

GENERAL APPENDIX

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As addressed

Act. Senior Manager
Corporate Safety Office (Rail Directives)
Room 911
Umjantshi House
30 Wolmarans Street
JOHANNESBURG

Tel: (011) 773-8321

Fax: (011) 773-7857

Date: 12 March 2007

Reference: S.RTS/SP/OD/X3/339

AMENDMENT NO. 1 TO THE GENERAL APPENDIX (PART I)

To ensure proper management and control of the serviceworthiness of foreign and Spoornet rolling stock on Spoornet lines it is necessary to examine all damaged couplers and other parts removed from such rolling stock. These components must be forwarded to the warehouse as indicated in clause 9137.1 of General Appendix (Part I) for examination by the Department concerned.

The attached revised English pages 9-00, Index-0, 9-31, 9-31a, 9-31b, 9-32, Index-1 and Index-2 and revised Afrikaans pages 9-0, 9-31, 9-32, 9-32a, 9-32b, Bladwyser-0, Bladwyser-1, Bladwyser-2, Bladwyser-5, Bladwyser-6, Bladwyser-7 and Bladwyser-8 replaces the existing pages in the General Appendix (Part I) and Algemene Aanhangel no. 6 (deel I) and must be inserted. The superseded pages must be destroyed.

Supervisory officers must ensure that a sufficient number of copies of this amendment is produced and distributed to all employees who do not have access to electronic mail.

Supervisors must also ensure that personnel working under their control understand this amendment and the implication thereof and where necessary provide guidance in this regard.

This amendment must be distributed in accordance with the provisions of clause 1055.0 of General Appendix (Part I) and acknowledgement of receipt retained for record purposes.

Addressed persons please acknowledge receipt.



R.A. MAKOE
Act. SENIOR MANAGER
CORPORATE SAFETY OFFICE (RAIL DIRECTIVES)



Addressed to:

- : Regional Operating Executive (Central Region), Sentrarand
- : Regional Operating Executive (Eastern Region), Witbank
- : Regional Operating Executive (Western Region), Cape Town
- : Assistant Regional Operating Executive (Central Region), Durban
- : Assistant Regional Operating Executive (Eastern Region), Richards Bay
- : Assistant Regional Operating Executive (Western Region), Port Elizabeth
- : Executive Manager, Safety, Health & Quality (SHEQ), Room 700, 222 Smit Street, Braamfontein
- : Executive Manager (Luxrail), Room 1814, Logistics House, 39 Wolmarans Street, Braamfontein
- : Executive Manager (Shosholoza Meyl), Room 704, Benson & Hedges Building, Braamfontein
- : Executive Manager (Linkrail), Room 601, Logistics House, 39 Wolmarans Street, Braamfontein
- : Executive Manager (Corporate Safety Office), Room 918, Umjantshi House, Johannesburg
- : Executive Manager, Train Plan Design & Implementation (Service Design & Evaluatiuon), 2nd Floor NOC, 22 Girton Road, Parktown
- : Executive Manager (National Operations Centre), 3rd Floor NOC, 22 Girton Road, Parktown
- : Chief Engineer (Spoornet Africa Business Ventures Technical), Room 308, NZASM Building, 6 Minnaar Street, Pretoria
- : Chief Engineer (Infrastructure Engineering), Room 314, 138 Eloff Street, Braamfontein
- : Chief Engineer (Infrastructure Maintenance), Room 411A, 138 Eloff Street, Braamfontein
- : Chief Engineer (Rolling Stock Engineering) Room 901, Laboratory Building, cnr. Harrison and Leyds Streets, Johannesburg
- : Chief Engineer (Technology Management), Room 820, 138 Eloff Street, Braamfontein
- : Chief Engineer (Traction) Room 506, Laboratory Building, cnr. Harrison and Leyds Streets, Johannesburg
- : Chief Engineer (Wagon Maintenance) Room 708, Laboratory Building, cnr. Harrison and Leyds Street, Johannesburg
- : Chief Engineer (Engineering & Technology), Room 913, Umjantshi House, 30 Wolmarans Street, Johannesburg
- : Senior Manager (Safety, Health, Environment & Quality (SHEQ), Central Region
- : Senior Manager (Safety, Health, Environment & Quality (SHEQ), Eastern Region
- : Senior Manager (Safety, Health, Environment & Quality (SHEQ), Western Region
- : Senior Manager (Safety Assurance, Operations CSO), Room 928, Umjantshi House, 30 Wolmarans Street, Johannesburg
- : Senior Manager, Train Plan Design & Implementation (Service Design & Evaluation) National Operations Centre, 2nd Floor, 22 Girton Road, Parktown
- : Senior Manager (Train Operations), Metro, Room 1404, 222 Smit Street, Braamfontein
- : Business Manager (Rail Generic Training) Room 4, Main Building, Esselenpark
- : Senior Manager (Technical Support & Train Design), Room 426, NZASM Building, Pretoria
- : Manager (Safety & Risk Compliance), National Operations Centre, 2nd Floor, 22 Girton Road, Parktown
- : Manager, (Train Operations), Metro, Room 1409, 222 Smit Street, Braamfontein
- : Manager, (Functional Training) House No. 2, Esselenpark
- : Manager, (Rail Operations Training) Room 1, Simutrain Building, Esselenpark
- : Manager, Functional Training, Room 104, 222 Smit Street, Braamfontein
- : Senior Engineer (Infrastructure Engineering), Room 410, 96 Rissik Street, Johannesburg
- : Risk Manager (Transwerk Maintenance), Room 517, Laboratory Building, cnr. Harrison and Leyds Street, Johannesburg
- : Area Production Manager, Sentrarand
- : Area Manager (Yards), Sentrarand
- : Area Manager (Movement), Room 207, Administrative Building, Sentrarand
- : Area Manager, Natalspruit, Room 302B, Terminal Building, City Deep
- : Area Manager, Isando, Room 204, Administrative Building, 1 Anville Road, Isando
- : Area Manager, Polokwane, Station Building, cnr. Mark and Hospital Streets, Polokwane
- : Area Manager, Pretoria, Room 51, NZASM Building, 6 Minnaar Street, Pretoria



: Area Production Manager, Krugersdorp
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 : Area Manager, Klerksdorp, Room 1, Magreta Prinsloo Street, Klerksdorp
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 : Area Manager, Witbank, cnr. Main and Langerman Streets, Witbank
 : Area Manager, Belville, Room 200, Belcon Building, Modderdam Avenue, Belville
 : Area Manager, Bloemfontein, Room F1, CS&P Building, SATS Road, Bloemfontein
 : Area Manager, East London, Room 210, Upper Western Avenue, Cambridge, East London
 : Area Production Manager, Kimberley
 : Area Manager, Kimberley, Room 512, J.W. Sauer Building, Kimberley
 : Area Manager, Port Elizabeth, Room 300, FC Sturrock Building, Flemming Street, Port Elizabeth
 : Area Production Manager, Saldanha
 : Area Manager, Saldanha, Room 122, Salkor Building, Saldanha
 : Area Manager, Worcester, 2 Louis Lange Street, Worcester
 : Junior Manager, Corporate Safety Office (Safety Assurance), Room 614, 222 Smit Street, Braamfontein
 : Junior Manager, Corporate Safety Office (Inspections), Room 316, Umjantshi House, 30 Wolmarans Street, Johannesburg
 : Chief Administrative Official, Corporate Safety Office (Rail Directives), Room 420, Propnet Building, 1 Adderley Street, Cape Town
 : Chief Administrative Official, Corporate Safety Office (Rail Directives), Room 113, Terminal Building, 151 South Coast Road, Bayhead
 : Chief Administrative Official, Train Operations, Room 103, Malahle House, Empangeni
 : Chief Administrative Official, Corporate Safety Office (Rail Directives), Room 531, FC Sturrock Building, Flemming Street, Port Elizabeth



Acknowledgement of receipt.

From: _____

To: Act. Senior Manager
Corporate Safety Office (Rail Directives)
Room 717
Umjantshi House
30 Wolmarans Street
Johannesburg

Date :

Tel:

Tel:011-773 8321

Fax:

Fax:011-773 7857

AMENDMENT NO. 1 TO THE GENERAL APPENDIX (PART I)

Your S.RTS/SP/OD/X3/339 of 12 March 2007 is hereby acknowledged.

Signature:_____



9135.0 DETENTION OF FOREIGN VEHICLES THROUGH DEFECTS OR OTHER CAUSES AND DELAY OF FOREIGN EQUIPMENT

- 9135.1 When a foreign vehicle is detached at a station on a Spoornet line due to a defect or other cause, particulars of the delay and reason thereof must be submitted to the National Operations Centre (NOC). Unusual delay to foreign ropes, tarpaulins or chains, whether used on foreign or Spoornet vehicles, must also be reported.
- 9135.2 When foreign vehicles have been repaired, such vehicles must receive preferential despatch.
- 9135.3 When a foreign vehicle is unfit to travel on its own wheels and has in consequence to be loaded onto another vehicle, or if the damage renders the vehicle unsafe for carrying traffic, the following details must be included in the return submitted to the National Operations Centre (NOC):
- 9135.3.1 Date and time when damage took place.
- 9135.3.2 Particulars of despatch to the foreign railway concerned.
- 9135.3.3 Station to which consigned.
- 9135.4 Vehicles of foreign railways and of Spoornet may be included on the same return.

9136.0 SUPPLY OF SPARE PARTS TO FOREIGN VEHICLES

- 9136.1 In cases where foreign vehicles are fitted with Spoornet couplers, wheels or other spare parts, the Regional Operations Manager (ROM), Transwerk, supplying the material must take steps to have the parts belonging to Spoornet returned by reporting the matter to the National Operations Centre (NOC).
- 9136.2 A repair label, on which particulars of Spoornet parts affixed to the vehicle must be endorsed, must be attached to the foreign vehicle fitted with Spoornet material.
- 9136.3 Spoornet vehicles damaged on foreign lines will be similarly treated, and the Regional Operations Manager (ROM), Transwerk, to whom the vehicles are returned, must arrange for the prompt removal and despatch to the owning foreign railway of the couplers, wheels. etc., temporarily supplied.

9137.0 DISPOSAL OF DAMAGED COUPLERS, WHEELS AND OTHER PARTS

- 9137.1 All damaged couplers, wheels and other parts removed from foreign and Spoornet rolling stock, must be consigned to the dedicated store holding-area for failed components/parts in the Koedoespoort Workshop (Warehouse 138A/Steelroom), Pretoria, for examination by the Materials Very Important Technology Owner (VIT), Transwerk.
- 9137.2 All damaged couplers, wheels and other parts, irrespective of whether it is foreign or Spoornet material, must, before despatch to the Koedoespoort Workshop, be labelled, and in addition to the label, be clearly marked, i.e. the number of the vehicle from which it has been removed must be painted on the parts.
- 9137.3 Before returning the damaged couplers, wheels and other parts to the foreign railways concerned, it must be clearly labelled, the number of the wagon from which it has been removed and the cause of breakage or damage must be shown on the label.

9138.0 PARTS OF ROLLING STOCK FOUND ON OR NEAR THE LINE

- 9138.1 Parts of vehicles or locomotives found by track personnel or other employees on or near the line must be conveyed or despatched to the nearest depot.

9139.0 EXAMINATION OF VEHICLE ARRIVING AT OR DEPARTING FROM A STATION

- 9139.1 Except where otherwise provided for by the Chief Executive (Spoornet), all vehicles arriving at or departing from a station or in a marshalling yard where wagon maintenance personnel are stationed, must undergo the prescribed examination.
- 9139.2 The train-control officer or senior yard official, or his/her representative, as the case may be, must timeously advise the wagon maintenance personnel of a train which is being admitted to or arranged to depart from a line which is not considered part of the station or marshalling yard, or which is not normally used for the admittance and/or departure of trains, as the case may be. [See train working rule No. 115(1).]

9140.0 **VOID**

9141.0 **VOID**

9142.0 **VOID**

LEFT OPEN FOR FUTURE USE.

9143.0 OFFICIAL IN CHARGE TO BE ADVISED OF COMPLETION OF EXAMINATION

9143.1 Wagon maintenance personnel must inform the responsible official of the completion of the examination of vehicles, and such examination, in the case of passenger vehicles, should be completed before the vehicles are placed at the platform, and in the case of goods vehicles before they are shunted into position for loading.

9144.0 PROTECTION OF WAGON MAINTENANCE PERSONNEL AT OUT-STATIONS AND YARDS

9144.1 Wagon maintenance personnel or other employees proceeding to out-stations and yards to effect repairs to vehicles must, before commencing work, report to the train-control officer controlling the section or official in charge of the yard, and obtain permission to effect the necessary repairs. The wagon maintenance personnel must then carry out the instructions contained in subclause 11003.5 hereof. On completion of the work the relevant official must be informed accordingly.

9145.0 SUPERVISORY PERSONNEL MUST SEE THAT PROPER EQUIPMENT IS PROVIDED

9145.1 Supervisory personnel must see that wagon maintenance personnel or other employees sent to out-stations to effect repairs to vehicles are provided with the required number of discs (lamps if necessary) and detonators.

9146.0 LOADING AND OFF-LOADING OF WAGONS AT SIDINGS AND LOADING PLATFORMS: OPERATING OF ISOLATING AND EARTHING SWITCHES

9146.1 Loading points where loading and off-loading of wagons may take place in safety on electrified sections are demarcated by means of warning notices (see clause 202.0 of the Electrical Safety Instructions). These places are either not wired or are provided with isolating and earthing switches and employees in charge of shunting movements must ensure that wagons are placed within the boundaries of the place where loading and off-loading is permitted.

9146.2 The normal position of the isolating and earthing switch is in the "power off" position, i.e. with the overhead wires "dead" and the switch locked in that position by means of a special lock. Except at places where the isolating and earthing switch keys are locked electrically in accordance with subclause 7011.2, the keys must be kept in safe custody by the train-control officer, yard master or other designated official, hereinafter referred to as the issuing official.

9146.2.1 Except at places where the isolating and earthing switch key is locked in terms of clause 7011.0, a special book with columns for the date, key No., time and signature of recipient when the key was issued, as well as the date, key No., time and signature of issuing official when the same key is returned, must be kept at each place.

9146.2.2 Each time the key is issued or returned, the employee receiving the key must sign the book.

9146.2.3 In addition to the special lock mentioned in subclause 9146.2 some siding users also use a private lock to lock the isolating and earthing switch in the "power off" position.

9146.3 When it is necessary to perform shunting movements with an electric locomotive at a loading area equipped with an isolating and earthing switch, or when the power supply must, for whatever reason, be switched on, the driver's assistant, yard official or other person in charge of the work, hereinafter referred to as the responsible person must, before unlocking the isolating and earthing switch, first warn all persons in charge of loading and off-loading operations in writing of his intention to turn on the power by completing paragraph A of the "Notice to siding users in connection with the switching of the electric traction power supply" (see specimen at the end of this section) and obtaining their signatures in paragraph B. He must also, by personal observation ensure that no persons are on or in open wagons or on vehicle roofs and that loading or off-loading operations or any other work involving the handling of long lengths of material with which it is possible to make contact with the overhead wires are stopped and that everything is in order for making the overhead wires in the siding "live". Where the isolating and earthing switch is also locked with a private lock, he must request the siding user to remove his private lock.

9146.3.1 Should an isolating and earthing switch have to be placed in the "power on" position and no siding user whatsoever is present, the notice must none the less be completed with an entry that no siding user was present. In these circumstances the responsible person must nevertheless be on the look out and should a siding user arrive, his signature must be obtained.

9146.4 Whilst the power is "on" the responsible person must see to it that loading or off-loading operations are not resumed.

9146.5 Immediately after completion of the work, the responsible person must ensure that the switch is placed and locked in the "power off" position.

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As addressed

Act Senior Manager

Corporate Safety Office (Rail Directives)
Room 911
Umjantshi House
30 Wolmarans Street
JOHANNESBURG

Tel: (011) 773-8321

Fax: (011) 773-7857

Date: 12 March 2007

Reference: S.RTS/SP/OD/X2/126 (Vol.4)

AMMENDMENT NO. 2 TO THE GENERAL APPENDIX (PART I)

Due to the alarming increase in level crossing accidents and to ensure stricter action from Spoornet, it is necessary to change the way the locomotive whistle must be sounded to warn road users of an oncoming train. The locomotive whistle must now be sounded **continuously** between the second whistle board and the level crossing.

The attached revised English and Afrikaans pages 9-00, 9-3 and 9-4 replaces the existing pages in the General Appendix No. 6 (Part I) and the Algemene Aanhangsel no. 6 (deel I) and must be inserted. The superseded pages must be destroyed.

Supervisory officers must ensure that a sufficient number of copies of this amendment is produced and distributed to all employees who do not have access to electronic mail.

Supervisors must ensure that personnel working under their control understand this amendment and the implication thereof and where necessary provide guidance in this regard.

This amendment must be distributed in accordance with the provisions of clause 1055.0 of the General Appendix (Part I) and acknowledgement of receipt retained for record purposes.

Addressed persons please acknowledge receipt.



R.A. MAKOE
ACTING SENIOR MANAGER
CORPORATE SAFETY OFFICE (RAIL DIRECTIVES)



Addressed to:

- : Regional Operating Executive (Central Region), Sentrарand
- : Regional Operating Executive (Eastern Region), Witbank
- : Regional Operating Executive (Western Region), Cape Town
- : Assistant Regional Operating Executive (Central Region), Durban
- : Assistant Regional Operating Executive (Eastern Region), Richards Bay
- : Assistant Regional Operating Executive (Western Region), Port Elizabeth
- : Executive Manager, Safety, Health & Quality (SHEQ), Room 700, 222 Smit Street, Braamfontein
- : Executive Manager (Luxrail), Room 1814, Logistics House, 39 Wolmarans Street, Braamfontein
- : Executive Manager (Shosholoza Meyl), Room 704, Benson & Hedges Building, Braamfontein
- : Executive Manager (Linkrail), Room 601, Logistics House, 39 Wolmarans Street, Braamfontein
- : Executive Manager (Corporate Safety Office), Room 918, Umjantshi House, Johannesburg
- : Executive Manager, Train Plan Design & Implementation (Service Design & Evaluatiuon), 2nd Floor NOC, 22 Girton Road, Parktown
- : Executive Manager (National Operations Centre), 3rd Floor NOC, 22 Girton Road, Parktown
- : Chief Engineer (Spoornet Africa Business Ventures Technical), Room 308, NZASM Building, 6 Minaar Street, Pretoria
- : Chief Engineer (Infrastructure Engineering), Room 314, 138 Eloff Street, Braamfontein
- : Chief Engineer (Infrastructure Maintenance), Room 411A, 138 Eloff Street, Braamfontein
- : Chief Engineer (Rolling Stock Engineering) Room 901, Laboratory Building, cnr. Harrison and Leyds Streets, Johannesburg
- : Chief Engineer (Technology Management), Room 820, 138 Eloff Street, Braamfontein
- : Chief Engineer (Traction) Room 506, Laboratory Building, cnr. Harrison and Leyds Streets, Johannesburg
- : Chief Engineer (Wagon Maintenance) Room 708, Laboratory Building, cnr. Harrison and Leyds Street, Johannesburg
- : Chief Engineer (Engineering & Technology), Room 913, Umjantshi House, 30 Wolmerans Street, Johannesburg
- : Senior Manager (Safety, Health, Environment & Quality (SHEQ), Central Region
- : Senior Manager (Safety, Health, Environment & Quality (SHEQ), Eastern Region
- : Senior Manager (Safety, Health, Environment & Quality (SHEQ), Western Region
- : Senior Manager (Safety Assurance, Operations CSO), Room 928, Umjantshi House, 30 Wolmarans Street, Johannesburg
- : Senior Manager, Train Plan Design & Implementation (Service Design & Evaluation) National Operations Centre, 2nd Floor, 22 Girton Road, Parktown
- : Senior Manager (Train Operations), Metro, Room 1404, 222 Smit Street, Braamfontein
- : Business Manager (Rail Generic Training) Room 4, Main Building, Esselenpark
- : Senior Manager (Technical Support & Train Disign), Room 426, NZASM Building, Pretoria
- : Manager (Safety & Risk Compliance), National Operations Centre, 2nd Floor, 22 Girton Road, Parktown
- : Manager, (Train Operations), Metro, Room 1409, 222 Smit Street, Braamfontein
- : Manager, (Functional Training) House No. 2, Esselenpark
- : Manager, (Rail Operations Training) Room 1, Simutrain Building, Esselenpark
- : Manager, Functional Training, Room 104, 222 Smit Street, Braamfontein
- : Senior Engineer (Infrastructure Engineering), Room 410, 96 Rissik Street, Johannesburg
- : Risk Manager (Transwerk Maintenance), Room 517, Laboratory Building, cnr. Harrison and Leyds Street, Johannesburg
- : Area Production Manager, Sentrарand
- : Area Manager (Yards), Sentrарand
- : Area Manager (Movement), Room 207, Administrative Building, Sentrарand
- : Area Manager, Natalspruit, Room 302B, Terminal Building, City Deep
- : Area Manager, Isando, Room 204, Administrative Building, 1 Anville Road, Isando
- : Area Manager, Polekwane, Station Building, cnr. Mark and Hospital Streets, Polekwane
- : Area Manager, Pretoria, Room 51, NZASM Building, 6 Minnaar Street, Pretoria



: Area Production Manager, Krugersdorp
 : Area Manager, Krugersdorp, Room 101, 15 Market Street, Krugersdorp
 : Area Manager, Vereeniging, 2nd Floor, Tower Building, Vereeniging
 : Area Manager, Klerksdorp, Room 1, Magreta Prinsloo Street, Klerksdorp
 : National Container Manager, Durban
 : Area Manager, Kroonstad, Room 1, Client Services Centre, 1 Vermaak Road, Kroonstad
 : Area Manager, Newcastle, Room 14, Client Services Centre, Albert Wessels Drive, Newcastle
 : Area Manager, Ladysmith
 : Area Manager (Movement), Durban, Room 315, Terminal Building, 151 South Coast Road, Bayhead
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 : Area Manager, Nelspruit, Room 34, Station Building, Nelspruit
 : Area Manager, Ermelo/Ogies
 : Area Production Manager, Richards Bay, Room 208, Malahle House, Empangeni
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 : Area Production Manager, Saldahna
 : Area Manager, Saldahna, Room 122, Salkor Building, Saldahna
 : Area Manager, Worcester, 2 Louis Lange Street, Worcester
 : Junior Manager, Safety Assurance, Operations (CSO), Room 614, 222 Smit Street, Braamfontein
 : Junior Manager, Inspections, Operations (CSO), Room 316, Umjantshi House, 30 Wolmarans
 Street, Johannesburg
 : Chief Administrative Official, Corporate Safety Office (Rail Directives), Room 420, Propnet Building,
 1 Adderley Street, Cape Town
 : Chief Administrative Official, Corporate Safety Office (Rail Directives), Room 113, Terminal Building,
 151 South Coast Road, Bayhead
 : Chief Administrative Official, Train Operations, Room 103, Malahle House, Empangeni
 : Chief Administrative Official, Corporate Safety Office (Rail Directives), Room 531, FC Sturrock
 Building, Flemming Street, Port Elizabeth



Acknowledgement of receipt.

From: _____

To: Act. Senior Manager
Corporate Safety Office (Rail Directives)
Room 717
Umjantshi House
30 Wolmarans Street
Johannesburg

Date:

Tel:

Tel:011-773 8321

Fax:

Fax:011-773 3512

AMENDMENT NO. 2 TO THE GENERAL APPENDIX (PART I)

Your S.RTS/SP/OD/X2/126 of 12 March 2007 is hereby acknowledged.

Signature: _____

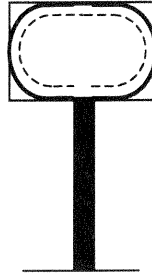


9007.10 Sounding of locomotive whistle

- 9007.10.1 The term "whistle" is described in train working rule No. 1 and provides for various warning devices which drivers of locomotives can use.
- 9007.10.2 A locomotive whistle can be a disturbance to the public, especially in residential areas, and should therefore only be used for prescribed and justifiable warning and signalling purposes. Unjustifiable use or use for other purposes is prohibited.
- 9007.10.3 When, owing to the type of warning device it is impossible to sound the "cock crow" signals provided for in the train working rules or other instructions, an equal number long whistles must be given on the siren or device provided.

9007.11 Use and observance of whistle boards

- 9007.11.1 A whistle board is provided to indicate to the driver to sound the locomotive whistle, and is an oval white board with a border of white reflective paint on the front, thus –

**9007.11.2 Locomotive whistle, siren or hooter to be sounded when train approaches level crossing**

- 9007.11.2.1 The driver of a train that approaches level crossings between the hours 05:00 to 23:00 must give a warning by sounding the locomotive whistle, siren or hooter of the train.
- 9007.11.2.2 When the train reaches the first whistle board as it is approaching a level crossing, or, in the absence of such a board, at a point 400 metres before reaching the level crossing, the driver must sound the locomotive's whistle, siren or hooter for at least 3 seconds. On reaching the second whistle board, or, in the absence of such a board, at a point 125 metres before reaching the level crossing, the driver must sound the locomotive whistle, siren or hooter continuously until the leading locomotive has passed the level crossing.
- 9007.11.2.3 Should, due to the view or other reasons, circumstances exist or arise at a particular level-crossing which make it necessary for an additional locomotive warning whistle to be given in order to prevent an accident, the driver must give such additional warning.
- 9007.11.3 When a train approaches a level crossing during the hours 23:01 to 04:59, the locomotive whistle warning as described in subclause 9007.11.2.1 hereof is not legally required. The driver should not use the locomotive whistle, siren or hooter for this purpose unless, in his/her judgement, the view or other circumstances at the particular level crossing require such action in order to prevent an accident.

9008.0 VEHICLES TO BE ATTACHED TO LOCOMOTIVE WHEN OUTSIDE THE AREA PROTECTED BY FIXED SIGNALS

- 9008.1 Vehicles must not be taken or placed on the running line outside the area protected by fixed signals unless they are attached to a locomotive, and then only when the provisions of train working rules Nos. 129, 131 and 220 have been complied with.

9009.0 HAND-SHUNTING OVER FACING POINTS: WHEN PERMITTED

- 9009.1 Except where instructions to the contrary are laid down in the local appendices, one wagon at a time may be hand-shunted over the facing points, from one line to another, in order to expedite the disposal of wagons, provided that, in addition to carrying out the provisions of train working rules Nos. 129 and 220, the operating official in charge personally supervises the movement. Before commencing to shunt, he/she must see that the hand brake is in good order, also that scotches are provided, so that the wagon may be kept under control.

9010.0 VEHICLES LEFT ON RUNNING LINE OUTSIDE HOME SIGNAL

- 9010.1 When it is necessary to leave a vehicle or vehicles on the running line outside a home signal, or outside the facing points where a home signal is not provided, the provisions of train working rules Nos. 129, 131 and 220 must be complied with.

9011.0 USE OF TURNTABLES

9011.1 As provided in train working rule No. 145 the speed of a locomotive passing over a turntable must not exceed 5 km/h. The lever of a turntable must not be dropped into the slot until the turntable has been completely stopped.

9012.0 DRIVERS' ASSISTANTS TO ASSIST TRAIN-CONTROL OFFICERS

9012.1 As soon as a goods train comes to a standstill at a non-interlocked station, the driver's assistant must, except where otherwise laid down, immediately approach the train-control officer and ascertain whether his assistance is required. (See clause 1031.0, of this appendix.)

9012.2 Drivers' assistants to operate points when instructed

9012.2.1 The driver's assistant of a train which has either to be crossed or passed at a non-interlocked station, may operate points and admit the opposing or passing train when orally instructed to do so by the train-control officer. (See train working rule No. 190.)

9012.2.2 The operation of the points by a driver's assistant will not relieve the train-control officer of his responsibility as laid down in train working rule No. 218.

9012.3 When driver's assistant to control shunting work

9012.3.1 At stations where a competent employee is not available to conduct shunting operations, the driver's assistant must take charge thereof.

9013.0 VOID**9014.0 STEP IRON AND HAND-GRIP TO BE USED**

9014.1 Step irons and handgrips on vehicles must be used by employees employed in shunting, to facilitate the application of the brakes.

9015.0 USE OF TOW ROPES

9015.1 When using a tow rope for shunting, the hook should be put in the towing loop of the wagon nearest the locomotive. When ready to move, the locomotive must start gently. If there should be reason to think that the towing loop is not strong enough, or a towing loop is not provided, the rope may be connected to the coupler shank, but great care must be used to prevent the rope becoming entangled in the wheels. The number of wagons towed must be determined by their mass, the gradient and other circumstances, care being taken not to move more wagons than can be towed safely at one time.

9016.0 VOID**9017.0 COUPLING OF VEHICLES AND LOCOMOTIVES**

9017.1 Locomotives and vehicles are equipped with various types of couplers. Employees who perform shunting or must couple locomotives or vehicles must familiarise themselves with the methods of establishing that the gravity locks are fully down in position.

9017.2 When an employee has to move in between two locomotives, a locomotive and a vehicle or two vehicles to adjust the knuckles or centre or adjust the couplers or test the gravity locks to ensure that they are fully down in position, or for any other reason whatever, the movement must be brought to a standstill before he moves in between the locomotives/vehicles concerned.

9017.3 Nobody may be between two locomotives, a locomotive and a vehicle or two vehicles when it is brought together to be coupled.

9017.4 The instruction for coupling the locomotives/vehicles may not be given whilst a person is still between the locomotives/vehicles concerned.

9017.5 After the instruction for coupling the locomotives/vehicles has been given, nobody, for whatever reason, may move in between the vehicles concerned until the movement has been brought to a standstill.

9017.6 After the locomotives/vehicles have been coupled the employee concerned must examine the coupling and ensure that it is secure. If the locomotives/vehicles are coupled in the presence of a member of the wagon maintenance personnel, the latter must also ensure that the coupling is secure.

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ACKNOWLEDGEMENT FORM

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Signature _____

Date _____

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NAME	EMPLOYED AS

who agrees to return it to the proper official when called upon to do so, or upon leaving the Service.

Subject to amendment, of which due notice will be given, the instructions contained herein apply to the service of Spoornet, whether in respect of its own locomotives, trains or employees, or in respect of those of other operators with running rights over its lines. These instructions, and any modification thereof, continue to apply to the employees of Spoornet when working on or over the lines of other operators, provided that where the owning operator has any special or additional instructions, such instructions shall apply to the employees of Spoornet during the period they are working on or over the lines of such other operator.

GENERAL APPENDIX
NO. 6 (PART I)
TO THE
TRAIN WORKING RULES AND
APPLICABLE LEGISLATION

PRIVATE – *For the information and guidance
of employees
in the service of*

FEBRUARY 2002
IN FORCE UNTIL FURTHER NOTICE

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GENERAL APPENDIX NO. 6

(PART I)

- I. Part I of the General Appendix is issued principally for the guidance of the employees employed in the working of trains, and it is the duty of every employee supplied with a copy thereof to make himself acquainted with and to act upon the instructions therein contained.
- II. Every employee of Spoornet affected by the instructions contained in the General Appendix (Part I) must be supplied with a copy of that book and must produce it when called upon to do so.
- III. Circulars, in addition to and in modification of the instructions contained in this book, will be issued from time to time, and when any instruction is altered or cancelled by such circulars, the book must be corrected accordingly.
- IV. A local appendix, containing special instructions governing local conditions only, has been issued for each specific area. Every employee concerned must see that he obtains a copy of the local appendix applicable to the area on which he is employed, in addition to the General Appendix.
- V. Employees whose duties require them to work on two or more areas, must see that they obtain a copy of the local appendix for each area on which they are employed.
- VI. The General Appendix must be read in conjunction with and not in lieu of the Consolidated Service Conditions, Train Working Rules, and applicable legislation.
- VII. The instructions contained herein will come into operation on 1 January 2002, and, unless otherwise provided, they will cancel all previous instructions inconsistent therewith.

RAIL DIRECTIVES
JOHANNESBURG

FEBRUARY 2002

GENERAL APPENDIX NO. 6

(PART I)

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TRANSNET LIMITED

GENERAL APPENDIX NO. 6

(PART I)

SAFETY AND EFFICIENCY

Every member of the personnel must exert continuous effort to ensure the attainment of safety and efficiency, and he must constantly bear in mind that his first and most important duty is to ensure the safe working of Transnet Limited. His responsibility is not confined to a general observance of the rule or any instructions which may be issued for his guidance, but he must be vigilant and observant at all times. If he has reason to believe that there is need for precautionary measures, in addition to those already provided, for the safety of trains, the general public, himself and his fellow employees, it is his duty promptly to submit full particulars to his superior officer. (See train working rule No. 4.)

Systems for controlling movements of trains

The instructions for operating the various types of instruments, or relative to the systems in general use, for the control of trains, are detailed in the following sections of this appendix:

Van Schoor Train Token System	Section 3
Radio Train Order System.....	Section 4
Wooden Train Staff and Paper Ticket System	Section 5
Telegraph Order System	Section 6
Colour-light Signalling System	Section 7

Instructions relative to specific methods of train operation falling under one or other of the following systems of train control, and which are in force only on particular sections of the line, are detailed in the local appendices concerned.

SECTION 1

GENERAL TRAIN-OPERATING INSTRUCTIONS

- 1001.0 VOID**
- 1002.0 GENERAL SUPERVISION AND CONTROL**
- 1002.1 Supervisory officers**
- 1002.1.1 The supervisory officer of a station or depot is responsible for the general good conduct of all employees under his control and for the maintenance of discipline (see train working rule No. 107).
- 1002.1.2 The supervisory officer must –**
- 1002.1.2.1 make himself acquainted with the capabilities and conduct of each employee;
- 1002.1.2.2 give clear and precise instructions;
- 1002.1.2.3 see that the hours of duty as laid down by competent authority for the various grades of personnel are punctually observed;
- 1002.1.2.4 when there is any possibility of misunderstanding, arrange for the duties and hours of attendance of each employee to be defined in writing (see train working rule No. 107);
- 1002.1.2.5 avoid Sunday work as far as practicable and, when certifying Sunday work, he must ensure that such work is absolutely necessary;
- 1002.1.2.6 see that the station, train-control offices, etc. under his control is/are kept in a neat state;
- 1002.1.2.7 see that rule and instruction books, amendments thereto, as well as other instructions are promptly issued to the personnel concerned; and
- 1002.1.2.8 ensure that rule and instruction books issued to personnel under his control are kept up to date.
- 1002.2 Supervision of employees (training) and unskilled workers**
- 1002.2.1 Train-control officers (training) are not authorised employees in terms of train working rule No. 86, and may not operate points, signals or train-control instruments unless they do so under the direct control and personal supervision of the train-control officer. The train-control officer must see that a train-control officer (training) does his work correctly.
- 1002.2.2 Driver's assistants (training) and yard officials (training) may not perform duties involving, directly or indirectly, the safety of trains or shunting movements unless such duties are performed under the direct control and personal supervision of a qualified employee.
- 1002.2.3 Employees in charge of unskilled workers are personally responsible for the performance of all duties connected with the safe working of trains and operations connected therewith.
- 1002.3 Section Managers (Train Control) and (Train Traffic) to supervise train working**
- 1002.3.1 Section Managers (Train Control) and (Train Traffic) must give special attention to the action of personnel under their control in connection with train movements. They must report all instances of negligence, or of failure to comply strictly to rules, instructions, or orders given.
- 1002.4 Employees taking over duty at stations and in offices and train-control offices**
- 1002.4.1 Employees must insert, in the appropriate manner, the actual time of coming on or going off duty. They must not depart from the scheduled hours of duty unless authorised to do so by the supervisory officer.
- 1002.4.2 During the period open for train working a train-control officer may not leave the installation of which he has charge, except when he is relieved by an authorised employee (see train working rule No. 91).
- 1003.0 CONDUCT OF EMPLOYEES TOWARDS PUBLIC**
- 1003.1 Every employee whose duties bring him into contact with the public must exercise tact and display a proper measure of sympathy and courtesy in all his dealings with members of the public.
- 1003.2 Whenever possible, employees must reply to the public in the language in which they are addressed, and all replies to correspondence must be written in the language used by the correspondent.

1004.0 PERSONNEL NOT TO LEAVE NEIGHBOURHOOD OF STATION WITHOUT AUTHORITY

- 1004.1 Unless authority has been obtained previously from the Operations Manager, station officials in charge, except as provided in subclause 1004.3, although off duty, must not go so far from the station that undue delay would arise in obtaining their services in the event of an accident or other emergency arising. The official in charge must furnish particulars of his whereabouts with the senior employee on duty, or he must leave such particulars in a place where locomotive personnel can readily find the information.
- 1004.2 Station officials in charge may grant permission to the employees under their control to leave the neighbourhood of the station, when off duty, provided particulars are obtained of their whereabouts and that such permission will not unduly interfere with the work.
- 1004.3 In the case of stations where only one employee is appointed, he may leave the neighbourhood of the station, when off duty, without having obtained previous authority, provided he does not go an unreasonable distance, and that he leaves particulars of his whereabouts in such a place where locomotive personnel can readily find the information.

1005.0 ISSUE AND CARE OF INSTRUCTIONS

- 1005.1 The supervisory officers must see to it that instructions in connection with the execution of the operating task are communicated to all employees affected by them and, where necessary, that it is done in writing.
- 1005.1.1 A plea of ignorance will not be accepted unless the employee concerned can furnish proof that he was not supplied with a copy of the instructions, or otherwise was not properly instructed by the official in charge. The posting of instructions in recognised places for the information of the personnel generally will be regarded as adequate intimation to an employee (see clause 1055.0).
- 1005.2 All written and printed instructions of a permanent nature must be pasted in a special book accessible to the personnel, until such time as they are issued in amendment form for inclusion in the appendix concerned. Circulars and notices intended for the information of employees, must not be posted where they can be seen by members of the public.
- 1005.3 Circulars and notices should be marked "CANCELLED" when withdrawn, superseded or out of date.

1006.0 SAFETY AND EFFICIENCY

- 1006.1 Every member of the personnel must exert continuous effort to ensure the attainment of safety and efficiency, and he must constantly bear in mind that his first and most important duty is to ensure the safe working of Spoornet. His responsibility is not confined to a general observance of the rules or instructions which are issued for his guidance, but he must be vigilant and observant at all times. If he has reason to believe that there is need for precautionary measures, in addition to those already provided, for the safety of trains, the general public, himself and his fellow employees, it is his duty promptly to submit full particulars to his supervisory officer (see train working rule No. 4).

1006.2 High-voltage electrical equipment

- 1006.2.1 A publication entitled "Electrical Safety Instructions" has been issued to provide protection for all persons against the dangers arising from the use of electricity and from the existence of exposed live high-voltage equipment. (High-voltage is normally any voltage exceeding 1 000 volts.)
- 1006.2.2 Employees whose duties require them to work in the vicinity of or near exposed high-voltage equipment must thoroughly acquaint themselves with the instructions contained in the said publication.
- 1006.2.3 Employees who, in the normal execution of their duties, must work in areas where there is live high-voltage electrical equipment, but whose duties do not require them to work on or to clearance from such equipment, must thoroughly acquaint themselves with the instructions contained in the said publication.

1007.0 UNUSUAL CIRCUMSTANCES NOT PROVIDED FOR

- 1007.1 When unusual circumstances arise for which provision is not made in the applicable rules and instructions and time does not permit of reference being made to higher authority for instructions, the employee concerned must be guided by his own prudence and judgement and base his actions on the principles which may already be laid down in the applicable rules and instructions. He must thereafter make a special report to his supervisory officer.

1008.0 SYSTEMS FOR CONTROLLING MOVEMENTS OF TRAINS

1008.1 The instructions for the systems in general use, for the control of trains, are detailed in the following sections of this appendix:

Van Schoor train-token system	Section 3
Radio train order system	Section 4
Wooden train staff and paper-ticket system	Section 5
Telegraph-order system	Section 6
Colour-light signalling system	Section 7

1008.2 Where a train-working method (whether or not it falls under one or the other abovementioned train-control systems) is in operation over a specific section only, instructions in connection therewith appear in the local appendix concerned.

1009.0 MAXIMUM SPEED AND SPEED RESTRICTIONS (SEE TRAIN WORKING RULES NOS. 64 AND 177 AND CLAUSE 11011.0 OF THIS APPENDIX)

1009.1 Responsibility of drivers

1009.1.1 A driver must have the point to point running times applicable to his particular train readily available in front of him and use the utmost discretion in regulating the speed of his train to suit the various portions of the line and his train. He must always regulate the speed in such a manner that it will never exceed the maximum applicable on the portion of the line concerned (including points, diamond crossings, slips and curves) and on his train. Except where otherwise provided, speed restrictions must be observed until the complete train has passed over the portion of line concerned.

1009.1.2 If a driver considers the scheduled time laid down for a train over a particular portion of the line necessitates running at too high a speed, or at a speed in excess of that already prescribed for such section or any portion thereof, he must promptly notify his supervisory officer, who must through the Operations Manager immediately advise the Chief Executive (Spoornet).

1009.2 Maximum permissible speed

1009.2.1 The maximum speed permissible on straights and on other portions of the running line on which a lower-speed restriction is not enforced in accordance with permanent-speed-restriction boards or other instructions, is shown in the working time book. Particulars of special speed restrictions that are applicable at specific places, appear in the local appendix.

1009.3 Speed of trains over points, crossings and slips

1009.3.1 Except where otherwise specifically laid down, the permissible maximum speeds as prescribed in subclauses 1009.4 to 1009.8 must not be exceeded when passing in the facing direction over points, crossings and slips in the section, at stations, interloops and intersidings connected to the through running line. These speed restrictions must be maintained until the complete train has moved over the points, crossings and slips.

1009.4 Signalling arrangements classed as INTERLOCKED SPECIAL

1009.4.1 NOTE: INTERLOCKED SPECIAL means:

1009.4.1.1 Stations equipped with semaphore signals and an independently worked plunger bolt lock. Such stations are distinguished by means of a distant signal included in the signalling arrangement at each end.

1009.4.1.2 Sections, stations, remote-controlled interloops and token stations equipped with colour-light signals.

Kilometres per hour

- (a) Colour-light signals: When the points are situated on the straight line and are set for the through line. (In the event of certain stations equipped with semaphore signals, the speed are indicated by permanent speed-restriction boards)..... 100
- (b) Stations equipped with semaphore signals where there are no permanent speed-restriction boards [see paragraph (a)]. When the points are situated on the straight line and are set for the through line 80

Kilometres per hour

- (c) When the points are situated on the straight line and are set for the turnout –
 - (i) 1 in 20 points with moveable vee and 1 in 12 equal split points 75
 - (ii) 1 in 12 unequal split points and 1 in 9 points 30

1009.4.2 Signalling arrangements classed as INTERLOCKED

1009.4.2.1 NOTE: INTERLOCKED means:

1009.4.2.2 Stations equipped with semaphore signals and points. Such stations are distinguished by the non-inclusion of distant signals in the signalling installation.

1009.4.2.3 Interloops, token stations and intersidings with two-way or one-way points indicators.

Kilometres per hour

- (a) When the points are situated on the straight line and are set for the through line 60
- (b) When the points are situated on the straight line and are set for the turnout 30

1009.4.3 Signalling arrangements classed as NOT INTERLOCKED

1009.4.3.1 NOTE: NOT INTERLOCKED means:

1009.4.3.2 Stations equipped with semaphore signals and tumbler-worked hand points.

1009.4.3.3 Places equipped with tumbler-worked hand points without signals, two-way or one-way points indicators.

Kilometres per hour

- (a) When the points are situated on the straight line and are set for the through line 40
- (b) When the points are situated on the straight line and are set for the turnout 25

1009.5 NARROW-GAUGE lines:

Kilometres per hour

- (a) When the points are set for the straight line 25
- (b) When the points are set for the turnout 15

1009.6 DIAMOND CROSSINGS AND SLIPS 30

1009.7 Interloops and token stations equipped with trailable self-normalising points. These places are distinguished by –

1009.7.1 electric distant and points indicators, or two-way points indicators.

1009.7.2 The tumblers are painted black.

Kilometres per hour

- (a) When the points are set for the straight line 60
- (b) When the points are set for the turnout 30

- 1009.8 When a train is passing over points in the TRAILING DIRECTION, the following speeds must not be exceeded. The speed must be maintained until the complete train has passed over the points:
- (a) Over the turnout : The maximum permissible speed applicable over the points in the facing direction.
 - (b) When the train does : The maximum permissible speed applicable on that portion of the line.
not turn out and the line is straight
 - (c) When the train does : The maximum permissible speed applicable over the points in the facing direction.
not turn out and the line is on a curve
 - (d) Places equipped with : The maximum permissible speed applicable over the points in the facing direction.
traillable self-normalising points (straight and turnout)

1009.9 Use and observance of permanent speed-restriction boards

- 1009.9.1 Where the speed must be reduced round a particular bend or owing to a curvature over a portion of the line or other reason, the maximum permissible speed is shown on a permanent speed-restriction board in kilometres per hour, erected short of the portion of the line concerned. It is the duty of drivers to know and comply with the speed-restriction. The facing side of the board is painted reflective yellow and the permissible speed is shown in black figures. The boards are placed as follows:
- 1009.9.1.1 **On single-line sections** (i.e. single bidirectional running lines) on either side of the portion of the line over which the speed restriction applies, on masts, between 2 and 3 metres above rail level, 30 metres or more from where the speed restriction starts on the right- or left-hand side of the line, depending on the positioning of the masts, as seen from approaching trains. The reverse side of the board is painted reflective white to indicate the end of the speed restriction from the opposite direction. If the reverse side is not clearly observable due to the type of mast, an additional white board must be erected.
- 1009.9.1.2 **On double-line sections** (i.e. all double, uni- and bidirectional running lines) on masts, between 2 and 3 metres above rail level, 30 metres or more from the beginning of the speed restriction, on the right- and left-hand side of the line as seen from approaching trains. If the reverse side is not clearly observable due to the type of mast, an additional white board must be erected.
- 1009.9.1.3 **On other sections** (i.e. multiple running lines as well as non-electrified running lines) 30 metres from the beginning of the speed restriction, on the right-hand side of the line as seen from approaching trains. The reverse side of the board is painted reflective white to indicate the end of the speed restriction in the opposite direction.
- 1009.9.2 In the case of various speed restrictions on curves over short distances where the number of curves do not exceed five and the distance over which the speed restrictions applies does not exceed two kilometres, the lowest speed of the group is made applicable and the boards as indicated in subclause 1009.9.1 are erected at each end of the group only.
- 1009.9.3 Where it is necessary to restrict the speed of trains through a station or yard, or over a considerable distance, a permanent-speed-restriction board is erected 30 metres short of the point from where the speed restriction begins. A rectangular board is erected adjacent to the permanent speed restriction board and indicates in black letters or figures the extent of the length of the restriction. The front of the notice board is painted yellow and the reverse side white. At the end of the length of the speed restriction a derestriction board is erected.
- 1009.9.4 Where points are situated on a curve and this be the reason why a speed restriction over the points must be observed, or where there are unequal-split points within a running line, two speed-restriction boards on the same post are provided 30 metres from the point thus –



The upper board indicates the maximum permissible speed over the through line, and the lower board the maximum permissible speed for the turnout. In the case of equal-split points within a running line, a single speed-restriction board is erected. In the facing direction a board for each line is provided and, where necessary, a black arrow indicating to the line concerned, is painted on the board. The reverse sides of the boards are painted black. (Where permanent speed-restriction boards are provided in accordance with subclause 1009.9.3, speed-restriction boards for the points, may not be necessary.)

1009.9.5 Where, owing to local conditions, it is not possible to erect a permanent speed-restriction board 30 metres from the point from which the speed restriction begins, it must be so erected that it gives maximum visibility to the driver of an approaching train.

1009.10 Speed table

1009.10.1 A ready means of calculating the speed of a train is to divide 1800 by the number of seconds taken to travel half a kilometre.

1009.10.2 The following table shows the speed in kilometres per hour, giving seconds taken in travelling half a kilometre:

Time Seconds per 0,5 km	Speed. Kilometres per hour	Time. Seconds per 0,5 km	Speed. Kilometres per hour
15	120	34	53
16	112	35	52
17	106	36	50
18	100	37	49
19	95	39	46
20	90	41	44
21	86	43	42
22	82	45	40
23	78	47	38
24	75	50	36
25	72	53	34
26	69	56	32
27	67	60	30
28	64	65	28
29	62	70	26
30	60	75	24
31	58	80	22
32	56	90	20
33	55	100	18

1009.11 Trains/vehicles being propelled

1009.11.1 When a train is being propelled in accordance with train working rule No. 199, the speed must be reduced to ensure safety, especially when the train approaches curves and cuttings where permanent-way personnel may be at work, as well as level-crossings and such other places where employees or other persons may be on or near the track.

1010.0 CONVEYANCE OF PASSENGERS AND RUNNING OF PASSENGER AND MIXED TRAINS

1010.1 Passenger trains must receive special attention

1010.1.1 Passenger trains, must receive special attention and everything practicable must be done by the train and station personnel concerned to ensure punctuality. Train-control officers must keep the central operating office constantly informed, without being asked therefore, of the progress of passenger trains over sections or through areas which they control, especially when they are running late, so that the information may be furnished to depot and junction stations and locomotive depots concerned and the necessary arrangements may be made beforehand.

1010.2 Void

1010.3 Connecting stations must be advised when trains are running late

1010.3.1 When a passenger or mixed train, which has to make a connection, is running late, the train manager must arrange that details of the number, class and destinations of passengers be furnished to the station from which the connecting train starts.

1010.4 Method of dealing with passengers, luggage and mail bags

1010.4.1 Station personnel must direct passengers to the part of the platform or line where the class of coaches, in which they intend travelling, usually come to a standstill.

1010.4.2 Train managers must promptly attend to the entraining and detraining of passengers. This is particularly necessary where there are no platforms.

- 1010.4.3 Station personnel must timeously warn, prior to the arrival or passage of a train, intending passengers and other persons, waiting at a platform, or alongside a running line where there is no platform, to stand well clear of the edge of the platform or from the running line where there is no platform, until the train has come to a standstill or has passed. Intending passengers must be warned furthermore to stay away from passenger coaches in motion until they have come to a standstill.
- 1010.4.4 When passenger or mixed trains must cross where there is only one platform or no platform, train-control officers, train managers and other employees concerned must do everything possible to specially warn or have passengers and other persons concerned warned.
- 1010.4.5 Luggage and parcels must not be left within two metres of the edge of the platform. Luggage barrows, not in use, must be kept close to the rear end of the platform, and, if necessary, secured to prevent them from moving.
- 1010.5 Trains which are booked to stop only if there are passengers who must entrain or detrain**
- 1010.5.1 Train managers must advise drivers whether or not there are passengers for conditional stopping places.
- 1010.5.2 When a train approaches a conditional stopping place, the train manager must display a danger or "all-right" hand signal to the driver, according to whether or not there are passengers to alight. If he was not advised by the train manager that there are passengers that must alight, the driver must stop his train at the conditional stopping place.
- 1010.5.3 When a train approaches a conditional stopping place, the driver must sound one long whistle. While approaching or running through the place, he, and the train manager must keep a good lookout for passengers who may desire to join the train. The driver must obtain a definite signal from the train manager whether or not the train may run through. If a definite "all-right" hand signal is not obtained, or if the driver has obtained such a hand signal but passengers desiring to join the train are noticed by him, he must stop.
- 1010.5.4 When handing over trains at depots and elsewhere, train managers must give to the persons relieving them particulars of passengers for conditional stopping places beyond.
- 1010.6 Passenger and mixed trains must not depart before time**
- 1010.6.1 Trains advertised to the public must not depart from advertised stopping places before the time shown in the working time tables.
- 1010.6.2 A train which is running late, must depart at the earliest possible moment after completion of station and other duties, and must not be held for the full announced stopping time unless the stopping time is also intended for passengers to obtain meals.
- 1010.7 Use of warning bells**
- 1010.7.1 At terminal stations one beat on the warning bell, where provided, must be given five minutes prior to the departure of a passenger train, and two beats when the train is about to depart. Where trembling bells are used, one ring, for about six seconds, must be given five minutes before departure time, and two rings, for about six seconds each, with a pause of two seconds between rings, when the train is about to depart.
- 1010.7.2 At intermediate stations, when a passenger train is announced to stop for five minutes or longer, one beat on the bell must be given a reasonable time before departure and two beats when the train is about to start. The bell must not be sounded when a train is announced to stop for a period of less than five minutes.
- 1010.8 Points of stoppage of passenger and mixed trains**
- 1010.8.1 Passenger and mixed trains must, whenever possible, be stopped with the passenger coaches opposite a platform, station building, or shelter, as the case may be.
- 1010.9 Passengers must alight in time and at the correct place**
- 1010.9.1 Except in the case of commuter trains, passengers must be warned by the train manager when approaching their destinations.
- 1010.9.2 Except in a case as provided in subclause 1010.9.4, the station official in charge, or his deputy, must ensure that all passengers have detrained on arrival at the station where the train terminates its journey, and prior to the passenger coaches being shunted.
- 1010.9.3 Passengers travelling to places at which the train does not stop, or to places on branch lines accessible only from a junction, or to places beyond the station at which the train terminates its journey, must be advised beforehand by the train manager at which station they must change. This employee must also ensure when practicable, that such passengers actually alight at the proper place.

-1010.9.4 Passengers in long-distance trains arriving at a terminal station late at night or in the early morning, and who have reached their destination, may be allowed to remain in the passenger coaches until 06:30, provided the passenger coaches are not proceeding beyond the station before 06:30. The passenger coaches must be placed in a suitable position. Prior to shunting the passenger coaches at 06:30 or thereafter, or before they are forwarded, it must be ensured that all passengers who have reached their destination have detrained.

1010.10 Locomotives for important passenger trains

1010.10.1 Officials in charge of locomotive depots must see that locomotives booked to work important passenger trains are specially examined and are in good order before leaving the shed. They must also see that the locomotive personnel appointed to work such trains are experienced and capable and that they are well acquainted with the line.

1010.11 Passenger and empty passenger-coach trains stopping at places where they are not scheduled to stop

1010.11.1 Everything must be done to avoid that passengers boarding a wrong train when it stops alongside a platform at which it is not scheduled to stop.

1010.11.2 Where there are controlled signals, and the line ahead is occupied so that a passenger train which is not scheduled to stop, or an empty passenger-coach train, will have to stop alongside the platform, the train must, where practicable, be held back at the controlled signal short of the platform until it can proceed without stopping alongside the platform.

1010.11.3 If a passenger train stops alongside a platform at which it is not scheduled to stop, the train personnel must be on the alert and do everything in their ability to inform awaiting passengers. The train manager must alight from the train immediately, and announce in a loud, distinct voice the destination of the train and the names of the places where it must stop or that the train is not conveying passengers, as the case may be. Before the train departs, the prescribed hand signals and, where applicable, bell signals as prescribed for the particular type of train, must be exchanged.

1010.11.4 Before an empty passenger-coach train departs from a station or depot, the doors of all the passenger coaches must be locked and all the windows closed. Passengers must not be allowed to travel in these passenger coaches.

1010.12 Crossing of passenger trains at stations where there is one platform only

1010.12.1 Where a passenger train is scheduled to stop at a station where there are one or more platforms, the train must be admitted alongside a platform. When passenger trains, which are both scheduled to stop at a station, must cross where there is one platform only, the train which arrives first must be admitted on the platform line. After all the passengers who have to detrain or entrain, have done so, and a clear understanding are reached with the driver and the train manager, the train must set back and be readmitted on a non-platform line so that the opposing trains can be admitted on the platform line.

1010.12.2 In the case of a train which is hauled by a locomotive, a train manager or other competent employee must, during the propelling movement, in the direction of the movement, travel on the leading vehicle or precede ahead [see train working rule No. 134(4)]. In addition protection must be afforded in accordance with train working rule No. 220(1)(b), where applicable. When taking up a suitable place to display the necessary hand signals to the driver, the train manager must comply with the provisions of train working rule No. 132 or 133, as the case may be. In the case of a motor-coach train, the instructions for the propelling of the train as contained in the local appendix, must be complied with.

1010.12.3 Unless the train can be readmitted by means of a fixed signal, the train manager, or conductor (Commuter Services) in the case of a motor-coach train must admit the train by means of the prescribed hand signal which must be displayed at the facing points.

1010.12.4 After the train has been readmitted, the train manager or conductor (Commuter Services), as the case may be, must comply with train working rule No. 209(2), except at a station with colour-light signals. If, in the case of a non-interlocking station, the train manager or conductor (Commuter Services) has admitted the train himself, he must, before displaying the clearance-mark hand signal, reset and lock the points for the platform line.

1010.13 Delays to be promptly reported

1010.13.1 Train-control officers must promptly report to the central operating office all delays to passenger trains at places under their control, and drivers' assistants must record all such delays fully and accurately in their journals. If a passenger train is delayed 15 minutes or more at any place, the central operating office must be advised by telegram or telephone, and then by means of a full report in writing.

1010.14 Conveying of passengers on goods trains

1010.14.1 Except in the case of Spoornet personnel who are travelling on duty, no passengers including scholars may travel on goods trains, except where specially authorised by the Chief Executive (Spoornet).

- 1010.15 Conveyance of dignitaries**
- 1010.15.1 When a special train must run for the conveyance of dignitaries, the necessary special instructions, for the running of the train which must be complied with, will be issued by the Chief Executive (Spoornet).
- 1011.0 VOID**
- 1012.0 VOID**
- 1013.0 TRANSPORT OF EXPLOSIVES AND OTHER DANGEROUS GOODS**
- 1013.1 Identification of vehicles**
- 1013.1.1 Vehicles containing dangerous goods are identified by placards for dangerous goods.
- 1013.1.2 The placards shall remain displayed on a vehicle until the dangerous goods have been removed in their entirety and the vehicle has been certified as clean.
- 1013.1.2.1 Dedicated vehicles may retain their placards when they are certified clean.
- 1013.1.3 When an empty vehicle displaying a placard for dangerous goods must be marshalled on a train, it is subjected to the instructions applicable to loaded vehicles as far as compatibility of the product with other commodities and/or separation from other vehicles are concerned.
- 1013.2 Special attention must be afforded to the transit of explosives**
- 1013.2.1 A train conveying explosives, must be despatched without avoidable delays, and unnecessary detention, especially at inhabited areas, must be avoided.
- 1013.2.2 The central operating office must afford special attention to the transit and advising forward of explosives, and each intermediate train-control office must be advised in good time of a train conveying explosives.
- 1013.3 Explosives: Transport groups that may not be conveyed together**
- 1013.3.1 Vehicles conveying explosives of transport group 6A, 10, 16, or 18, must not be part of a train conveying other explosives, except that transport groups 6A and 10 may be conveyed by the same train. The different transport groups may/must therefor be conveyed as follows –
- 1013.3.1.1 transport groups 1, 2, 3, 4, 5, 6, 7, 7A, 8, 9, 11, 12, 13, 15 and 17 – same train;
- 1013.3.1.2 transport groups 6A and 10 – same train;
- 1013.3.1.3 transport group 16 – alone; and
- 1013.3.1.4 transport group 18 – alone.
- 1013.4 Maximum permissible mass**
- 1013.4.1 The maximum gross mass of explosives that may be conveyed by one train, is as follows –
- 1013.4.1.1 by special explosives train, i.e. a goods train running exclusively to convey explosives, ammonium nitrate excluded: 600 tons;
- 1013.4.1.2 by special explosives train, i.e. a goods train running exclusively to convey ammonium nitrate (transport group 17): 1 500 tons;
- 1013.4.1.3 by ordinary goods train: Transport group 17 (ammonium nitrate)(alone): 500 tons, other transport groups: 110 tons; and
- 1013.4.1.4 by mixed train (where there are no ordinary goods trains): 10 tons.
- NOTE:** *These gross masses referred to in this subclause are the masses of the explosives and their containers and are exclusive of the tare of the conveying vehicles.*
- 1013.5 Marshalling of vehicles containing explosives**
- 1013.5.1 Trains conveying explosives must be marshalled in the following manner:
- 1013.5.1.1 Special explosives trains**
- 1013.5.1.1.1 locomotive
2 loaded or empty vehicles (runners)
Loaded explosives vehicles
Empty explosives vehicles
2 empty vehicles (runners)

- 1013.5.1.2 Special explosives trains conveying ammonium nitrate only**
- 1013.5.1.2.1 locomotive
2 loaded vehicles (runners)
loaded vehicles with ammonium nitrate
2 loaded or empty vehicles (runners)
- 1013.5.1.3 **Ordinary goods trains** – Explosives vehicles must be marshalled as near to the locomotive of the train as possible. At least two vehicles must be between the locomotive and an explosives vehicle, except in a private siding where the runners may be reduced to one vehicle.
- 1013.5.1.4 **Mixed trains** – Explosives vehicles must be separated from the locomotive and from any passenger coach by at least two vehicles.
- 1013.5.2 Restrictions**
- 1013.5.2.1 Vehicles loaded with lime, forage, heavy machinery, projecting timber, rails and telephone poles and mechanical refrigerator wagons must not form part of a special explosives train.
- 1013.5.2.2 Vehicles labelled with hazard-class labels class 2 to class 9 must not form part of a train conveying explosives vehicles.
- 1013.5.2.3 When explosives vehicles must be conveyed on an ordinary goods or mixed train it must be separated by at least one vehicle from vehicles loaded with lime, forage, heavy machinery, projecting timber, rails or telephone poles.
- 1013.5.2.4 Mechanical refrigerator vehicles must not form part of a train conveying explosives.
- 1013.5.2.5 Except in the case of vehicles type FP-5 loaded with explosives of transport group 17 (ammonium nitrate) vehicles with end-of-wagon cushioning devices must not form part of a train conveying explosives.
- 1013.5.2.5.1 Vehicles type FP-5 loaded with ammonium nitrate must be marshalled in front of other vehicles fitted with end-of-wagon cushioning devices and must be separated therefrom by at least two vehicles.
- 1013.5.3 Explosives vehicles and vehicles with other dangerous goods on the same train**
- 1013.5.3.1 Except with the permission in writing of the Chief Inspector of Explosives, vehicles containing explosives shall not be placed on the same train as petrol tank wagons (loaded or empty).
- 1013.5.4 Wagons dedicated to the transport of explosives must not form part of a combined train.
- 1013.6 Examination en route of vehicles containing explosives or dangerous goods**
- 1013.6.1 Whenever opportunity offers en route the driver's assistant must examine such vehicles. Should he be in doubt as to the serviceworthiness of any vehicle, he must at once confer with the driver, and the latter, in the absence of wagon maintenance personnel must decide whether or not the vehicle should be detached.
- 1013.6.2 To enable the driver's assistant to examine a special explosives train en route, time has been allowed in the schedules of special explosives trains. The driver's assistant must, prior to departure of a special explosives train from these places, examine on either side all the vehicles to ensure that each vehicle is in good running order. Special attention must be given to axle boxes and if there are any signs of heating, the driver must attend to it immediately.
- 1013.6.3 Before departure of a special explosives train from an intermediate examination place, the driver's assistant must inform the train-control officer that the train has been examined, the time it has taken and that the vehicles are in good order. The train-control officer must endorse the train register accordingly.
- 1013.7 Examination of and access to explosives**
- 1013.7.1 No person, except a government inspector of explosives or a person duly authorised by him, whether acting on behalf of the customs authorities, or otherwise, shall open any package of explosives on premises of Transnet.
- 1013.7.2 A government inspector of explosives may inspect consignments of explosives and the vehicles in, or trains by which they are being conveyed, provided that in so doing he does not unnecessarily impede the traffic. The personnel must give government inspectors of explosives all information and assistance required.
- 1013.7.3 Persons, other than government inspectors of explosives, not actually engaged in or supervising the loading or unloading of wagons containing explosives, are prohibited from having access to such wagons or remaining in the vicinity thereof.

1013.8 Conveyance of passengers by trains conveying explosives

- 1013.8.1 Except in the case of mixed trains and a person tending livestock on a train, passengers must not be allowed to travel by trains conveying explosives.
- 1013.8.1.1 The train assistant and those concerned must ensure that a person tending livestock is duly authorised to accompany the livestock.
- 1013.8.2 Government inspectors of explosives and train personnel, when travelling on duty, may be allowed to travel by trains conveying explosives.
- 1013.8.3 No person other than a government inspector of explosives or a duly authorised Spoornet employee must be allowed to travel in a vehicle containing explosives or other dangerous goods unless in possession of written authority from the Chief Executive (Spoornet).

1013.9 Shunting with explosives and other dangerous goods

- 1013.9.1 The utmost caution must be exercised when shunting, marshalling, or coupling vehicles containing explosives, empty explosives vehicles, vehicles loaded with dangerous goods like flammable-liquid drums, full or empty, tank wagons and vehicles with containers (full or empty) for flammable and other dangerous liquids, hereafter called "dangerous" vehicles. These vehicles must not be detached from a shunting movement until it has been brought to a standstill, and at least one vehicle (empty or loaded with non-flammable goods) must separate such vehicles and the locomotive during shunting operations. Loose or fly shunting is strictly forbidden (see train working rules Nos. 140, 141 and 144).
- 1013.9.2 When shunting with "dangerous" vehicles or on a line on which such vehicles are standing, the brakes of all the vehicles attached to the locomotive, must be coupled throughout.
- 1013.9.3 When shunting movements have to be made with a train with "dangerous" vehicles attached, these vehicles must not be allowed to remain attached to that portion of the train which is being shunted. If possible, the "dangerous" vehicles must be so marshalled that they can remain stationary with the rear portion of the load whilst shunting with the other portion is in progress. If this is not possible they must be placed in a safe position on another line, and re-attached when all other shunting movements have been completed.
- 1013.9.4 When it is necessary to attach "dangerous" vehicles to other vehicles during the marshalling of a train, the "dangerous" vehicles must not be shunted until all the other vehicles have been correctly marshalled. The vehicles which are to be marshalled in front of or behind the "dangerous" vehicles, as the case may be, must remain attached to the locomotive when attaching the "dangerous" vehicles.

1013.10 Labelling of empty explosives wagons

- 1013.10.1 Private-siding owners or the officer who delivers explosives are responsible to label empty explosive vehicles.
- 1013.10.2 Explosives vehicles which are not labelled, must not be removed.

1013.11 Protection of vehicles with explosives or dangerous goods at stations and in yards

- 1013.11.1 When a vehicle containing explosives or other dangerous goods arrives at or is detained at a station or in a yard, it must be placed in the most suitable isolated position and be secured by handbrakes and scotches. The points giving access to the line on which the vehicle is staged must be set against incoming traffic and, if it is an explosives siding, it must be locked in that position by means of a special lock with its own key. The official in charge or his authorised deputy must keep the key and exercise proper control thereof.
- 1013.11.2 Whenever it may appear necessary for security, the operations manager may authorise that a watchman or watchmen be appointed to guard the explosives.
- 1013.11.3 Explosives must not be stored in a goods shed or any other building but must be kept in the vehicle in which it has arrived or in the vehicle in which it is to be conveyed to a further destination.

1013.12 Locomotives must not stand near wagons

- 1013.12.1 If at all possible, locomotives must not be brought to a standstill next to or in close proximity of vehicles containing explosives or other dangerous goods.

1013.13 Lights, fires, cellular telephones and smoking prohibited

- 1013.13.1 Explosives or flammable liquids must not be loaded or unloaded within 30 metres from a fire, naked light, flame or cellular telephones. A paraffin hand lamp, naked light of any kind or cellular telephone must not be taken into a vehicle containing explosives or flammable liquids. A fire must not be lighted or a naked light or flame carried to within 30 metres of a wagon containing explosives or flammable liquids, or premises where explosives or flammable liquids are stored.

1013.13.2 Smoking is strictly prohibited within 30 metres of a vehicle or shed containing explosives or flammable liquids or at a place where explosives or flammable liquids are being loaded or unloaded.

1013.13.3 No person, whilst inside a vehicle containing explosives or flammable liquids or which is being loaded with, or from which explosives or flammable liquids are being unloaded, shall wear boots or shoes unless goloshes are worn over them, nor shall any person have with him whilst inside such vehicle any tobacco, pipe, cigarettes, matches or any other means of producing a naked light or flame or a cellular telephone.

1013.14 Admittance and protection of special explosives trains

1013.14.1 Except in an emergency, special explosives trains must not be admitted to platform lines at places where they are scheduled to stop for crossing purposes, waiting section, etc..

1013.15 Action to be taken when unusual circumstances arise with regard to explosives

1013.15.1 Where delay occurs in the delivery of explosives, or where they are considered unsafe for handling or transport, or if any unusual circumstances arise in the handling, transport or delivery thereof, the vehicles must be placed in the safest place available and particulars of the circumstances and action taken must be faxed to the Chief Inspector of Explosives, the Chief Executive (Spoornet) and the operations manager controlling the forwarding and receiving places. The disposal instructions of the Chief Inspector of Explosives must be carried out.

1014.0 CONVEYANCE OF RADIOACTIVE MATERIAL

1014.1 Precautionary measures against contamination

1014.1.1 Radioactive material emits invisible rays which may be harmful and dangerous to life, unless adequate precautionary measures are taken to safeguard those handling the commodity. Although the danger associated with this material can be restricted by special methods of packing, the safety barrier against irradiation is distance, and all concerned must observe the precautionary requirements on the packs containing radioactive material.

1014.1.2 Radioactive materials conveyed by rail must be labelled and accompanied by a consignment note and declaration for explosives and other dangerous goods (form T175) or disembarkation, delivery and forwarding order and declaration for explosives and other dangerous goods.

1014.2 Definition and handling of radioactive materials – Radioactive materials are divided into three categories, i.e. categories I, II, and III, and are accepted for conveyance only by prior arrangement with Spoornet, and the following instructions for the conveyance of the respective categories must be observed:

1014.2.1 Category I radioactive materials

1014.2.1.1 Packs with category I radioactive materials are conveyed in a wagon or in a road vehicle.

1014.2.1.2 Each pack of category I radioactive material must bear the cautionary label for that category material, and must, in addition to that, be labelled or stencilled as follows:

DO NOT HANDLE UNNECESSARILY – TO BE OPENED BY CONSIGNEE ONLY

MOENIE ONNODIG HANTEER NIE – MOET NET DEUR GEADRESSEERDE OOPGEMAAK WORD

NOTE: *This classification is based on recommendations of the International Atomic Agency as set out in the Regulations for the Safe Transport of Radioactive Materials (Safety Series No. 6, 1973) Revised Edition as Amended).*

1014.2.1.3 Category I radioactive material is packed in such a manner that it can be handled safely without special precautions, but the normal care must still be exercised.

1014.2.1.4 Category I radioactive material is conveyed by a passenger or mixed train or road transport service passenger vehicle, subject to the availability of suitable space.

1014.2.2 Category II radioactive materials

1014.2.2.1 Category II radioactive materials may be conveyed in a wagon or in a road vehicle, provided it is positioned at least 1,5 m from any person.

1014.2.2.2 Each pack of category II radioactive material must bear the cautionary label for that category material, and must, in addition to that, be labelled or stencilled as follows:

DO NOT HANDLE UNNECESSARILY – DO NOT LOAD OR STORE WITHIN 1,5 METRES OF PHOTOGRAPHIC MATERIAL AND MAIL BAGS – TO BE OPENED BY CONSIGNEE ONLY.

MOENIE ONNODIG HANTEER NIE – MOENIE BINNE 1,5 METER VANAF FOTOGRAFIESE MATERIAAL EN POSSAKKE AF BÈRE OF LAAI NIE – MOET NET DEUR GEADRESSEERDE OOPGEMAAK WORD.

1014.2.3 Category III radioactive materials

1014.2.3.1 Category III radioactive materials may be conveyed in a road vehicle only when it is positioned more than 3 m from any persons, or in a wagon, preferably an open steel wagon on a goods or mixed train, but not in a livestock wagon.

1014.2.3.2 Packs of category III radioactive materials must not be loaded into a vehicle together with mailbags, photographic material, explosives or other dangerous good or foodstuffs. The packs must be placed in the centre of the vehicle, equidistant from the sides, and must be properly secured to prevent movement or damage.

1014.2.3.3 Each pack of category III radioactive material must bear the cautionary label for that category material, and must, in addition to that, be labelled or stencilled to indicate the safe distance barrier as follows:

UNDER NO CIRCUMSTANCES LOITER WITHIN TWO METRES OF THIS CONTAINER FOR LONGER THAN 30 MINUTES.

MOET ONDER GEEN OMSTANDIGHEDE LANGER AS 30 MINUTE BINNE TWEE METER VAN HIERDIE HOUER TALM NIE.

1014.2.3.4 Consistent with the marshalling instructions, a vehicle containing category III radioactive material must be separated from a single locomotive or any vehicle conveying livestock and/or passengers, by at least one wagon.

1014.2.3.5 A wagon with category III radioactive material must be properly sheeted. It must be labelled on both sides with the applicable dangerous goods labelling, as well as with the usual "DANGER" wagon label (T41). In addition, labels T25, which bear the undermentioned wordings must be affixed to both sides of the wagon. The sheeting of the wagon must be done in such a manner that the labels do not or cannot become obscured:

**RADIOACTIVE MATERIAL : DO NOT LOITER NEARBY
RADIOAKTIEWE MATERIAAL : MOENIE NABY TALM NIE**

1014.2.3.6 Whenever possible, category III radioactive material must be loaded in a direct wagon to destination but, if this cannot be arranged, it must be loaded to the furthest possible concentration depot. The destination station must be advised of the despatch of the traffic, particulars of the invoice and wagon number being given. If the traffic is not loaded in a direct wagon to destination, particulars of despatch must be forwarded to the depot to which the wagon is labelled, and by that depot to the next depot and to the destination station.

1014.2.3.7 When a wagon with category III radioactive material forms part of a train, or is to be attached to it, the official in charge must take steps to ensure that the driver's assistant is notified. The driver's assistant, in turn, must advise the driver, and also the driver's assistant or official in charge, as the case may be, to whom he hands over. The official in charge at each depot station on the journey must advise the driver's assistant taking over, of the presence on the train of such a vehicle, and the driver's assistant of each train must advise the driver. In each case of a vehicle with category III radioactive material is being conveyed with a train worked without a driver's assistant, officials in charge of depot stations and marshalling yards must arrange that drivers are being advised.

1014.2.3.8 At the depot where category III radioactive material is being transhipped, it must, if practicable, be unloaded first and placed in an isolated position where it must be kept under constant surveillance. If necessary, a security official or police officer, where one is available, must guard the consignment, but he must remain at a distance of more than 2 metres from it. The radioactive material must be the last commodity to be loaded into the outgoing wagon, and must be placed in the centre of the wagon, equidistant from the two sides. The vehicle must be labelled in the same way as was the incoming wagon, and properly sheeted.

1014.3 Procedure that must be followed if a wagon containing radioactive material, becomes defective

1014.3.1 If a wagon with category III radioactive material becomes defective, and wagon maintenance personnel work on it for a period of longer than 30 minutes, at a distance of less than 2 metres from the radioactive material, it must be unloaded and placed in an isolated position, where it must be kept under constant guard in accordance with the instructions in subclause 1014.2.3.8.

1014.3.2 After repairs the consignment must be reloaded and placed in the same position as it was before. If the contents of the wagon must be transhipped, an open steel wagon, which must be labelled in the same way as was the incoming wagon and properly sheeted, must be used. Advice of the transhipment of the consignment must be given to the destination station and, if the wagon is labelled to a tranship depot, to that depot.

1014.4 Arrival at destination

1014.4.1 At the destination station the radioactive material must, if practicable, be unloaded first, and placed in an isolated position, where it must be kept under constant guard in accordance with the instructions in subclause 1014.2.3.8, until delivery to the consignee has been effected.

1014.5 Steps to be taken in abnormal circumstances with regard to radioactive materials

- 1014.5.1 If the inside containers break or, if vehicles with radioactive material are damaged in an accident, or caught fire, the vehicles and any loose radioactive material must be isolated, as far as possible, so that nobody may come into contact with it and no persons must be allowed to remain close to the vehicles or their contents needlessly, until qualified persons are available to supervise handling.
- 1014.5.2 If it is likely that the inside container is damaged, great care must be exercised to prevent contact with or inhalation of radioactive material by any person.
- 1014.5.3 Vehicles, buildings, areas or equipment in which radioactive material has been spilled must not again be used until decontaminated by qualified persons.
- 1014.5.4 The circumstances must promptly be reported to the central operating office who must report it telephonically to the Atomic Energy Corporation of South Africa Limited, Pretoria, to enable an official of the Corporation to be deputed to deal with the material. In addition, all Spoornet's departments concerned, including the Chief Executive (Spoornet), the operations managers concerned and the SA Police Services must be advised promptly by the most expeditious means. The emergency plan must be activated.

1014.6 General

- 1014.6.1 Radioactive material may not be conveyed in the passenger compartment of any vehicle.
- 1014.6.2 The number of categories II and III packs that may be stored together or conveyed together in any vehicle must be so limited that the sum of the transport indices (i.e. the maximum dose rate in milliröntgen per hour at 1 metre as given on their labels), does not exceed 50.
- 1014.6.3 The Atomic Energy Corporation of South Africa Limited is by statute (Act No. 92 of 1982, as amended) responsible for regulatory control of all radioactive material in South Africa.

1015.0 EXAMINATION AND TRANSPORTATION OF TANK WAGONS USED FOR FLAMMABLE OR CORROSIVE LIQUIDS

- 1015.1 The classification of commodities conveyed by tank wagons is comprehensively expounded in SABS Code 0228. Labels, in accordance with SABS Code 0232, shall at all times be affixed to wagons containing dangerous goods.

1015.2 Warning

1015.2.1 Flammable liquids

- 1015.2.1.1 These commodities, in addition to being highly flammable, can also be extremely poisonous when swallowed or inhaled. All concerned must see that no person is exposed to these liquids.

1015.2.2 Corrosive liquids

- 1015.2.2.1 These commodities are of a corrosive nature and contamination through contact can produce serious injury. In the event of any of these chemicals coming into contact with the body, eyes or clothes of any persons, the action as expounded in the following subclauses 1015.2.2.2 to 1015.2.2.6, must be taken:

1015.2.2.2 The contaminated portion of the skin must be washed immediately with copious quantities of the cleanest water available.

1015.2.2.3 All contaminated clothing must be removed.

1015.2.2.4 The eyes must be thoroughly flooded with clean running water (warm if possible) for about 20 minutes.

1015.2.2.5 After receiving treatment as prescribed above, the person affected must receive immediate medical attention or be removed to hospital, whichever is the quickest.

1015.2.2.6 When leaking wagons have to be handled, as for instance in the case of derailments or accidents, full use must be made of the prescribed personnel protective clothing and the emergency plan activated.

1015.3 The instructions in subclauses 1015.4 to 1015.12 apply to flammable and corrosive liquid-tank wagons, whether loaded or empty (see clause 10006.0 for special additional instructions regarding anhydrous ammonia and liquefied petroleum gas-tank wagons).

1015.4 Examination before despatch by train

1015.4.1 Before tank wagons are placed in position for loading purposes, the brake and other running gear, the refuel mechanism and outlet valves, must be examined and all defects repaired.

1015.4.2 The employee responsible for the clearance of tank wagons from the loading point must visually examine the wagons before they are moved. It must be ensured that the tanks, valves, etc. are not leaking or that vapour is not escaping.

- 1015.4.3 Where wagon maintenance personnel are available at the starting point, the wagons must also be examined by them and for this purpose wagons must be safely placed if overhead electric wires are present. Where wagon maintenance personnel are not available at the starting point, the wagons must be examined at the nearest wagon maintenance depot.
- 1015.4.4 The consignor must ensure that the valves of tank wagons used for conveying flammable liquids, which have bottom outlet valves, are not leaking and that the valve cap is securely replaced. If any leakage is observed which cannot be rectified by wagon maintenance personnel, the tank wagon(s) must be safely placed and the central operating office advised accordingly.
- 1015.4.5 Users of liquefied petroleum gas tank wagons (type XV) must complete in duplicate and hand to the station official in charge, a certificate to the effect that no leaks can be detected in the tank wagon concerned. Such a certificate must be submitted in each instance when a liquefied petroleum gas tank wagon is required to be moved from a user's siding, whether the tank wagon is loaded or not. The tank wagon must not be accepted for conveyance without receipt of the covering declaration. A copy of this certificate must be filed and retained for record purposes at the forwarding station.
- 1015.4.6 Before despatching tank wagons, the handbrakes must be in good working order and the vehicle must be in a thoroughly serviceworthy condition and certified as such by wagon maintenance.
- 1015.5 Shunting with tank wagons**
- 1015.5.1 Before a tank wagon is moved, the employee in charge of the movement must examine the vehicle and ensure that it is not being loaded or emptied and that it can be moved with safety. Tank wagons must be shunted with caution and the provisions of subclause 1013.9 must strictly be observed [see subclause 1015.10 and train working rule No. 127(1)].
- 1015.6 Wagon maintenance personnel must be advised**
- 1015.6.1 The official in charge of each depot station en route must see to it that wagon maintenance personnel are advised prior to the arrival of tank wagons so that these employees may be prepared to examine the vehicles.
- 1015.7 Driver's assistant and driver to be advised**
- 1015.7.1 When tank wagons are attached to a train or must be attached to it, the official in charge must advise the driver as well as the official in charge to whom he hands over. Employees to perform shunting duties with the train, must also be advised.
- 1015.7.2 If there are tank wagons on a train the driver's assistant must examine such wagons as frequently as possible en route.
- 1015.7.3 Under no circumstances whatsoever may any person use a lighted hand lamp when examining tank wagons and come close to tank wagons with an ordinary lighted lamp in their possession.
- 1015.8 When tank wagons to be detached from train**
- 1015.8.1 If a tank wagon shows signs of leakage or escape of vapour, or should there be any mechanical running defect on such wagon, the vehicle must be detached from the train, placed in a suitable siding as far as possible, and in all cases not nearer than 30 metres from naked lights and fires. The incident must be reported to the central operating office and the emergency plan activated. If the defective vehicle is detached at a station, it must be kept under close observation.
- 1015.8.2 If it is necessary to detach a tank wagon at an unmanned place, the driver's assistant must report the circumstances to the central operating office and they must activate the emergency plan. Particulars of the action taken by the wagon maintenance personnel must be recorded on the wagon label.
- 1015.9 Protection of tank wagons at stations and in yards**
- 1015.9.1 When tank wagons arrive or are staged at a station, the official in charge must instruct the employees concerned to take all necessary precautions to ensure safety. Such wagons must be placed in an isolated position and be secured by handbrakes and scotches. Protection must be afforded in accordance with the provisions of subclause 1013.11.
- 1015.10 Precautions against fire**
- 1015.10.1 Precautions to be taken by driver** – A driver of a train to which tank wagons are attached, must exercise great care. When flammable or corrosive liquids are being loaded or unloaded, an electric or diesel locomotive may not be moved closer than 15 metres from the line on which the tank wagons are standing.
- 1015.10.2 Void**

- 1015.10.3 Use of electric lights, portable radios, walkie-talkies and cellular telephones –**
- 1015.10.3.1 When using an electric hand lamp, torch, portable radio, walkie-talkie or cellular telephone, an employee may under no circumstances whatsoever switch it on or off within 15 metres from a tank wagon or container of any nature containing flammable or corrosive liquids or petrol installations. Electric hand lamps, torches, portable radios, walkie-talkies and cellular telephones may not be used within 15 metres from any place where the loading/unloading of flammable liquids are taking place.
- 1015.10.3.2 Smoking, fires and the use of naked lights are prohibited** – Smoking within 30 metres from a tank wagon or container of any nature containing flammable or corrosive liquids or petrol installations, is strictly prohibited. A fire must not be made or a naked light or flame be carried within 30 metres from the wagons, containers or installations.
- NOTE :** *The instructions in subclause 1015.10 are applicable on all flammables and corrosives.*
- 1015.11 Tank wagons derailed** – When tank wagons are derailed or damaged, see clause 10005.8 for action to be taken, and clause 10006.0 with regard to anhydrous ammonia and liquefied petroleum gas tank wagons.
- 1015.12 When tank wagons are to be forwarded to mechanical workshops**
- 1015.12.1 Particulars of examinations and/or tests carried out in mechanical workshops as well as at private firms are recorded on tank-test record plates which are affixed to tank wagons. After examination and testing, the date of the next examination must be inserted on the record plate before the tank wagon is released to traffic.
- 1015.12.2 When tank wagons are forwarded to the workshops for examination or repairs, the responsible mechanical official of the workshop concerned must be advised, immediately when the wagons arrive in the traffic yard.
- 1015.12.3 Officials in charge of workshops shall ensure that employees who work on loaded or empty tank wagons are informed of the hazards of the product which is/was conveyed in the tank wagon.
- 1015.12.4 Examination or repair work, which requires an employee to climb on top or to elevated positions on a tank wagon under electrified wires, is strictly prohibited (see clause 211.0 of the Electrical Safety Instructions).
- 1015.12.5 The internal examination of tank wagons must be undertaken in mechanical workshops only.
- 1015.12.6 Locomotives must not be allowed to enter a workshop area in which work of any nature is performed on a flammable or corrosive liquid tank wagon.
- 1016.0 MARSHALLING AND TRANSIT OF RAIL TRAINS**
- 1016.1 Definition**
- 1016.1.1 Rail wagon set:**
- 1016.1.1.1 A rail wagon set is a group semi-permanent coupled NPS-2 or NPS-6 wagons for the conveyance of rails longer than 36 metres on which the rails are clamped during transit by means of a clamping mechanism.
- 1016.1.2 Rail train:**
- 1016.1.2.1 A rail train is a train which consists solely or partially of rail wagon sets which, in the case of –
- 1016.1.2.1.1 NPS-2 wagons of a maximum of 30 wagons; and
- 1016.1.2.1.2 NPS-6 wagons of a maximum of 36 wagons.
- 1016.1.3 Bolster**
- 1016.1.3.1 A bolster is an inseparable unit consisting of two modified bogies and fitted with cradles and used to transport rails 36 metres long.
- 1016.1.4 Slinger**
- 1016.1.4.1 A slinger is a competent employee who must be conversant with the details of loading and unloading of long rails and accompanies a rail train during transit and is also responsible for the loading and unloading of rail trains outside welding workshops.
- 1016.2 A rail train as mentioned in this instruction, is a train consisting of one or more rail wagon sets.
- 1016.2.1 Rails of up to 36 metres in length must be considered as movable steel and handled as such.

- 1016.2.2 Rails of up to 36 metres can be conveyed in wagons, type SF, NPS-4 or NPS-5 wagon sets or other bolsters. In the event of rails up to 36 metres being conveyed by a train without a slinger, a maximum of two rail wagon sets or one NPS-4 or NPS-5 wagon set (maximum twelve axles) are permitted to be marshalled behind the locomotive.
- 1016.2.3 A slinger must accompany a rail train consisting of loaded rail wagon sets.
- 1016.3 Examination of rail wagon sets**
- 1016.3.1 Before loading a rail wagon set, the wagon maintenance personnel must examine all wagons for serviceworthiness, ensure that all couplings are secured and end frames, cradles and stanchions, where applicable, are placed in the correct position.
- 1016.3.2 After the rails have been loaded, the slinger or other authorised employee must examine the load of the rail train in accordance with the particulars of the notice regarding the transit of long rails and he must inspect each vehicle before departure of the rail train.
- 1016.4 Marshalling of trains conveying rails**
- 1016.4.1 The following instructions must be complied with regarding the marshalling of trains conveying rails:
- 1016.4.1.1 The running of rail trains must be announced by special train notice. The special train notice must specially draw attention to the way in which the train must be marshalled.
- 1016.4.1.1.1 Rail wagon sets must be marshalled in front of wagons conveying rails of up to 36 metres in length.
- 1016.4.1.1.2 No other type of wagon must be marshalled between the locomotive and the rail wagon sets and/or wagons conveying rails of up to 36 metres in length.
- 1016.4.1.1.3 No other type of wagon must be marshalled between the rail wagon sets and/or wagons conveying rails of up to 36 metres in length and the caboose of the slinger.
- 1016.4.1.1.4 In order to ensure that adequate brake power is available the average axle-mass load of a rail train must not exceed the limits laid down in instructions extant for each particular section concerned. Similarly, the minimum vacuum requirements and maximum speed restrictions in respect of braking, must be complied with for each particular section concerned.
- 1016.4.1.1.5 Empty or lightly loaded open bogie wagons may be attached to a rail train to bring the average axle-mass load within the prescribed limits. Such wagons must be loaded and marshalled in such a way that the slinger has an unrestricted view of the longitudinal movements of the rails.
- 1016.4.1.1.6 The load of a rail train must not exceed 7/8 of the maximum load of a goods train for the particular section(s) and the motive power concerned.
- 1016.5 Transit of rail trains**
- 1016.5.1 Normal goods train speed as laid down for the section concerned over which the train will run, must be maintained.
- 1016.5.2 The maximum permissible speed of a rail train on curves, is the normal maximum permissible speed for the curves reduced by 15 km/h.
- 1016.5.3 The maximum permissible speed of a rail train over points set for the turnout is 15 km/h in both the facing and trailing direction.
- 1016.5.4 Loads of rail trains must receive a thorough examination at all wagon maintenance depots en route by wagon maintenance personnel.
- 1016.5.5 A slinger accompanying a rail train must be in possession of a red flag, a hand-lamp fitted with a red shade only and where necessary two walkie-talkies. Where walkie-talkies are provided, the slinger must, before commencement of the journey, hand one walkie-talkie to the driver of the rail train.
- 1016.5.6 Whilst the rail train is in motion, the slinger must keep a sharp lookout on the train. When the train stops the slinger must avail himself of every opportunity to examine the train. For safe operation, longitudinal movement of rails should be limited to 230 mm. If circumstances arise that will adversely affect the safe running of the rail train, the train must be brought to a standstill at once.
- 1016.6 Unloading/loading of rail trains outside a welding workshop**
- 1016.6.1 Outside a welding workshop, a slinger is responsible for the unloading/loading of a rail train, and the trackmaster is responsible for the unloading/loading of rails which are conveyed on a train, other than a rail train.

1017.0 HAULAGE OF DEAD LOCOMOTIVES

1017.1 Definitions

1017.1.1 Dead locomotive – A dead locomotive is any one of the following four different types of locomotives:

1017.1.1.1 A steam locomotive without fire or which cannot move under its own power.

1017.1.1.2 An electric locomotive of which the pantograph(s) is/are in the down position.

1017.1.1.3 A diesel locomotive of which the engine(s) is/are not running.

1017.1.1.4 A motor coach of which the pantograph(s) is/are in the down position.

1017.1.2 Defective dead locomotive – A defective dead locomotive is a dead locomotive of any type of which the draw gear, main frame, bogie frames, wheels and any other associated running gear and other components which can or may influence the safe running of the locomotive, are incomplete, damaged or in such a condition that the safe running of the locomotive will or may be affected.

1017.1.3 Working dead locomotive – A working dead locomotive is a dead locomotive of any type of which the draw gear, main frame, bogie frames, wheels and all other associated running gear and other components which can or may influence the safe running of the locomotive, are complete, undamaged or in such a condition that the safe running of the locomotive cannot in any way be affected.

1017.1.4 Dead locomotive with braking power – A dead locomotive with braking power is an working dead electric or diesel locomotive which complies with the following requirements:

1017.1.4.1 The brake gear and brake system must be complete, undamaged and in working condition.

1017.1.4.2 The dead locomotive can and must be coupled to the train locomotive with the compressed-air supply coupled throughout and the brakes set up so that the dead locomotive is controlled by the train locomotive and will work together with the train brakes.

1017.1.4.3 The foregoing throughout coupling and setting up must be such that a parting in front of or behind the dead locomotive will cause the brakes of the dead locomotive as well as the brakes of all portions of the train to be applied and to remain applied.

1017.1.5 Dead locomotive without braking power – A dead locomotive without braking power is a working dead electric or diesel locomotive which does not have brakes that are controlled by the train locomotive and will not work together with the train brakes.

1017.1.6 Isolated locomotive – An isolated locomotive is an electric or diesel locomotive which is not dead but forms part of a combined electric or diesel locomotive set. It must, however, be so switched or coupled that it cannot deliver tractive effort. It must also comply with the requirements of a dead locomotive with braking power. For the purpose of these instructions an isolated locomotive is a dead locomotive with braking power.

1017.1.7 Train locomotive – A train locomotive is the locomotive (or multiple electric or diesel locomotive set) which hauls one or more dead locomotive(s), either with or without other vehicles on the train.

1017.1.8 Dead-section working – Dead-section working is the haulage by means of diesel or steam locomotives of trains with attached dead electric locomotives or motor coaches because the overhead power supply has failed or has been switched off.

1017.2 Circumstances under which these instructions are not applicable – Provided the conditions and requirements indicated are complied with, the instructions in this clause are not applicable to the following:

1017.2.1 The clearance of a failed or defective dead locomotive from an obstructed section to the first place where it can be detached. The person in charge at the scene, or the driver who undertakes the clearance when there is no one else in charge, must, however, attempt to apply the safety principles of the applicable instructions as far as practicable. He is responsible for the safety of the movement.

1017.2.2 The continued haulage of a failed locomotive of a multiple electric or diesel locomotive set which fails en route, and where it is possible, desirable and safe to complete the trip without detaching the failed locomotive unit en route. The failed locomotive must, however, comply with the requirements of a dead locomotive with braking power.

1017.2.3 The haulage of one or more working dead motor coaches – For train-composition purposes such a dead motor coach may be treated as an ordinary passenger vehicle. A driver (electric), or a technician, who is familiar with the particular type of motor coach must, however, first ensure that –

1017.2.3.1 the pantograph(s), is/are properly secured against raising;

1017.2.3.2 the vacuum brake is in a good working condition; and

1017.2.3.3 the handbrake is in a good working condition.

- 1017.3** **Circumstances under which these instructions are applicable** – With the exception of the cases referred to in subclause 1017.2, the instructions in this clause are applicable to the haulage of all dead locomotives between any two places for any purpose. The instructions are, therefore, also applicable to the following:
- 1017.3.1 The further haulage of a failed or defective dead locomotive from the place where it could have been detached after clearing an obstructed section of traffic.
- 1017.3.2 The haulage by trains of “spare” or “surplus” dead locomotives for operating purposes.
- 1017.3.3 The haulage by trains of dead locomotives for maintenance purposes.
- 1017.3.4 Dead-section working.
- 1017.3.5 The haulage, without other vehicles, of a group of combined electric or diesel locomotives for operating or maintenance purposes.
- 1017.4** **Trains which may haul dead locomotives** – With the following exceptions dead locomotives may be hauled by vacuum-brake goods trains only:
- 1017.4.1 Over branch lines without a goods-train service.
- 1017.4.2 In individual exceptional instances authorised by the Manager (Technical Support).
- 1017.4.3 By other trains on sections authorised by the Chief Executive (Spoornet) and which must then be reflected in the relevant working time book.
- 1017.5** **Loads of trains hauling dead locomotives**
- 1017.5.1 The load of a train hauling (a) dead locomotive(s) may not exceed the load (i.e. tonnage and axle length) laid down for the particular train locomotive(s) over the particular section. When the load of the train is calculated the tonnage and axle length of the dead locomotive(s) must be included with the load of the other vehicles on the train and indicated on the list of vehicles.
- 1017.5.2 For the calculation of train loads the following tonnage and number of axles must be used for dead locomotives:
- 1017.5.2.1 All steam locomotives: 200 tons for 8 axles.
- 1017.5.2.2 Electric and diesel locomotives: The actual tonnage of the particular class of locomotive for the number of driving axles (i.e. the number of traction motors).
- 1017.5.3 The tonnage and number of axles of electric and diesel locomotives which are used in a region and are regularly required for load-calculation purposes, must be indicated in the working time book.
- 1017.6** **Average axle-mass loads of trains hauling dead locomotives**
- 1017.6.1 The average axle-mass load of a train hauling (a) dead locomotive(s) may not exceed the maximum permissible average axle-mass load for the particular section.
- 1017.6.2 The average axle-mass load of a train hauling (a) dead locomotive(s) must be calculated as follows:
- 1017.6.2.1** **Steam locomotives** (irrespective of whether they have braking power or not) – Take 200 tons for no axles, in other words, add 200 tons to the tonnage of the rest of the load and then divide it by the actual number of axles of the rest of the vehicles of the load.
- 1017.6.2.2** **Electric and diesel locomotives without braking power** – Take the actual tonnage of the dead locomotive for no axles, in other words, add the actual tonnage of the dead locomotive to the tonnage of the rest of the load and then divide it by the actual number of axles for the rest of the vehicles of the load.
- 1017.6.2.3** **Electric and diesel locomotives with braking power** – Ignore the dead locomotive(s) and calculate the average axle-mass load by dividing the tonnage of the rest of the load by dividing the actual number of axles of the rest of the vehicles of the load.
- 1017.6.3 In exceptional circumstances, the Manager (Technical Support) may, in individual cases, authorise the exceeding of the maximum permissible average axle-mass load of trains hauling dead locomotives. When this is done, such additional precautions as may be required to ensure the safety of the train, must be taken. Such authority, including the conditions of the additional precautions, must be suitably conveyed to the driver of the train.
- 1017.7** **When a special train must be announced and notice issued**
- 1017.7.1 If the maximum permissible speed at which a dead locomotive may or will be hauled is such that goods train point-to-point running times for the section concerned cannot be met to the extent that other trains and the service in general will be seriously affected, the train conveying the dead locomotive must be announced as a special goods train and a notice issued. Special point-to-point running times to suit the particular maximum permissible speed must be indicated in the notice.

1017.8 Haulage of defective dead locomotives

- 1017.8.1 The haulage of any type of defective dead locomotive must be authorised by the Manager (Technical Support), and he must determine the special conditions and precautions to be applied. As far as practicable, they must comply with and not be less restrictive than those contained in these instructions.
- 1017.8.2 The driver of the train hauling a defective dead locomotive must be advised in writing of the nature of the defect affecting the safe running of the dead locomotive as well as all the conditions and precautions applicable to its haulage.
- 1017.8.3 Only one defective dead locomotive may be hauled at a time and it must be accompanied by a suitable attendant.
- 1017.8.4 In the case of a visibly defective dead locomotive which nevertheless complies with the requirements of a working dead locomotive, as determined by a technical supervisor who is familiar with the particular dead locomotive, the driver of the train must be suitably advised (in writing if possible) of this fact.

1017.9 Void

1017.10 Haulage of dead electric and diesel locomotives without braking power

- 1017.10.1 The haulage of a dead electric or diesel locomotive without braking power must be authorised by the Manager (Technical Support). He must determine any additional restrictions he considers necessary in the light of the particular circumstances.
- 1017.10.2 Except in the case of dead-section working, only one dead electric or diesel locomotive without braking power may be hauled at a time and it must be hauled by a train with sufficient vehicles to ensure that brake-power requirements are complied with.
- 1017.10.3 A dead electric or diesel locomotive without braking power must –
- 1017.10.3.1 be marshalled immediately behind the train locomotive;
- 1017.10.3.2 except in the case of dead-section working, be secured at each end with emergency coupling chains;
- 1017.10.3.3 if the type dead locomotive differs from the type train locomotive, be accompanied by a technician, driver, or learner train driver who is qualified in driver's duties and who is familiar with the particular class of locomotive concerned and will act as attendant; and
- 1017.10.3.4 be hauled at a maximum speed of 60 km/h, or such lower speed as is applicable to goods trains over the particular section, or such lower speed(s) as determined by the Manager (Technical Support).

1017.11 Haulage of dead electric and diesel locomotives with braking power

- 1017.11.1 The haulage of (a) dead electric or diesel locomotive(s) with braking power by a train which is hauled by a locomotive of a different type must be authorised by the Manager (Technical Support). He must be satisfied that the brake-power requirements of the locomotive can and will reliably be complied with.
- 1017.11.2 The haulage of (a) dead electric or diesel locomotive(s) with braking power by a train which is hauled by a locomotive of the same type does not require special authority, provided the driver of the train is sufficiently familiar with the particular class of dead locomotive with braking power to ensure that the brake-power requirements of the locomotives are reliably complied with.
- 1017.11.3 The driver of the train hauling (a) dead electric or diesel locomotive(s) with braking power of a different type must be advised (in writing if possible) that authority has been obtained from the Manager (Technical Support).
- 1017.11.4 Except in the case of dead-section working, only two dead electric or diesel locomotives with braking power may be hauled together on a train which also consists of other vehicles, but then the maximum number of locomotives on the train must not exceed four. However, see subclause 1017.11.6 in connection with permissible combinations of electric locomotives to ensure safe air supply.
- 1017.11.5 When (a) dead electric or diesel locomotive(s) with braking power is/are hauled on a train which is hauled by a locomotive of a different type, a technician, driver, or learner train driver who is qualified in driver's duties and who is familiar with the particular class of dead locomotive(s), must be provided to act as attendant.
- 1017.11.6 To ensure safe air supply to the dead locomotives with braking power, the number of dead locomotives with braking power, may not exceed the number of train locomotives.
- 1017.11.7 The pressure of the air supply of the train locomotive to the dead locomotive(s) with braking power may not be higher than the main-reservoir safety-valve setting of the dead locomotive(s) with braking power.

- 1017.12 Haulage of groups of dead electric or diesel locomotives with braking power without other vehicles**
- 1017.12.1 The haulage of a group of dead electric or diesel locomotives with braking power of the same type without other vehicles, for operating or maintenance purposes, must be authorised by a senior technical supervisor or a supervisor (footplate personnel). He must be sufficiently familiar with the locomotives concerned to be able to ensure that the brake-power requirements in respect of the locomotives can and will reliably be complied with.
- 1017.12.2 The driver of the locomotive hauling such a group of dead locomotives with braking power must be advised of the name of the supervisor who has authorised the haulage thereof.
- 1017.12.3 A maximum of seven locomotives may be combined for this purpose of which a maximum of three dead locomotives with braking power may be hauled.
- 1017.12.4 When locomotives are hauled under the circumstances laid down in clauses 1017.11.6 and 1017.12.3, some of the train locomotives may be isolated to prevent traction power, with exception of the control locomotive.
- 1017.13 Dead-section working**
- 1017.13.1 The Manager (Technical Support) must always be consulted (in advance, when possible) in connection with all dead-section working.
- 1017.13.2 When the Manager (Technical Support) is advised of immediate or planned dead-section working, he must –
- 1017.13.2.1 decide whether brake power can and should be provided to dead electric locomotives, and if required, make the necessary arrangements;
- 1017.13.2.2 decide whether special supervision is necessary, and make the arrangements;
- 1017.13.2.3 ensure that the tractive effort of the diesel or steam locomotives used is adequate for the particular trains and section concerned;
- 1017.13.2.4 ensure that the brake power of the trains concerned will be adequate for the section concerned – particularly if the dead electric locomotives will be without braking power.
- 1017.13.2.5 ensure that the drivers who will be used are adequately experienced with regard to the particular trains and section concerned; and
- 1017.13.2.6 lay down such additional speed restrictions or other safety precautions as may be necessary or desirable with regard to the particular trains and section concerned.
- 1017.13.3 The driver of a diesel or steam locomotive undertaking dead-section working, must be advised of any special speed restrictions or other precautions prescribed by the Manager (Technical Support). He must also ensure that the train loads and average axle-mass loads which exceed normal permissible maximum values have been approved by the Manager (Technical Support).
- 1017.13.4 The driver of a diesel or steam locomotive undertaking dead-section working, must consult with the driver of the dead electric locomotive or motor coach. The latter must act as attendant on the dead electric locomotive or motor coach.
- 1017.14 Duties of attendant of a dead locomotive – The attendant of a dead locomotive must –**
- 1017.14.1 report his presence to the driver of the train and ensure that the driver is aware of the circumstances under which the dead locomotive is being hauled (i.e. defective or working, with or without braking power, etc.) and the maximum permissible speed which is applicable to the dead locomotive;
- 1017.14.2 ensure that the pantographs of (a) dead electric locomotive(s) or motor coach(es) are properly secured against raising;
- 1017.14.3 ensure that emergency coupling chains, if required, have been correctly applied and if necessary, fit them himself;
- 1017.14.4 come to a clear understanding with the driver of the train on how he will attract his attention should it become necessary to reduce speed or to stop;
- 1017.14.5 in the case of (a) dead electric or diesel locomotive(s) with braking power which is/are being hauled by a train locomotive of a different type, check the brake couplings and brake settings of the dead locomotive(s) and ensure that they are correct. In addition, he must, in collaboration with the driver, carry out a brake test to prove that the brake operation is correct and safe;

- 1017.14.6 ensure that the handbrake(s) of the dead locomotive(s) operate(s) correctly and has/have been released before the train departs;
- 1017.14.7 en route, closely watch the safe running of the dead locomotive(s) as well as the operation of the brakes (if applicable). Any abnormal or unusual circumstances must immediately be brought to the attention of the driver;
- 1017.14.8 carry out any lubrication or other duties which require to be performed or have been given to him to do so; and
- 1017.14.9 attend to the securing of the dead locomotive(s) when it/they is/are detached.
- 1017.15 Duties of driver of train hauling a dead locomotive – The driver of the train hauling (a) dead locomotive(s) must –**
- 1017.15.1 make sure of the circumstances under which the dead locomotive(s) is/are being hauled i.e. defective, working, with or without braking power, etc.;
- 1017.15.2 if required, be in possession of the written authority for the haulage of the dead locomotive(s);
- 1017.15.3 ensure that the train load and length, as well as the average axle-mass load of the train do not exceed the permissible maximum values laid down;
- 1017.15.4 make sure of the maximum speed at which the dead locomotive(s) may be hauled;
- 1017.15.5 ensure that the emergency coupling chains, if they are required, have been correctly fitted;
- 1017.15.6 ensure that the attendant, if he is required, is present and come to an understanding with him on how he will attract attention when it is necessary to reduce speed or to stop;
- 1017.15.7 in the case of (a) dead electric or diesel locomotive(s) with braking power and when there is an attendant present, check the brake couplings and brake settings of the dead locomotive(s) with the attendant and make sure that they are correct. In addition, he must, in collaboration with the attendant, carry out a brake test to prove that the brake operation is correct and safe;
- 1017.15.8 in the case of (a) dead electric or diesel locomotive(s) with braking power, when there is no attendant present, himself check the brake couplings and brake settings of the dead locomotive(s) and carry out a brake test to prove the brake operation is correct and safe;
- 1017.15.9 in the case of (a) dead electric locomotive(s) when there is no attendant present, make sure that the pantographs are safely secured against raising;
- 1017.15.10 when there is no attendant present, make sure that the handbrake(s) of the dead locomotive(s) has/have been released; and
- 1017.15.11 when there is no attendant present, perform the same duties and responsibilities in respect of the dead locomotive(s) as are applicable to his train locomotive.

1018.0 VOID

1019.0 TRAIN-DESPATCH, VACUUM-BRAKE AND RELATED INSTRUCTIONS

1019.1 Scope of instructions

- 1019.1.1 These instructions are applicable to vacuum-brake vehicles and all vacuum-brake trains which are hauled by locomotives.
- 1019.1.2 The instructions are not applicable to commuter motor-coach trains which are operated under their own power.
- 1019.1.3 The instructions are, however, applicable to commuter motor-coach trains and all vehicles on such trains which are not operated under their own power but hauled by (a) locomotive(s).
- 1019.1.4 The instructions are also applicable to any ordinary vacuum-brake vehicle which, with the required authority, are hauled behind commuter motor-coach trains operating under their own power. In such cases the Train Load Certificate need not be completed, but the driver must be aware of or advised of the information concerned.
- 1019.1.5 When subclause 1019.1.4 is applicable and the rear vehicle is not fitted with a vacuum gauge, the vacuum at the rear vehicle need not be measured by means of a portable vacuum gauge, provided that a vehicle which is not further than the fourth vehicle from the rear, is fitted with a vacuum gauge and that the vacuum value at that vehicle complies with the minimum requirements. The test for continuous vacuum brake is still applicable.

- 1019.1.6 When a passenger or mixed train, with the required authority, runs without a brake van or with the required authority, hauls one or more vehicles behind the brake van, and the rear vehicle is not fitted with a vacuum gauge, the procedure in subclause 1019.1.5 must be followed.
- 1019.2 Duties and procedures relating to the despatch and departure of trains**
- 1019.2.1 Prior to the despatch of a train from its starting point or the place where the load was made up, or from a place en route where the load stood over unmanned, the driver's assistant/train despatcher must –
- 1019.2.1.1 examine the complete load on both sides;
- 1019.2.1.2 ensure that the tonnage, the actual number of axles, the equivalent axle length, the average axle-mass load and the marshalling of the train are correct;
- 1019.2.1.3 ensure that all vehicles are properly coupled and that the gravity locks of the couplers are fully down;
- 1019.2.1.4 ensure that all the vacuum hose pipes are correctly coupled;
- 1019.2.1.5 on both sides of the train, ensure that every handbrake is fully released;
- 1019.2.1.6 ensure that the change-over lever(s) of every vehicle equipped with dual-power brakes is/are correctly set on both sides of the train;
- 1019.2.1.7 ensure that all vacuum release wires are free and not tied back and that all vacuum release-valve levers are normal and not wedged open with foreign objects;
- 1019.2.1.8 ensure that all wagon and container doors are properly closed and secured, and that each container is secured with all the clamps provided for this purpose;
- 1019.2.1.9 ensure that all wagon tarpaulins are properly tied and that all handbrake wheels and levers are exposed;
- 1019.2.1.10 ensure that the vacuum value measured by the vacuum gauge in the brake van, or a portable vacuum gauge at the rear vehicle of the train, is at least 51 kPa;
- 1019.2.1.11 correctly perform the test for continuous vacuum brake; and
- 1019.2.1.12 correctly complete the Train Load Certificate and hand it to the driver.
- 1019.2.2 If the driver's assistant/train despatcher who has examined the load originally, due to the changing of shifts or any other reason will not despatch the train also, he may sign the Train Load Certificate with regard to items 1 to 3 indicated thereupon only, and the driver's assistant/train despatcher who actually despatch the train, will then sign the Train Load Certificate with regard to items 5 and 6 only.
- 1019.2.3 Officials in charge must see that sufficient reliable portable vacuum gauges, which must be tested regularly, are being made available to train despatchers at places where trains are despatched.
- 1019.2.4 When the composition of the load of a train is altered en route without it standing over unmanned, the driver's assistant/train despatcher must perform the duties mentioned in subclause 1019.2.1 as far as necessary, with special attention to all additional vehicles attached to the load and the required minimum vacuum value at the rear of the train. He must also update the Train Load Certificate as required, but when this will cause a delay, the required information must be furnished to the driver who must then update the form himself.
- 1019.2.5 The driver of a train may not depart from the place where he assumes control of the train, or from a place en route where the composition of the load is altered, unless he is in possession of and familiar with the TCVF containing the correct information applicable to his train.
- 1019.2.6 When the locomotive(s) and/or the driver of a train change(s) en route without the load standing over unmanned, the driver who hands over the train must personally hand the Train Load Certificate to the driver who takes over the train. When practical circumstances prevent the two drivers from personally speaking to each other without delay or disruption, it must be arranged that the handing over of the Train Load Certificate be undertaken by an employee who is involved with the train.
- 1019.2.7 The driver of a train must ensure that the load and the length as well as the average axle-mass load of the train do not exceed the prescribed maximum permissible values.
- 1019.2.8 Loads which exceed the prescribed maximum permissible values may only be authorised under very exceptional or emergency circumstances and then only by the Manager (Technical Support) or his deputy. Such authority must be obtained for each individual instance and must be given to the driver in writing quoting the name and grade of the officer who authorised the overload.

1019.3 Test for continuous vacuum brake – Prior to the departure of a train from the place where the locomotive(s) is/are coupled to the load, or from a place where the composition of the train is altered en route (including the changing of locomotives or the locomotive composition), the driver's assistant/train despatcher must perform the following test for continuous vacuum brake while vacuum is being created or after the prescribed minimum vacuum values have been obtained and are being maintained:

1019.3.1 Pull the vacuum hose pipe at the rear of the last vehicle of the train off the dummy and ensure, by looking at the brake blocks, that the brakes of this vehicle apply.

1019.3.2 Replace the vacuum hose pipe on the dummy and ensure, by looking at the brake blocks, that the brakes release again.

1019.4 Vacuum values and creation of vacuum

1019.4.1 Locomotive brake system equipment must be so adjusted that not more than 64 kPa vacuum can be created on the locomotive.

1019.4.2 The driver is responsible for the correct setting up, adjusting (where necessary) and testing of the brake system of the locomotive, or of the brake systems of all the locomotives of a locomotive set in the case of multiple working, in accordance with the particular procedures and instructions applicable to the class(es) of locomotive(s) or types of brake systems concerned.

1019.4.3 Unless the Chief Executive (Spoornet) authorises the use of more than one exhaustor in respect of particular locomotives, trains, places or sections, only the exhaustor or ejector of the front locomotive from which the train will be controlled, may be used for creating and controlling vacuum. When more than one locomotive is used to work a train (whether with double-headed, banking or multiple locomotive working), the driver of the leading locomotive, who will be in control of the train, must ensure that the exhaustors or ejectors of all the other locomotives have been switched off or cut out.

1019.4.4 As soon as the locomotive(s) has/have been coupled to the load, the driver must, as quickly as possible, create the maximum vacuum obtainable on the locomotive and train. Whilst creating vacuum the quick-release position or function of the locomotive's brake equipment must be used, but care must be taken that a vacuum value of 64 kPa on the locomotive is not exceeded. After vacuum has been created in this manner for a sufficient period, it must be ensured that the prescribed minimum vacuum values referred to in subclause 1019.4.5, can be maintained in the running position or with the maintaining function of the locomotive's brake equipment.

1019.4.5 Prior to the departure of a train from the place where the locomotive(s) is/are coupled to the load, or from a place where the composition of the train is altered en route (including the changing of locomotives or the locomotive composition), the locomotive of the train must create and maintain a vacuum value of at least 58 kPa in the locomotive and 51 kPa (15 inches) in the brake van (or at the rear of the last vehicle of the train). It is the driver's assistant's/train despatcher's responsibility to see that the latter value is obtained.

1019.4.6 If the prescribed minimum vacuum values referred to in subclause 1019.4.5 not being created and maintained within a reasonable or expected period of time, the train must be carefully examined to locate all audible or possible sources of leakage and/or obstruction. Such defects must then be repaired in order to obtain the required minimum vacuum values. If this procedure still does not result in the obtaining of the prescribed minimum vacuum values, another locomotive or locomotive set must be used for the train, or the length of the train must be reduced until the required minimum vacuum values are obtained.

1019.5 Use of vacuum brake en route

1019.5.1 As soon as practicable after the departure of a train from the place where the locomotive(s) was/were coupled to the load, or from a place where the composition of the train was altered en route, or from a place where control of the train was taken over by another driver, the driver must test the vacuum brake of the train by making a brake application, and then he must ensure that it functions correctly and that there is sufficient brake power for the route ahead.

1019.5.2 The driver must continually observe the train-pipe vacuum value. Any reduction in the train-pipe vacuum without a brake application being made, or any problem with keeping a brake application constant, or any problems to create vacuum after a brake application, must receive immediate attention. Unless it can be established without any doubt that the train has not derailed or parted, and that no attempt is being made to bring the train to a standstill with a brake application from the rear, the train must immediately be brought to a standstill to investigate these possibilities. Should it be entirely certain that the train is complete and running safely, and there is no possibility of a brake application from the rear, a stop must be made as soon as practicable at the first suitable place and the cause of the vacuum problem investigated.

1019.5.3 The driver of a train should not rely upon the efficiency of any vacuum-brake application for longer than 15 minutes at a time without the vacuum being fully recreated. Train handling must be so planned and executed as to permit of these precautions being taken and, in the case of stationary trains on gradients, train handbrakes must be applied where and when necessary.

1019.5.4 A diesel-electric or an electric locomotive or motor coach may never be braked by applying current to reversed traction motors, except as a last resort in an emergency when the brakes of a light locomotive have failed.

1019.5.5 The independent locomotive brake must always be fully applied after a light locomotive or a train has come to a standstill.

1019.6 Vehicles with through pipes

1019.6.1 A vehicle with defective brake equipment, of which one or more vacuum cylinders have been disconnected from the train pipe, is known as a "vehicle with through pipe" and must be provided with wagon labels to this effect.

1019.6.2 A vehicle with through pipe must be repaired as soon as practicable.

1019.6.3 No train consisting of more than one vehicle with through pipe for every fifteen vehicles of the train may depart from the place where the load was made up.

1019.6.4 The last vehicle on a train must not be a vehicle with through pipe.

1019.7 General maximum speeds of trains – Provided the track conditions and the train composition permit it and there are no other instructions or circumstances which demand lower speeds or make this desirable, or authorised other speeds, the general maximum permissible speeds for the particular types of trains are as follows:

1019.7.1 Goods and mixed trains as well as light locomotives 60 km/h.

1019.7.2 Mixed trains of which all the vehicles are fitted with approved bogies and composition brake blocks and of which the average axle-mass load does not exceed 10 tons/axle, to a maximum length of 120 axles 75 km/h.

1019.7.3 Passenger trains 90 km/h.

NOTE: All passenger coach type bogies, Spoorbarber bogies and HS bogies are approved bogies and, with the exception of passenger coach bogies, are identified by the three yellow circles provided at each end of the goods vehicles. Goods vehicles types LA-1, LA-2, LO-2, OZ-10, PZ-1 and TZ-1 which are fitted with passenger coach type bogies and all goods vehicles with the three yellow circles, with the exception of goods brake vans type V-3 (numbers 90-051 289 to 90-052 374), V-1 and VL-1 which are fitted with Barber Bettendorf bogies may be hauled at a maximum speed of 75 km/h .

1019.8 Speed of trains on down grades – Provided that track conditions and train composition permit it and no other instructions or circumstances exist that demand lower speeds or make this desirable, or authorised other speeds, trains must observe the following speeds on down grades of 2 km and longer:

1019.8.1 Loaded goods trains and mixed trains:

GRADIENT	LOADED GOODS TRAINS		MIXED TRAINS	
	REGENERATIVE/DYNAMIC BRAKE		REGENERATIVE/DYNAMIC BRAKE	
	INSUFFICIENT	SUFFICIENT	INSUFFICIENT	SUFFICIENT
1 in 91 and lower	See subclause 1019.10.1		See subclause 1019.10.1	
1 in 71 to 1 in 90	35 km/h	50 km/h	50 km/h	-----
1 in 56 to 1 in 70	25 km/h	40 km/h	40 km/h	50 km/h
1 in 55 and steeper	20 km/h	30 km/h	30 km/h	40 km/h

NOTE – Goods trains which comply with the requirements of subclause 1019.7.2, are subject to the down gradient speeds as applicable to mixed trains.

1019.8.2 Goods trains consisting of empty vehicles

1019.8.2.1 On all down gradients: 60 km/h, subjected to the provisions of subclause 1019.10.1

1019.8.3 Passenger trains

1019.8.3.1 Except where other down grade speed restrictions were established by means of dynamometer-car tests, the following speed restrictions must be observed:

GRADIENT	SPEED
1 in 81 to 1 in 100	90 km/h
1 in 67 to 1 in 80	80 km/h
1 in 51 to 1 in 66	70 km/h
1 in 41 to 1 in 50	60 km/h
1 in 40 and steeper	50 km/h

1019.8.4 General

1019.8.4.1 Down grade speed restrictions are applicable only while the front locomotive of the train moves between the appropriate kilometre points.

1019.8.4.2 The point where the down grade speed restrictions are lifted, is as directed in the operating timetables, load tables or special instructions. Where no directive exists it is the end of the down grade.

1019.8.5 Regenerative/Dynamic brake

1019.8.5.1 The regenerative/dynamic brakes of all locomotives on a train must be engaged to a maximum of four with the exception of classes 6E/6E1, of which a maximum of three must be engaged.

1019.8.5.2 Down grade speed restrictions for trains with sufficient regenerative/dynamic brakes are only valid when at least half of the prescribed electric brakes (see paragraph 1019.8.5.1) are fully working.

1019.8.5.3 Electric regenerative brakes (classes 5E/5E1 and 6E/6E1 locomotives) are seen as fully working if a single locomotive can deliver an armature current of at least 350 ampere or when in multiple working a total armature current of at least 480 ampere can be supplied on request of the driver.

1019.8.5.4 If the driver must considerably increase the train brake application with which the train speed was initially controlled, while moving down a reasonably constant down grade, he must regard the regenerative/dynamic brake as insufficient and the down grade speeds for insufficient/dynamic brakes must be observed.

1019.9 Average axle-mass load of goods and mixed trains

NOTE – *The average axle-mass load of a train is obtained by dividing the gross tonnage of the load by the total actual number of axles of the load. Both the gross tonnage and the number of axles must be calculated without including the train locomotive(s). In the case of a non-articulated steam locomotive, the tender is regarded as part of the locomotive. In the case of a Garratt locomotive with a water tank which remains coupled to the locomotive, such water tank is also regarded as part of the locomotive.*

EXAMPLE

LOAD GROSS TONNAGE	NUMBER OF AXLES	AVERAGE AXLE-MASS LOAD (TONS PER AXLE)
1 540	132	11,7

1019.9.1 Unless other values are laid down for particular trains and/or sections, the following average train axle-mass load values for goods and mixed trains must not be exceeded on down grades:

GRADIENT	STEAM TRACTION		DIESEL OR ELECTRIC TRACTION	
	FOREIGN WAGONS	OWN WAGONS	FOREIGN WAGONS	OWN WAGONS
1 in 33 and steeper	As determined by region	11 t/axle	As determined by region	18,5 t/axle
1 in 34 to 1 in 40	As determined by region	12,5 t/axle	As determined by region	18,5 t/axle
1 in 41 and more level	As determined by region	18,5 t/axle	As determined by region	18,5 t/axle

NOTE: *The average-axle mass load of foreign wagons must be calculated separately and observed.*

1019.10 Control of trains on down grades

1019.10.1 A train speed of 50 km/h may only be exceeded where the train can be controlled by means of –

1019.10.1.1 the regenerative/dynamic brake only; or

1019.10.1.2 with short applications of the train brake in circumstances where a minimum brake application will retard the train too much. If no or insufficient regenerative/dynamic brake is available and the train brake must be used continuously to control the speed, the train speed must be reduced to not more than 50 km/h .

1019.10.2 When the regenerative/dynamic brake is used together with a train-brake application to control a train on a down grade, the train-brake application must, as far as practicable, be kept applied at a constant value and the regenerative/dynamic braking altered as required to achieve the desired speed control.

1019.10.3 When a train on a long down grade is controlled by means of the train brake (whether on its own, or with the combined use of locomotive friction brake, or with the combined use of regenerative/dynamic braking), the speed must be so selected and controlled that sufficient train brake power remains unused with which to stop the train. In general, this should not be less than approximately half of the available train brake power.

- 1019.10.4 Except for final stopping purposes and emergencies, the use of the locomotive friction brake for train handling must, as far as practicable and safe, be avoided. When it must be used for safe control on long down grades, the speed and the application intensity must be kept as low as practicable and the period of use must be kept as short as practicable.
- 1019.11 Coupling and uncoupling of vacuum hose pipes**
- 1019.11.1 When vacuum hose pipes are coupled and uncoupled, it must be done so as to avoid damage to the hose pipes and loss of sealing rings.
- 1019.11.2 When vacuum hose pipes are coupled and uncoupled, special care must be taken to prevent dust or foreign objects (e.g. cotton waste) being sucked into the vacuum pipes.
- 1019.11.3 When diesel or electric locomotives equipped with vacuum stand pipes on both sides of the coupler are coupled to passenger vehicles, only the vacuum hose pipe on the right-hand side of the coupler, in the direction of travel, must be connected.
- 1019.12 Use of brake-van brake valve**
- 1019.12.1 The brake-van brake valve may only be used in collaboration with the driver or, in an emergency, to stop the train.
- 1019.12.2 When the brake-van brake valve is used, it must be fully applied and held in that position until the train has come to a standstill.
- 1019.13 Use of vacuum release valve**
- 1019.13.1 The vacuum brake of a detached vehicle may be released by pulling the vacuum-release wire and, if necessary, holding it in the pulled position until the brake is completely released. If necessary, this procedure must be followed before moving a vehicle of which the vacuum hose pipes have not been coupled.
- 1019.13.2 If the vacuum brake of one or more vehicles of which the vacuum hose pipe are coupled and under vacuum will not release when vacuum is fully created, the vacuum-release wires of such vehicles must be pulled until the brakes are released.
- 1019.14 Prevention of skidded wheels** – Before a vehicle is moved for any reason whatsoever, it must be ensured that the hand and vacuum brakes of the vehicle are sufficiently released to prevent the wheels skidding.
- 1020.0 VOID**
- 1021.0 MARSHALLING OF TRAINS**
- 1021.1 Passenger trains** – All passenger trains must consist of bogie vehicles only which comply with the technical conditions regarding the types of vehicles which may be attached to such trains.
- 1021.2 Steam heating of passenger trains** – When passenger trains are heated by means of steam, a passenger coach to which the heating system is not coupled, or of which the device is out of order thus preventing the passage of steam, must be marshalled immediately in front of the brake van.
- 1021.3 Mixed trains** – Wagons must be marshalled in a similar manner as wagons on goods trains and, except where otherwise provided in the local appendices, they must be marshalled in front of the passenger coaches.
- 1021.4 Goods trains** – Except as otherwise provided for, vehicles comprising goods trains must be marshalled in the following order:
- Locomotive
Loaded wagons
Empty wagons and empty coaches
- 1021.5 Exceptions**
- 1021.5.1 Loaded well wagons** – Loaded well wagons, except where otherwise specially provided, must be marshalled immediately behind the locomotive.
- 1021.5.2 Void**
- 1021.6 Marshalling of combined or banked trains** – Loaded or empty vehicles may be marshalled in front of the centre locomotive on a combined train. The total load must not in any instance exceed that of the combined load laid down for the locomotives concerned. Passenger coaches, when attached to a combined train, must be marshalled behind the centre locomotive(s).

- 1021.7 Locomotive coal** – Wagons containing locomotive coal must, when practicable, be marshalled so that they are immediately behind the locomotive on arrival at the locomotive depot to which they are consigned.
- 1021.8 Livestock** – Wagons containing livestock must be marshalled as near to the rear of the train as possible and unnecessary shunting with such vehicles must be avoided.
- 1021.8.1 When wagons containing livestock are hauled by the same train as wagons containing explosives or flammable goods, the wagons containing the livestock must be marshalled behind the wagons containing the explosives or flammable goods and must be separated therefrom by at least two wagons.
- 1021.9 Wagons containing flammable goods on mixed trains** – Wagons, other than flammable-liquid tank wagons (see subclause 1021.10.6), containing flammable-liquid drums or other types of containers, full or empty, or wagons containing road-rail tankers, full or empty, must not be attached to mixed trains unless authorised by the Chief Executive (Spoornet) and must be separated from passenger coaches by at least two runners.
- 1021.9.1 Wagons marshalled on goods trains on which “Dangerous” wagon labels are placed, must be separated by at least one wagon from a single locomotive. Where trains are equipped with open flame train markers, at least one runner must be provided behind the wagon with a “Dangerous” wagon label.
- 1021.10 Tank wagons and wagons containing tank containers (loaded or empty)**
- 1021.10.1 The instructions in the following subclauses 1021.10.2 to 1021.10.7 are applicable on tank wagons and wagons containing tank containers for flammable and corrosive liquids and anhydrous ammonia.
- 1021.10.2 Tank wagons and wagons containing tank containers must, except as stipulated in subclause 1013.6.3.2, be separated by at least one wagon from a single locomotive. When two or more locomotives are used and provided no person is allowed to travel in the rear locomotive, no runners are required. Where trains are equipped with open flame train markers, at least one runner must be provided behind the tank wagons and wagons with tank containers.
- 1021.10.3 Tank wagons or wagons containing tank containers must not be marshalled immediately in front or behind a vehicle containing wood, rails, telegraph poles or heavy machinery or a mechanical refrigerator wagon of which the diesel engine is running.
- 1021.10.4 Tank wagons or wagons containing tank containers for the conveyance of flammable or corrosive liquids, whether loaded or empty, must not be attached to the same train conveying explosives.
- 1021.10.5 Tank wagons and wagons containing tank containers may be marshalled on combined or banked trains provided the provisions of subclauses 1021.10.2 to 1021.10.4 are observed.
- 1021.10.6 Tank wagons and wagons containing tank containers must not be attached to mixed trains unless there is no suitable goods-trains service. When it is imperative to attach tank wagons or wagons containing tank containers to a mixed train, the number of tank wagons or wagons containing tank containers must not be more than two; and
- 1021.10.6.1 it must be separated from the passenger coaches by at least three wagons (see clause 1015.0 regarding the haulage and examination of tank wagons).
- 1021.11 Marshalling of vehicles containing explosives** – The instructions for the marshalling of vehicles containing explosives are included in clause 1013.5.
- 1021.12 Creosoted wood** – Wagons containing creosoted wooden sleepers and similar treated wooden poles must be marshalled as far as possible from wagons containing general goods.
- 1021.13 Marshalling of travelling cranes** – The instructions for the marshalling and conveyance of travelling cranes when attached to goods trains, are included in clause 1023.0.
- 1021.14 Vehicles containing abnormal loads** – Vehicles containing loads of abnormal mass or size may only be despatched under special arrangements made by the Chief Executive (Spoornet’s) office.
- 1021.15 Void**
- 1021.16 Private coaches**
- 1021.16.1 A private coach may be marshalled immediately behind the locomotive provided that the authority of the Chief Executive (Spoornet) has been obtained.
- 1021.16.2 When tests have to be conducted with a dynamometer car, this vehicle may be marshalled immediately behind the locomotive.

- 1021.17 Damaged vehicles**
- 1021.17.1 Damaged vehicles which are suitable to travel, must be marshalled immediately in front of the last vehicle. If vehicles are damaged in such a way that it cannot be marshalled immediately in front of the last vehicle, two damaged vehicles at the most may be marshalled at the rear of the last vehicle for haulage during daylight only.
- 1021.17.2 If (a) damaged vehicle(s) is/are marshalled behind the last vehicle, it must be coupled to the last vehicle, and, where applicable, to each other, by means of a standard emergency coupling, utilised as a safety chain, in addition to the automatic couplings. When this can be done, the vacuum brake must be coupled throughout the train in consideration of the provisions of subclause 1019.6.4 (see clause 9127.0 regarding the marshalling of vehicles with slack tyres).
- 1021.17.3 Damaged vehicles must not be marshalled to trains conveying explosives.
- 1021.18 Hopper wagons must not be detached at unattended places** – When the load of a train must be reduced, at an unattended place, hopper wagons must not be detached, where practicable.
- 1021.19 Responsibility of personnel** – The employee responsible for the final make up of a train will, along with the driver's assistant/train despatcher of such train, be held responsible for seeing that it is properly marshalled.
- 1022.0 VOID**
- 1023.0 CONVEYING AND MARSHALLING OF TRAVELLING CRANES WHEN ATTACHED TO GOODS TRAINS**
- 1023.1 Particulars of travelling cranes and stations to which they are located are shown in local appendices. When a travelling crane is required at a place other than at the station at which it is kept, application therefor must be made to the Chief Executive (Spoornet).
- 1023.2 When a travelling crane must be attached to a goods train, the following instructions must be strictly observed:
- 1023.2.1 A travelling crane (steam or diesel) must be provided with a crane runner and be marshalled near the locomotive, but must be separated from the locomotive by two loaded wagons.
- 1023.2.2 The crane must, when practicable, be so placed that the crane jib will point towards the rear of the train.
- 1023.2.3 The crane and crane runner must be specially examined to ensure that the framework, brake gear, wheels, bearings, draw gear, etc. are in such a condition that they can be conveyed and marshalled safely according to the before-mentioned instructions.
- 1023.2.4 The vacuum and hand brakes must be closely examined and tested, and all repairs necessary to put the brakes in good order must be effected.
- 1023.3 When the crane and its crane runner are serviceworthy, but the framework, draw gear, etc. are not in such a condition that they can withstand the push and pull of a heavy load, the crane must be marshalled near the rear of the train, but not less than two vehicles from the last vehicle. If there is no brake van on the train, the last vehicle at the rear must be regarded as one of the requisite runner vehicles.
- 1023.4 A crane must not be marshalled near the front of a train which is being hauled by an electric or diesel locomotive using regenerative, rheostatic or dynamic braking.
- 1023.5 Except where a lower speed is prescribed in the local appendices, the maximum speed on main lines must not exceed 60 km/h when the crane is marshalled near the train locomotive, and 30 km/h when marshalled near the rear of the train. On a branch line, the speed restrictions and other conditions imposed, e.g. axle-mass loads, restricted clearances, etc., must also be observed.
- 1023.6 If it is necessary to impose a maximum speed restriction that is very much below the maximum permissible speed for the section concerned, a train to which a crane is attached must be run as a special goods train, and must be announced accordingly. Special attention must be directed in the train notice to the maximum permissible speed for the train concerned.
- 1023.7 The central operating office must be advised regarding the conveyance of all travelling cranes, and travelling cranes must be accompanied by a crane driver, who must travel on the crane or the crane runner. The provisions of train working rule No. 123 must strictly be observed by the crane driver.
- 1023.8 The crane driver must watch the running of the crane and crane runner, and display a danger hand signal, when necessary, and carry out examinations en route. In the event of any defect arising, he must inform the driver immediately. If the defect is of such a nature that it will interfere with the safe running of the train, the crane and crane runner must be detached and secured at the first suitable place. A good lookout must also be maintained by locomotive personnel in accordance with train working rules Nos. 171 and 198(4).

1023.9 Travelling cranes, unless specially authorised by the Chief Executive (Spoornet), must be conveyed during daylight only.

1024.0 BREAKDOWN TRAINS: SPEED, ETC.

1024.1 Particulars regarding breakdown gangs and trains are shown in local appendices. This information includes the section for which each gang is responsible, the numbers, description and lifting capacity of the cranes and also the sections over which certain cranes may not travel.

1024.2 Except where the Chief Executive (Spoornet) has imposed a lower speed restriction due to such factors as, e.g. bridge and track limitations, the maximum speed of a breakdown train to which a crane is attached, is 60 km/h and this speed may not be exceeded.

1024.3 A crane attached to a breakdown train proceeding to a scene of an accident, may be conveyed in such a manner that the crane jib will be in position for the rerailing operation. On the return journey, wherever practicable, the crane jib must point to the rear of the train (see train working rule No. 123 and clause 1023.0 for instructions regarding the conveyance of travelling cranes when attached to goods trains).

1025.0 VOID

1026.0 VOID

1027.0 RUNNING OF TRAINS DURING FOGGY OR OTHER ADVERSE WEATHER CONDITIONS

1027.1 The instructions in the following subclauses 1027.2 to 1027.11 must be strictly observed at stations or in the section, as the case may be, during foggy or other adverse weather conditions.

1027.2 A train-control officer must advise adjoining stations as well as the central operating office, when foggy or other adverse weather conditions prevail at his station, and he must endorse in the train register the time that this information is furnished. The train-control officers at the stations receiving such information must endorse in their train registers the time of receipt.

1027.3 When foggy or other adverse weather conditions are experienced in the section, but not at stations, drivers must report such weather conditions to the train-control officer at the station or train-control office in advance. The train-control officer receiving the information must immediately advise the train-control officer at the preceding station as well as the central operating office. The train-control officer receiving the information from the driver must endorse in the train register the times of receipt and transmission of the information, and the train-control officer at the preceding station must endorse in his train register the time of receipt of the information.

1027.4 Train-control officers must warn locomotive personnel in writing (telephonically in cases where the delivery of the written warning is impracticable and/or may lead to delay) when foggy or other adverse weather conditions prevail in the section or at the station in advance.

1027.5 When foggy or other adverse weather conditions are experienced in a CTC section, drivers must inform the train-control officer of such weather conditions and the latter must immediately advise the central operating office, and, where necessary, the train-control officer at the adjoining train-control office. The train-control officer must also endorse in his train register the times of receipt and transmission of the information.

1027.6 All trains that must run through the CTC section in which foggy or other adverse weather conditions prevail, must be stopped at a signal in the interlocking area short of that section and the drivers be warned by the train-control officer concerned. (Where radio communication between the train-control officer and the driver is available, the circumstances must be given to the driver by means of the radio before the train reaches the section entry signal of the CTC section in which such conditions prevail, and for this purpose it is not necessary for the train to be brought to a standstill). Where such weather conditions prevail between an interlocking area and an adjoining telegraph station, all trains entering the CTC area, must be stopped at the section entry signal or another signal at the telegraph station of which the telephone is directly connected with the train-control office, and the driver must be orally informed by the train-control officer of the circumstances.

1027.7 In the case of foggy or other adverse weather conditions at a station, the train-control officer must take immediate steps to ensure safe working according to circumstances. He must ensure that all signal lamps are lighted or switched on, as the case may be, and are kept alight whilst such adverse weather conditions prevail [see train working rule No. 87(1)].

1027.8 Locomotive personnel must exercise special care in order to ensure safety. Drivers must light the headlamps and frequently sound the locomotive whistle, hooter or siren and regulate the speed of their trains according to the physical conditions. When necessary, drivers must proceed at a speed that will enable them to stop safely within sight distance (see train working rule No. 174).

1027.9 The running line outside the facing points at single-line stations must not be occupied for shunting purposes during foggy or other adverse weather conditions unless the telegraph section is clear of trains.

- 1027.10 Shunting operations are not permitted at interloops or intersidings during foggy or other adverse weather conditions, except if the train doing the shunting is the only train in the telegraph section, or, in the case of interworking, the opposing train has already left the interloop.
- 1027.11 If a driver is warned against foggy or other adverse weather conditions, and he finds that the conditions in the sections have cleared to such an extent that no further precautions are necessary, he must advise the train-control officer at the train-control office in advance.
- 1027.12 When the fog or other adverse weather conditions have cleared, the train-control officer at the train-control office or the train-control officer receiving the message from the locomotive personnel that such conditions in the section have cleared, must advise the train-control officers at the train-control offices concerned as well as the central operating office. This information must be recorded in their train registers by the train-control officers.
- 1028.0 VOID**
- 1029.0 MOTOR AND PUSH TROLLEYS**
- NOTE:** *For the purpose of these instructions a motor trolley is a motor-powered rail or road-rail type vehicle used for patrolling, inspection or maintenance purposes, or a combination thereof.*
- 1029.1 Motor trolleys to be treated as trains –** Motor trolleys must run as trains in strict accordance with train working rule No. 221.
- 1029.2 Competence of motor-trolley drivers**
- 1029.2.1 A motor-trolley driver must not drive a motor trolley over any portion of a line which he is not acquainted with and must at all times be accompanied by a person who is competent to observe the provisions of clause 11007.0 where necessary (also see clause 1042.0).
- 1029.2.2 Before a motor-trolley driver is allowed to drive a motor trolley over any portion of a running line over which he has, as a driver not previously driver a motor trolley, he must be allowed to learn the line. Before being placed in charge of a motor trolley proceeding over such portion of the running line, a Section Manager (Train Traffic) or a Track Manager must test and certify him as competent to drive a motor trolley over that portion of the line and issue a certificate accordingly which must be placed on the employee's depot/station file (see clause 2017.0 re the running of heavy ballast-tamping machines).
- 1029.3 Communication**
- 1029.3.1 Direct voice communication must be available between the driver and the train control officer(s) concerned.
- 1029.4 Motor trolleys running at night**
- 1029.4.1 A motor trolley may run at night and may be included in crossing arrangements at interloops and token stations.
- 1029.5 Hauling of trailers**
- 1029.5.1 A motor trolley fitted with an approved coupling may haul one trailer only.
- 1029.6 Speed**
- 1029.6.1 Drivers must strictly observe the speed(s) laid down in respect of each particular type of motor trolley and the section concerned, and except where instructions are issued to the contrary, take into account permanent and temporary speed instructions.
- 1029.7 Train-control officers must be advised of movements –** When a motor trolley is running as an unannounced train, the person in charge thereof must give timely advice of the proposed movements to the train-control officer at the starting station. Alterations in the arrangements must not be made without first notifying the train-control officer at the first telegraph station affected. Train-control officers must transmit the information from station to station so that the necessary crossing arrangement can be made.

- 1029.8 Despatching of motor trolleys**
- 1029.8.1 When a motor trolley must enter or leave the line in the section, it must, depending on the system of train control, be despatched in terms of clause 2028.0, 2031.0 or 2033.0 of the General Appendix (Part I); or
- 1029.8.1.1 by means of a token on sections where the driver writes down a token issued verbally by the train-control officer.
- 1029.8.2 The driver must –**
- 1029.8.2.1 be equipped with a pad of "Combined heavy ballast tamping machine message and proceeding order" forms;
- 1029.8.2.2 only place the motor trolley on the line once he is in possession of the necessary authority form the train-control officer; and
- 1029.8.2.3 immediately the motor trolley is placed clear of the line, cancel his token and advise the train-control officer accordingly.
- 1029.9 Turn around of motor trolleys**
- 1029.9.1 When a motor trolley turns around, adequate precautions must be taken to safeguard the employees concerned and to protect the turn-round movement, especially where there is an adjacent line.
- 1030.0 VOID**
- 1031.0 TRAIN-CONTROL OFFICERS MUST CO-OPERATE WITH THE CENTRAL OPERATING OFFICE: CO-OPERATION BETWEEN TRAIN AND OTHER PERSONNEL**
- 1031.1 Train-control officers must co-operate with the central operating office, and, in the case of exceptional conditions, such as adverse weather conditions, washaways, accidents, locomotive failures, congestion of traffic and detention to trains, they must at once seek instructions from the central operating office.
- 1031.2 To attain safe, efficient and punctual working, it is necessary that close and constant co-operation should exist between locomotive personnel, and also between locomotive and other personnel, whether working under normal or abnormal conditions. All concerned must adopt every means to secure unity of action so that the safest and best results may be obtained. Obstructive working on the part of any employee must be immediately reported to the Operations Manager (see train working rule No. 190 and subclause 9012.2 regarding the crossing of trains at non-interlocked stations).
- 1032.0 TRAIN-CONTROL OFFICERS TO KEEP IN TOUCH WITH THE RUNNING OF TRAINS: ADVISING FORWARD OF TRAINS AND PREFERENCE TO BRANCH-LINE TRAINS**
- 1032.1 To permit of timely arrangements being made for crossings, etc. train-control officers must ascertain in good time how trains are running, obtain information regarding the length (in metre) and loads of all trains, the number of the last vehicle, whether the train is equipped with telemeters or not. Particular care must be taken in the case of trains running late or not running according to the scheduled order.
- 1032.2 Efficient working depends upon trains being correctly advised forward and train-control officers must ensure that the correct number of each train, according to the working-time book or special-train notice, is always transmitted (also see subclause 7007.2.2).
- 1032.3 A branch-line train working towards a junction at which a connection is to be made with a main-line train, must be given preference in crossings over opposing branch-line trains.
- 1032.4 When any vehicle(s), including a private saloon, is/are attached behind the brake van of a train, each train-control officer must advise the train-control officer at the station in advance of this fact, when he advises him of the departure of the train concerned. A train-control officer, who receives such notification, must take special care to see that the marker is attached to the back of the last vehicle when the train passes his station or train-control office.
- 1032.5 Train-control officers must promptly supply information about the running of trains asked for by adjacent stations or other personnel concerned. Doubtful information or indistinct messages must not be acted upon, but steps must be taken to verify the particulars furnished or to have the messages repeated. Should difficulty or delay be experienced in obtaining the necessary information, the circumstances must be reported to the Operations Manager and/or to the central operating office.

1033.0 PRIORITY OF TRAINS

1033.1 Light locomotive or motor trolley must be shown on tokens and warning advices – Telegraph orders and warning advices, as the case may be, must be amplified to show, in addition to the number of the train to be crossed at an interloop, whether it is a light locomotive or a motor trolley.

1033.2 Announcing of trains – When a breakdown train or a light locomotive has to proceed to clear an obstruction, or if a breakdown train is returning to its depot, it must be so described and the number thereof inserted in the special notice announcing the train, as well as on telegraph-order tokens or warning advices, as the case may be, issued to locomotive personnel of trains arranged to cross the breakdown train or light locomotive at interloops (see train working rule No. 213).

1034.0 DELIVERY OF TOKENS AND WARNING ADVICES

1034.1 Tokens to be ready for delivery – Whenever practicable on sections controlled by token working and provided the line through the station into the section ahead is clear, the train-control officer must deliver the token for the section ahead to the driver as the train enters the station (see train working rule No. 206).

1034.2 Delivery of tokens – When passing through a station at night time, the driver must dim the electric headlight of his locomotive and reduce the speed sufficiently to ensure the safe exchange of tokens.

1034.2.1 Telegraph-order and warning-advice carriers (token carriers) must be used for placing telegraph-order tokens in which are handed over to locomotive personnel of non-stopping trains.

1034.2.2 The train-control officer must hold the token or warning advice for a passing train in such a manner that it will be easily seen and picked up by the locomotive personnel. At night the train-control officer must suitably reflect the white light of his hand lamp on the token carrier when about to deliver the token or warning advice to the locomotive personnel.

1034.2.3 Locomotive personnel must promptly withdraw the telegraph-order token or warning advice and immediately throw off the carrier in a backward direction, with a rotating movement, clear of the railway lines. A carrier must not be taken away from the station at which it is handed over.

1034.2.4 Care must be taken that adequate token or warning-advice carriers are readily available. When carriers are required, and none can be obtained from other stations in the section, a requisition for the requirements must be submitted in the usual way.

1034.3 Warning advices

1034.3.1 Warning advices must be prepared in onefold and placed with the token in the token pouch.

1034.3.2 In the event of an train-control officer failing to deliver a warning advice to a driver, the latter must stop his train and the driver's assistant must proceed to the station and obtain a copy from the train-control officer. The reason for the delay must be recorded in the train journal.

1034.3.3 When a driver receives an incorrect warning advice he must immediately bring his train to a standstill and send his driver's assistant to the station with the incorrect warning advice. The train-control officer must withdraw the incorrect warning advice and issue a correct one. Thereafter the train-control officer must forward the incorrect warning advice to the Operations Manager's Office, together with an explanation of the delay(s) to the train(s).

1034.3.4 Warning advices issued to drivers must be handed in at their depot at the termination of each journey.

1035.0 COMPLICATED CROSSINGS TO BE AVOIDED

1035.1 Train-control officers must avoid complication or congestion in the crossing of trains. All efforts must be directed toward simplified crossings and, in the case of important passenger trains, crossings at interloops must, as far as practicable, be confined to one crossing one or one crossing two. In the case of express and passenger trains, the provisions of subclause 1010.2 must be observed. Train-control officers must also comply with the provisions of clause 1032.0.

1036.0 PREFERENCE TRAINS MUST ENJOY DURING DESPATCH AND IN TRANSIT

1036.1 Trains must enjoy the following preference during despatch from a starting place and during transit:

- (a) Breakdown trains or light locomotives proceeding to clear a section;
- (b) high-speed freight trains that may run at 100 and 120 km/h;
- (c) motor-car trains;
- (d) fastfreight trains that may run at 80 km/h;
- (e) Blue Train;
- (f) express passenger trains (name trains - Blue Train excluded);
- (g) metro trains;
- (h) bulk cargo air-brake trains;
- (l) passenger and mixed trains;
- (J) light locomotives;
- (k) goods trains [other than those mentioned in items (b), (c), (d) and (h)] and breakdown trains returning to depots; and
- (l) material trains and motor trolleys.

1036.2 Train-control officers should, however, be led by prevailing operating conditions and despatch trains in such a way that each train arrives at its destination with the least possible delay. If there is sufficient time available for a train with a lower preference to reach the next crossing or passing place without delaying a train with a higher preference or that runs at a higher speed, the train with the lower preference may be despatched first.

1036.3 When trains cross at an interloop or a token station, the train with the highest priority in accordance with the table of importance set out in train working rule no. 213 (1), must be admitted to the main line.

1037.0 – 1041.0 VOID

1042.0 DRIVERS' ASSISTANTS MUST READ TOKENS AND OBSERVE SIGNALS

1042.1 Tokens

1042.1.1 After having satisfied himself in accordance with train working rules Nos. 192(5) and 204 that the token received is the correct one for the section ahead, the driver must hand it to his driver's assistant for perusal. The driver's assistant must, in his scrutiny of the token, note to what place the train is authorised to proceed. This procedure must be repeated when the train is nearing the warning board of an interloop. The driver is solely responsible for seeing that he has the correct token for the section that the train is about to traverse.

1042.1.2 When, in accordance with subclause 1029.2.1, a motor-trolley driver is accompanied by a person not qualified in train working, the latter must still read the token and discuss the information with the driver. If this person cannot read, the driver must read the token to him and thereafter they must discuss the information with each other.

1042.2 Observance of fixed signals – When signals are observed and accordingly acted upon as provided in train working rules Nos. 169, 173(1) and 192(5), the driver and his driver's assistant must exchange an oral check with each other with regard to all running-line signals and confirm with each other the actual indication displayed by the particular signal.

1043.0 TRAIN REGISTER AND TRAIN TELEGRAMS: LIST OF TRAINS AT DEPOT STATIONS

1043.1 Particulars of all advices concerning the running of trains, must be promptly and accurately entered in the train register. In sections where the train service is light, the train-control officer concerned must utilise one double page for more than one day's entries. The entries for each day must be signed and ruled off (see train working rules Nos. 98 and 108).

1043.2 In recording train times fractional parts less than half a minute, must not be counted. The half minute and fractional parts over the half minute must be reckoned as a minute, thus – 15¼ minutes must be entered as 15 minutes and 15½ as 16 minutes, except where trains are scheduled in parts of a minute, when the fractional parts (in quarter minutes) must be entered.

- 1043.3 At suburban train-control offices, where there is an intensive train service, the hour need only be shown under each heading against the first entry for that particular hour, and on the top of each page, subsequent entries showing the minutes only, e.g.:

"Is line clear?"	"Train entering section"
0942	0943
49	50
54	55
1001	1002
07	08
12	13

- 1043.4 Particulars of an accident, failure, obstruction, power-supply failure or other exceptional occurrence, must be recorded clearly and as fully as possible immediately below the last entry in the train register. The remarks column must not be used for this purpose.
- 1043.5 Full train registers must be stored for record purposes for a period of six months.
- 1043.6 Officials in charge of depot stations must see that a list of all announced trains is exhibited in each train-control office, showing number, arrival and departure times, and, when possible, the platform arrangements. Any alteration made in the train service must be notified to the train-control officers, and the list must be amended.

1044.0 CHECKING OF STATION CLOCKS

- 1044.1 Officials in charge of stations and depots, train-control officers and others concerned, must ensure that clocks provided, are checked daily and, where necessary, adjusted to reflect the correct time. The correct time must be obtained from the nearest depot station or the central operating office, as the case may be. Train-control officers must record details of the daily time checks in the remarks column of their train registers.

1045.0 TRAINS TO BE GIVEN A THROUGH RUN WHEN POSSIBLE

- 1045.1 A train-control officer must avoid stopping trains unnecessarily at signals. On single lines, if a train is scheduled to stop conditionally at a station, but is not required to stop, the provisions of train working rule No. 114 must be complied with.

1046.0 NON-SCHEDULED STOPS (INCLUDING PLACES OTHER THAN RECOGNISED STOPPING PLACES)

1046.1 Stopping of trains at recognised stopping places

- 1046.1.1 Passenger and mixed trains** – If a passenger or mixed trains is required to make an unscheduled stop at a station, interloop, intersiding or halt, for traffic purposes, a stop order must be issued in duplicate on the authority of the central operating office, one copy being handed to the driver and the other to the Train Manager of the train authorised to stop (see train working rule No. 113).

- 1046.1.2 Goods trains** – If a goods train is required to make an unscheduled stop at a station, interloop, intersiding or halt for passengers, shunting or traffic purposes, the driver must be advised in writing of the nature of the work to be performed.

- 1046.1.2.1 When an unscheduled stop at a telegraph station is authorised, the train-control officer at the station concerned must be advised. Should a train which is not scheduled to stop at an interloop, intersiding or at a recognised stopping place in a CTC area, be authorised to stop at such a place, the train-control officers controlling the telegraph section/area in which such stopping place is situated, must be advised accordingly.

1046.2 Stopping of trains at non-recognised stopping places

- 1046.2.1 Special stops at other than recognised stopping places, i.e. at a kilometre point in a telegraph, double-line, non-token, single-line or CTC section, for the purpose of loading or unloading goods, or picking up or setting down passengers, may be made only on authority of the Chief Executive (Spoornet). In the case of Spoornet material this authority may be given by the Operations Manager concerned.

- 1046.2.2 When a train is despatched with a written or oral authority into a double-line, non-token, single-line or CTC section, in which it must specially stop, due to failure of the signalling power supply or other apparatus, a following train must not be despatched until the train which must stop, has cleared complete the block or CTC section concerned.

1046.3 Despatch of consignments to recognised stopping places

1046.3.1 The despatching of consignments to recognised stopping places are subject to the provisions in clause 14 of the Official Goods Tariff Book, and consignments for such places, which weighed more than the fixed mass, may only be accepted if special authority has been obtained from the Operations Manager.

1046.4 Issue of and control over special stop orders

1046.4.1 Applications for special stops must indicate approximately what time will be required if traffic is to be loaded or unloaded, and the applicant, whose full name and address in the case of revenue-earning traffic, and the name, grade and depot in the case of Spoornet material, must be recorded, must undertake to provide sufficient labour to perform the work expeditiously.

1046.4.2 Non-departmental applications for special stops submitted to officials in charge of stations should be forwarded to the Chief Executive (Spoornet), and departmental applications must be referred to the nearest operating office. If approved, the depot station will be advised and permission will be given to the station immediately preceding the place at which the special stop is to be made, to issue a special stop order.

1046.4.3 The official in charge of the last station preceding the stopping place, must issue to the driver a special stop order showing where the special stop(s) has/have to be made and also the nature of the work to be done.

1046.4.4 When in a CTC area or in sections where the delivery of a written special stop order by the train-control officer is impracticable and/or may lead to delays, a train has to stop for work to be done where it is not scheduled to stop for such purposes, the special stop order must be handed over to the driver by a competent operating official at a suitable place. If it is not possible or cannot be arranged, the train-control officer must telephonically or by radio read out the special stop order to the driver. After the driver has written down the special stop order, he must repeat in full the contents to the train-control officer who must confirm that it is correct. The driver and the train-control officer must record on the special stop order their own and each other's names and the time.

1046.4.5 The driver's assistant must record on the special stop order the time occupied in carrying out the work in respect of each place separately and thereafter hand the special stop order in along with the train journal. In addition, endorse on the train journal particulars of the stop(s) made. In order that there may be uniformity of practise, a special stop order, in accordance with the following specimen, must be prepared:

(SPECIMEN)

SPOORNET

SPECIAL STOP ORDER

STATION DATE STAMP

To the driver of train No.

This order is your authority to stop in the section as follows:

Minutes stopping time..... Place/kilometre point.....

Nature of work to be performed

.....

Time:.....

.....
Official in charge

NOTE – More than one stopping place may be shown on a special stop order, provided all such stopping places are in the same telegraph, double-line, non-token single-line or CTC section and the kilometre points and other information in respect of each stopping place are clearly indicated.

1046.4.6 A copy of the special stop order issued to the driver, and which must bear the appropriate reference number, must be sent by the controlling station to the Operations Manager.

1046.4.7 On receipt of the train journal in the Operations Manager's Office, in cases where the special stop order was issued to authorise a special stop in a section, except to load or unload Transnet material, the special stop order authorising the special stop must be examined to see that the time occupied in connection with the special stop service is covered by the amount deposited and if there is any difference in the charges, the Operations Manager must arrange for the necessary adjustments.

- 1047.0 STARTING OF PASSENGER AND MIXED TRAINS: “TRAIN MAY DEPART” HAND SIGNAL**
- 1047.1 Exchange of hand signals**
- 1047.1.1 Train managers must intimate to the train-control officer when their duties have been completed and all is in order for the safe departure of a passenger or mixed train. The train-control officer must then display the “train may depart” hand-signal to the driver.
- 1047.1.2 Where there is more than one train manager and/or a luggage handler, the train manager nearest to the locomotive must give this intimation by holding one arm horizontally, or a white light held steadily above the head, to the next train manager, and so on. The train manager nearest to the last vehicle on the train must give the intimation to the train-control officer, except at unattended places or at such places as laid down in the local appendices, when he must display a “train may depart” hand-signal to the driver.
- 1047.2 Repeating of “train may depart” signal to driver** – Where, owing to the length of the train, configuration of the line, or other physical conditions, it is impossible for the driver to see the “train may depart” hand-signal from the train manager, the other train managers must repeat the signal to the driver [see train working rule No. 192(2)].
- 1047.3 Starting of trains to which private coaches are attached** – When private coaches, in which distinguished persons travel, are attached to trains, station officials and train managers must, before exchanging any hand signals, ensure, as far as practicable, that the occupants of the private coaches are prepared for the train to start.
- 1047.4 The driver may be authorised to depart by means of radio communication.
- 1048.0 VOID**
- 1049.0 VOID**
- 1050.0 STATION PERSONNEL TO GIVE ASSISTANCE IN SHUNTING, TRANSHIPPING, ETC.**
- 1050.1 Station personnel must give every assistance with shunting operations. The shunting personnel, where available, must do the shunting (see subclause 9012.3).
- 1051.0 WORKING OF PICK-UP TRAINS AND TRAINS CONVEYING LIVESTOCK, PERISHABLE AND OTHER GOODS**
- 1051.1 Locomotive personnel to be advised of work to be done**
- 1051.1.1 On arrival of a train at a station where shunting has to be performed, the official in charge, or his deputy, must hand to the driver’s assistant in duplicate a completed works order. As soon as the clearing has been done and the driver’s assistant has signed the works order, he must hand the original to the official in charge, or his deputy (see subclauses 9030.8.1.1 to 9030.8.1.3). When wagons have to be detached, the provisions of subclause 9030.8 must be complied with.
- 1051.1.2 The official in charge (or his deputy) must hand the driver’s assistant a works order regarding the work to be done at token stations, interloops, intersidings, halts and places in a CTC/RTO area and the driver’s assistant must inform the driver. This will not relieve the driver’s assistant of his responsibility to personally ensure as to the traffic to be attached or detached at such unmanned places.
- 1051.2 Assistance to be given by station personnel in shunting operations** – Where shunting has to be performed, or wagons attached at places other than depots, station officials must, as far as practicable, see that the wagons are coupled together beforehand. All possible assistance must be given by the station personnel to avoid delay to trains.
- 1051.3 Stations in advance to be advised of traffic requirements** – Locomotive personnel of pick-up trains must at all times realise the importance of carrying out their duties in a prompt and efficient manner. The driver’s assistant must accurately inform the train-control officer at the train-control office in advance as to the requirements at unattended places.
- 1051.4 Advice of wagons for stations or intersidings in advance** – Drivers’ assistants having wagons to be detached at stations, interloops or intersidings, must advise the train-control officer two telegraph stations before reaching such places, the probable time they expect to be occupied with the work. This information must be advised forward so that the most suitable crossing arrangements can be made. In CTC areas this information must be furnished to the train-control officer at an early stage, and at least before the place is reached where the work has to be performed.
- 1051.5 Despatch of traffic** – Particulars of the number of wagons, destination and nature of traffic on incoming trains must be ascertained at an early stage, so that arrangements may be made to work the traffic forward.

- 1051.6** **Through goods trains under load to assist pick-up trains** – Through goods trains under load may, with permission from the central operating office, perform a reasonable portion of the work normally performed by pick-up trains.
- 1051.7** **Trains conveying livestock and perishable goods waiting connections** – Trains conveying livestock and perishable goods must not be kept at junction stations for connecting trains more than three hours beyond the scheduled time. A special train must, when necessary, be arranged to run as early as practicable after the arrival of the late connecting train conveying livestock or perishable goods (see subclauses 1010.14.1 and 1054.2).
- 1052.0** **OPENING AND CLOSING OF VEHICLE DOORS**
- 1052.1 Station personnel must see that doors of stationary wagons at their stations are closed, and, when loading or off-loading operations are performed, that the doors of such wagons are properly opened and where possible, hooked to the side of the wagon.
- 1053.0** **VOID**
- 1054.0** **ANNOUNCING AND CANCELLATION OF TRAINS**
- 1054.1** **Announcing of special trains**
- 1054.1.1 When special trains are arranged, they must each have a distinctive number and run in suitable times. When a special train is running in the place of a cancelled train, it may be run according to the running times of such train provided the running times are suitable. Special trains must be announced in accordance with train working rule No. 223.
- 1054.1.2 Where possible, all concerned must be advised of the running of a conditional or a special train by means of a special-train notice.
- 1054.1.3 In the preparation of special-train notices the time must be indicated in accordance with the 24-hour time system.
- 1054.2** **Cancellation of trains**
- 1054.2.1 When an announced train is required to perform work en route for which time is not allowed in the schedule, or is relieved of work en route for which time is allowed, and the arrival time at the terminal station would be altered to the extent of two hours or more, it must be cancelled and a special train arranged to run from the depot starting station.
- 1054.2.2 A scheduled train must not be cancelled on account of late running, at any intermediate place between depot stations, except in the case of a serious accident or other disorganisation of the train service.
- 1054.3** **Distribution of train notices and other circulars**
- 1054.3.1 Train notices and other circulars in connection with the running of trains, must be promptly despatched by the issuing office to stations/depots for issuing to all employees directly concerned and acknowledgement therefor must be obtained.
- 1054.3.2 Drivers and drivers' assistants must endorse the train journal of the special train with the reference, number and date of the special-train notice before the journal is handed in at the termination of the particular journey.
- 1054.3.3 The officials in charge at depot stations and locomotive depots must ensure that suitable arrangements are made for all drivers' assistants and drivers, before departure, to be supplied with the necessary train notices. This does not relieve drivers' assistants and drivers from the responsibility of acquainting themselves, before departing, with the running of special or conditional trains (see train working rule No. 160).
- 1054.3.4 Special care must be exercised in regard to the receipt and distribution of train notices addressed to permanent-way personnel so that the latter may have the earliest possible intimation of any alterations in or additions to the ordinary train service.
- 1054.3.5 Track inspectors must see that the employees under their control are supplied with copies of all notices and circulars affecting them or their work and that such notices or circulars are promptly distributed.
- 1054.4** **Acknowledgement of special-train notices**
- 1054.4.1 At each station and locomotive depot a book must be kept in which must be recorded particulars of all special-train or other notices in connection with the running of trains etc. as well as the time of acknowledgement.

- 1054.4.2 All notices regarding special trains or other notices must be given a serial number and the particulars thereof be recorded in the book, immediately after receipt. The serial number must start with No. 1 on the first day of each month.
- 1054.4.3 Receipt of notices regarding special trains must be immediately acknowledged. The acknowledgement must include the code word only. If the acknowledgement is given by telephone, only the serial number need be given.
- 1054.4.4 Train notices must be made up in date order in a separate pack for each calendar month so that they will be available for reference purposes. The station official in charge must ensure that proper attention has been given to the train notices each day, and that they are filed.

1055.0 DISTRIBUTION AND ACKNOWLEDGEMENT OF SPECIAL CIRCULARS AND OTHER NOTICES

1055.1 Management notices and other circulars

- 1055.1.1 A copy of the Management Notice or any special circulars issued by the Chief Executive (Spoornet), as well as special-train notices, or other notices affecting the working of trains, local circulars with instructions, etc., must be pasted in a special book, each copy on a separate page, and every employee concerned must sign his name on the counterfoil as having read such notice. Sufficient loose copies of all notices concerning the working of trains must be available so that any employee, who is required by the train working rules to have such notices in his possession, can be supplied with one. These books containing signatures must be kept for a period of at least three years.
- 1055.1.2 At large depots, in addition to a book containing instructions of a general nature, a separate book for each section of the line served by the depot may be provided, as follows:

NORTH	SOUTH	EAST	WEST	GENERAL
-------	-------	------	------	---------

- 1055.1.3 At certain large depots, special arrangements are in operation for distributing and obtaining signatures for special train or other notices affecting the working of trains, special circulars, etc. as referred to in subclause 1055.1.1. The instructions relative to such arrangements are published in the local appendices.
- 1055.1.4 When an employee is temporarily absent from duty owing to sickness or leave, instructions which have been issued during his absence and are still in operation when he resumes duty, must be delivered to and signed for by such employee immediately he resumes duty.
- 1055.1.5 In addition to the complete set of instructions pasted in the special book, copies of standing notices must be exhibited on the notice boards at stations, locomotive depots, and other places where personnel are in attendance. The notice boards must be fixed in a position readily accessible at all times to the employees concerned.
- 1055.1.6 Special-train notices and other notices of a temporary nature, affecting train movements, must be exhibited during the period they are in force. When time will not permit of special-train notices being issued before the train arrangements are carried out, a copy of the advice, showing particulars, must be exhibited in a prominent position readily accessible to the employees concerned.
- 1055.1.7 Officials in charge must take a personal interest in connection with the distribution of all circulars and notices. At frequent intervals they must inspect the signature book and ensure that the foregoing procedure is being properly observed. The book must be initialled accordingly.
- 1055.1.8 Section Managers (Train Control) and (Train Traffic) must ensure that the arrangements for the distribution and acknowledgement of circulars and notices are satisfactory and report any irregularities in connection therewith.

1056.0 VOID

1057.0 CHANGING OVER OF LOCOMOTIVE PERSONNEL

- 1057.1 In order to minimise delays to trains when locomotive personnel change over at stations, crossing places or interloops, the instructions in the following subclauses 1057.2 to 1057.14 must be observed.
- 1057.2 The train-control officer at a station where locomotive personnel are scheduled to change over, or the train-control officers at the stations on either side of the interloop at which the change-over is scheduled to take place, must make prompt enquiries regarding the running of the trains concerned and ascertain whether or not the change-over will be effected at the scheduled change-over point.

- 1057.3 Should it be necessary, owing to the late running of one or both of the trains concerned, or other cause, to arrange the crossing and change-over at some other station or interloop, the train-control officer at the station where, or the train-control officers at each end of the telegraph section in which the change-over was scheduled to take place, must make the necessary arrangements with the train-control officer at the station where, or the train-control officers at each end of the telegraph section in which the altered crossing and change-over will take place.
- 1057.4 The train-control officer at a station where the personnel is actually to change over, must telephonically advise particulars of the change-over to the train-control officers on either side before giving "line clear" authority for the trains concerned.
- 1057.5 Void
- 1057.6 The train-control officers at the stations on either side of the station or interloop at which the change-over is to be effected, must advise the drivers and drivers' assistants in writing of the change-over that has been arranged.
- 1057.7 On approaching the change-over station or interloop at night, the drivers concerned must exchange signals by dimming the locomotive headlights three times. In the case of a train waiting with dimmed headlight, the driver must exhibit three flashes of the headlight to the approaching train.
- 1057.8 In the following subclauses 1057.9, 1057.10 and 1057.11, a "stopping train" means a passenger or mixed train which requires to stop for passengers and a "through train" any other train.
- 1057.9 Changing over of personnel of two through trains**
- 1057.9.1 Locomotive personnel** – The driver of a through train who must change over with the driver of another through train already in the station or interloop, must bring the leading locomotive of his train to a standstill opposite that of the opposing train in order that the locomotive personnel can change over before the train proceeds.
- 1057.10 Changing over of personnel of two stopping trains: Locomotive personnel**
- 1057.10.1 In the case of two stopping trains, both trains must be admitted to the station or interloop in the normal manner, and only after both trains have come to a standstill in the position required to enable passengers to entrain and/or detrain, may the change-over be effected. The driver's assistant of the first train to arrive, must immediately take up a position where it is expected the locomotive of the opposing train will come to a standstill and, on arrival of such train, take over its locomotive. The locomotive personnel of the opposing train must then proceed to change over with the driver of the other train, who must not leave his locomotive until his relief has taken over.
- 1057.11 Changing over of personnel: One through train and one stopping train**
- 1057.11.1 In the case of only one of the two trains of which the personnel have to change over being a stopping train, this train must be admitted and despatched in the normal manner. If the crossing is taking place at a station, the stopping train must be admitted first.
- 1057.11.2 Locomotive personnel** – When the stopping train is the first to arrive, the driver of the through train must comply with the provisions of subclause 1057.9.1, in order that the locomotive personnel may change over. If the through train is the first to arrive, the provisions of subclause 1057.10 must be observed regarding the changing over of the locomotive personnel.
- 1057.12 Drivers, when changing over, must personally hand over to each other their train-composition and vacuum forms or combined brake-test and load certificates, as the case may be.
- 1057.13 When locomotive personnel must change over in CTC/Radio Train Order/Track Warrant System sections, the foregoing instructions as applicable when the crossings take place at stations, must be observed, with the exception that the train-control officer must advise the drivers concerned telephonically or by radio, as far as possible, where they must change over with the personnel of an opposing train.
- 1057.14 As far as possible, it must not be arranged for locomotive personnel to change over at places where the view is restricted.
- 1058.0 ELECTRIC AND DIESEL LOCOMOTIVES: RELIEF ARRANGEMENTS FOR LOCOMOTIVE PERSONNEL (SHUT DOWN AND SWITCH OFF OF LOCOMOTIVES)**
- 1058.1 When instructions are given for a train hauled by an electric or diesel locomotive, or for (an) electric or diesel locomotive(s) running light, to wait at a station, yard or elsewhere for relief personnel, or if the central operating office does not consider it necessary or for any other reason whatsoever, for train personnel to remain with the train or locomotive(s), the driver and his driver's assistant must shut down/switch off the locomotive(s) in the prescribed manner and protect it/them in accordance with the provisions in train working rule No. 164 and proceed by the first available train to their home depot to book off.

- 1058.2 The driver must ensure that the handbrakes are applied, scotches are placed in front of the wheels, all windows are properly closed, and all outer doors are locked. Train-control officers and shunting or locomotive personnel must, in co-operation with each other, take the necessary precautionary measures to ensure the safety of a train or locomotive(s) staging unmanned.
- 1058.3 An electric or diesel locomotive, whether attached to a train or standing alone, must not be left unattended, unless standing within the clearance mark(s) of (an) adjoining line(s). The locomotive personnel, before shutting down/switching off the locomotive(s), must be ready to move the train or locomotive(s) to a siding or any other line as instructed by the train-control officer or shunting personnel, if necessary. The train-control officer must advise the central operating office of the time at which the instruction to shut down/switch off the locomotive(s) was given to the locomotive personnel.
- 1058.4 Drivers' assistants must endorse the train journals showing the time at which shut down/switch-off instructions were received.

1058.6 Switching off of diesel locomotives in traffic

- 1058.6.1 When it is known or expected that (a) diesel locomotive(s) in traffic will remain stationary for thirty minutes or longer, the engine(s) must be switched off to save fuel - if the circumstances are such that it will be safe and not unwise to do so.
- 1058.6.2 When it is known or expected that a train worked by (a) diesel locomotive(s) will be delayed at a station, interloop, halt, or at any place in a CTC/Radio Train Order/Track Warrant System area or at a signal for 30 minutes or longer, the train-control officer must advise the driver (or other member of the locomotive personnel) accordingly.
- 1058.6.3 If a member of the locomotive personnel is advised by the train-control officer, either in writing or orally of an expected delay, that employee must convey the message to the driver of the train without delay.

The written message must read as follow:

From: Train-control officer at

To: Driver of train No.

Your train is expected to be delayed for approximately 30 minutes or longer at
 *station/ interloop/halt/crossing place/signal No before you can proceed.
 Contact the *station/train control office at least every 15 minutes.

*Delete what is not applicable.

Date

.....
 Train-control officer

- 1058.6.4 If conditions occur in shunting yards which can result in a delay of 30 minutes or longer, drivers must be advised accordingly so that diesel engines can be switched off.

1059.0 LOCOMOTIVE AND DOMESTIC WATER SUPPLIES

- 1059.1 Officials in charge of stations and depots must report any defects in equipment or interruption of water supplies, locomotive or domestic, that come to their notice, to the respective official(s) concerned with the maintenance of water supply. If the defect or interruption is likely to affect the train service the Operations Manager must also be advised.
- 1059.2 With the exception of mechanical parts of pumping plants and the appliances that are connected with the working thereof, technical superintendents (production control)(civil maintenance) are responsible for the maintenance of all pipes and fittings forming part of a network system for the delivery of water supplies. In emergencies, personnel of all departments concerned must, however, co-operate in repairing the water supply at the most expeditious manner.
- 1059.3 Track inspectors must visit all pump houses and arrange for weeds and grass around the buildings and enclosures to be cleaned for a distance of at least 6 metres. Track personnel must report any defects in water services in the section, or at unattended stations, that come to their attention. Where they find weed, sediment, fungus, etc. likely to interfere with the satisfactory functioning of the water supply, they must take suitable steps to rectify matters.
- 1059.4 Technicians (Chemistry) exercise control over the chemical treatment of water supplies, particularly those used for locomotive purposes. They must be advised whenever any marked change is observed in the condition of the water, which necessitates their urgent presence or advice. In cases of stoppage of water treatment plants, or when other serious trouble with such plant is experienced, the Executive Manager (Transwerk) must be advised.

1060.0 WORKING OF LOCOMOTIVES IN DEPARTMENTAL SIDINGS, PRIVATE SIDINGS/EXCHANGE YARDS OR OVER PRIVATE SERVICE LINES

- 1060.1 Trains or locomotives must be run cautiously in departmental sidings, private sidings/exchange yards, or over private service lines, and a good lookout must be maintained by the locomotive personnel (see train working rule No. 127).
- 1060.2 Frequent use must be made of the whistle when the locomotive is in motion, and also when approaching a level crossing.
- 1060.3 The employee in charge of the movement must see that points and scotch blocks or derails are in the correct position and on completion of shunting operations he must see that they are reset or replaced in the normal position and properly secured.
- 1060.4 All defects or damage observed must be recorded and reported in writing to the official in charge of the nearest station (see clause 9119.0).
- 1060.5 Before a locomotive of Spoornet traverses any portion of a private service line or siding ordinarily worked by a private locomotive, the train-control officer or other authorised employee must ensure that the service line or siding is clear and, if necessary, get an assurance from the owner's responsible representative that the service line or siding is unoccupied, and that no obstruction will be permitted during the period it is being traversed by the Spoornet locomotive. The train-control officer or other authorised employee must give the driver a written assurance that the line is clear for him to proceed and that it will be kept clear until he has returned (also see clause 9022.0).

1061.0 WORKING OF PRIVATE LOCOMOTIVES IN STATION YARDS

- 1061.1 A private locomotive (see note) may not enter or be permitted to enter, or shunt or be permitted to shunt, on lines within the Spoornet's boundary unless –
- 1061.1.1 the driver of such locomotive has been tested by a Section Manager (Train Traffic) and this official has issued a certificate to the effect that the private-locomotive driver complies with the following requirements:
- 1061.1.1.1 He is thoroughly competent.
- 1061.1.1.2 He is conversant with the layout of the station/siding he is required to enter and/or to shunt in.
- 1061.1.1.3 He has a thorough knowledge of the signalling (hand or fixed signals) and/or indication boards applicable to the particular locality.
- 1061.1.2 the owner of the private locomotive, after the certification of his driver by a Section Manager (Train Traffic), has the written permission of the Operations Manager, for such driver to drive a locomotive belonging to his employers within Spoornet's boundary at the station/siding concerned.
- 1061.2 The Section Manager (Train Traffic) must, from time to time ensure that the driver of a private locomotive working within Spoornet's boundary has been tested and that the owner has the written permission of the Operations Manager for his locomotive to work on the Spoornet's lines (see subclauses 1061.1.1 and 1061.1.2).
- 1061.3 A private locomotive may not enter upon or cross any line owned by Spoornet, except under the direct supervision and control of the train-control officer or yard master, as the case may be, or, on his authority, under the supervision and control of a competent member of the yard personnel.
- 1061.4 Before a private locomotive enters upon or fouls any line of Spoornet, the driver of such locomotive must receive the prescribed signal from the train-control officer or the other authorised employee. The employee must, before giving the prescribed signal, ensure that the line upon which it is intended the private locomotive should run, is clear. The employee must also ensure that the driver has been instructed as to what he is required to do.
- 1061.5 All movements of a private locomotive within Spoornet's boundary, must be made under the direct supervision and control of the train-control officer or the other authorised employee.
- 1061.6 Before a private locomotive, with traffic, enters upon any line of Spoornet to run from the station to the private siding or exchange yard, or vice versa, the driver must ensure that all the handbrakes of the vehicles are released and that the vacuum hose pipes are coupled throughout. A test for continuous vacuum brake must be performed in the prescribed manner.

NOTE – "Private locomotive" means a locomotive owned by a party or parties other than Spoornet, or a locomotive hired from Spoornet by such party or parties.

1062.0 – 1069.0 VOID

1070.0 CONTROL OF TRAINS, ROLLING STOCK AND EQUIPMENT

1070.1 Employees to carry out instructions received from the central operating office

1070.1.1 All concerned must carry out the instructions received from the central operating office in respect of the running of trains and rolling stock, as well as other instructions which exceptional circumstances necessitate.

1070.1.2 Traffic positions must be given at fixed hours to the central operating office.

1070.2 Special trains

1070.2.1 Trains announced to run on certain days of the week only, must not be arranged to run as special trains on other days. If special trains are required, they must be arranged in the prescribed manner under another train number.

1070.3 Information regarding the running of all trains must be provided

1070.3.1 Particulars regarding the arrival and departure of all trains, as well as reasons for delays and other relevant information, must be provided to the central operating office by the train-control officer. This must be done as soon as possible after the arrival and/or departure of all trains.

1070.4 Breakdown trains, material trains and ballast-tamping machines

1070.4.1 Train-control officers must keep the central operating office informed regarding the movements of breakdown trains, material trains and heavy ballast-tamping machines.

1071.0 SPECIMENS OF MESSAGES, ORDERS AND WARNINGS

1071.1 Where specimens of messages to be exchanged and orders and warnings to be issued, with the exception of messages and manuscript orders which must be written out completely, appear in this appendix, it serves as a guide only insofar as the wording is concerned.

1071.2 Proceed authorities for trains printed on colour paper or on white paper with a colour overprint, may in no circumstances be photostatted or be reproduced in any other way and be used for the running of trains.

SECTION 2

MAINTENANCE OF PERMANENT WAY AND WORKS WORKING OF HEAVY BALLAST TAMPING MACHINES

2001.0 GENERAL

- 2001.1 In the instructions in the following subclauses 2001.0 to 2036.0, unless inconsistent with the context –
- 2001.1.1 **off-tracking place:** means a place with an off-tracking platform to place the tamping machine clear of the line;
- 2001.1.2 **double-line section:** means a unidirectional running line over which the train-control officers at two adjoining stations jointly control the running of trains by means of fixed signals;
- 2001.1.3 **tamping machine:** means a heavy ballast tamping machine, crib excavator, crib compactor, ballast profiling machine or sleeper removal and insertion machine;
- 2001.1.4 **track inspector:** means the track inspector, or his authorised representative, who is responsible for the control over and protection of the tamping machine and the arrangements regarding the running thereof;
- 2001.1.5 **non-token single-line section:** means a bidirectional running line over which the train-control officers at two adjoining stations jointly control the running of trains by means of fixed signals;
- 2001.1.6 **working area:** means any line not exceeding three kilometres in length on which tamping operations are performed and which must be protected during such tamping operations; and
- 2001.1.7 **CTC section:** means a uni- or bidirectional running line in a CTC area extending from an interlocking area with points as far as the next interlocking area with points.

2002.0 TRACK INSPECTOR TO BE QUALIFIED IN TRAIN WORKING

- 2002.1 The track inspector must be qualified in train working as applicable to motor trolley drivers and must, in addition to observing the instructions regarding the working of heavy ballast tamping machines, observe the rules and instructions governing the working of trains.

2003.0 MESSAGES, ORDER AND WARNING

- 2003.1 The messages, order and warning referred to in these instructions, are the following (see specimens in clause 2036.0):

PREFIX OF MESSAGE, ORDER OR WARNING	NAME OF MESSAGE, ORDER OR WARNING
BOM	Combined heavy ballast tamping machine message and proceeding order
BM	Heavy ballast tamping machine question message
BMI	Heavy ballast tamping machine reply message
BMX	Heavy ballast tamping machine warning

- 2003.2 The train-control officer who has to authorise the departure of a tamping machine by means of a combined message and proceeding order form (BOM) must, in every instance, fully complete and sign the form. The completed forms must be retained for six months.
- 2003.3 The track inspector must forward his copies of the combined message and proceeding order forms (BOM) weekly to the track manager who must file them for record purposes for a period of six months.

2004.0 SPECIAL NOTICE MUST BE ISSUED

- 2004.1 A special notice containing the following information must be issued weekly for the working of the tamping machine:
- 2004.1.1 The date on which the work will commence, as well as the date on which the work will be completed;

- 2004.1.2 the places between which tamping work will be performed (in the case of double-line sections, “up line” or “down line”, as the case may be, must be shown);
- 2004.1.3 the kilometre points between which work will be performed, (these must correspond with the particulars in subclause 2004.1.2); and
- 2004.1.4 the name of the track inspector in charge of the tamping machine.
- 2004.2 When tamping is completed at an earlier date and, where applicable, can be commenced at an earlier date at another place, the altered or new work programme must be arranged by means of a special notice (YQ).
- 2004.3 Occupation of running line**
- 2004.3.1 Where a line, such as the up or down main line on a particular double-line section, must be closed entirely for traffic for the duration of tamping and where trains may not run over the section at all during such occupation, or should only run over the other line(s), it must clearly be stipulated in the notice.
- 2004.3.2 Until such time as the occupation is cancelled, no trains may be allowed to enter the section of line concerned.
- 2004.3.3 During the occupation it will not be necessary to make train arrangements for the movement of the tamping machine over the section of line of which occupation is taken, and therefore no token must be issued for the tamping machine and/or a running signal operated for the despatch thereof.
- 2004.3.4 The train-control officer must use a reminder to remind him that the signal controlling access to the line concerned, must not be operated. The reminder must not be removed before tamping has been ceased for the day and the track inspector has given the assurance that the provisions of clause 2011.0 have been complied with.
- 2004.3.5 The track inspector is responsible for adequate safeguarding of the workmen and protection of machines against possible irregular movement on the occupied line (see clause 2009.0) and, where possible, points must be clamped to prevent vehicles from entering the occupied line. An audible warning device must be used to warn employees against approaching trains on adjacent parallel lines (also see subclause 2041.8).
- 2005.0 ONLY ONE TAMPING MACHINE MAY WORK IN A PARTICULAR SECTION OR AT A PARTICULAR PLACE**
- 2005.1 Except where occupation is taken (see subclause 2004.3) or as provided in subclause 2005.3, only one tamping machine at a time may work in a telegraph, double-line, non-token single-line or CTC section, at a particular station or in a particular interlocking area.
- 2005.2 Where occupation is taken, two or more tamping machines (any type) may be allowed to work on the section of line concerned and the official in charge of the track work must see to the safe movement of the respective tamping machines.
- 2005.3 Other machine(s) working together with a heavy ballast tamping machine**
- 2005.3.1 A ballast profiling machine, crib excavator, crib compactor and/or sleeper removal and insertion machine may work together with a heavy ballast tamping machine, provided that it is working in the same working area as the ballast tamping machine. In such instances, the ballast tamping machine and the ballast profiling machine, crib excavator, crib compactor and/or sleeper removal and insertion machine are regarded, for operating and protection purposes, as a unit.
- 2005.3.2 The off-tracking platforms for the ballast tamping machine and the machine(s) mentioned in subclause 2005.3.1 must be constructed next to each other and, for operating purposes, be regarded as one off-tracking place. The track inspector is in charge of all the machines and is responsible for the safe movement thereof.
- 2005.3.3 In the notice regarding the working of the ballast tamping machine it must be specifically mentioned which type(s) of machine(s) will work together with the ballast tamping machine.
- 2005.3.4 When the machines must move outside the working area, the ballast profiling machine, crib excavator, crib compactor and/or sleeper removal and insertion machine must, where possible, be coupled to the heavy ballast tamping machine by means of an approved coupling in order that it can move with the ballast tamping machine as a unit. If the machine(s) concerned cannot be coupled to the ballast tamping machine, each machine must be despatched separately. As soon as it has arrived in the working area or new working area and has been secured on the off-tracking platform, or has arrived at the telegraph station, crossing place or interlocking area, the next machine may be despatched. The place where the **HEAVY BALLAST TAMPING MACHINE** is standing while the other machine(s) is/are being moved, must in such instances – until such time as all the machines have moved – be regarded as the place where trains must pass the tamping machine.
- 2005.3.5 A ballast-cleaning machine, when it is working, leaves the track unsafe for the passage of trains and must only be used during an occupation.

2006.0 COMMUNICATION

2006.1 Track inspector to be in contact with train-control officers and track helpers

2006.1.1 Direct communication between the track inspector and the train-control officers at the two stations controlling a telegraph, double-line or non-token single-line section in which a tamping machine is working, must in normal circumstances be provided by means of suitable radios. The radios must be installed at each station/train-control office and on or near the tamping machine.

2006.1.2 Communication in CTC area – Except where otherwise provided by the Chief Executive (Spoornet), communication between the track inspector and train-control officer must be provided by means of –

2006.1.2.1 a plug-in telephone at the emergency plug point nearest to the off-tracking platform together with portable radios for communication between the place where the plug-in telephone is provided and the tamping machine. A trackmaster or other competent employee must be delegated to operate the plug-in telephone and radio and, where necessary, to listen in on continuously so as to be able to transmit all the messages between the train-control officer and the track inspector; or

2006.1.2.2 direct radio communication between the tamping machine and the train-control office.

2006.1.3 Three walkie-talkies must be supplied to provide communication only between the track inspector and the track helper(s) affording protection. This number can be increased if radio communication is too weak and telephonic communication (see subclause 2006.2) cannot readily be established, in which case a competent employee may be used to repeat the instructions of the track inspector to a track helper (see subclause 2006.4).

2006.1.4 The radio sets must be used to maintain close contact between all concerned, and are intended for use in connection with the control of tamping work only.

2006.1.5 Employees operating radio sets must be conversant with the use thereof and all sets must be tested daily before the tamping machine starts working.

2006.2 Field or plug-in telephones for use if radio fails or is not available

2006.2.1 In addition to the radio sets, three plug-in telephones (where there is an emergency line) must be available on the tamping machine in order that the track inspector may communicate with the train-control officers concerned, and/or with the track helper(s) affording protection, should radio communication fail or if radios are not available.

2006.2.2 When plug-in telephones must be used, the procedure described in subclause 2006.1.2.1 must be followed to provide communication between the track inspector and the train-control officers. A plug-in telephone must be handed to each track helper affording protection and with whom no radio communication exists and the point of protection must be moved to the first plug-in point outside the normal distance of protection.

2006.2.3 The track helper(s) must be told to listen in continuously and to be ready to carry out instructions from the track inspector.

2006.2.4 When plug-in telephones are used, the track helpers will be able to communicate with the train-control officer(s) and others as well as with the track inspector. It must, however, be clearly understood that track helpers must act only on instructions from the track inspector.

2006.3 In order to prevent trains from being delayed, the track inspector must keep in close touch with the train-control officer(s) controlling the section. The train-control officers must stay well informed with regard to the running of trains and must timeously inform the track inspector regarding the time of departure or the expected time of departure of a train into the section concerned, in order that the tamping machine can be placed clear of the line before the train arrives at the track helper and the board mentioned in subclause 2009.1.2.

2006.4 In order that there will be no misunderstanding, the employees concerned must repeat all instructions given or received by radio or telephone.

2006.5 Procedure to be followed when radio communication cannot be established with both train-control officers

2006.5.1 Where the track inspector cannot communicate by radio with both train-control officers controlling a telegraph, double-line or non-token single-line section (for example in mountainous areas), but radio communication can be established with one of the train-control officers, all messages in connection with the tamping machine may be exchanged with this train-control officer only.

2006.5.2 When radio communication can be established between only one of the train-control officers and the track inspector, this train-control officer must transmit all the messages in connection with the movement or the working of the ballast tamping machine to the other train-control officer concerned and he must advise the track inspector of the expected time of departure of trains from both ends into the section (see subclause 2022.1.8).

2007.0 PLACE WHERE TAMPING MACHINE WILL WORK AND AUTHORITY TO WORK

2007.1 Authority to work must be obtained and details of working area must be furnished

- 2007.1.1 Every day, before tamping commences, the track inspector must obtain oral authority from the train-control officer, the train-control officers who jointly control the telegraph, double-line or non-token single-line section, the yard master or other operating official in charge, depending on who is controlling the section of line in which the working area will be, and thereafter arrange for protection to be afforded in terms of clause 2009.0.
- 2007.1.2 The track inspector must furnish the operating official(s) concerned, mentioned in subclause 2007.1.1, with all the relevant details of the working area, namely the telegraph, double-line, non-token single-line or CTC section in which, the kilometre points between which, the place at which and/or the line on which, as the case may be, the tamping machine will work. Except when the tamping machine is working within the fixed signals of a telegraph station or an interlocking area or the working area adjoining such station or interlocking area, and in these circumstances it is agreed that the tamping machine each time will stand clear within the clearance marks/signals of a particular line at the place concerned to allow a train to pass, or if it is working in a marshalling or goods yard, the track inspector must furnish particulars of the actual place (to the nearest half-kilometre point) where trains must pass the tamping machine within the working area and ensure that an off-tracking platform is erected at such place.
- 2007.1.3 The off-tracking place must be indicated to the driver by means of a rectangular yellow board that has a black "X" on both sides and that is affixed to a pole. For the duration of the tamping, the board must stand alongside the line at the off-tracking place, with the "X" facing the driver of a train travelling in the direction of the tamping machine.
- 2007.1.4 Another off-tracking place may not be used, unless oral authority has been obtained from the train-control officer(s) controlling the telegraph, double-line, non-token single-line or CTC section.
- 2007.1.5 When the tamping machine is working on one of two or more parallel running lines and occupation of the running line concerned is not taken in accordance with subclause 2004.3, the train-control officer(s) must, for the duration of the tamping operations, arrange for as many trains as possible to run over the line(s) on which work is not performed.
- 2007.2 Not more than three kilometres of track at a time may be tamped on a running line on which the tamping machine is working and this working area may in no circumstances be changed unless oral authority has been obtained from the train-control officer(s) concerned. The working area on a unidirectional line may be moved in the "wrong" direction only if the old and new working areas overlap one another, the tamping machine is working on that portion of the running line or is standing clear at an off-tracking place alongside that portion of the running line which is part of the old as well as the new working area and protection in accordance with clause 2009.0 is continuously being afforded whilst the tamping machine is on the line, i.e. provided the working area is changed in the process of tamping operations.
- 2007.3 An axle counter or block joint at the beginning/end of a block section, or points, except points at an interloop (including a remote-controlled interloop), a token station or an intersiding, must not fall within the working area of a tamping machine, but it must be arranged for the working area to begin or end at the axle counter, block joint or points, as the case may be (if necessary, after consultation with the train-control officer).
- 2007.4 Irrespective of the system of train working, a tamping machine may move forward or backward, as may be necessary, within its working area, provided it is protected in accordance with clause 2009.0. If a track circuit controlling the aspect of a controlled colour-light signal falls within the working area, such signal must be kept at "danger" until the tamping machine is clear of the line.
- 2007.5 When a tamping machine, in the process of tamping, arrives at an absolute stop signal at "danger" (in other words, a signal which a train, during normal working, may not pass without the authority of the train-control officer or a handsignalman, as the case may be), or at points controlled by a train-control officer or other operating official, the track inspector must first obtain oral authority from the train-control officer or other operating official, as the case may be, to pass the signal or clearance mark, to proceed over the points or to proceed from one line to another. In addition, the track inspector must obtain the assurance that the points, where applicable, are correctly set.

2008.0 ARRIVAL OF TAMPING MACHINE AT PLACE OF WORK

- 2008.1 Immediately on arrival of the tamping machine at a place in a telegraph, double-line or non-token single-line section or in a CTC area where tamping operations must take place, the track inspector must arrange for protection in accordance with clause 2009.0. Thereafter the train-control officer(s) controlling the section concerned, must be advised by radio or telephone of the time of arrival of the tamping machine at the place where it is to work and that protection is afforded in accordance with clause 2009.0.

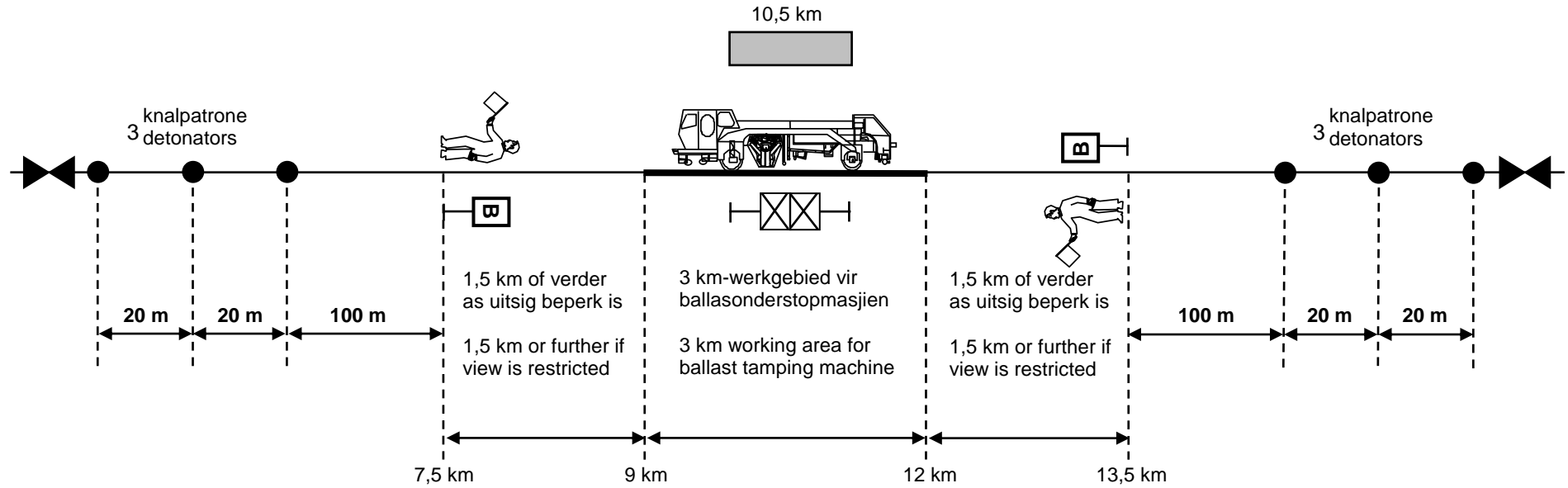
2009.0 PROTECTION OF TAMPING MACHINE







2009.1 Protection when the tamping machine is working on the line

- 2009.1.1 When the tamping machine is working on the line, a track helper, equipped with a walkie-talkie, a red flag and at least 10 detonators, must stand at a place at least 1,5 kilometres, from each end of the working area (in the case of a bidirectional line) or from the end of the working area on the side from which trains approach the tamping machine (in the case of a unidirectional line) and display a danger hand signal from a point where it will be seen clearly by the driver of a train travelling in the direction of the tamping machine. Before taking up the position from where he must display the danger hand signal, the track helper must place three detonators 20 metres apart on the line, the first one 100 metres outside the place from where he must display the danger hand signal. (The total distance of 1,640 m between the working area and the furthest detonator is hereinafter referred to as the "full protection distance".) Each track helper must continue to display a danger hand signal until instructed by the track inspector to cease the protection.
- 2009.1.2 A yellow board, affixed to a pole with a large black letter B thereon, must be placed at each point where a track helper takes up position to display the danger hand signal, as an indication to a driver that he is approaching the area where the tamping machine is working. The board must be placed alongside the line, facing the driver of a train travelling in the direction of the tamping machine, as indicated in subclause 2009.1.6.
- 2009.1.3 Where, except as laid down in subclause 2009.3, there are points within the full protection distance, the distance between the working area and the track helper, initially, and then, if necessary, the distance between the track helper and the detonators, and then even the number of detonators, must be reduced in order that the furthest detonator or, should there not be space at all for at least one detonator between the working tamping machine and the points, the track helper displaying a danger hand signal, will be on that side of the points nearest to the tamping machine (alongside the stock-rail joint or clearance mark, depending on whether they are facing or trailing points). A B board (see subclause 2009.1.2) must, in each case, be placed at the point where the track helper is standing.
- 2009.1.4 In all instances where tamping operations are performed near or between points and protection cannot be afforded at the full protection distance (see subclause 2009.1.3), the track inspector and the train-control officer must come to a clear understanding and the train-control officer must ensure that the tamping machine is properly protected by controlled signals, where provided, on that/those side(s) where protection is not being afforded at the full protection distance, and THAT A TRAIN IS NOT ALLOWED TO DEPART FROM THE TELEGRAPH STATION, CROSSING PLACE OR INTERLOCKING AREA CONCERNED OR TO ENTER THE LINE ON WHICH THE TAMPING MACHINE IS WORKING BEFORE THE TRACK INSPECTOR HAS INFORMED HIM THAT THE TAMPING MACHINE IS CLEAR OF THE LINE. Where applicable, the train-control officer must make use of reminders on the levers, switches or panel push buttons concerned or, in the case of hand points, the track inspector must, in consultation with the train-control officer or other operating official, as the case may be, arrange for the points concerned to be clamped against movements to the line on which work is performed for as long as the line is occupied by the tamping machine.
- 2009.1.5 As soon as the tamping machine has completed tamping operations up to the first kilometre or half-kilometre point allowing the full protection distance between the tamping machine and the points (see subclause 2009.1.3), the track inspector must change the working area in order that it will start at this kilometre or half-kilometre point and arrange for protection to be afforded at the full protection distance.
- 2009.1.6 How protection must be afforded:

TWEERIGTINGLYN

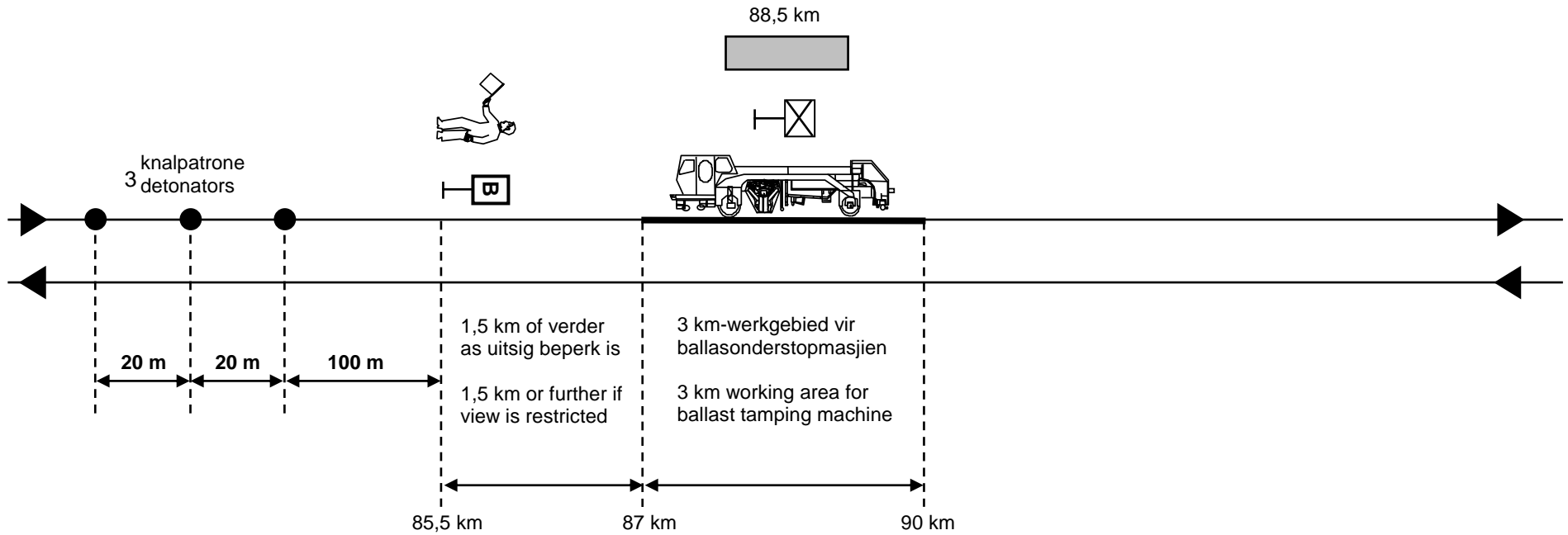
BIDIRECTIONAL LINE









 <p>TWEERIGTINGLYN BIDIRECTIONAL LINE</p>	 <p>KNALPATRONE DETONATORS</p>	 <p>VLAGMAN MET LOOPGESELSER FLAGMAN WITH WALKIE-TALKIE</p>	 <p>ONDERSTOPMASJIE- WAARSKUBORD TAMPING MACHINE WARNING BOARD</p>	 <p>X – BORD X – BOARD</p>	 <p>10,5 km AFHAALPLATFORM OFF-TRACKING PLATFORM</p>
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EENRIGTINGLYN

UNIDIRECTIONAL LINE



 <p>TWEERIGTINGLYN BIDIRECTIONAL LINE</p>	 <p>KNALPATRONE DETONATORS</p>	 <p>VLAGMAN MET LOOPGESELSER FLAGMAN WITH WALKIE-TALKIE</p>	 <p>ONDERSTOPMASJIE- WAARSKUBORD TAMPING MACHINE WARNING BOARD</p>	 <p>X – BORD X – BOARD</p>	 <p>88,5 km AFHAALPLATFORM OFF-TRACKING PLATFORM</p>
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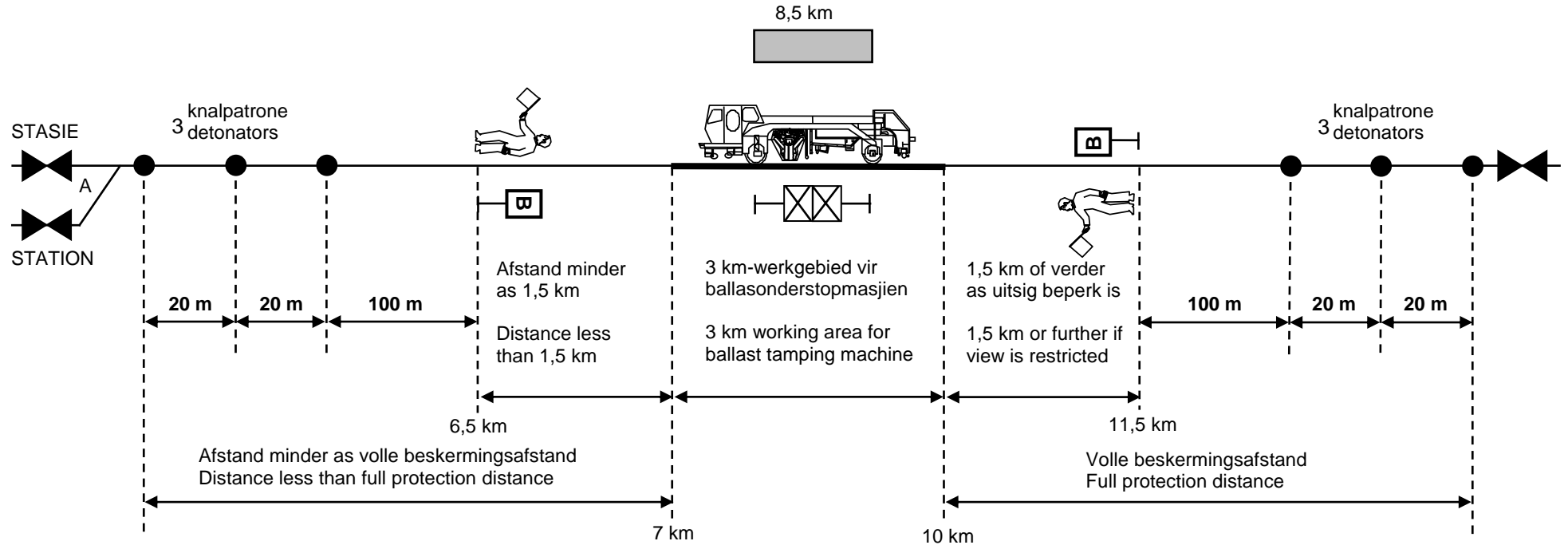
2009.1.6.3
(a)







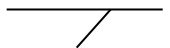
TWEERIGTINGLYN: WISSEL BINNE VOLLE BESKERMINGSAFSTAND

Treine moet nie van A in die rigting van die werkgebied vertrek voordat die onderstopmasjien op die afhaalplatform beveilig is nie.

BIDIRECTIONAL LINE: POINTS WITHIN FULL PROTECTION DISTANCE

Trains must not depart from A in the direction of the working area before the tamping machine has been secured on the off-tracking platform.



 TWEERIGTINGLYN BIDIRECTIONAL LINE	 KNALPATRONE DETONATORS	 VLAGMAN MET LOOPGESELSER FLAGMAN WITH WALKIE-TALKIE	 ONDERSTOPMASJIE- WAARSKUBORD TAMPING MACHINE WARNING BOARD	 X – BORD X – BOARD	 8,5 km AFHAALPLATFORM OFF-TRACKING PLATFORM	 WISSELS POINTS
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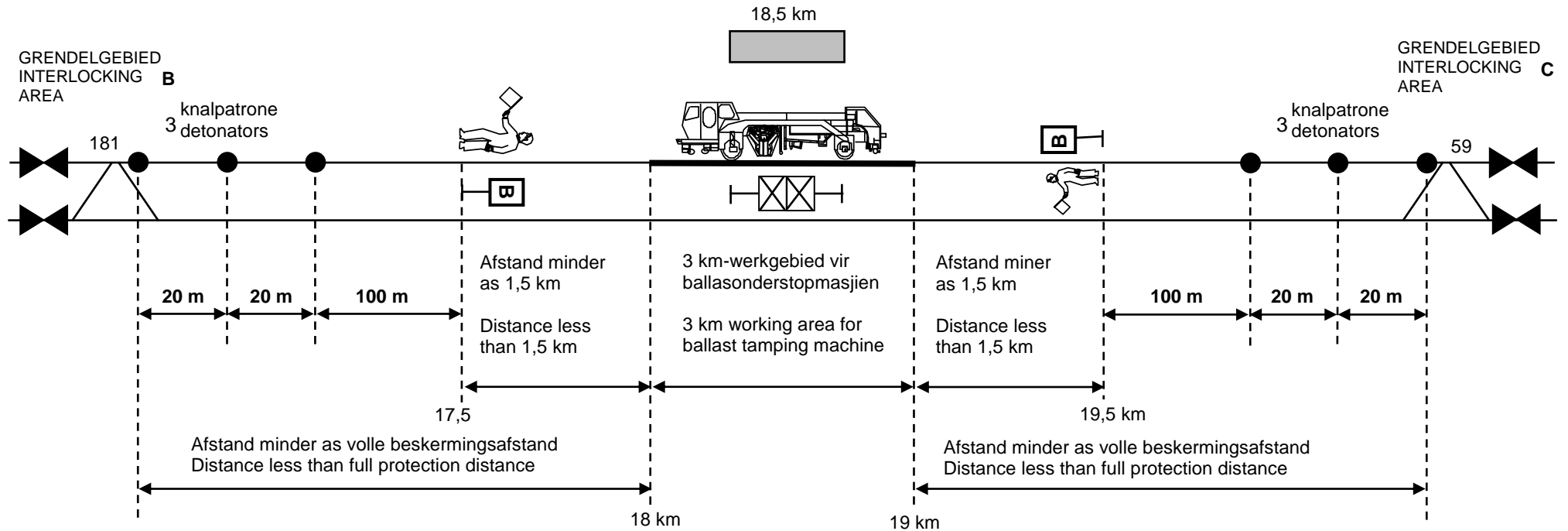
2009.1.6.3
(b)

TWEERIGTINGLYN: WISSEL BINNE VOLLE BESKERMINGSAFSTAND

Treine moet nie toegelaat word om die lyn tussen wissel no. 181 by grendelgebied B en wissel no. 59 by grendelgebied C binne te loop voordat die onderstopmasjien op die afhaalplatform beveilig is nie.

BIDIRECTIONAL LINE: POINTS WITHIN FULL PROTECTION DISTANCE

Trains must not be allowed to enter the line between No. 181 points at interlocking area B and No. 59 points at interlocking area C before the tamping machine has been secured on the off-tracking platform.



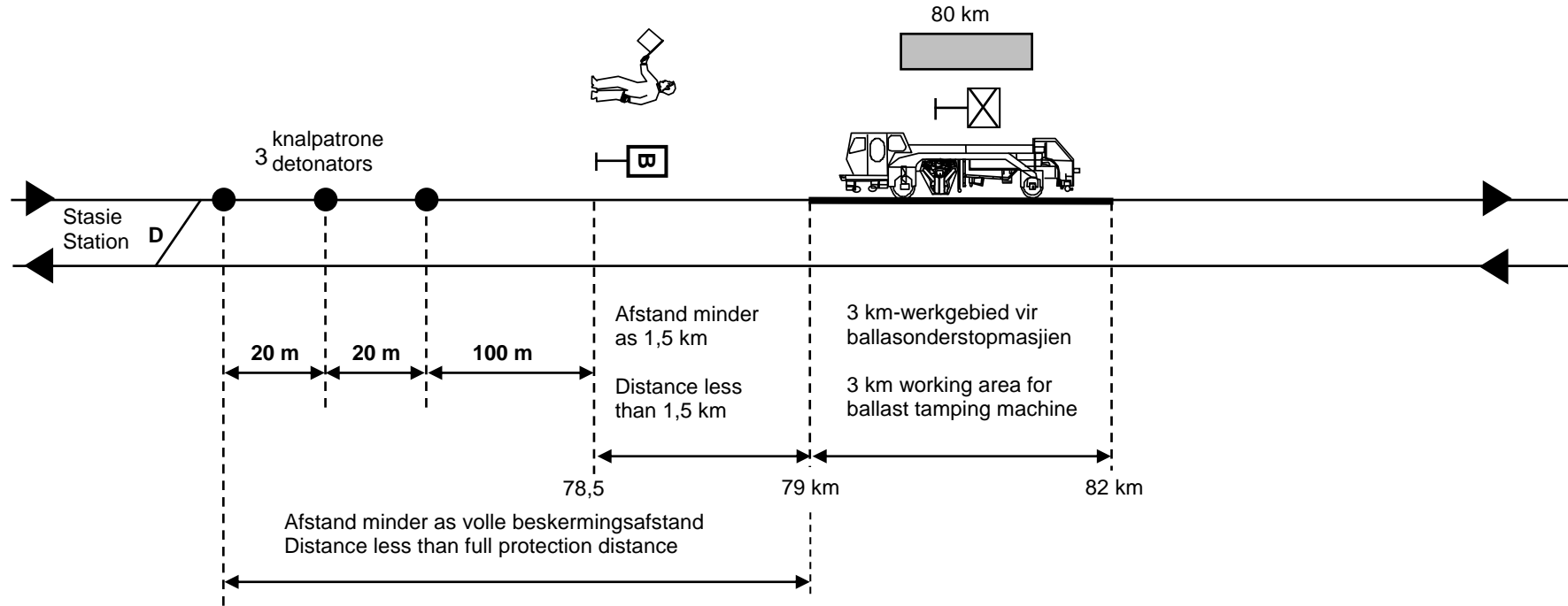
<p>TWEERIGTINGLYN BIDIRECTIONAL LINE</p>	<p>KNALPATRONE DETONATORS</p>	<p>VLAGMAN MET LOOPGESELSER FLAGMAN WITH WALKIE-TALKIE</p>	<p>ONDERSTOPMASJIE- WAARSKUBORD TAMPING MACHINE WARNING BOARD</p>	<p>X – BORD X – BOARD</p>	<p>18,5 km AFHAALPLATFORM OFF-TRACKING PLATFORM</p>	<p>WISSELS POINTS</p>
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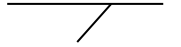
EENRIGTINGLYN: WISSEL BINNE VOLLE BESKERMINGSAFSTAND

Treine moet nie van stasie D in die rigting van die werkgebied vertrek voordat die onderstopmasjien op die afhaalplatform beveilig is nie.

UNIDIRECTIONAL LINE: POINTS WITHIN FULL PROTECTION DISTANCE

Trains must not depart from station D in the direction of the working area before the tamping machine has been secured on the off-tracking platform.



 TWEERIGTINGLYN BIDIRECTIONAL LINE	 KNALPATRONE DETONATORS	 VLAGMAN MET LOOPGESELSE FLAGMAN WITH WALKIE-TALKIE	 ONDERSTOPMASJIE- WAARSKUBORD TAMPING MACHINE WARNING BOARD	 X – BORD X – BOARD	 80 km AFHAALPLATFORM OFF-TRACKING PLATFORM	 WISSELS POINTS
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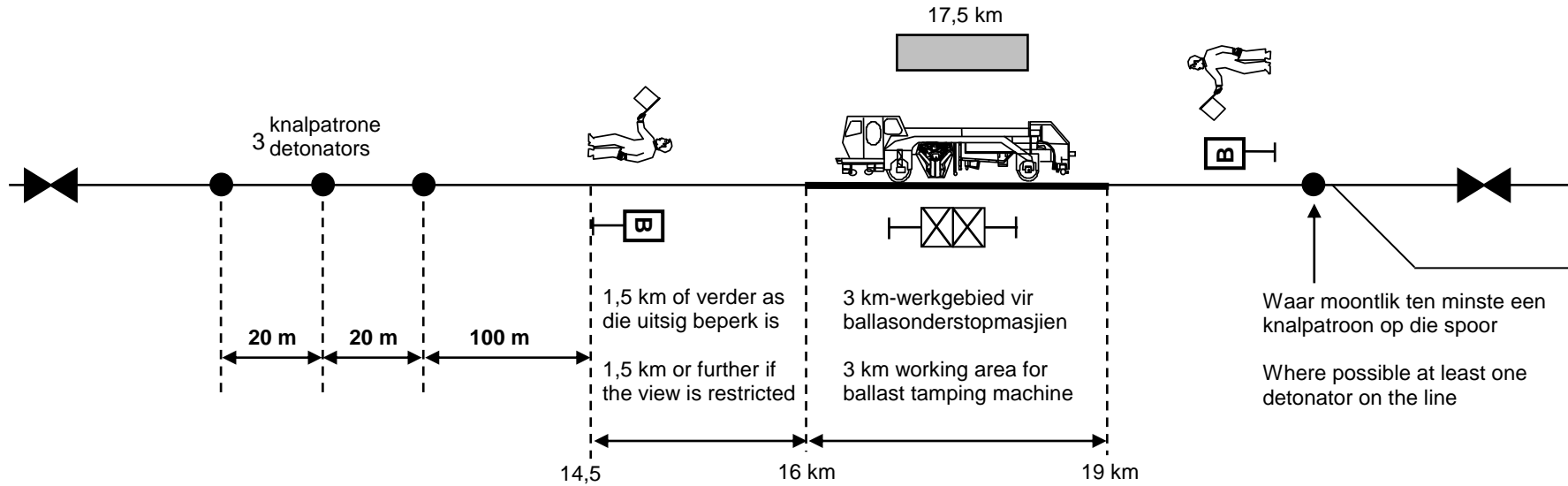
2009.1.6.5
(a)







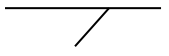
**TWEERIGTINGLYN: WERKGEBIED BEGIN
BY OF NABY WISSEL**

Treine moet nie van stasie E in die rigting van die werkgebied vertrek voordat die onderstopmasjien op die afhaalplatform of in die stasie, na gelang van die geval, vry staan vir die trein om verby te gaan nie.

**BIDIRECTIONAL LINE: WORKING AREA STARTS
AT OR NEAR POINTS**

Trains must not depart from station E in the direction of the working area before the tamping machine is standing clear on the off-tracking platform or in the station, as the case may be, for the train to pass.



 <p>TWEERIGTINGLYN BIDIRECTIONAL LINE</p>	 <p>KNALPATRONE DETONATORS</p>	 <p>VLAGMAN MET LOOPGESELSER FLAGMAN WITH WALKIE-TALKIE</p>	 <p>ONDERSTOPMASJIE- WAARSKUBORD TAMPING MACHINE WARNING BOARD</p>	 <p>X – BORD X – BOARD</p>	 <p>17,5 km AFHAALPLATFORM OFF-TRACKING PLATFORM</p>	 <p>WISSELS POINTS</p>
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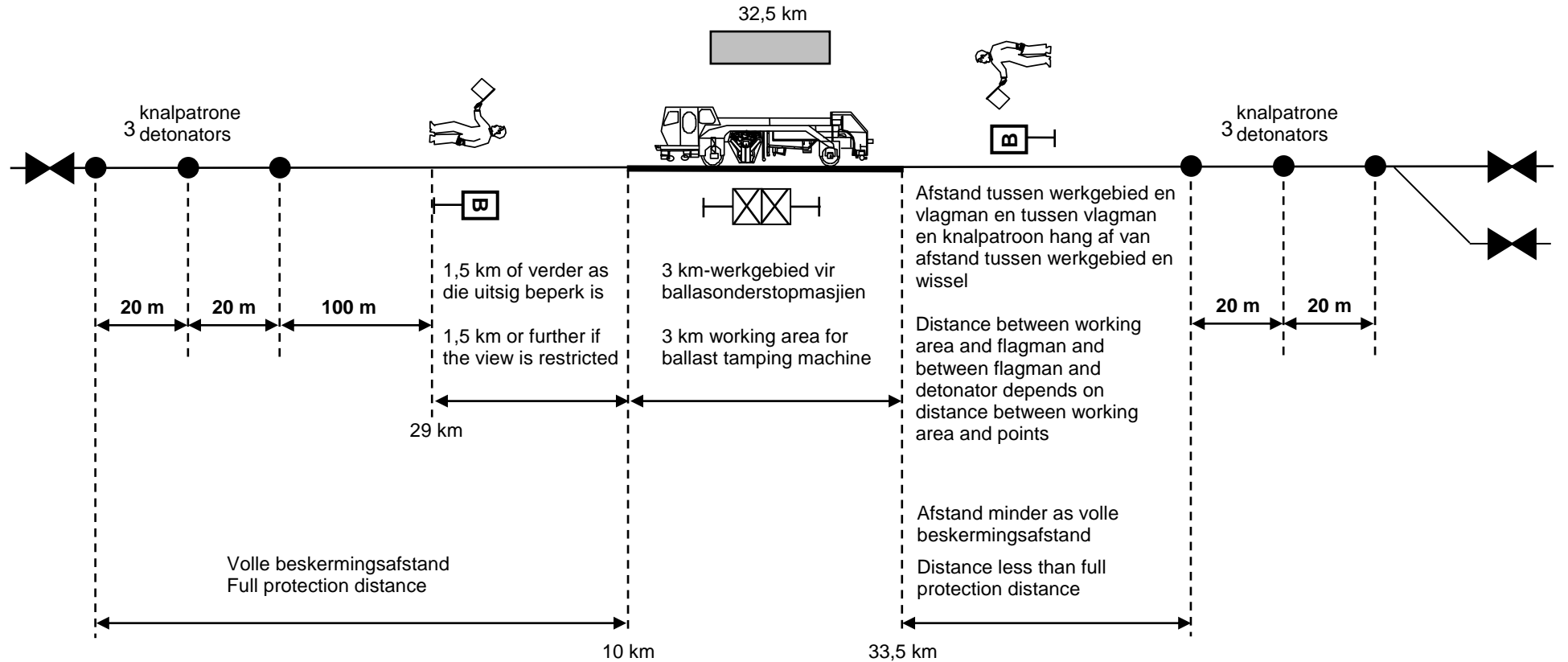
2009.1.6.5
(b)

**TWEERIGTINGLYN: WERKGEBIED BEGIN
BY OF NABY WISSEL**

Treine moet nie van kruisplek F in die rigting van die werkgebied vertrek voordat die onderstopmasjien op die afhaalplatform beveilig is nie.

**BIDIRECTIONAL LINE: WORKING AREA STARTS
AT OR NEAR POINTS**

Trains must not depart from crossing place F in the direction of the working area before the tamping machine has secured on the off-tracking platform.



<p>TWEERIGTINGLYN BIDIRECTIONAL LINE</p>	<p>KNALPATRONE DETONATORS</p>	<p>VLAGMAN MET LOOPGESELSER FLAGMAN WITH WALKIE-TALKIE</p>	<p>ONDERSTOPMASJIE- WAARSKUBORD TAMPING MACHINE WARNING BOARD</p>	<p>X – BORD X – BOARD</p>	<p>32,5 km AFHAALPLATFORM OFF-TRACKING PLATFORM</p>	<p>WISSELS POINTS</p>
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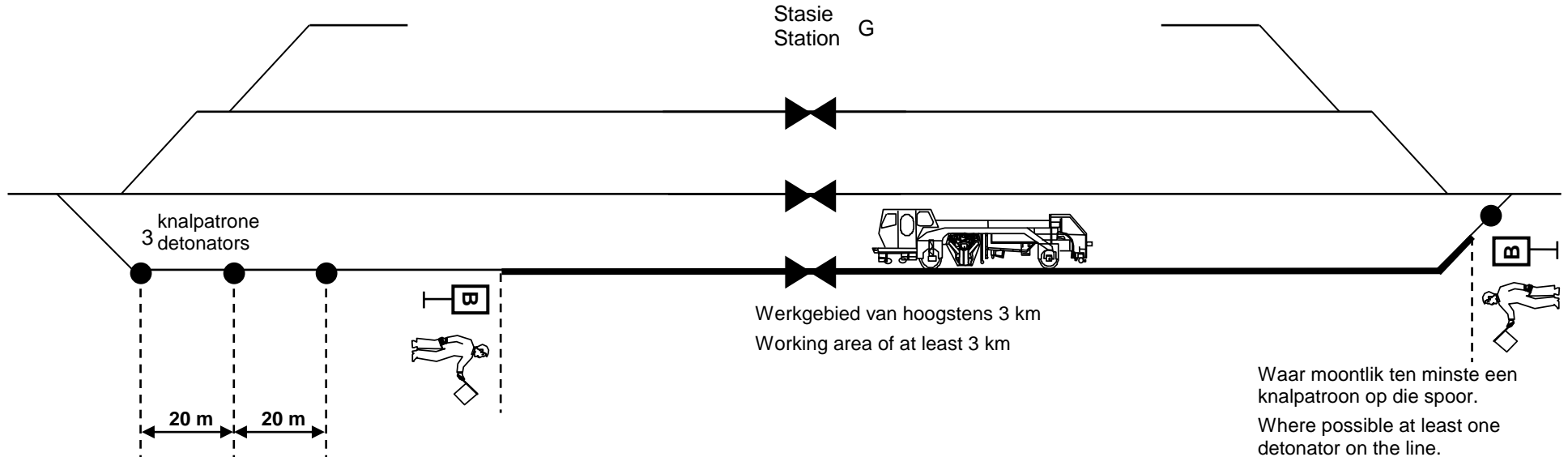
2009.1.6.5
(c)

TWEERIGTINGLYN: WERKGEBIED BEGIN BY OF NABY WISSEL





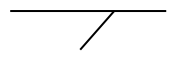
Treine moet nie toegelaat word om die lyn waarop die onderstopmasjien werk, binne te loop voordat die masjien by 'n afhaalplek of op 'n ander lyn vry staan nie.

BIDIRECTIONAL LINE: WORKING AREA STARTS AT OR NEAR POINTS

Trains must not be allowed to enter the line on which the tamping machine is working before the machine is standing clear at an off-tracking place or on another line.



Die afstand tussen die werkgebied en die vlagman en tussen die vlagman en die knalpatroon hang af van die afstand tussen die werkgebied en die wissel.
The distance between the working area and the flagman and between the flagman and the detonator depends on the distance between the working area and the points.

 TWEERIGTINGLYN BIDIRECTIONAL LINE	 KNALPATRONE DETONATORS	 VLAGMAN MET LOOPGESELSER FLAGMAN WITH WALKIE-TALKIE	 ONDERSTOPMASJIE- WAARSKUBORD TAMPING MACHINE WARNING BOARD		 WISSELS POINTS
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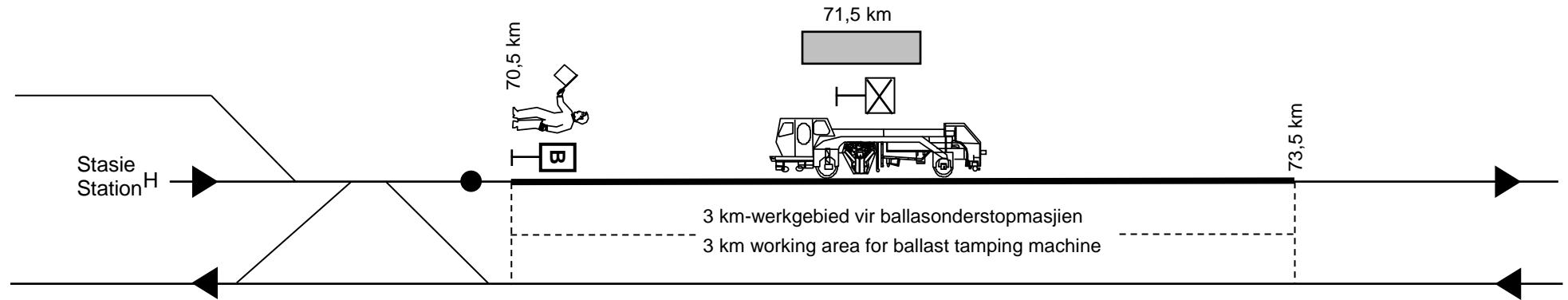
2009.1.6.6
(a)

EENRIGTINGLYN: WERKGEBIED BEGIN BY OF NABY WISSEL







Treine moet nie van stasie H in die rigting van die werkgebied vertrek voordat die onderstopmasjien op die afhaalplatform of in die stasie, na gelang van die geval, vry staan vir die trein om verby te gaan nie.

UNIDIRECTIONAL LINE: WORKING AREA STARTS AT OR NEAR POINTS

Trains must not depart from station H in the direction of the working area before the tamping machine is standing clear on the off-tracking platform or in the station, as the case may be.



Waar moontlik ten minste een knalpatroon op die spoor.
Where possible, at least one detonator on the line.

 TWEERIGTINGLYN BIDIRECTIONAL LINE	 KNALPATRONE DETONATORS	 VLAGMAN MET LOOPGESELSER FLAGMAN WITH WALKIE-TALKIE	 ONDERSTOPMASJIE- WAARSKUBORD TAMPING MACHINE WARNING BOARD	 X – BORD X – BOARD	 71,5 km AFHAALPLATFORM OFF-TRACKING PLATFORM
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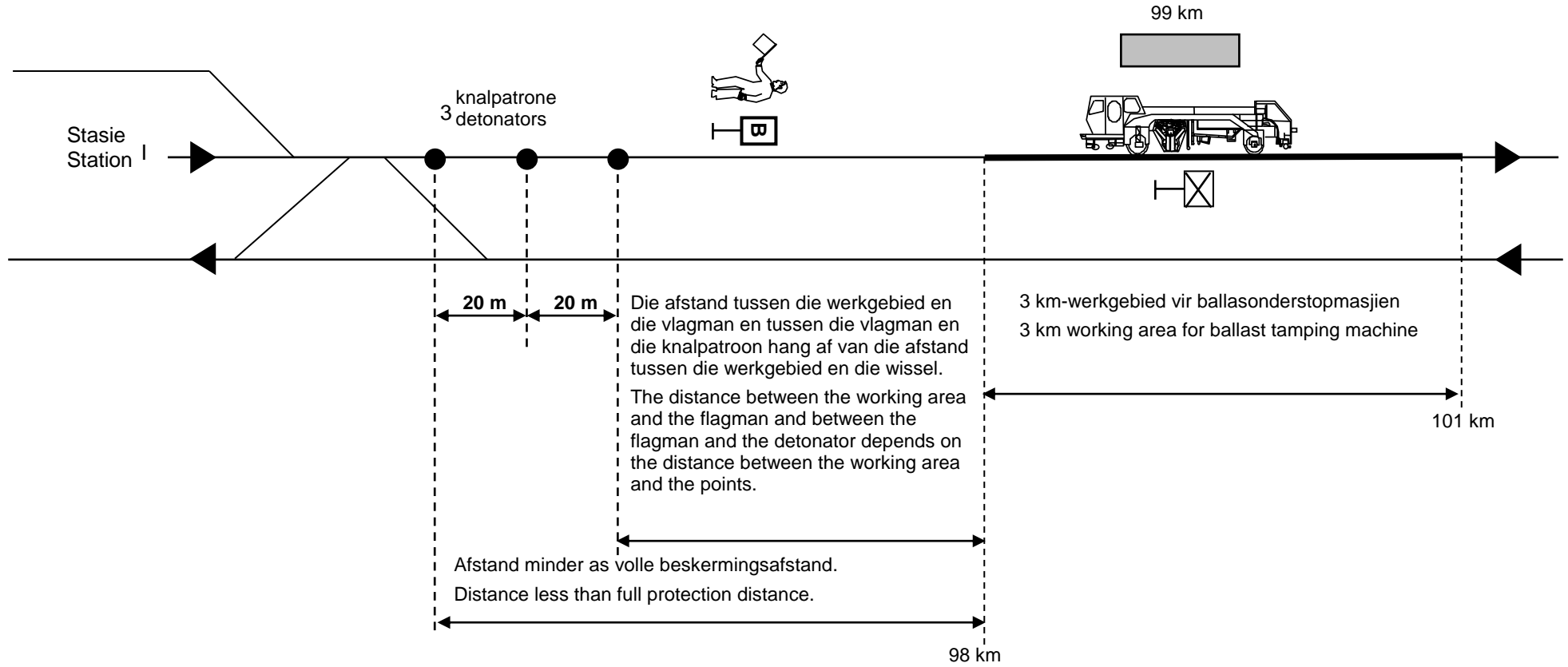
2009.1.6.6
(b)

EENRIGTINGLYN: WERKGEBIED BEGIN BY OF NABY WISSEL

Treine moet nie van stasie I in die rigting van die werkgebied vertrek voordat die onderstopmasjien op die afhaalplatform beveilig is nie.

UNIDIRECTIONAL LINE: WORKING AREA STARTS AT OR NEAR POINTS

Trains must not depart from station I in the direction of the working area before the tamping machine has been secured on the off-tracking platform.



<p>TWEERIGTINGLYN BIDIRECTIONAL LINE</p>	<p>KNALPATRONE DETONATORS</p>	<p>VLAGMAN MET LOOPGESELSER FLAGMAN WITH WALKIE-TALKIE</p>	<p>ONDERSTOPMASJIE- WAARSKUBORD TAMPING MACHINE WARNING BOARD</p>	<p>X – BORD X – BOARD</p>	<p>99 km AFHAALPLATFORM OFF-TRACKING PLATFORM</p>
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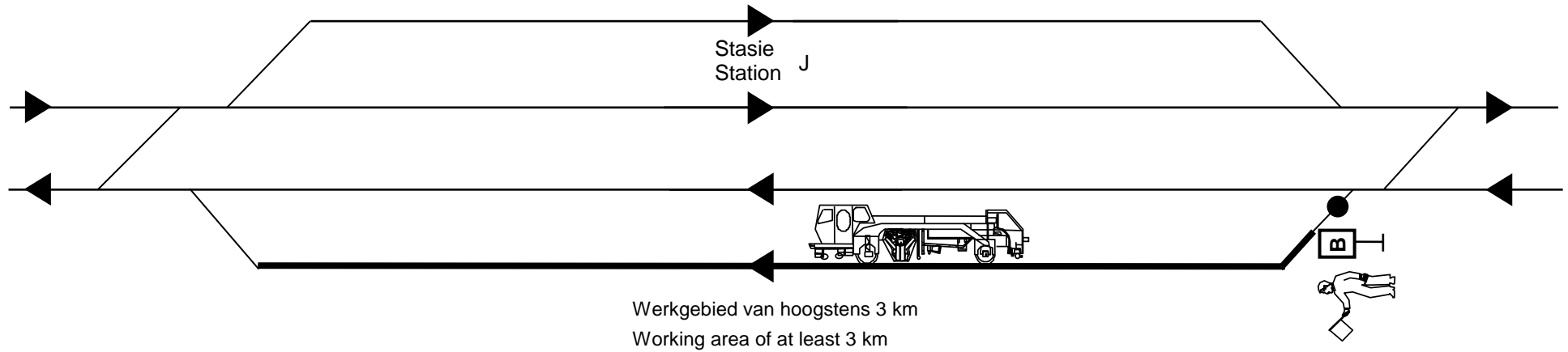
2009.1.6.6
(c)

EENRIGTINGLYN: WERKGEBIED BEGIN BY OF NABY WISSEL





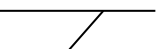
Treine moet nie toegelaat word om die lyn waarop die onderstopmasjien werk, binne te loop voordat die masjien by 'n afhaalplek of op 'n ander lyn vry staan nie.

UNIDIRECTIONAL LINE: WORKING AREA STARTS AT OR NEAR POINTS

Trains must not be allowed to enter the line on which the tamping machine is working before the machine is standing clear at an off-tracking place or on another line.



Waar moontlik ten minste een knalpatroon op die spoor.
Where possible at least one detonator on the line.

 <p>TWEERIGTINGLYN BIDIRECTIONAL LINE</p>	 <p>KNALPATRONE DETONATORS</p>	 <p>VLAGMAN MET LOOPGESELSER FLAGMAN WITH WALKIE-TALKIE</p>	 <p>ONDERSTOPMASJIE- WAARSKUBORD TAMPING MACHINE WARNING BOARD</p>		 <p>WISSELS POINTS</p>
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- 2009.2 If the track inspector has any doubt about whether the line on which tamping operations are to be performed is a uni- or bidirectional line, for example in the case of a double-line station with only one loop which can be used either for trains in one specific direction only or for up and down trains, he must come to a clear understanding with the train-control officer(s) concerned when permission is requested to commence with tamping operations.
- 2009.3 A tamping machine working at or near an interloop (including a remote-controlled interloop, a token station or an intersiding) or on the main or through line at or near an unattended junction, must be protected at the FULL distances as laid down in subclause 2009.1.1, irrespective of the fact that there are points, warning boards and, where applicable, colour-light signals.
- 2009.4 An audible warning device must be used to warn the tamping gang against approaching trains on adjacent parallel lines.
- 2009.5 Protection of permanent way personnel and equipment used in connection with the tamping machine**
- 2009.5.1 When any other employees perform preparatory or follow-up work to the track/overhead equipment relating to the tamping operations, the employees and equipment at such work must be protected separately from the tamping machine in terms of clauses 11004.0 and 11010.11, as the case may be.
- 2009.5.2 The track helper protecting the tamping machine and the track/overhead-track personnel and equipment respectively, must at all times work independently and must under no circumstances interfere with each other's protection.
- 2009.5.3 The track inspector must also arrange for the personnel to be warned by an audible warning device when a train is approaching the gang.
- 2010.0 REMOVAL FROM LINE OR STANDING CLEAR OF TAMPING MACHINE**
- 2010.1 The train-control officer at the despatching station/train-control office, must advise the track inspector in good time of the departure time or the expected time of departure of a train from the station/train-control office, crossing place or interlocking area concerned, in order that the tamping machine may timeously be admitted to another line or that the track inspector may timeously make arrangements to have the tamping machine placed clear of the line, as the case may be, to prevent the train from being delayed.
- 2010.2 If the tamping machine must stand clear on an off-tracking platform, it must timeously be removed from the line and secured on the off-tracking platform so that it can be clear of the line before the expected time of arrival of the train at the track helper mentioned in subclause 2009.1. Under no circumstances must the protection be discontinued before the tamping machine has been placed clear of the line and has been secured on the off-tracking platform.
- 2010.3 When the tamping machine is clear of the line and, where applicable, has been secured on the off-tracking platform, the track inspector must instruct the track helper(s) to remove the detonators from the line and discontinue the danger hand signal(s).
- 2010.4 Each time after a train has passed a track helper, the track helper must immediately again afford protection as laid down in subclause 2009.1.
- 2010.5 As soon as a train complete has passed a tamping machine at an off-tracking place, the tamping machine may immediately be placed on the line to proceed with tamping operations, provided –
- 2010.5.1 the track inspector has ensured that protection is afforded at the point of protection already passed by the train;
- 2010.5.2 protection at the opposite end of the working area will be afforded as soon as the train complete has passed the point of protection;
- 2010.5.3 there is no indication that the train will come to a standstill between the B boards;
- 2010.5.4 the view is not restricted; and
- 2010.5.5 there is sufficient time for tamping operations before the arrival of a following train.
- 2010.6 Void**
- 2010.7 Work at interloops, token stations and intersidings (see subclause 2009.3)**
- 2010.7.1 When a tamping machine is working at a remote-controlled interloop, it may, during the passage of a train, continue to work on the main line, loop or siding, as the case may be, or stand clear on one of these lines. Where there are two running lines only and both are needed for the crossing of trains, the tamping machine must stand clear at an off-tracking place.
- 2010.7.2 When the tamping machine is working at an interloop that is not remote controlled, a token station or an interloop, it must always stand clear at an off-tracking place for a train to pass, except when it is working in the siding at such place, in which case the work may continue during the passage of a train.

- 2010.7.3 When the tamping machine, in terms of subclauses 2010.7.1 and 2010.7.2, continues to work or stands clear, as the case may be, on a line at a remote-controlled interloop or in the siding at another interloop, token station or intersiding, as the case may be, during the passage of a train, the track inspector must see to it that the tamping machine does not proceed past the signal(s)/clearance mark(s) concerned and that the hand points, where applicable, are set and locked in the normal position. When a train is approaching the protection area, the track inspector may authorise the track helpers to remove the detonators from the line and discontinue the danger hand signals. The B boards may, however, not be removed.
- 2010.7.4 When the tamping machine, in terms of subclauses 2010.7.1 and 2010.7.2, remains on the line at an interloop, token station or intersiding during the passage of a train, the X board (see subclause 2007.1.3) must be placed opposite the place where the tamping machine is working or is standing clear.
- 2011.0 STABLING OF TAMPING MACHINE**
- 2011.1 Except as otherwise provided in the local appendix, a tamping machine may not be left on a line if it must be stabled after completion of the day's work, but it must be removed clear of the line and secured and locked on the off-tracking platform, whereafter the train-control officer(s) must be advised accordingly.
- 2011.2 The protection afforded in terms of clause 2009.0 must not be stopped before the tamping machine is removed from the line or before arrangements have been made with the train-control officer(s) for the machine to be taken to a place outside the working area, there to be stabled on an off-tracking platform or, where authorised in the local appendix, to be stabled on a specified line.
- 2011.3 After tamping operations for the day have been completed, the track inspector must advise the train-control officer(s), the yard master or other operating official in charge, as the case may be, of the expected time of commencement of tamping operations the following day as well of as full particulars of the working area for that day (see subclause 2007.1.2). This information must be entered in the train register (see clause 2022.0). On the morning of the following working day, however, authority must once again be obtained in terms of subclause 2012.1 to commence with tamping operations before the tamping machine is placed on the line.
- 2012.0 PROCEDURE TO BE FOLLOWED AFTER TAMPING MACHINE HAD BEEN STABLED AND BEFORE WORK IS COMMENCED**
- 2012.1 If the tamping machine, after stabling, must commence tamping operations between the kilometre points mentioned in the tamping-machine notice, the track inspector must obtain authority in the prescribed manner to commence with tamping operations (see subclause 2007.1).
- 2012.2 If the telegraph, double-line, non-token single-line or CTC section or another section of line on which the tamping machine must work, is clear of trains when authority is requested to commence with tamping operations, oral authority must be given after the provisions of clause 2009.0 have been complied with.
- 2012.3 If (a) train(s) already occupies/occupy a telegraph, double-line, non-token single-line or CTC section when authority is requested to commence with tamping operations in the section, oral authority to commence with tamping operations after the provisions of clause 2009.0 have been complied with, may be granted provided –
- 2012.3.1 the locomotive personnel of the train(s) concerned have received a BMX warning or, where applicable, have been advised telephonically of the working area and passing point; and
- 2012.3.2 the track inspector is of the opinion that there is sufficient time to commence with the tamping operations before the train approaches the working area. If the locomotive personnel have already received a BMX warning or have been warned telephonically but there is not sufficient time, the track inspector must keep the tamping machine clear of the line and secured on the off-tracking platform and arrange for the provisions of subclauses 2007.1.3 and 2009.1.2 to be complied with. As soon as the train has passed the off-tracking platform, oral authority must again be requested to commence with tamping operations.
- NOTE:** *In no circumstances may the tamping machine be placed on the line, unless the track inspector has ensured that the provisions of clause 2009.0 have been complied with.*
- 2012.4 In the case of a double-line, non-token single-line or CTC section or other running line equipped with continuous track circuits, authority to commence with tamping operations may be given only after the section or track circuits concerned is/are clear of trains.
- 2013.0 TAMPING TIME ALLOWED**
- 2013.1 Train-control officers must ascertain in good time how trains are running and arrange crossings judiciously in order to ensure the maximum tamping time.
- 2013.2 Operating must keep a watchful eye on train arrangements and, where possible, not allow light locomotives to run over the section(s) concerned during the normal working hours of the tamping machine.
- 2013.3 Where possible, the goods train service must be so adapted as to ensure maximum working time for the tamping machine.

- 2014.0 WORKING AT NIGHT OR DURING FOGGY WEATHER OR OTHER ADVERSE WEATHER CONDITIONS**
- 2014.1 A tamping machine may be allowed to work at night or during foggy weather or other adverse weather conditions only on instructions from the central operating office. The central operating office must indicate whether the tamping operations must be performed during normal working of heavy ballast tamping machines, with an absolute tablet or the wooden train staff (see subclause 2028.9) or during an occupation.
- 2015.0 LEVEL CROSSINGS TO BE APPROACHED CAREFULLY**
- 2015.1 The track inspector must exercise care when the tamping machine is approaching and passing over a level crossing, and he must be prepared to have it brought to a standstill short of the level crossing, if necessary. This is particularly necessary where a good view of the road approaches on either side cannot be obtained for a distance of at least one kilometre before reaching the level crossing. The track inspector must carry out the provisions of clause 9007.11.
- 2016.0 RUNNING OF TAMPING MACHINE TO A PLACE OUTSIDE THE WORKING AREA OR SECTION IN WHICH IT IS WORKING**
- 2016.1 If the tamping machine must proceed under its own power from a working area in a telegraph, double-line, non-token single-line or CTC section to a point outside the working area or to the nearest station, crossing place or interlocking area without performing tamping operations, the provisions of clauses 2028.0, 2031.0 or 2033.0, whichever is applicable, must be complied with. All fixed signals en route must be observed.
- 2016.2 If the tamping machine must proceed under its own power through one or more telegraph, double-line, non-token single-line or CTC sections, it must be regarded as a train in accordance with train working rule No. 221.
- 2016.3 When the tamping machine is proceeding as a train in terms of subclause 2016.1 or 2016.2 and is brought to a standstill due to an accident, a failure, an obstruction or other exceptional cause, protection must be afforded in terms of clause 11007.0. When, however, it is brought to a standstill during tamping operations because of one of the reasons mentioned, the protection in terms of subclause 2009.1 must be continued.
- 2017.0 TRACK INSPECTOR TO KNOW LINE**
- 2017.1 A tamping machine may not be permitted to proceed over any section of a running line, unless a track inspector, or another employee when running as a train, with a valid "knowledge of the road" certificate, accompanies the driver of the tamping machine. The pilot must make sure that he knows how to bring the tamping machine to a halt in an emergency.
- 2017.2 Before a track inspector is allowed to accompany a tamping machine on a running line, a Section Manager (Train Traffic) or a track manager must test the track inspector and certify that he is acquainted with the line, and issue a certificate to that effect, that must be placed on the employee's depot/station file.
- 2018.0 FAILURE OF COMMUNICATIONS WHILST TAMPING OPERATIONS ARE IN PROGRESS**
- 2018.1 If the tamping machine is working in a telegraph, double-line, non-token single-line or CTC section and communications between the train-control officer(s) and the track inspector fail, trains may be despatched in the normal manner, provided the provisions of clause 2008.0, where applicable, have already been complied with. In such instances it will not be possible to advise the track inspector of the departure times of trains. The provisions of clause 2023.0 must be strictly complied with. In addition, the driver of each train must be advised of the failure of communications.
- 2018.2 While communications are interrupted, the tamping machine may not be allowed to leave the working area in which it was working at the time of the failure or to alter its off-tracking place, except as provided in clause 2027.0.
- 2018.3 After the tamping operations in the working area have been completed, the tamping machine must be stabled at the off-tracking place until the communications have been restored.
- 2018.4 When no communication can be established in a CTC area between a train-control officer and the drivers of trains, the train-control officer must arrange with the track inspector to secure the tamping machine clear of the line at the off-tracking place, and obtain the assurance that this has been done before operating the signal controlling entrance to the CTC section in which the tamping machine is working.
- 2018.5 During the full period of failure of all communications between the train-control officer(s) and the track inspector, the latter must ensure that the protection measures set out in clause 2009.0 are strictly observed.
- 2019.0 TRACK INSPECTOR MUST SEE THAT TAMPING MACHINE IS PROPERLY EQUIPPED**
- 2019.1 The track inspector must see that the tamping machine is equipped with the necessary flags, hand lamps, detonators, plug-in telephones, radio sets, etc. as well as a head lamp and marker, which should be ready for use.

2020.0 RUNNING OF MATERIAL TRAINS

- 2020.1 Except when instructions to the contrary are issued by the Chief Executive (Spoornet) or when occupation is taken of a line, a material train and a tamping machine may not work simultaneously in the same telegraph, double-line, non-token single-line or CTC section or interlocking area.
- 2020.2 In the case of an occupation, the officer in charge of the track work, as in the case of two or more tamping machines (see subclause 2005.2), is responsible for the safe movement of the tamping machine and the material train during the occupation.

2021.0 FAILURE OF TAMPING MACHINE

(See also clause 2027.0.)

- 2021.1 Should the tamping machine fail and be unable to continue with the operations for the day, the track inspector must, without delay, inform the train-control officer(s) controlling the telegraph, double-line, non-token single-line or CTC section, the yard master or other operating official, as the case may be, and arrange for the tamping machine to be secured and locked on an off-tracking platform. Where applicable, the central operating office must thereafter be requested to cancel tamping-machine working on those days it is expected the tamping machine will be out of order.
- 2021.2 After the track inspector has ensured that the line is clear and safe for the passage of trains and, in the case of a telegraph, double-line, non-token single-line or CTC section, after the last train in the section en route to the working area at the time of the failure, has passed the working area, protection must be discontinued.
- 2021.3 The train-control officer(s), yard master or other operating official, as the case may be, must obtain the assurance from the track inspector that the line is clear and safe for the passage of trains before further movements are allowed over the line.
- 2021.4 Should the assistance of a locomotive be required to clear the failed tamping machine to a telegraph station or other staging point, the provisions of train working rule No. 227 or 234(3), or clause 7036.0, Section 7 of this appendix, depending upon the system of train control applicable, must be observed. It must also be established from the employee reporting the circumstances from which side the assisting locomotive must be despatched and if a pullrod is available or should be brought along.
- 2021.5 If the tamping machine has failed and cannot be moved, due to an accident or other cause, and the assistance of a breakdown train is required to clear the obstruction, the provisions of train working rule No. 229 or 234(3), or clause 7036.0, Section 7 of this appendix, depending on the system of train control applicable, must be observed. (See subclause 10010.2, Section 10 of this appendix.)
- 2021.6 Should a tamping machine fail whilst tamping operations are in progress and it cannot be removed from the line, protection in terms of clause 2009.0 must be continued. (See subclause 2016.3.)

2022.0 INFORMATION REGARDING TAMPING MACHINE MUST BE RECORDED

- 2022.1 The train-control officer(s), yard master or other operating official concerned, as the case may be, must record below the last train entry in the relevant columns in the train register full particulars regarding the tamping machine, namely –
- 2022.1.1 the time authority was granted for tamping operations to commence;
- 2022.1.2 the telegraph, double-line, non-token single-line or CTC section in which, the kilometre points between which, the place at which and/or the line on which, as the case may be, tamping operations will be performed;
- 2022.1.3 the place or kilometre point where trains must pass the tamping machine within the working area;
- 2022.1.4 at what time the tamping machine arrived at and departed from a telegraph station, crossing place, working place, staging point or other place;
- 2022.1.5 information regarding the new off-tracking place, or new working area and off-tracking place, should the off-tracking place, or working area and off-tracking place, be changed during the working day, as well as the time the change was made;
- 2022.1.6 the time tamping operations for the day were completed and the tamping machine was placed clear of the line;
- 2022.1.7 the name of the place or the kilometre point where the tamping machine is stabled in a telegraph, double-line or non-token single-line section or in a CTC area;
- 2022.1.8 the time telephone and radio messages regarding the movements of the tamping machine were despatched, received and/or transmitted; and
- 2022.1.9 all other information regarding the tamping machine that the track inspector furnished to the train-control officer(s) or other operating official.

2023.0**DRIVERS MUST BE WARNED OF TAMPING-MACHINE WORKING IN SECTION**

- 2023.1 The driver of each train entering a telegraph, double-line or non-token single-line section in which a tamping machine is working or will work before the train has reached the working area (see subclauses 2011.3 and 2012.3), and which is expected to arrive at the working area before completion of tamping operations for the day, must receive a BMX heavy ballast tamping machine warning. This warning must reflect the kilometre points between which the tamping machine is working, as well as at which place or kilometre point the train must actually pass the tamping machine in the telegraph, double-line or non-token single-line section. On token-working sections the BMX warning must be issued together with the train token and, where applicable, the warning or other message to be issued together with the train token. Each token or warning or other message, as the case may be, must have an endorsement indicating that the BMX warning is attached.
- 2023.2 Each train concerned must be stopped at the station where the BMX warning must be handed to the driver, unless the train-control officer –
- 2023.2.1 has ensured or has received the assurance from the track inspector that the distance between his station and the working area is such that the track helper affording protection on the station side of the working area has taken up position outside the outermost controlled signal of the station, or warning board where there are no controlled signals; or
- 2023.2.2 has received the assurance from the track inspector that the tamping machine has been placed clear of the line and secured on the off-tracking platform until after the passage of the train, in which case the BMX warning may be handed to the driver while the train is in motion.
- 2023.3 Train-control officers must prepare the BMX warning in duplicate by means of carbon paper. The original must be retained at the station and the duplicate must be handed to the driver. It must be ensured that the kilometre points between which work is performed and the kilometre point at which the train must pass the tamping machine, are indicated correctly. All the information on the BMX warning, including the name of the station and the date, must be WRITTEN in.
- 2023.4 In the case of CTC, Radio Train Order system or Track Warrant system a BMX warning is not issued. The train-control officer must stop all trains which have to proceed through a CTC, Radio Train Order or Track Warrant section in which a tamping machine is working or will work (see subclauses 2011.3 and 2012.3) in terms of the provisions of subclause 2033.2.2 and warn the drivers telephonically or by radio that the tamping machine is working in the CTC, Radio Train Order or Track Warrant section and inform them of the exact kilometre points between which the tamping machine is working, as well as where the tamping machine will be removed from the line for the passage of trains.
- 2023.5 When the tamping machine is working in a CTC section between an interlocking area and adjacent telegraph station, all trains having to enter the CTC area must be stopped at the section entry signal or another signal, the telephone of which is connected directly to the train-control office, at the telegraph station and the driver must be informed orally of the working area and passing point.
- 2023.6 Where, in the case of a telegraph, double-line or non-token single-line section, it is impracticable to issue a BMX warning due to the location of the train-control office, the train-control officer may, provided it is specially laid down in the notice regarding ballast tamping machine working, telephonically or by radio furnish the driver with the required information regarding the tamping-machine working in the section. Where necessary, it must be indicated in the notice where the train-control officer will have to stop the train for this purpose before it enters the section and which telephone must be used.
- 2023.7 When, in the case of Van Schoor train-token working, a train must enter the telegraph section at an unattended place where a subsidiary instrument is provided and a tamping machine is working in the section between the unattended place and the next telegraph station, the train-control officer concerned must, before authority is granted for the train to be allowed onto the running line at the unattended place, inform the driver telephonically of the kilometre points between which the tamping machine is working, as well as the place where the tamping machine will be removed from the line for the passage of trains.
- 2023.8 The provisions of subclauses 2023.1 to 2023.7 are also applicable where the tamping machine –
- 2023.8.1 is working between the controlled signals of the next station or interlocking area but the protection area extends into the telegraph, double-line, non-token single-line or CTC section and the track helper is affording protection outside the outermost stop signal of such station or interlocking area; or
- 2023.8.2 is working between the warning board and the outermost points this side of the next telegraph station if such station is not equipped with semaphore or colour-light signals.
- 2023.9 In the following instances, a BMX warning need not be issued or the driver informed telephonically of the tamping machine:
- 2023.9.1 If the working area of the tamping machine completely falls within the fixed signals of the telegraph station or interlocking area from where the train will depart.
- 2023.9.2 If the working area of the tamping machine starts at the outermost points of the telegraph station or interlocking area from where the train will depart and the tamping machine is standing clear in the station or interlocking area for the train to pass (see subclause 2009.1.4).
- 2023.9.3 If the train will pass through on a line next to the one on which the tamping machine is working.

2024.0 DRIVERS MUST KEEP A GOOD LOOKOUT

2024.1 When approaching the area in which the tamping machine is working, or while their trains are passing through this area, drivers must keep a good lookout, and be prepared to act immediately on any hand signal that may be displayed.

2024.2 Should a driver approach the working area and find that neither the track helper nor the board mentioned in subclauses 2009.1.1 and 2009.1.2 is at the expected place of protection, he must reduce the speed of his train and proceed cautiously. If the tamping machine is clear of the line at the off-tracking place at the kilometre point where the train must pass it, but the board as described in subclause 2007.1.3 is not erected at the tamping machine, the driver must proceed and report the circumstances to the train-control officer at the next station/train-control office (see clause 2027.0).

2025.0 VOID

2026.0 TRAILER OR PUSH TROLLEY ATTACHED TO TAMPING MACHINE

2026.1 No more than one trailer or push trolley at a time may be attached to a tamping machine. When a trailer or push trolley is attached to a tamping machine an approved type of coupling must be used. Under no circumstances may a trailer or a push trolley be propelled by a tamping machine. (See subclause 11.0.8 of the Manual for Track Maintenance.)

2027.0 ALTERING OF OFF-TRACKING PLACE OF TAMPING MACHINE

2027.1 If, owing to failure or other cause, the tamping machine cannot be off-tracked at the pre-arranged off-tracking place, but can be off-tracked at another off-tracking place within the working area, the track inspector must, as soon as the tamping machine is secured at the new off-tracking place, inform the train-control officer(s) controlling the section and each train-control officer must record in the train register particulars of the time and place where the tamping machine is off-tracked. Thereafter that place must be regarded as the new passing place.

2027.2 Should a train have entered the section concerned before the off-tracking place has been altered, the following procedure must be followed:

2027.2.1 Immediately after the tamping machine has been off-tracked at the new off-tracking place and the line is clear, the track inspector must, either remain at the new off-tracking place or go to the pre-arranged passing place, depending on the direction from which a train approaches, inform the driver of the circumstances and authorise him to proceed. If the track inspector is unable to go, he must send the information and authority in writing to the driver.

2027.2.2 The driver must bring his train to a standstill at the off-tracking place reflected on the BMX warning or which has been furnished to him telephonically, as the case may be, or at the new off-tracking place, depending on the direction in which he is travelling, and wait there unless or until he is authorised to proceed in terms of subclause 2027.2.1.

2027.3 Should work be discontinued for the day after the tamping machine has been placed clear of the line at a new off-tracking place, the track inspector must observe the provisions of subclause 2027.2.1. The B boards and the board indicating the off-tracking place must not be removed, and the track helpers must not leave their positions until all the trains in the section, the personnel of which have been warned to pass the tamping machine at the original off-tracking place, have been advised of the alteration and authorised to proceed (see clauses 2021.0 and 2024.0).

2027.4 In the case of CTC, Radio Train Order or Track Warrant System the driver must communicate with the train-control officer should he not have been authorised to proceed in terms of subclause 2027.2.1, and the latter must inform the driver of the changed passing place and authorise him to pass the tamping machine at the new off-tracking place.

2028.0 TAMPING MACHINE REQUIRED TO ENTER TELEGRAPH SECTION CONTROLLED BY TOKEN WORKING

2028.1 Authority for tamping machine to depart

2028.1.1 Before the tamping machine departs from a telegraph station to work in a telegraph section controlled by means of the Van Schoor train-token system, the wooden train staff and paper ticket system or the telegraph order system, and the working area is not adjacent to the telegraph station, the track inspector must obtain authority from the train-control officer on the combined message and proceeding order form (BOM).

2028.1.2 The train-control officers controlling the telegraph section must come to a clear understanding and –

2028.1.2.1 ensure that the telegraph section is clear of all trains or, in the case of telegraph order working, clear of opposing trains;

- 2028.1.2.2 in the case of the Van Schoor train token system, the train-control officer who must despatch the tamping machine, or both train-control officers if there is one or more token stations in the telegraph section, must obtain an absolute tablet in the prescribed manner, immediately lock it away and record in the train register(s) the progressive number(s) indicated on the counter(s) of the instrument(s), together with an explanation as to why the token(s) was/were withdrawn; and
- 2028.1.2.3 in the case of the wooden train staff and paper ticket system, the train-control officer who is in possession of the wooden train staff for the telegraph section or, where there is one or more token stations in the telegraph section, each train-control officer who may be in possession of the wooden train staff for the adjacent train-staff section, must lock away all ticket books in the staff box and the staff in a safe or drawer. After the wooden train staff has been locked away, the train-control officer at the other end of the telegraph section must be informed accordingly and an endorsement to that effect must be made in the train register at each telegraph station.
- 2028.1.3 After the provisions of subclause 2028.1.2 have been complied with, the train-control officers must exchange BM and BMI messages and the train-control officer at the station from which the tamping machine must enter the telegraph section, must complete the combined message and proceeding order form (BOM) and hand it to the track inspector, who must read and sign it. On receipt of a "train may depart" hand signal from the train-control officer, the tamping machine may depart.
- 2028.1.4 Train-control officers must not exchange BM and BMI messages before the question message on the combined message and proceeding order form (BOM) has been received or has been exchanged between the track inspector and the train-control officer at the station where the tamping machine is.
- 2028.1.5 Where trains are controlled by means of the Van Schoor train token system or the wooden train staff and paper ticket system, the absolute tablet(s) or the wooden train staff(s), as the case may be (see subclauses 2028.1.2.2 and 2028.1.2.3), must be kept lock away until the track inspector has complied with the provisions of clause 2008.0.
- 2028.2 Despatch of trains: Van Schoor train token and wooden train staff and paper ticket systems**
- 2028.2.1 After the track inspector has complied with the provisions of clause 2008.0 and, in the case of Van Schoor train token working, after the absolute tablet(s) has/have been restored to the instrument(s) in the prescribed manner, the train-control officers must exchange K and KI messages, whereafter normal working may be resumed.
- 2028.2.2 The train-control officers must record the time K and KI messages have been exchanged next to the entry in the train register in respect of the arrival time of the tamping machine at the working place in the telegraph section.
- 2028.2.3 As soon as a train is ready to proceed into the telegraph section in which the tamping machine is working, a token must be obtained in the normal manner and handed to the driver (see clause 2023.0).
- 2028.3 Despatch of trains: Telegraph order system**
- 2028.3.1 After the track inspector has complied with the provisions of clause 2008.0, trains may be despatched into the telegraph section in the normal manner (see clause 2023.0).
- 2028.3.2 All train messages must be amplified to reflect the place or kilometre point at which the train must pass the tamping machine in the telegraph section. Each station to station order, station to interloop order, manuscript order or section blocked order must be endorsed to the effect that the BMX heavy ballast tamping machine warning is attached. In the case of trains running in accordance with the provisions of clause 6012.0, Section 6 of this appendix, this endorsement must appear on the order for the train proceeding to the interloop, or on the order for the train returning from the interloop, or on both orders, as the case may be.
- 2028.4 Procedure to be followed when a tamping machine must proceed from the working area in a telegraph section to another place in the same telegraph section or to the adjacent station without performing tamping work**
- 2028.4.1 When the tamping machine, for whatever reason, must proceed from the working area in a telegraph section to another place in the same section or to the adjacent station and this movement will not be carried out in the process of tamping, the track inspector must communicate with the train-control officer at each end of the telegraph section and obtain authority to do so by exchanging the question message on the combined message and proceeding order form (BOM) with the train-control officer at the telegraph station in the direction in which the tamping machine must proceed.
- 2028.4.2 On receipt of the request of the track inspector, the train-control officers controlling the telegraph section must comply with the provisions of subclause 2028.1, and the train-control officer at the telegraph station issuing the authority, must exchange the reply message and order on the combined message and proceeding order form (BOM) with the track inspector. The track inspector must repeat the message to the train-control officer and, if the arrangements are confirmed, he must sign the form.
- 2028.4.3 Before departing, the track inspector must arrange for the protection, afforded in terms of clause 2009.0, to be discontinued. In no circumstances may the protection be discontinued before the provisions of subclauses 2028.4.1 and 2028.4.2 have been complied with. The track inspector must also advise the train-control officer at each end of the telegraph section the time the tamping machine will depart and the train-control officer must record the time below the last entry in his train register.

- 2028.4.4 Until advice has been received that the tamping machine complete has arrived at the telegraph station, staging point or new working place and, where applicable, is being protected in accordance with clause 2009.0, the absolute tablet(s) or the wooden train staff(s), as the case may be, must be kept locked away or, in the case of telegraph order working, the telegraph section must be kept clear of all opposing and following trains. In the case of the Van Schoor train token system or the wooden train staff and paper ticket system, the provisions of subclauses 2028.2.1 and 2028.2.2 must be complied with before normal working is resumed.
- 2028.5 Opening of token stations**
- 2028.5.1 If the end of a line is a token station, arrangements must be made for that token station to be opened for the duration of tamping operations if the tamping machine must work between the last telegraph station and the terminal station.
- 2028.5.2 Where, in the case of the Van Schoor train token system or the wooden train staff and paper ticket system, the tamping machine is working in a long telegraph section with one or more token stations and trains and/or the tamping operations may be delayed due to the distance between the working area and one or both of the telegraph stations, every effort must be made to open one or two token stations, as the case may be, in order that the tamping machine will work in a shorter telegraph section.
- 2028.6 Tamping operations in long telegraph section**
- 2028.6.1 If, due to the length of the telegraph section, it is expected that trains and/or the tamping operations may be delayed and, in the case of the Van Schoor train token system or the wooden train staff and paper ticket system, a token station or token stations cannot be opened in terms of subclause 2028.5.2, a radio telephone affording communication with the track inspector at the tamping machine, must be provided at a token station/interloop short of the working area, or at two token stations/interloops on both sides of the working area, as the case may be. A reliable employee must supervise each such instrument at the token station/interloop.
- 2028.6.2 Particulars of the places where the radio telephones will be installed, must be furnished in the notice regarding ballast tamping machine working, and each BMX warning must be amplified to the effect that the driver must communicate with the track inspector from the place concerned.
- 2028.6.3 Before a train departs from the token station/interloop indicated on the BMX warning, the driver must inform the track inspector by means of the radio telephone of the expected time of departure of the train.
- 2028.6.4 If the driver cannot communicate with the track inspector, the train may depart.
- 2028.7 Void**
- 2028.8 Suspension of normal working**
- 2028.8.1 When, because of failure of the token instruments, the damage or loss of a token or whatever other reason, Van Schoor train token working or working in accordance with the wooden train staff and paper ticket system is to be superseded by telegraph order working in accordance with the instructions applicable to the particular train control system, or when working in accordance with any of the three token working systems mentioned is to be superseded by pilot working as a result of a failure of all communications, tamping operations in the section may be continued. The provisions of clause 2023.0 must still strictly be complied with. In the case of pilot working, the provisions of subclause 2031.4.3 must be complied with and the pilotman must see that a BMX warning is issued to the driver of each train running over the telegraph section in which the tamping machine is working (also see clause 2018.0).
- 2028.9 Tamping machine working in section in accordance with absolute tablet or wooden train staff**
- 2028.9.1 Provided trains will not be delayed, a tamping machine may be despatched with an absolute tablet or the wooden train staff, as the case may be, into a telegraph section or, in the case of a telegraph section with one or more token stations, into the section adjacent to the telegraph station, to perform tamping operations. In such a case –
- 2028.9.1.1 the train-control officer must, as in the case of a material train, obtain the absolute tablet or the wooden train staff, as the case may be, and hand it to the track inspector (see clause 3023.0, Section 3 and clause 5007.0, Section 5 of this appendix);
- 2028.9.1.2 the tamping machine must, after completion of the work, return to the station from where it departed if the telegraph section is subdivided into two or more sections by means of one or more token stations; and
- 2028.9.1.3 the track inspector must inform the train-control officer of the approximate time required to perform the work. Before despatching the tamping machine into the section, the train-control officer must inform the track inspector in writing of the time the tamping machine must be clear of the section, and at which end of the section the tamping machine must clear the section.
- 2028.9.2 When the tamping machine has been despatched with an absolute tablet or the wooden train staff, it is not necessary to protect the tamping machine whilst it is working.
- 2029.0 VOID**

- 2030.0** **VOID**
- 2031.0** **WHEN TAMPING MACHINE MUST ENTER A DOUBLE-LINE SECTION OR NON-TOKEN SINGLE LINE SECTION**
- 2031.1** **Authority for tamping machine to depart**
- 2031.1.1 Before a tamping machine departs from a station or other place controlled from a particular train-control office to work in the adjacent double-line section controlled by three-position absolute block instruments, axle counters or continuous track circuits, or in a non-token single line section with axle counters or continuous track circuits, and the working area is not adjacent to the place concerned, the track inspector must communicate with the train-control officer controlling the place from where the tamping machine must depart and obtain oral authority to proceed.
- 2031.1.2 The train-control officer must thereafter communicate with the train-control officer at the next train-control office and, in accordance with the instructions applicable to the particular train-control system, obtain "line clear" as for a material train. When "line clear" has been obtained, the train-control officer despatching the tamping machine may place the signals concerned at "all right" or "proceed" for the departure of the tamping machine and, as soon as it has departed, he must give the applicable bell signal to the train-control officer at the train-control office in advance which the latter must acknowledge by repeating it.
- 2031.1.3 The train-control officers despatching the tamping machine or, in the case of non-token single line working, both train-control officers controlling the non-token single line section, must, after departure of the tamping machine, place a reminder on the lever/switch/push button of the signal controlling entrance to the section and leave it there until the track inspector has complied with the provisions of clause 2008.0. The reminder must also not be removed before a BMX warning has been completed for the driver of the first train which must thereafter run over the section, or particulars regarding the tamping operations has been furnished telephonically to the driver of such train, as the case may be (see subclauses 2023.2 and 2023.6).
- 2031.1.4 When, owing to the requirements of the train service or of the tamping operations, it is considered necessary to despatch a tamping machine in the "wrong" direction from a station or other place controlled from a particular train-control office to perform work in the adjacent double-line section, whether the working area adjoins the place concerned or not, such procedure may be followed but subject to the following conditions:
- 2031.1.4.1 The track inspector must give both the train-control officers the assurance that the working area is already being protected at the full prescribed distance in accordance with the provisions of clause 2009.0 BEFORE the tamping machine is despatched.
- 2031.1.4.2 The train-control officer concerned must not authorise the track inspector to depart, unless the whole double-line section is clear of all trains and the signal giving access to the section, is at "danger". (Where applicable, the assurance that the signal is in fact at "danger", must be obtained from the train-control officer at the other end of the double line section). The provisions of subclause 2031.1.3 must be complied with, except that a reminder must be placed on the lever/switch/ push button of the said signal before the tamping machine departs. Where absolute lock and block working is in operation, "blocking back" must be carried out in the prescribed manner and the block indicators must be kept in the "train on line" position until advice is received that the tamping machine has arrived in the working area and is still being protected in the prescribed manner.
- 2031.1.4.3 The train-control officer must authorise the track inspector in writing to enter the section. The authority must be worded in accordance with the following example:
- As the main line between and is clear of all trains, the tamping machine may depart on that line from to work between kilometre points and All the points concerned are correctly set.
This train-control office must be notified on arrival in the working area.
- 2031.1.4.4 As soon as the tamping machine has arrived in the working area, the track inspector must cancel the written authority by writing "ARRIVED", (with the time beside it) across the authority, before the train-control officer concerned is advised of the time of arrival.
- 2031.1.4.5 Where, owing to the distance from the train-control office, it is not possible to hand the written authority to the track inspector, it may be read out to him over the telephone and he must write it down. Thereafter the authority must be repeated to the train-control officer, who, if it is correct, must confirm it by saying "right". In addition to their own signatures, the track inspector and the train-control officer must endorse each other's surname on their copies.
- 2031.2** **Despatch of trains**
- 2031.2.1 After the track inspector has complied with the provisions of clause 2008.0, arrangements may be made for trains to be despatched in the normal manner into the double-line or non-token single line section (see clause 2023.0).
- 2031.2.2 In the case of absolute lock and block working, the train-control officer at the train-control office in advance must, after the track inspector has complied with the provisions of clause 2008.0, depress the recording release plunger of the block instrument in order to place the instruments at both train-control offices in the normal position, i.e. "line blocked". Each train-control officer must record under the last entry in his train register, the time the recording release plunger was used and the reason therefor. In addition, the train-control officer using the recording release plunger must record the progressive number used.

- 2031.2.3 If the tamping machine has been despatched to work in a double-line or non-token single-line section where the section is controlled by axle counters and the tamping machine has passed over only one axle counter of such section, or of the block section concerned where the double line or single line section consists of two or more block sections, as the case may be, the train-control officers concerned must first reset the axle counters in the prescribed manner before trains can be despatched.
- 2031.2.4 The train-control officer despatching trains or, in the case of non-token single line working, both train-control officers controlling the section, must, after the departure of each train entering the section whilst tamping operations are in progress, place a reminder on the lever/switch/push button of the signal controlling entrance to the section. The reminder must not be removed before a BMX warning has been completed for the driver of the next train which will run over the section, or particulars of the tamping operations have been furnished telephonically to the driver of such train, as the case may be (see subclauses 2023.2 and 2023.6).
- 2031.2.5 If, due to tamping operations in the section, circumstances are such that the signal controlling entrance to a section with continuous track circuits cannot be placed at "proceed", the train-control officer who must despatch a train into the section must inform the track inspector in good time of the expected time of departure of the train in order that the tamping machine can timeously be removed clear of the line to prevent the train being delayed. In addition, in cases where the section is short, the train-control officer must inform the track inspector of the expected time of arrival of the train at the working place of the tamping machine before the train arrives at the station or place where the section starts.
- 2031.3 Procedure to be followed when the tamping machine must proceed from the working area in a double-line or non-token single line section to another place in the same direction, or to the adjacent station without performing tamping work**
- 2031.3.1 If the tamping machine for whatever reason must proceed from the working area in a double-line or non-token single line section to another place in the same double-line or non-token single line section or to the adjacent station or other place where such section ends and the movement will not take place in the process of tamping, the track inspector must communicate with both train-control officers controlling the section and obtain oral authority to do so.
- 2031.3.2 The train-control officers must not authorise the track inspector to depart unless the whole double line or non-token single line section is clear of all trains and the signal(s) controlling entrance to the section is/are at "danger". Before authority is granted, the train-control officers, as the case may be, must place a reminder on the lever/switch/push button of the section entry signal and leave it there until the track inspector has complied with the provisions of clause 2008.0 or the tamping machine has cleared the double line or non-token single line section, as the case may be. Where absolute lock and block working is in operation, the absolute block instruments must be operated in the prescribed manner (as for a train) for the despatch of the tamping machine.
- 2031.3.3 Before the departure of the tamping machine, the track inspector must arrange for the protection afforded in accordance with clause 2009.0 to be discontinued. In no circumstances may the protection be discontinued before authority has been received from the train-control officers to depart. The track inspector must also inform both train-control officers of the time the tamping machine will depart, and the train-control officers must enter the time under the last entry in their train registers.
- 2031.3.4 A tamping machine working in a double line section and which is required to proceed outside the working area, may only proceed in the direction in which trains normally run, except as provided for in subclause 2031.3.9 or when occupation of the running line has been taken (see subclause 2004.3).
- 2031.3.5 Until notice is received that the tamping machine complete has cleared the double-line or non-token single line section or has arrived at the stabling place or new working place and, where applicable, is being protected in accordance with clause 2009.0, the double line or non-token single line section must be kept clear of all trains.
- 2031.3.6 As soon as the tamping machine complete with marker has cleared the double-line or non-token single line section, the train-control officers must exchange the bell signal "train has arrived" (2.1). In the case of absolute lock and block working, the train-control officer at the end of the section must turn the commutator of the block instrument to the normal position, viz. "line blocked", and thereafter exchange the bell signal with the train-control office in the rear. On sections where axle counters are installed, the train-control officers must reset the axle counters.
- 2031.3.7 If the tamping machine, after clearing the section, does not pass the train-control office concerned, or if it cannot be seen from the train-control office, the track inspector must inform the train-control officer telephonically that the tamping machine complete has arrived.
- 2031.3.8 If the tamping machine has proceeded to another place outside the working area but in the same double-line or non-token single line section, and the train-control officers have been informed that the tamping machine has arrived at its destination and is being protected in accordance with clause 2009.0, or that it has been secured clear of the line on the off-tracking platform, they must comply with the provisions of subclause 2031.2 regarding the despatch of trains.
- 2031.3.9 If a tamping machine on a double line section with colour-light signals, must return on the "wrong" line to the station or place at the entrance to such section, the setting-back movement may be carried out only if the track inspector has obtained a wrong-line order in accordance with the provisions of clause 7032.0, of this appendix.

- 2031.4 Suspension of section control by means of fixed signals**
- 2031.4.1 Double-line sections**
- 2031.4.1.1 When trains have to be despatched into a double-line section by means of SD2 authorities, tamping operations in the section may be continued. The provisions of clause 2023.0 must still be strictly complied with (see also clause 2018.0).
- 2031.4.1.2 If pilot working in accordance with train working rule No. 235 must be introduced on a running line on which a tamping machine is working, the train-control officer controlling entrance to the section must, except as provided in the following subclause 2031.4.1.3, inform the track inspector by the most expeditious means to suspend tamping operations, and the latter must comply with the provisions of clause 2011.0. Before tamping operations are resumed, the track inspector must obtain oral authority from the train-control officers.
- 2031.4.1.3 If pilot working in accordance with train working rule No. 235 must be introduced and the train service is expected to be such that tamping operations may be continued, the employee who will act as pilotman must warn the track inspector to have the working area protected at both sides. The pilotman must see that a BMX warning is issued to the driver of each train running over the section in which the tamping machine is working.
- 2031.4.2 Non-token single line sections**
- 2031.4.2.1 When the signalling apparatus or the signalling apparatus and all communications on a non-token single line section fail and telegraph order-working or pilot working, as the case may be, must be introduced in accordance with the applicable instructions, tamping operations in the section may be continued. The provisions of clause 2023.0 must still be strictly complied with. In the case of pilot working, the pilotman must see that a BMX warning is issued to the driver of each train running over the section in which the tamping machine is working (see also clause 2018.0).
- 2031.4.3 Pilotman must be informed of tamping operations**
- 2031.4.3.1 If tamping operations can be continued whilst pilot working is in force (see subclauses 2031.4.1.3 and 2031.4.2.1), the train-control officer introducing pilot working, must inform the employee acting as pilotman in writing that tamping operations will be continued and furnish him with particulars of the working area and the kilometre point where trains have to pass the tamping machine.
- 2032.0 VOID**
- 2033.0 DESPATCHING OF TAMPING MACHINE IN CENTRALISED TRAFFIC CONTROL AREAS**
- 2033.1 Despatch of tamping machine**
- 2033.1.1 The movement of a tamping machine in a CTC area is controlled by the signal aspects displayed, except when occupation of a running line is taken in the CTC area (see subclause 2004.3). The instructions for the control of trains by means of centralised traffic control as contained in Section 7 of this appendix, or such other instructions as may have been issued for the particular area, are applicable in every respect and must be observed by the track inspector.
- 2033.1.2 Before a tamping machine may enter an area in which it has to work, the track inspector must communicate with the train-control officer by telephone or radio and obtain authority to do so.
- 2033.1.3 After a clear understanding has been arrived at between the train-control officer and the track inspector regarding the kilometre points of the working area where tamping operations are to be performed, and the place or kilometre point (to the nearest 0,5 km) where trains will pass the tamping machine, the train-control officer may authorise the despatch of the tamping machine by operating the appropriate signals (see clause 2022.0).
- 2033.1.4 The train-control officer must, where possible, place reminders on the push button of each signal controlling entrance to the line on which the tamping machine will work and, where applicable, set up the illuminated red warning cross for the section of line concerned on the panel. Magnetic reminders must be placed on the panel or console to remind the train-control officer of the tamping machine (see subclause 7013.3, Section 7 of this appendix).
- 2033.2 Despatch of trains**
- 2033.2.1 After the track inspector has complied with the provisions of clause 2008.0, trains may be despatched in the normal manner under centralised traffic control.
- 2033.2.2 The drivers of all trains that must proceed through the CTC area in which the tamping machine is announced to work, must be in possession of the special notice mentioned in clause 2004.0. If the tamping machine is working in a CTC section, all trains that must proceed through this section must be stopped at a signal in the interlocking area short of the section. Thereafter the train-control officer must inform the driver of the exact kilometre points between which the tamping machine is working, also the place or kilometre point (to the nearest 0,5 km) where the tamping machine will be off-tracked for trains to pass. The driver must write all these particulars down in his notebook. (Where radio communication exists between the train-control officer and the driver, particulars regarding the tamping machine must be furnished to the driver by radio before the train reaches the section entry signal of the CTC section in which the tamping machine is working, and the train need not be stopped for this purpose.)

- 2033.2.3 The train-control officer must thereafter cancel the locking by removing the red warning cross from the panel and/or remove the reminders from the push buttons of the signals controlling entrance to the area concerned, as the case may be, and advise the track inspector immediately the train departs from the interlocking area concerned. The red warning cross and/or the reminders must be replaced as soon as possible after the departure or passage of the train.
- 2033.3 Resetting of axle counters**
- 2033.3.1 When the tamping machine has proceeded into or departed from a block section where axle counters are provided without having passed over the corresponding axle counter at the opposite end of the block section, the axle counters must be reset before the departure of the first train into the block section. (See instructions contained in clause 7009.0, Section 7 of this appendix in regard to the resetting of axle counters.)
- 2033.4 Continuous track circuiting**
- 2033.4.1 Where continuous track circuiting is provided, the train-control officer must instruct the track inspector to off-track the tamping machine in good time before a train arrives at the signal controlling entrance to the running line or section of running line concerned on which the tamping machine is working, in order that the train will not be delayed. As soon as the tamping machine has been placed clear of the track the train-control officer must, where applicable, cancel the route direction and thereafter despatch trains in the normal manner.
- 2033.5 Procedure to be followed when the tamping machine must proceed from the working area in a CTC area to a place outside the working area without performing tamping**
- 2033.5.1 When, for whatever reason, the tamping machine must proceed from the working area in a CTC area to another place outside the working area and the movement will not take place in the process of tamping, the track inspector must obtain authority from the train-control officer to do so. The latter must not authorise the departure of the tamping machine unless the CTC section is clear of all trains and the provisions of subclause 2033.1 have been complied with.
- 2033.5.2 Before the departure of the tamping machine, the track inspector must arrange for the protection afforded in terms of clause 2009.0 to be discontinued. In no circumstances may the protection be discontinued until the track inspector has received authority from the train-control officer to depart. The track inspector must also inform the train-control officer of the time the tamping machine will depart, and the train-control officer must enter the time under the last entry in the train register.
- 2033.5.3 No trains may be permitted to enter the CTC section whilst the tamping machine is proceeding to the stabling point or new working place, or before it has cleared the section.
- 2033.5.4 As soon as the tamping machine complete with marker has cleared the CTC section or has arrived complete at the stabling point or new working place and protection has been afforded in terms of clause 2009.0, the track inspector must inform the train-control officer accordingly, and thereafter, where applicable, tamping operations may be resumed in terms of these instructions.
- 2033.5.5 A tamping machine which is working on a unidirectional line and must proceed outside a working area, may only proceed in the direction in which trains normally run, except when occupation has been taken of the portion of the running line or where specially otherwise laid down by the Chief Executive (Spoornet).
- 2034.0 PROCEDURE WHEN TRAINS PROCEED TO AND FROM POINT OF OBSTRUCTION**
- 2034.1 When a telegraph, double-line, non-token single line or CTC section is obstructed due to a failure, accident or other exceptional occurrence, tamping operations on the obstructed line may be continued, provided the distance between the working area and the point of obstruction is such that there will be no overlapping of the protection afforded on both sides of the obstruction and the working area respectively.
- 2034.2 In the case of a double-line section or other unidirectional line, the train-control officer despatching an assisting locomotive or breakdown train into the section must warn the track inspector to have the working area protected on both sides before the assisting locomotive or breakdown train is allowed to depart.
- 2034.3 Except where the provisions of subclauses 2023.4 and 2023.6 apply, a BMX warning must be issued to the driver of the assisting locomotive or driver of the breakdown train, as the case may be, despatched into the section to render assistance, if the tamping machine performs work in that part of the section over which the assisting locomotive or breakdown train must run. Where the provisions of subclauses 2023.4 and 2023.6 apply, particulars regarding the tamping machine must be furnished telephonically to the driver should a breakdown train be required to return to the place from where it is despatched.
- 2034.4 Where pilot working has been introduced in accordance with train working rule No. 230, the pilotman must see that a BMX warning is issued to the driver of each train.
- 2034.5 Where communications with the tamping machine are in order, the working area may be changed, but only after all trains which are not involved in the obstruction, and the assisting locomotive or breakdown train, as the case may be, has cleared the section.

2035.0 OBSERVANCE OF TRAIN WORKING RULES, ETC.

2035.1 Except as otherwise specifically provided herein, the instructions in this section are in addition to and not in lieu of the Train Working Rules, as well as Sections 1, 3, and 4 to 11 of this appendix and the Manual for Track Maintenance.

2036.0 SPECIMENS OF MESSAGES, ORDER AND WARNING

2036.1 The following are specimens of the messages to be exchanged and orders and warnings to be issued, as described in the instructions herein:

**BERIG-EN-RYORDER INSAKE SWAAR BALLASONDERSTOPMASJEN
COMBINED HEAVY BALLAST TAMPING MACHINE MESSAGE AND PROCEEDING ORDER**

BOM

VRAAGBERIG QUESTION MESSAGE

Van Baaninspekteur (Naam) <i>From Track Inspector (Name)</i>	by at
Aan treinbeheerampenaar <i>To train-control officer</i>	by at
Die onderstopmasjien is by <i>The tamping machine is at</i>	
Mag die onderstopmasjien vertrek # na <i>May the tamping machine proceed # to</i>	
# om werk te begin tussen <i># to commence work between</i>	en and
Tyd <i>Time</i>	Datum <i>Date</i>
Handtekening van Baaninspekteur <i>Signature of Track Inspector</i>	

ANTWOORDBERIG-EN-ORDER REPLY MESSAGE AND ORDER

Van treinbeheerampenaar <i>From train-control officer</i>	by at
Aan Baaninspekteur <i>To Track Inspector</i>	by at
Aangesien die trajek tussen <i>The section between</i>	-stasie en <i>station and</i>
	-stasie vry van alle treine is, mag die <i>station being clear of all trains, the</i>
onderstopmasjien vertrek # na <i>tamping machine may depart # to</i>	
# om te werk tussen <i># to work between</i>	en and
# Hierdie stasie moet by aankoms in kennis gestel word <i># This station must be advised on arrival</i>	
Tyd <i>Time</i>	Datum <i>Date</i>
Handtekening van treinbeheerampenaar <i>Signature of train-control officer</i>	
Handtekening van Baaninspekteur <i>Signature of Track Inspector</i>	

Skrap onnodige woorde en parafeer
Delete words not required and initial

**BERIG INSAKE SWAAR BALLASONDERSTOPMASJEN
HEAVY BALLAST TAMPING MACHINE MESSAGE**

VRAAGBERIG QUESTION MESSAGE

Kantoordatumstempel
Office date stamp

Voorvoegsel **BM**
Prefix

Berignommer <i>Message number</i>	# Ontvang/Gestuur om # Received/Sent at
Van <i>From</i>	Aan <i>To</i>
Laaste vertrek <i>Last departure</i>	Laaste aankoms <i>Last arrival</i>
# Treinnommer # <i>Train number</i>	is nog in die telegraaftrajek <i>is still in the telegraph section</i>
Aangesien die telegraaftrajek vry van # teenoorgestelde/alle treine is, mag ek die onderstopmasjien magtig <i>The telegraph section being clear of # opposing/all trains, may I authorise the tamping machine</i>	
# om te loop van # <i>to proceed from</i>	na <i>to</i>
# om werk te begin tussen # <i>to commence work between</i>	en <i>and</i>
# 'n Absoluuttablet/Die houttreinstaf vir die trajek tussen # <i>An absolute tablet/The wooden train staff for the section between</i>	en <i>and</i>
	is op <i>has been locked away at</i>
	-stasie weggesluit <i>station</i>

ANTWOORD
REPLY

Voorvoegsel **BMI**
Prefix

Berignommer <i>Message number</i>	# Ontvang/Gestuur om # Received/Sent at
Van <i>From</i>	Aan <i>To</i>
Laaste vertrek <i>Last departure</i>	, kennis geneem , <i>noted</i>
Laaste aankoms <i>Last arrival</i>	, korrek , <i>correct</i>
# Treinnommer # <i>Train number</i>	is nog in die telegraaftrajek, kennis geneem <i>is still in the telegraph section, noted</i>
Aangesien die telegraaftrajek vry van # teenoorgestelde/alle treine is, mag u die onderstopmasjien magtig <i>The telegraph section being clear of # opposing/all trains, you may authorise the tamping machine</i>	
# om te loop van # <i>to proceed from</i>	na <i>to</i>
# om werk te begin tussen # <i>to commence work between</i>	en <i>and</i>
Kennis is daarvan geneem dat # 'n absoluuttablet/die houttreinstaf vir die trajek tussen <i>I note that # an absolute tablet/the wooden train staff for the section between</i>	
	en <i>and</i>
op <i>has been locked away at</i>	stasie weggesluit is <i>station</i>
# Ek het # 'n absoluuttablet/die houttreinstaf vir die trajek tussen # <i>I have locked away # an absolute tablet/the wooden train staff for the section between</i>	en <i>and</i>
	op <i>at</i>
	-stasie weggesluit <i>station</i>
Datum <i>Date</i>	Tyd <i>Time</i>
Treinbeheeramptenaar <i>Train-control officer</i>	

Skrap sin of woorde wat nie van toepassing is nie en parafeer
Delete sentence or words not applicable and initial

WAARSKUWING INSAKE SWAAR BALLASONDERSTOPMASJIE
HEAVY BALLAST TAMPING MACHINE WARNING

BMX

Aan drywer van treinnommer
To driver of train number

Die swaar ballasonderstopmasjien is in die trajek en werk tussen kilometerpunte
The heavy ballast tamping machine is in section working between kilometre points

en
and

U trein moet die onderstopmasjien verbygaan by †
Your train must pass the tamping machine at †

Let goed op vir onderstopmasjienwaarskubord en handseine, en handel stip daarvolgens.
Keep a sharp look-out for tamping machine warning board and hand signals and act in strict accordance therewith.

Stasie
Station

Datum
Date

Tyd
Time

Handtekening van treinbeheeramptenaar
Signature of train-control officer

† Vul in die plek of kilometerpunt
† *Fill in the place or kilometre point*

2037.0	VOID
2038.0	VOID
2039.0	VOID
2040.0	SAFETY INSTRUCTIONS FOR TRACK WELDING
2040.1	General
2040.1.1	The track inspector responsible for maintenance of the track, hereinafter referred to as the "Track Inspector", is responsible for all safe-guarding and protection measures necessary for the safety of employees and the protection of trains and on-track welding and grinding equipment on the section under his control. For this purpose he must make available the required qualified employees.
2040.1.2	Permanent-way welders working independently must not be supplied with on-track welding machines.
2040.1.3	The minimum personnel required to afford protection when track welding gangs use on-track welding machines are two employees qualified in push-trolley working and who have knowledge of these safety instructions, one of whom must be nominated by the Track Inspector as "the employee in charge of protection", and two hand-signalmen, tested and passed by a track manager.
2040.1.4	Hand signals must be given by means of red, white or yellow and black flags. Green flags must not be used.
2040.1.5	The Track Inspector must ensure that supervisors in charge of track welding gangs, track welders and all employees responsible for arranging and affording protection, are conversant with these instructions as applicable to their particular duties.
2040.1.6	There must be close co-operation between the employees appointed to carry out the protection duties and the supervisor in charge of a welding gang or a welder working independently, as the case may be, each of whom will be responsible for seeing that all safety measures are effectively carried out.
2040.1.7	The Track Inspector must make all the necessary arrangements if a temporary speed restriction is required. He must arrange to have the speed restriction included in the weekly temporary speed restriction notice issued. The length of track to be shown in the said notice, must not exceed 5 km.
2040.1.8	Machines, equipment and push trolleys, when not in use, must be off-tracked and secured against movement by means of chains and padlocks.
2040.2	Permission to be obtained before track welding using on-track welding machines is commenced
2040.2.1	The employee in charge of protection must obtain permission from the train-control officer(s) concerned, before machines are placed on the track and before welding is allowed on any signalled or non-signalled running line.
2040.2.2	When track welding or grinding must be done on a line other than a running line, e.g. in a marshalling or goods yard, the employee in charge of protection must advise the yard master or other operating official in charge or, in the absence of such an official, the train-control officer, of the work programme. The latter official must arrange for the necessary care to be exercised during train and shunting movements.
2040.2.3	Where permission is given in terms of subclauses 2040.2.1 and 2040.2.2 for track welding or grinding to commence, a suitable entry must be made in the train register and, except where the arrangements are made telephonically, the employee in charge of protection must sign the entry.
2040.3	Personal protection of welders
2040.3.1	Personal protection must be afforded to every track welder by a track helper standing next to him and warning him, by touch, of each approaching train. The welder must ensure that the track helper fully understands his duties in this respect and agreement must be reached beforehand between these employees as to how each is to stand clear of the line.
2040.4	Protection when welding
2040.4.1	Protection must be afforded by placing a red banner across the line at that/those end(s) of the unsafe portion of line concerned on that/those side(s) from which trains can be expected, depending on whether the line is uni- or bidirectional. A flagman exhibiting a danger hand signal must take up position 1,5 km from the red banner and place two detonators 20 meters apart on the line. The first detonator must be placed 100 meters outside the place where the hand signal is displayed. When working in tunnels, the red banner must be replaced by an employee exhibiting a red light.

- 2040.4.2 Where, except as laid down in subclause 2040.4.4, there are points within the full protection distance, the distance between the red banner and the flagman initially, and then, if necessary, the distance between the flagman and the detonators and then even the number of detonators must be reduced in order that the furthest detonator or, should there not be space at all for at least one detonator, the red banner and flagman are short of the points alongside the stock rail joint or clearance mark depending whether they are facing or trailing points.
- 2040.4.3 If the unsafe area is near or between points, and protection cannot be afforded at full protection distance, the employee in charge of the work and the train-control officer must arrive at a clear understanding. The train-control officer must ensure that the unsafe area is properly protected by controlled signals, where provided, at the side(s) where protection is not afforded at the full protection distance. Furthermore, the train-control officer must not allow a train to depart from the telegraph station, crossing place or interlocking area concerned or to enter the unsafe line before the employee in charge of the protection has informed him that the train may proceed. Where applicable, the train-control officer must make use of reminders or, in the case of hand points, the employee in charge of protection must, in consultation with the train-control officer, arrange for the points concerned to be clamped against entry to the line on which work is performed.
- 2040.4.4 Should the unsafe area be at or near an interloop (including a remote controlled interloop), a token station, order station or an intersiding, or on the main line or through line at or near an unattended junction, protection must be afforded at full distance, even if there are points, warning boards and, where applicable, colour-light signals.
- 2040.4.5 If the employee in charge has any doubt about whether the line on which work is to be performed is a uni- or bidirectional line, he must come to a clear understanding with the train-control officer(s) concerned when authority is requested to commence work.
- 2040.4.6 Should there be a tunnel within the prescribed distance, or should work be carried out in a tunnel, the employee in charge of the protection must, except where otherwise provided for in the Local Appendix for specific tunnels, arrange for the employee affording protection to proceed through the tunnel and afford protection at the full protection distance outside the mouth of the tunnel. The red banner must be so placed that oncoming trains will not stop with the locomotives in the tunnel.
- 2040.4.7 Protection on yard lines must be provided by a red banner displayed across the line, opposite the clearance mark at each end of the line occupied by the welding gang and machines. The points affording access to such line must be set against entry and clamped in that position.
- 2040.4.8 As the welding work progresses the employee in charge of protection must maintain the position of the protection relative to the place of work on the track. The supervisor of the welding gang must in addition, ensure that the welding gang will work between the red banners.
- 2040.4.9 Only the employee in charge of protection may authorise the removal of danger signals and detonators, but before authorising the removal, he must, in collaboration with the supervisor in charge of the welding gang, ensure that all machines have been moved clear of the permanent way and that the line is clear for the passage of trains.
- 2040.5 Movement of on-track plant**
- 2040.5.1 The employee in charge of protection must advise the train-control officer(s) of the proposed movements of the gang for the day.
- 2040.5.2 When it is necessary for a welding gang to convey on-track welding and grinding machines from any point to the working area, or vice versa, two push trolleys must accompany the movement. One must be marshalled in front of and one in the rear of the convoy. The machines and the trolleys must be kept as close together as is convenient and safe. The leading and trailing trolleys must be under control of employees qualified in push-trolley working. The welding machines, grinding machines and push trolleys must not be placed on the running line until the employee in charge of protection has arranged with the train-control officer(s) and has afforded protection.
- 2040.5.3 Should there be an insufficient number of employees to convey the machines and equipment simultaneously, it must be conveyed in more than one trip.
- 2040.5.4 Before permitting any machinery or equipment to be placed on the track prior to conveying and before passing through a station or over any interlocked points, the employee in charge of protection must establish from the train-control officer(s) concerned how trains are running.
- 2040.5.5 The employees qualified in push-trolley working must ensure that the line is clear and that all points over which the machines and equipment have to pass are correctly set for the movement.
- 2040.5.6 Rail-grinding and welding machines must not be attached to a train or to a trolley, nor may they be coupled together.
- 2040.5.7 On unidirectional lines the machinery and equipment may be moved only in the direction in which trains normally run, except where otherwise provided in local appendices.
- 2040.5.8 Machines and trolleys may not travel at a speed in excess of 5 km/h.

- 2040.5.9 Only the person who must operate the brake may travel on a machine or trolley.
- 2040.5.10 One member of the gang and at least two track helpers must accompany each machine or trolley. Each employee will be responsible for the safety of the machine or trolley he must accompany, as well as for its removal from the track under the supervision of the employee qualified in push-trolley working.
- 2040.6 Protection of on-track machines during movement**
- 2040.6.1 On bidirectional lines** – The convoy must be protected by qualified handsignalmen, with danger hand signals, (one in front and one in the rear), at a distance of 1,5 km from the front and rear trolleys. This protection must be afforded whether or not the view is restricted. Each handsignalman must be equipped with a danger hand signal and detonators.
- 2040.6.2 On uni-directional lines** – The convoy must be protected by a qualified handsignalman, with a danger hand signal, in the rear at a distance of 1,5 km from the rear trolley. This protection must be afforded whether the view is restricted or not. The handsignalman must be equipped with a danger hand signal and detonators.
- 2040.6.3 Where the visibility is restricted, additional qualified handsignalmen must be used to transmit hand signals.
- 2040.6.4 Should a train approach or when the convoy comes to a standstill, the handsignalmen must place three detonators 20 metres apart on the line. Should there be sufficient time, the first detonator must be placed 100 metres outside the place where the danger hand signal is displayed. The detonators and danger hand signal must not be removed before the machines and trolleys have been placed clear of the line.
- 2040.7 Machines on track-circuited sections**
- 2040.7.1 On track-circuited sections, metallic contact must not be made between any rail and earth or between the rails in one leg of the track and rails in the other leg of the track. Insulated joints must not be short-circuited. The instructions in the Manual for Track Maintenance dealing with insulated joints must be observed whenever work is done at an insulated joint.
- 2040.7.2 Only machines and equipment of which each track wheel, with and without the brake applied, is insulated from the other track wheels, may be used on track-circuited sections.
- 2040.7.3 The earthing terminal of electric-arc welding machines must be connected to the rail being welded and the connection must be on the same side of an insulated joint as that on which welding is being carried out.
- 2040.7.4 The cables on welding machines must be in a good condition and insulated, particularly at the joints, to ensure that no short circuit may be established.
- 2040.7.5 Before work is commenced with electric-arc welding machines the services of the signalling maintenance official must be obtained in order that he may arrange for signalling circuits to be disconnected from the rails by the withdrawing of fuses or links until after welding has been completed.
- 2040.8 Welding on electrified lines**
- 2040.8.1 The instructions contained in the chapter “Electrical” in the Manual for Track Maintenance must be observed by welding personnel.
- 2040.9 Protection of welding personnel using gas-welding apparatus or working with off-track equipment**
- 2040.9.1 With the exception of equipment which must be clamped to a rail, protection as laid down in subclause 2040.4 is not necessary when gas-welding apparatus is used, or when working with off-track equipment (see subclause 2041.11.3). The provisions of subclauses 2040.3 and 2041.11.4 must nevertheless be strictly observed.
- 2040.9.2 If, due to the nature of the work, it should become necessary to reduce the speed of trains to 30 km/h, it must be done in accordance with subclause 11011.2.4. In the event of a lower speed being essential, protection must be afforded in accordance with the provisions of clause 11004.0.
- 2040.9.3 There must be a clear understanding between the employee in charge of protection, the welders and the handsignalmen as to which signals must be exchanged between them should it become necessary to reduce the speed of a train. For this purpose red, white or yellow and black flags must not be used.
- 2040.10 Maintaining clearances**
- 2040.10.1 Cables and hoses must not be laid over rails if it is possible to lay them under the rails. Electrical cables and hoses of machines standing clear of the structure gauge, must be long enough to enable this requirement to be met.
- 2040.10.2 The necessary precautions must be taken to ensure that gas cylinders used by the permanent-way welders are kept clear of the line.

2040.11 Thermit welding of rail joints

- 2040.11.1 Thermit welding of rail joints requires an occupation of the track for about 45 minutes over approximately 400 metres on either side of the joint being welded. If two joints near to each other are being welded simultaneously, the occupation time is about 68 minutes.
- 2040.11.2 This operation, which includes a certain amount of distressing of the rails, must be carried out within prescribed temperature limits that makes it impossible to issue a detailed notice in advance. When thermit welding must therefore be done on any running line, the Track Inspector must obtain authority from the train-control officer(s) controlling the section of line before it is closed.
- 2040.11.3 Protection must be afforded in terms of clause 11004.0 and the red banners must not be removed until after the welded joint(s) has/have been ground smooth partially and the driver of each train which has to run over the partially ground joint(s), has been advised orally of the applicable speed to be maintained until the joint(s) has/have been fully ground, the track has been destressed and the sleepers under the joint(s) concerned have been properly packed.

2040.12 Running of push trolleys

- 2040.12.1 When welding personnel, equipment and/or consumable stores are transported by push trolleys, the push trolleys must follow each other at distances that will enable employees on each trolley at all times to see the trolley ahead and/or in the rear. Where possible, the distance must be approximately 100 metres.
- 2040.12.2 The leading and trailing trolleys must be under the control of employees qualified in push-trolley working, whilst each intermediate trolley must be under the control of a competent employee.
- 2040.12.3 The approach of a train must be indicated by a red flag waved from side to side by the employee in charge of the leading or trailing trolley, as the case may be, and this signal must be relayed from trolley to trolley. On receipt of such a signal, all trolleys must be removed clear of the line.
- 2040.12.4 Protection provided for the convoy of trolleys must be in accordance with subclause 2040.6.
- 2040.12.5 The instructions concerning the use of push trolleys laid down herein, are in addition to those in the Train Working Rules and Manual for Track Maintenance.

2040.13 Delays to trains to be minimised

- 2040.13.1 The Track Inspector and the supervisor of a permanent-way welding gang must co-operate with the operating and shunting personnel. All these employees must arrange their work so that delays to train and shunting movements and delays to permanent-way welding will be reduced to a minimum.

2041.0 OCCUPATIONS

2041.1 General

- 2041.1.1 Occupations can be taken of points, signals and/or related equipment, in other words, control over it can be taken over from Operating and the use thereof for train and shunting movements suspended, for the purpose of maintenance and/or repair work, to be replaced, shifted, altered, removed or suspended.
- 2041.1.2 Occupation of the track is taken for the replacement of sleepers or rails, the installing of points for construction sidings, relaying work, ballast sifting, etc.
- 2041.1.3 Likewise an occupation can be taken of the overhead equipment for maintenance and/or repair work or to make changes to existing equipment, etc.
- 2041.1.4 If work of any nature must be done on or near the track which does not necessitate occupation of the track, arrangements can be made that such work is done during the intervals between trains.

2041.2 Application for occupations

- 2041.2.1 Before an occupation may be taken of points, a signal and/or related equipment or a section of the track or overhead track, the department concerned must apply therefor.
- 2041.2.2 The points, signals or related equipment or the section of the track or overhead track which are to be worked on, the nature of the work and other points, signals, lines or equipment which will be affected by the occupation, must be indicated in the application.

2041.3 Allowing occupations

- 2041.3.1 On receipt of the applications, a meeting must be arranged in co-operation with all departments concerned during which the implications of the occupations must be thoroughly considered, especially as far as the effect on the train service is concerned.

2041.3.2 The senior operating official in the central operating office must, in co-operation with engineers of the departments concerned, decide which occupations are to be allowed and the period of time which will be allocated to each occupation. There must, as far as possible, be decided upon dates and times that will minimise the effect on the train service.

2041.4 Occupation notices

2041.4.1 After an application has been approved, a notice which, among other things, will serve as authority to grant permission for and allow an occupation for the necessary work to be done, must be issued to all concerned.

2041.4.2 The notice must include full particulars with regard to the day of the week, place, time and date, duration and nature of the work, numbers or description of points and signals, kilometre points in the section (if the permanent way is involved), the grade or designation of the employee(s) who will take the occupation and the grade or designation of the person(s) with whose co-operation the work will be done.

2041.4.3 Occupation notices must indicate the safety and other additional measures which must be taken, e.g. the provision of handsignalmen, a pilot, a bonder, etc. and must also indicate who will be responsible for applying wedges and clamps, where applicable.

2041.4.4 A notice must also be issued when new electrical equipment is being energised or commissioned, or where existing equipment is de-energised and removed.

2041.5 Taking of occupations

2041.5.1 Before occupation is taken of a section or portion of a running line or a yard line, the official in charge of the occupation must ensure, as far as practicable, that all concerned are in possession of the occupation notice and in accordance with subclause 1043.4 of this appendix make an entry in the train register of the station/train-control office concerned, or control point in the case of a yard, or one of the station/train-control offices controlling the telegraph section. The entry must be signed by the train-control officer or the operating official in the yard, as the case may be, as well as the official in charge of the occupation or his authorised representative (also see train working rule No. 104).

2041.5.2 The information must be transmitted telephonically or by radio to the train-control officer at the other end of the telegraph section or, in the case of CTC, to this train-control officer, who must make the necessary entry in the train register.

2041.5.3 Train-control officers must place lever collars or other reminders on the signal and/or points levers, switches or push buttons concerned and make use of any additional aids, where provided, to remind them that points and/or signals are not to be operated.

2041.5.4 After completion of the work and when the occupation can be suspended, a further entry in the train register must be made and signed as explained in subclause 2041.5.1.

2041.6 Duration of occupation

2041.6.1 Full particulars in respect of special arrangements must be furnished timeously to all concerned so that the arrangements can be fluent and that no doubt about any aspect will exist. The occupation times, as indicated in the notice, must strictly be complied with and the duration may not be exceeded without the approval of the senior operating official in the central operating office.

2041.7 Void

2041.8 Occupation of telegraph or block sections

2041.8.1 If an occupation is taken of a telegraph or block section or certain portion of the line in such section, trains must not be allowed to enter such a section. Train-control officers must comply with the provisions of subclause 2041.5.3.

2041.8.2 When, however, due to the nature of the work being executed during the occupation, it is necessary to run a locomotive with or without vehicles attached, a tamping or ballast-sifting machine, etc. over the section or portion of the line in such section, the driver must be authorised by the official under whose control the work will be done to enter the section or portion of the line, provided the occupation notice –

2041.8.2.1 stipulates specifically that during the occupation such a locomotive, etc. will run over the section or line concerned; and

2041.8.2.2 furnishes the name and grade/designation of the employee in charge of the work.

2041.8.3 The official in charge of the work must accompany the movement into the section and is responsible for the safety of all movements in the section or on the portion of line of which occupation has been taken.

2041.8.4 In accordance with train working rule No. 86(2), the train-control officer still remains responsible for the safe despatch and admittance of such locomotives, etc. Running signals may not be operated for entrance into a section of which occupation has been taken and on sections where trains normally run with tokens, a token must also not be issued to the driver.

- 2041.8.5 When occupation must be taken of a line for long periods for tamping or ballast-sifting operations to be done (see subclause 2004.3), it may be arranged on double-line sections, i.e. sections with running lines which are signalled in one direction only, for a temporary telegraph station to be opened at cross-overs in the mid-section between two telegraph stations/train-control offices to divide the double-line section into two separate sections, with normal double-line working on the one side and single line working on the other side of the temporary telegraph station.
- 2041.8.6 Temporary cross-overs must be installed and for the duration of the occupation the temporary telegraph station must be equipped with the prescribed fixed semaphore signals, which are fixed in the danger or caution position.
- 2041.8.7 Two stop signals which are fixed in the danger position, must be provided at the adjacent station alongside the portion of the line which will be used as a bidirectional single line for trains approaching the station from the wrong direction. All movements past these signals must be controlled by handsignalmen in accordance with train working rule No. 100(2).
- 2041.8.8 Complete operating instructions for the special working in accordance with subclause 2041.8.5 must be submitted to the Chief Executive (Spoornet) for approval, who will decide over the systems of train working according to which trains must be controlled over the sections on either side of the temporary telegraph station.
- 2041.8.9 Each time before a temporary telegraph station is opened, an occupation notice must be issued in which full particulars must be stated regarding the time and date that work commences, changes to the signals at the adjacent permanent stations/train-control offices and that portion of the track to be closed for trains, etc. A sketch showing the typical lay-out, position of the signals, points, etc. at the temporary telegraph station, must be attached to the occupation notice as an annexure.
- 2041.8.10 A name must be given to the temporary telegraph station and the special working restricted to daylight only.
- 2041.9 Occupation of points, signals, etc.**
- 2041.9.1 When work of any nature must be done to points, signals or related equipment which can impede the safe running of trains, the procedure as laid down in clause 8011.0, Section 8 of this appendix and train working rule No. 104, or clause 11004.0, Section 11 of this appendix, as the case may be, must strictly be complied with.
- 2041.10 Overhead occupations**
- 2041.10.1 All officials in charge of stations where electrical traction is in use, as well as employees supervising work being done on or nearby overhead equipment, must absolutely ensure at all times that safety measures are timeously taken and strictly complied with before an occupation for work on overhead equipment is allowed.
- 2041.10.2 It must be ensured that all employees concerned are in possession of a copy of the Electrical Safety Instructions, and that the instructions contained therein, are strictly complied with (see subclause 1006.2 of this appendix).
- 2041.10.3 Occupation notices for work on overhead equipment (see subclause 2041.4) must be printed in black ink on yellow paper on which is applied an emblem consisting of a lightning-arrow within a triangle.
- 2041.10.4 In addition to full particulars as mentioned in subclause 2041.4, the notice must also indicate the precise duration, which lines will be affected and which equipment will be worked on, which electric switches will be involved and that electric trains cannot travel over the section concerned during the occupation.
- 2041.10.5 If an overhead section is de-energised, electric locomotives or motor coaches must not be allowed to travel from a live section to a dead section, or vice versa, unless special arrangements are made for the movement to be carried out with safety, and then only when the pantographs are in the lowered position. For this purpose train-control officers at train-control offices must make themselves familiar with the switching diagrams made available for this purpose.
- 2041.10.6 Before commencing with any work on high-voltage equipment, the official in charge of the work must, in addition to the occupation notice issued –
- 2041.10.6.1 obtain permission from Control to commence with the specified work;
- 2041.10.6.2 make the necessary arrangements with the central operating office with regard to the running of trains;
- 2041.10.6.3 complete a work permit for the specified work in accordance with the Electrical Safety Instructions; and
- 2041.10.6.4 appoint handsignalmen to protect overhead personnel whose work requires them to work with ladders, etc. on or in close proximity of the line.

- 2041.10.7 All particulars in connection with work permits must, as far as possible, be recorded in the train registers of stations/train-control offices at both ends of the section concerned in accordance with subclause 2041.5 – it is especially applicable when work permits are taken in the case of accidents. Where it is not possible, the train-control officers must make the necessary entries in their respective train registers themselves.
- 2041.10.8 If the work cannot be completed within the appointed time, as stipulated in the notice, the overhead equipment must, after expiry of the appointed time, be regarded as live.
- 2041.10.9 In the case of accidents and failures of the power supply due to an accident, it is the duty of the senior operating official on the scene to ascertain the limits between which the overhead equipment is dead and to control the train arrangements over the section(s) concerned.
- 2041.11 Protection of permanent way personnel and equipment**
- 2041.11.1 When work is arranged between trains under a special notice, and the track may be unsafe for the passage of trains at different places and times, protection must be afforded in accordance with clause 11004.0, Section 11 of this appendix.
- 2041.11.2 If circumstances demand for work being done between trains without a notice being issued beforehand, and it is necessary to bring a train to a standstill because of the line being unsafe, protection must be afforded in accordance with clause 11004.0, Section 11 of this appendix.
- 2041.11.3 With the exception of tools that must be clamped to a rail, protection in accordance with clause 11004.0, Section 11 of this appendix, is not necessary when working with jacks which cannot form an obstruction, or off-track equipment, i.e. mechanical hand tools or equipment that can be removed from the line by a single employee.
- 2041.11.4 Jacks that form an obstruction as well as apparatus/equipment, with or without wheels which cannot immediately be removed from the line by a single person, must, however, be fully protected in accordance with clause 11004.0, Section 11 of this appendix.
- 2041.11.5 To ensure the safety of employees, as well as to ensure that their equipment and the work being done by them not being damaged by trains, the provisions of subclause 11003.1.3, Section 11 of this appendix, must be complied with.
- 2041.11.6 Rail transporters or any appliance with wheels designed to convey equipment, must be protected like a push trolley in accordance with clause 11010.0, Section 11 of this appendix.

SECTION 3

CONTROL OF TRAINS ON SINGLE LINES BY MEANS OF THE VAN SCHOOR TRAIN TOKEN SYSTEM

3001.0 OBJECT AND METHODS OF WORKING

3001.1 The object of the Van Schoor train token system is to permit a single line section to be converted into an up or a down line, according to the immediate traffic requirements.

3001.2 Where the word "station" is used in this section, it implies a place where train control instruments, excluding subsidiary instruments (see subclause 3013.1), are installed.

3001.3 The Van Schoor train token system provides for the following two operating methods:

3001.3.1 Absolute working: one train only may occupy the section between two stations;

3001.3.2 Interworking: one train may enter the telegraph section from each end, proceed to the interloop, cross the opposing train there and thereafter proceed to the station in advance.

3001.4 In Van Schoor train token working a token is handed to the driver as his authority to enter the section. The various tokens are known as absolute tablets and interworking tablets (crossing tablets). Absolute tablets are circular in shape, whilst interworking tablets are rectangular. (See FIG. 1.)

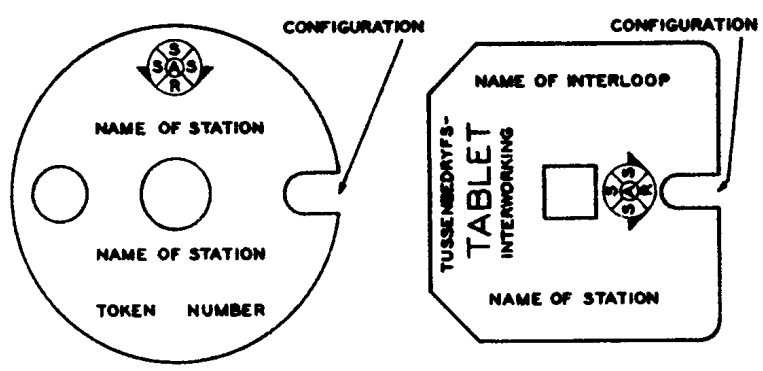


FIG. 1

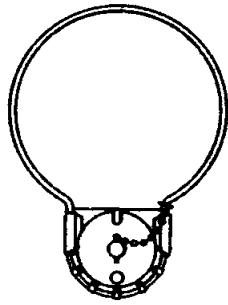
3001.5 A driver may not enter a section unless he is in possession of the correct token for that section.

3001.6 The name of the station at each end of the section to which an absolute tablet applies, as well as a distinctive number, are inscribed on the tablet. The names of the station and the interloop between which it applies, appear on each interworking tablet. A special SPOORNET crest is engraved on each token. In the edges of the tokens are configuration slots of various shapes to prevent them from being used in the instruments of adjacent sections.

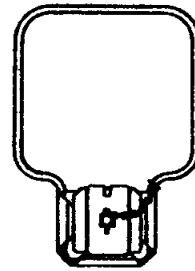
3002.0 USE OF TOKEN POUCHES

3002.1 A token must be placed in the appropriate pouch before being handed to a driver.

3002.2 The two types of token pouches are illustrated in FIG. 2. An absolute tablet must always be placed in a pouch with a circular handle (absolute pouch), and an interworking tablet in a pouch with a square-shaped handle (interworking pouch).



ABSOLUTE POUCH



INTERWORKING POUCH

FIG. 2

- 3002.3 Should the required type of pouch not be available, the token must be handed to the driver without a pouch, together with a written explanation of the circumstances. The train-control officer must promptly send a report of each case to the operations manager through his supervisory officer. Under no circumstances may the shape of the handle be tampered with.
- 3002.4 When trains stop at stations, pouches must, where possible, be exchanged by hand and not be thrown onto the platform or the ground. In the case of non-stopping trains, the pouch must be thrown off in a backward direction with a rotating movement so that it will fall flat on the ground and remain stationary.
- 3002.5 Number of pouches at stations**
- 3002.5.1 The following numbers of pouches may be held at each station for each instrument: 6 to 12 absolute pouches, and one interworking pouch for each interworking instrument. An additional interworking pouch may also be held.
- 3002.5.2 When the number of absolute pouches has decreased to three per instrument, the required number must immediately be obtained from an adjacent station or from the station which, in accordance with the local appendix, regulates the supply.
- 3002.5.3 Train-control officers must not allow pouches to accumulate and, where the number of either type exceeds the number allowed, they must forward the surplus pouches to the adjoining stations, should there be a shortage there, or to the controlling station.
- 3002.5.4 All defective pouches which the telecommunication maintenance official cannot repair must be forwarded to the controlling station. The official in charge of the controlling station must submit requisitions for replacement pouches to the official in charge of the stores at Langlaagte.
- 3002.5.5 The telecommunication maintenance official must examine all pouches monthly and keep them in good order. The shape of the handles must be corrected, if necessary, and missing split pins, chains, etc., must be replaced.
- 3003.0 CODE OF BELL SIGNALS**
- 3003.1 The following code of bell signals must be used:

Clause or subclause No.	Terms	Beats	Acknowledgment
	Attention. Speak on telephone.....	1	Repeat
	Express passenger train	4	
	Breakdown train going to clear the line, or light locomotive going to assist or replace locomotive of disabled train.....	4.4	
	Passenger train or breakdown train not going to clear the line	3.1	
	Branch passenger or mixed train	1.3	
3005.1.1	Mixed train	5	If prepared to accept train, repeat;
3007.4	Empty coaching stock train	2.2.1	if not, 1 beat
	Goods train not required to stop in section	3	
	Goods train required to stop in section, or material train	1.2.2	
	Goods train combined	3.2.3	
	Branch goods train	1.2	
	Light electric locomotive(s)	2.3.3	
	Light locomotive, light locomotives coupled together, or motor trolley	2.3	
3007.4	Locomotive and brake van	1.3.2	
	Introduction of interworking	4.1	If prepared to accept interworking, repeat; if not, 1 beat
3007.9	Termination of interworking	4.2	Repeat
3018.1	Release tablet for shunting or other work	5.2	If prepared to release token, repeat; if not, 1 beat
3018.2	Shunting completed, tablet replaced	2.5	Repeat
3019.4.1	Testing of bells and instruments	16	Repeat
3019.4.2	Train entering section	2	Repeat
3019.4.3	Train double-headed (steam locomotives).....	1.2.1	Repeat
3019.4.4	Train waiting	2.3.2	1 Beat
3019.4.5, 3019.4.9	Train arrived, or obstruction removed.....	2.1	Repeat
3019.4.6	Repeat	4.3	Repeat signal last sent
3019.4.7	Cancel	3.5	Repeat
3019.4.8	Amend	5.3	Repeat
3019.4.9	Obstruction danger	6	Repeat
3020.2	Banking locomotive in rear of train ..	2.2	Repeat
3022.1	Stop and examine train	7	Repeat
3023.1	Train passed without marker to station in advance	9	Repeat
3023.1	Train passed without marker to station in rear	4.5	Repeat
3024.1	Vehicles running away	2.5.5	Repeat
3025.1.7	Transfer of tablets	4.4.4.4	Repeat
3026.1	Closing of station	7.5.5	Repeat
3026.2, 3026.5	Opening of station	5.5.5	Repeat

3003.2 On an electrified section, one beat must be given after the ordinary code used to request and to give "line clear" for a train (except a motor trolley or a light locomotive not en route to assist or replace the locomotive of a disabled train) if it is hauled by a diesel or steam locomotive, e.g. express passenger train, 4--1; passenger train, 3.1--1. A distinct pause twice as long as that between the ordinary beats must be allowed between the standard code and the extra beat.

3004.0 ABSOLUTE WORKING : DESCRIPTION OF INSTRUMENT

3004.1 For absolute working over a particular section, an absolute instrument is provided at each end of the section.

3004.2 The absolute instrument is depicted in figures 3 and 4. If the instrument is equipped with a line break switch and an automatic/normal control switch (see FIG. 5) in order that it may be operated by locomotive personnel while the station is closed, it is known as an automatic absolute instrument or, in short, automatic instrument. (See clause 3009.0.) The name of the station at the distant end of the section is engraved on a plate on the base of the instrument.

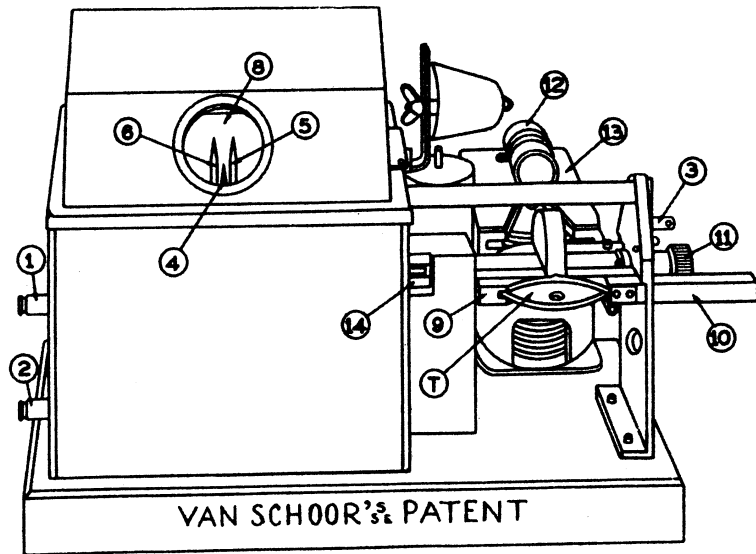


FIG. 3

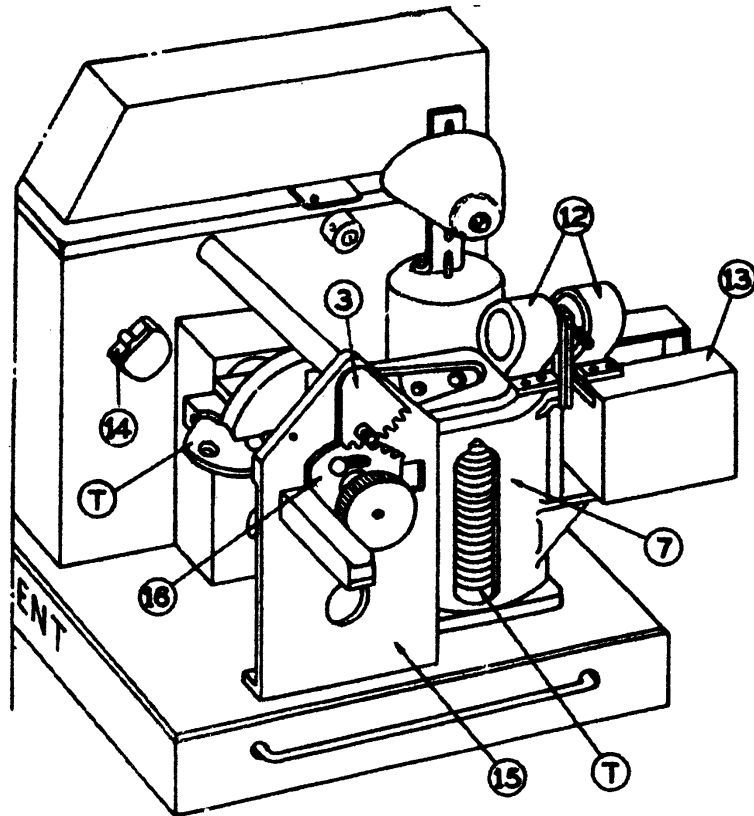


FIG. 4

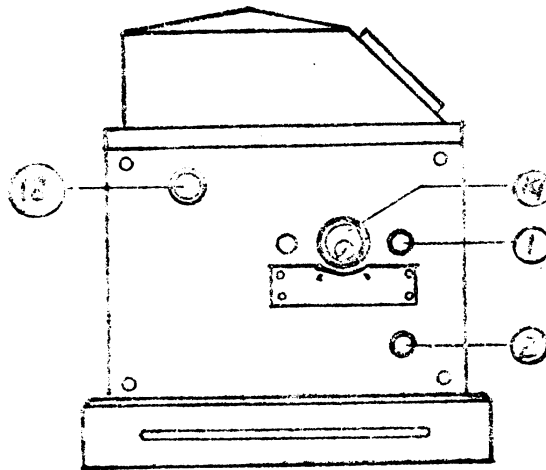


FIG. 5

- | | |
|------------------------------------|-------------------------------------|
| 1. Send switch | 11. Revolving magazine grip |
| 2. Receive switch | 12. Transfer locks |
| 3. Camshaft lever | 13. Transfer magazine |
| 4. *Galvanoscope needle | 14. Counter |
| 5. Out-lock pointer | 15. Magazine end bracket |
| 6. In-lock pointer | 16. Shutter |
| 7. Token storage magazine | 17. +Bell |
| 8. Dial | 18. Line break switch |
| 9. Revolving magazine | 19. Automatic/normal control switch |
| 10. Revolving magazine slide cover | T. Train tokens |

* In some instruments, two red lights on the dial, instead of a galvanoscope needle, indicate that current is being sent or received.

+ A tweeter, instead of a bell is fitted to some instruments.

3004.3 Send switch – The send switch is used to send current to the distant station and is operated while the camshaft lever is pressed. Except when there is an automatic instrument at the distant station and the control switch of the said instrument is set for automatic control, one beat of the bell is given at that station each time the send switch is pressed.

3004.4 Revolving magazine – A token can be withdrawn from or replaced in the instrument only by means of the revolving magazine which, with the token inside, can be rotated 180 degrees round its axis when current is received from the distant station. (To place the token in the revolving magazine, the camshaft lever is pressed backwards, the slide cover pushed to the right through the relative opening in the end bracket and the token, configuration first, pushed into the revolving magazine through its open side. The slide cover is then closed whereafter the camshaft lever will return to the normal forward position.)

3004.5 Communication – A telephonette is provided with each absolute instrument for communication with the station at the other end of the section.

3005.0 ABSOLUTE WORKING : PROCEDURE TO BE FOLLOWED

3005.1 When a train has to run over a section under absolute working and both stations are attended, the procedure described in the following example must be strictly followed:

3005.1.1 A and B represent the two stations. A has a train that must proceed through the section to B. If the "train arrived" signal for the previous train has been given and acknowledged, and a token has not been withdrawn from either instrument. A must rotate the revolving magazine of his instrument so that the open side is at the back and push a token, configuration first, from the storage magazine into the revolving magazine. He must then give the prescribed "is line clear" signal by means of the send switch. If B is not prepared to accept the train, he must acknowledge the signal by giving one beat. If he can accept the train, he must repeat the "is line clear" signal, holding in the send switch on the last beat. While current is thus being sent from B to A, A must press his receive switch, and as soon as the out-lock pointer moves, he must turn the revolving magazine outwards. When the magazine has been turned fully outwards, A must give one beat by means of the send switch, which B must acknowledge by giving one beat. A must then remove the token from the revolving magazine by pressing the camshaft lever and opening the slide cover, and thereafter close the slide cover.

- 3005.1.2 A must place the token in an absolute pouch and hand it to the driver. (See train working rule No. 204.)
- 3005.1.3 Immediately the train enters the section, A must give the "train entering section" signal (2 beats) which B must acknowledge.
- 3005.1.4 On arrival of the train at B, the driver must deliver the token to the official authorised to receive it. B, after satisfying himself that the train has arrived complete, must place the token, configuration first, in the revolving magazine of his instrument. B must then give the "train arrived" signal (2.1) by means of his send switch. A must acknowledge the signal, holding in the send switch on the last beat. While current is thus being sent from A to B, B must press his receive switch and when the "in" lock pointer moves, he must turn the revolving magazine fully inwards so that the token is safely locked away in the instrument. B must then give one beat by means of the send switch, which A must acknowledge. The token must be pushed from the revolving magazine into the storage magazine unless it is known that the next train will enter the section from B.
- 3005.1.5 Cancellng of absolute tablet** – If the train cannot depart after A has withdrawn the token, A must place the token in the revolving magazine. He must then give the "cancellng" signal (3.5) which B must repeat, holding in the send switch on the last beat, while A returns the token to the instrument as described in subclause 3005.1.4. A must then give one beat which B must acknowledge.
- 3005.2 Counter number to be recorded** – After a token, has been withdrawn at a telegraph station, the progressive number shown by the instrument's counter must be entered in the train register opposite the particulars of the train concerned. If a token that has been withdrawn, is not used for the despatch of a train but is cancelled, the reason for the cancellation and the progressive number must be entered in the train register. If an absolute tablet is withdrawn to introduce interworking, or for whatever other reason, the progressive number must also be entered in the train register.
- 3005.3 Camshaft lever to be in correct position** – The camshaft lever must be in the normal forward position before the out-lock or the in-lock, as the case may be, can move. Should the camshaft lever fail to return to its normal position, it must be pulled forward before the receive switch is pressed.
- 3005.4 Lock pointer to move before revolving magazine is rotated** – A revolving magazine must not be rotated to withdraw a token from or replace it in an instrument before the out-lock or in-lock pointer, as the case may be, has moved.
- 3006.0 INTERWORKING : DESCRIPTION OF INSTRUMENTS**
- 3006.1 The instruments used for interworking are depicted in figures 6 and 7. There is a controlling instrument at one end of the telegraph section and a secondary instrument at the other end. The interworking instruments (crossing instruments) are used in conjunction with the through-working instruments and are designed to permit interworking up to a maximum of one train crossing one train.

INTERWORKING INSTRUMENT (CONTROL)

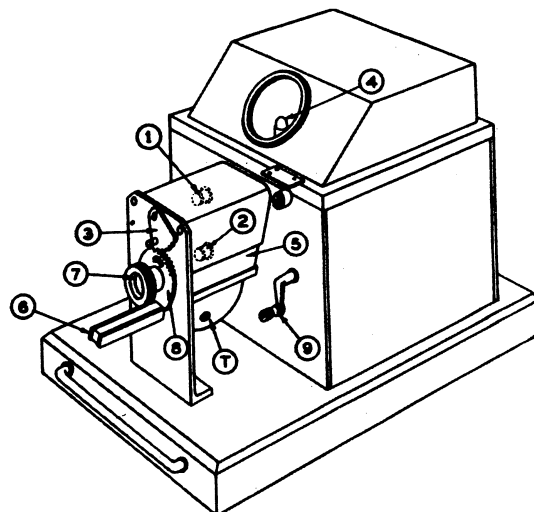


FIG. 6

INTERWORKING INSTRUMENT (SECONDARY)

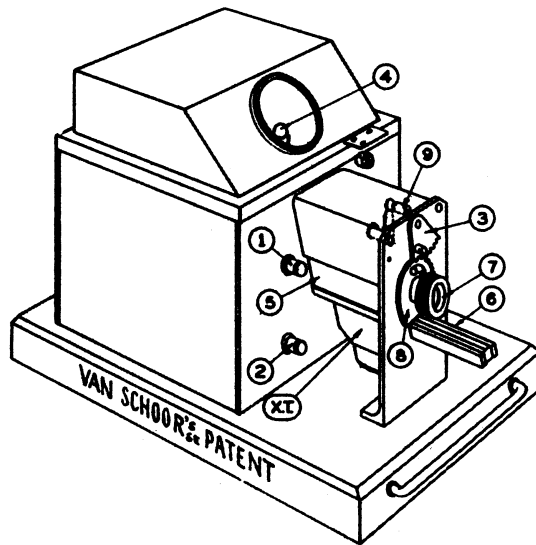


FIG. 7

- | | |
|---|--|
| <ul style="list-style-type: none"> 1. Send switch 2. Receive switch 3. Camshaft lever 4. Indicator lamp 5. Magazine 6. Magazine slide cover | <ul style="list-style-type: none"> 7. Magazine grip 8. Shutter 9. Alternating current generator handle T. Absolute tablet XT. Interworking tablet |
|---|--|

3006.2 The magazine of each instrument contains an interworking tablet so that crossings are restricted to one train crossing one train only. The token is contained in an adjacent slot in the magazine, the opening of which is closed by a slide cover. In the magazine of the controlling instrument a second slot is provided for an absolute tablet used to introduce interworking. This slot is closed by its own slide cover. The magazine rotates 30 degrees round its own axis when it is turned from the "in" position to the "out" position, or vice versa.

3006.3 All bell signals in connection with interworking must be given and acknowledged by means of the send switches and bells on the through-working instruments.

3007.0 INTERWORKING : PROCEDURE TO BE FOLLOWED

3007.1 For interworking, the procedure described in the following subclauses 3007.2 to 3007.9 must be strictly followed.

3007.2 A and B represent two telegraph stations and x the interloop between the stations. A is the controlling station, i.e. the controlling interworking instrument is at A. B is the non-controlling station, i.e. the secondary interworking instrument is at B. A has one train to despatch to B, and B has one train to proceed to A. These trains must cross at x.

3007.3 The train-control officers must arrive at a clear understanding beforehand in regard to the numbers and characters of the trains that have to cross at the interloop.

3007.4 A must give the "introduction of interworking" signal (4.1) which B must repeat. (If he is not prepared to accept interworking, he must give one beat.) A and B must then exchange the appropriate "is line clear" signal for the train having to run from A to B and thereafter for the train that must proceed from B to A. B must then press his send switch and A must withdraw an absolute tablet from his through-working instrument. The latter must then press to the right the camshaft lever of the interworking instrument, slide out the absolute cover, insert the absolute tablet in the relevant slot of the magazine, push in the cover, allow the camshaft lever to resume its normal position, and give one beat, which B must acknowledge.

- 3007.5 B must thereafter send alternating current for a period of five seconds to A by pushing aside the interworking instrument's camshaft lever, depressing the send switch (this will let the camshaft lever remain in that position) and turning the generator handle while the send switch is held in. A must press the receive switch of his interworking instrument and, as soon as the indicator lamp glows, he must turn the magazine grip anticlockwise and give one beat, which B must acknowledge. Thereafter A must send alternating current to B, and the same procedure must be followed to release the interworking tablet at B. After a token has been released at each station, it must not be removed from the instrument before the train is ready to depart to x.
- 3007.6 Shortly before the train is ready to leave, the train-control officer must remove the interworking tablet from the instrument, and hand it to the driver in an interworking pouch. Immediately the train enters the section, the "train entering section" signal (2 beats) must be given which must be acknowledged by the distant station.
- 3007.7 On arrival at x, the drivers of the opposing trains must exchange the tokens and return them to the issuing stations.
- 3007.8 On arrival of the train at the station in advance, the driver must deliver the token that he carried to the employee authorised to receive it. The train-control officer, after satisfying himself that the train has arrived complete, must place the token in the instrument and give the "train arrived" signal (2.1) which the distant train-control officer must acknowledge. When B receives the interworking tablet, he must turn it into the instrument by turning the magazine grip clockwise (without receiving current) before he gives the "train arrived" signal.
- 3007.9 When the trains have arrived at their respective stations, the "train arrived" signals have been exchanged, and the interworking tablets have been placed in the instruments and locked in at B, A must give the "termination of interworking" signal (4.2) which B must acknowledge. B must thereafter send alternating current to A for five seconds. A must at the same time press the receive switch of his interworking instrument, and immediately the indicator lamp glows, turn the magazine grip clockwise, thus locking the interworking tablet in the instrument. Thereafter A must remove the absolute tablet from the interworking instrument, prepare the through-working instrument for returning this tablet and give one beat to B. B must send current and A must turn the tablet into the through-working instrument as for absolute working. Hereafter, A must give one beat which B must acknowledge.
- 3008.0 INTERWORKING : GENERAL**
- 3008.1 Absolute tablet to be used** – Interworking may be introduced only by the withdrawal of an absolute tablet.
- 3008.2 Crossing arrangements not to be altered** – After definite arrangements have been made regarding the trains that will cross at the interloop and one of the trains has already been despatched, another train may not be included in the interworking arrangements, except as provided in subclause 3008.6.2 in the case of a train becoming disabled or losing time before it enters the telegraph section.
- 3008.3 Driver not to proceed beyond interloop** – Except as provided in train working rules Nos. 220(4) and 233, and subclauses 3008.5 and 3008.6, a driver entering a telegraph section with an interworking tablet, must not proceed beyond the clearance mark at the far end of the interloop before he has obtained the correct token for the section over which he is about to proceed.
- 3008.4 Train losing time or becoming partly disabled** – When a train is losing time or has become partly disabled in the section, the locomotive personnel must furnish full particulars to the train-control officer at the station in advance. (If possible, before departure from the interloop.)
- 3008.5 Interworking token lost at or en route to interloop**
- 3008.5.1 In the event of an interworking tablet being lost at or en route to an interloop, the driver who originally had the token may authorise the driver of the opposing train, in writing, to proceed from the interloop to the station.
- 3008.5.2 If there is speaking communication, the train-control officer concerned must confirm the arrangement before the train leaves the interloop.
- 3008.6 Train delayed at interloop awaiting opposing train**
- 3008.6.1 In interworking, if it is found after one train has been despatched, that the other train figuring in the crossing is running appreciably later than expected or cannot proceed owing to an accident or other reason, the train-control officers controlling the telegraph section must arrive at a clear understanding and confirm it by exchanging suitable messages on ordinary telegram forms. A written intimation giving the reason for the altered working, together with the original token, must thereafter be sent by the most expeditious means to the locomotive personnel of the train waiting at the interloop.

3008.6.2 In order to comply with the provisions of subclause 3008.6.1, another train may be despatched as follows to the interloop with the token and take along the written advice:

3008.6.2.1 The other train not originally involved in the crossing may be despatched to the interloop on the interworking tablet.

3008.6.2.2 The "other train" must be stopped at the station, and the driver's attention specially directed to the contents of the written intimation that he will be taking along for the opposing train. In such a case the driver must be prepared to find the train at the interloop occupying the "wrong" running line.

3008.6.3 Unless the opposing train has already arrived at the interloop and the driver's assistant has been telephonically advised of the altered arrangement, the procedures outlined in subclause 3008.6.2 may be followed only if the characters of the other train involved in the altered crossing is such that, to observe the rule of the road (train-working rule No. 213) in respect of the altered crossing, the trains will have to enter the same running lines at the interloop as the trains involved in the original crossing.

3008.6.4 Where speaking communication exists, authority for the waiting train to depart from the interloop may be given telephonically if the train would otherwise suffer lengthy delay. The train-control officer at the station towards which a waiting train is to proceed, must lock up the interworking tablet not used for the despatch of the train from his station. He and the train-control officer at the other end of the telegraph section must come to a clear understanding and confirm it by the exchange of suitable messages on ordinary telegram forms. The former train-control officer must exchange the manuscript order below with the driver of the train. The driver must write out the manuscript order and repeat it to the train-control officer. Thereafter the driver must sign the order and take it as his authority to proceed to the telegraph station.

3008.6.5 The manuscript order must be worded as follows, and the train-control officer who issues it, must keep a copy thereof:

From train-control officer	To driver of
at	train No.....
Date	at
Time	

The section between interloop and station is clear of an opposing train and will be kept clear until you arrive at station. This order is your authority to proceed from interloop to station.

Driver

3008.6.6 When working as outlined in subclause 3008.6.1 or 3008.6.4 is introduced, the driver's assistant of the train waiting at the interloop must withdraw and take to the following station the interworking tablet. Telegraph order working in terms of Section 6 of this appendix must thereafter be introduced to work trains over the telegraph section, and the interworking tablet must promptly be returned to the station to which it belongs. Immediately on arrival tablet at that station, the token must be placed in the instrument. Messages K and KI must be exchanged between the telegraph stations concerned, and tablet working must be resumed.

3009.0 AUTOMATIC ABSOLUTE INSTRUMENTS : PROCEDURE TO BE FOLLOWED

3009.1 Both stations attended, ordinary working – An automatic instrument is operated as described in clause 3005.0 when both the station at which it is provided and the station at the other end of the section are open. (See clause 3026.0.)

3009.2 Automatic working – Where one or both of the stations at either end of a section are unattended, the working over that section is known as automatic working, and the procedures described in subclause 3009.3 or 3009.4, as the case may be, must be followed at the places concerned. (See clause 3010.0.)

3009.3 One station attended, other station unattended

3009.3.1 Procedure at attended station – The procedure described in clause 3005.0 must be followed at the attended station if the station at the other end of the section is a token station (unattended station), except that bell signals are not sent to the token station and that current is automatically returned from the token station for about 6 seconds after current has been sent to it. To withdraw a token from or return it to the instrument, the train-control officer at the attended station must send current to the token station for 6 seconds and immediately thereafter release the camshaft lever and send switch. When one beat on the bell is received, he must press the receive switch, and as soon as the out- or in-lock pointer, as the case may be, moves, he must withdraw the token from or return it to the instrument, as the case may be. (From the foregoing it will be clear that the train-control officer at an attended station can conduct periodical tests to ensure that the instruments are functioning properly.)

- 3009.3.2 Procedure at token station when train arrives there from attended station** – Immediately the train arrives at the token station, the driver's assistant must satisfy himself that the train complete has arrived and place the token in the revolving magazine of the instrument and give the "train arrived" signal (2.1) to the train-control officer at the attended station. The latter must acknowledge the signal by pressing his send switch for 6 seconds. The driver's assistant must, at the same time, press his receive switch and immediately the in-lock pointer moves, restore the token by turning the revolving magazine fully inwards. Hereafter he must slide the token into the token storage magazine, close the revolving magazine slide cover, give one beat to the attended station and then speak to the train-control officer by telephone and confirm that the token has been restored.
- 3009.3.3 Procedure at token station when train has to proceed from there to attended station** – The driver's assistant must give one beat on the bell to contact the train-control officer by telephone and thereafter carry out the latter's instructions. To obtain a token for his train, the driver's assistant must prepare the instrument for the withdrawal of a token and thereafter give the "is line clear" signal. If the train-control officer is prepared to accept the train, he must acknowledge the signal by pressing his send switch for 6 seconds. The driver's assistant must, in the meantime, press his receive switch and, as soon as the out-lock pointer moves, turn the revolving magazine fully outwards. He must not endeavour to turn the magazine before the out-lock pointer moves. (Should the in-lock pointer move, it indicates that a token has already been withdrawn.) When the magazine has been turned outwards, the driver's assistant must give one beat on the bell and confirm by telephone with the train-control officer that a token has been obtained. The driver's assistant must then remove the token from the revolving magazine, close the slide cover, place the token in an absolute pouch and hand it to his driver.
- 3009.4 Both stations unattended** – The provisions of subclauses 3009.3.2 and 3009.3.3 are applicable when the stations at both ends of the section are token stations, except that bell signals are not exchanged and that current is automatically returned for about 6 seconds from the token station at the other end of the section after current has been sent to it for 6 seconds. To withdraw a token from or return it to the instrument, the driver's assistant at the token station must send current to the other token station for 6 seconds and immediately thereafter release the camshaft lever and send switch simultaneously. Thereafter he must press the receive switch and as soon as the out- or in-lock pointer, as the case may be, moves, he must, in the prescribed manner, withdraw the token from or return it to the instrument, as the case may be. (See subclause 3010.4.)
- 3010.0 AUTOMATIC WORKING : GENERAL**
- 3010.1 Advice to locomotive personnel**
- 3010.1.1 The train-control officer at each end of a telegraph section with one or more token stations, must remain in close touch with the running of trains in order that the best crossing arrangements may be made.
- 3010.1.2 Except where the token stations in the telegraph section do not have loops, the train-control officer at an attended station, before despatching a train, must hand to the driver an Advice Regarding Train Arrangements reflecting –
- 3010.1.2.1 the numbers and characters of all the trains to be crossed, passed or shunted for at intermediate token stations and;
- 3010.1.2.2 particulars of the preceding or following train involved in the same crossing(s). The advice must be made out in duplicate, and the first copy must be handed to the driver together with the token while the original must be retained at the issuing station. The driver must see that he receives the advice before leaving the attended station.
- 3010.1.3 Should the trip commence at an unattended place, the train-control officer at the telegraph station in the rear (or in advance if there is no open station in the rear) must complete the advice and read it to the driver's assistant over the telephone. The latter must complete the form and repeat the contents to the train-control officer. If the advice as repeated is correct, the train-control officer must confirm it by saying "correct". The train-control officer and the driver's assistant must then each sign the advice and record each other's surname on it. The driver's assistant must give the advice to the driver. The train must not depart from the unattended place unless the driver's assistant has contacted the train-control officer and the latter has read him an Advice Regarding Train Arrangements. (Drivers' assistants working trains from unattended places must, beforehand, see that they have a pad of Advice Regarding Train Arrangements.
- 3010.1.4 Parts of the Advice Regarding Train Arrangements not applicable to the running of the train concerned, must be crossed out and initialled.
- 3010.1.5 The driver must hand in his copy of each Advice Regarding Train Arrangements at his depot at the end of each trip.
- NOTE:** *A specimen of form Advice Regarding Train Arrangements appears at the end of this section.*
- 3010.2 The driver's assistant of each train to enter a token station is responsible for the operating of token instruments for his own train and must comply with the provisions of subclauses 3009.3.2, 3009.3.3 and 3009.4.

- 3010.3 When a driver's assistant has to withdraw a token from an automatic instrument at a token station, he must first communicate by telephone with the train-control officer at the telegraph station behind that train (the station in advance if the station in the rear cannot be contacted or if there is no open station in the rear) and confirm that the instructions with regard to the running of the particular train, e.g. where it is to cross an opposing train, remain unaltered. (This procedure must also be followed immediately after arrival and in respect of a train having to perform shunting or other work of similar duration.) Should it not be possible to contact one or the other telegraph station within 5 minutes, a tablet may be withdrawn, but the train must not proceed further than the crossing place with the first opposing train as indicated on the Advice Regarding Train Arrangements.
- 3010.4 Should it be necessary to deviate from the instructions, the driver's assistant must personally advise his driver, delete and sign the written instructions of the Advice Regarding Train Arrangements, fill in the altered arrangements on the form and repeat them to the train-control officer. The altered arrangements must also be shown on the train-control officer's copy of the written advice. The train-control officer and driver's assistant must each sign the advice and record each other's surname on the form.
- 3010.5 The train-control officer must not issue an instruction for an Advice Regarding Train Arrangements to be altered before the other train-control officer concerned has approved of the altered arrangement and the driver's assistant of each train already in the telegraph section and involved in the crossing or passing, has been advised of the planned alteration of the original arrangement.
- 3010.6 Provided the provisions of subclauses 3010.4 and 3010.5 are complied with, the altered arrangements may include trains not originally shown in the Advice Regarding Train Arrangements of trains already in the telegraph section.
- 3010.7 The provisions of train working rule No. 213 must be strictly complied with at token stations.
- 3010.8 When a running line at a token station is, or will be, obstructed temporarily, e.g. when a failed train or a defective vehicle has been left on it, automatic working may be continued provided –
 - 3010.8.1 the driver of each train are fully informed before they enter the section adjacent to the token station. If the train has not yet entered the telegraph section, it must be stopped at the telegraph station and the driver advised in writing; and
 - 3010.8.2 no crossing is arranged at the token station.

3011.0 FAILURE OF INSTRUMENTS DURING AUTOMATIC WORKING

3011.1 Token instruments failed : telephones in order

3011.1.1 Instruments failing before token is obtained to despatch train from telegraph station

3011.1.1.1 If, owing to the instruments being defective, a token cannot be obtained to despatch a train from a telegraph station to a token station, and one or more other trains already occupy the telegraph section, the train-control officers controlling the telegraph section must satisfy themselves that the section up to the first token station is clear and then come to a clear understanding by exchanging messages on ordinary telegram forms in accordance with the following examples:

QUESTION MESSAGE

Date

From To

..... last departure.

..... last arrival.

The Van Schoor train token instruments between and are out of action. May I authorise train No. to proceed from to? The section between and is clear of all other trains and will be kept clear until train No. arrives at

Time

Train-control officer

REPLY MESSAGE

Date

From

To

..... last departure, noted.

..... last arrival, correct.

The Van Schoor train token instruments between and are out of action. You may authorise train No. to proceed from to The section between and is clear of all other trains and will be kept clear until train No. arrives at, noted.

Time

Train-control officer

- 3011.1.1.2 The train-control officer concerned must thereafter issue a manuscript order in accordance with the following example to the driver of the waiting train:

MANUSCRIPT ORDER

..... station

Date

To the driver of train No.

The Van Schoor train token instruments between and are out of action. This order is your authority to proceed to The section is clear of all other trains and will be kept clear until you arrive at Messages have been exchanged between this station and station, and the train-control officer at the latter station is in agreement with the authority.

Time

Train-control officer

3011.1.2 Instruments failing before token is obtained to despatch train from token station

- 3011.1.2.1 Should a token not be obtained at a token station to despatch a train to the following token or telegraph station owing to the instruments being defective, the driver must contact the train-control officers at the telegraph stations on either side. The train-control officers must satisfy themselves that a train does not, or cannot, occupy the section concerned and assure the driver accordingly. Thereafter the driver must break the seal on the line break switch (red button) (fig. 5), press the switch until it locks in order to put the instruments for the section out of action and advise the train-control officers that he has done so.

- 3011.1.2.2 The driver of the train that is being delayed must exchange the question message on the combined message and line clear order with the train-control officer at the telegraph station in advance. The train-control officers must thereafter come to a clear understanding by exchanging messages in accordance with the examples in subclause 3011.1.1.1. The train-control officer at the telegraph station in advance must forward the question message, and after he has received the reply message, he and the driver must exchange the "Reply Message and Proceeding Order" on the combined message and line clear order as authority for the train to proceed to the following telegraph station. The driver must repeat the proceeding order to the train-control officer, and after he has received confirmation of the correctness thereof, he must sign it and accept it as his authority to proceed.

- 3011.1.3 If there is an opposing train en route to or at the place to which a train is to proceed on a manuscript order or a combined message and line clear order, as the case may be, as token, the train-control officers must first advise the driver's assistant of the former train and obtain his assurance that he will not endeavour to obtain a tablet for the section concerned. Each train-control officer must make an entry to this effect in his train register.

- 3011.1.4 Should there be an attended station on only one side, the procedure described in subclause 3011.1.1 or 3011.1.2, as the case may be, and subclause 3011.1.3 must be followed, with the exception that the driver's assistant at a token station will be able to contact the train-control officer at only the one attended station and that the manuscript order or combined message and line clear order, will have to be issued without the exchange of the messages described in subclause 3011.1.1.1. The last sentence of the order must be omitted/deleted.

3011.1.5 Instruments failing while train is on the way to token station

3011.1.5.1 Should a driver's assistant be unable to return a token to the instrument at a token station in the prescribed manner because the instruments for the section concerned are defective, he must immediately put these instruments out of action as laid down in subclause 3011.1.2.1, press the receive switch until the in-lock pointer moves, then turn the revolving magazine, with the token in it, fully inwards and advise the train-control officers that he has done so.

3011.1.5.2 If a token cannot be returned at all, the driver's assistant concerned must take it along and hand it to the train-control officer at the telegraph station in advance, who must lock it away until it can be handed to the telecommunication maintenance official. Before another train is allowed to proceed over the section, the instruments of which have failed, in accordance with subclause 3011.1.1 or 3011.1.2, the train-control officers must obtain an assurance from the said driver's assistant that he will retain the token that cannot be returned until he has arrived at the telegraph station in advance.

3011.1.6 Trains may be despatched by means of tablets over the adjoining sections, the instruments of which have not failed, but as soon as the telegraph section is clear of trains, tablet working must be suspended, and trains must run in accordance with the telegraph order system until the defective instruments have been repaired. (See subclause 3027.2.) Trains may not simultaneously proceed over the same section between a telegraph station and a token station or between two token stations on tablets and manuscript orders or combined message and line clear orders, as the case may be. As soon as ordinary working can be resumed, the train-control officers at the telegraph stations concerned must exchange messages K and KI in respect of the section concerned or the telegraph section, as the case may be.

3011.1.7 Drivers' assistants of trains proceeding over sections to which automatic working applies, must have a pad of Combined Message and Line Clear Orders.

3011.2 Telephones failed : token instruments in order

3011.2.1 Should the telephones between two telegraph stations fail but the token instruments are in order, automatic working may be continued. The train-control officers must fill in paragraph (3) of the Advice Regarding Train Arrangements.

3011.2.2 When a driver approaches a token station not equipped for simultaneous entry, he must be prepared to stop at the facing points, if necessary. If opposing trains arrive simultaneously at such a token station, both trains must stop at the facing points. Thereafter each driver must send a written advice, indicating the character of his train, with the driver's assistant to the driver of the opposing train in order to determine which train must enter the token station first. The drivers' assistants must exchange the advices where they meet.

3011.3 Failure of token instruments and telephones – Should the token instruments fail between a token station and a telegraph or other token station, and the telephone communication is interrupted to such an extent that the provisions of subclause 3011.1 cannot be complied with, the train-control officer at the nearest telegraph station must arrange for a token station or stations, according to the requirements, to be opened as telegraph station(s) and pilot working to be introduced. (See subclause 3027.3.)

3011.4 The train-control officer at the station at each end of the telegraph section must record full particulars of instances where normal working is departed from, in the train register.

3011.5 While telegraph order working or pilot working is in operation, the token instruments at token stations must be regarded as non-existent. (See subclause 3027.6.)

3012.0 RENDERING OF ASSISTANCE TO TRAIN FAILING DURING AUTOMATIC WORKING

3012.1 The applicable terms of train working rule No. 227 must be observed when a locomotive fails during automatic working.

3012.2 If there is no other train in the telegraph section or, in the case of a long telegraph section, if no other train will have to enter it before the section has been cleared, and an assisting locomotive must be authorised to proceed from a telegraph station to the point at which the failed train is standing, each train-control officer must obtain an absolute tablet (if such a token is not out already) in the usual manner and lock it away, and thereafter comply with the provisions of train-working rule No. 227(6). (See subclause 3005.2.) The tokens must not be restored to the instruments before the section concerned has been cleared and the assisting locomotive has returned to one or the other telegraph station.

3012.3 Should other trains be in the telegraph section or have to enter it, the procedure described in train-working rule No. 227(6) must be followed only in respect of the section in which the failure occurred. Movements, including those of the assisting locomotive, outside that section over the remaining part of the telegraph section, must be controlled in the usual manner by means of tablets.

3012.4 If the driver of the assisting locomotive has to be authorised at the token station adjoining the section in which the failure occurred to enter that section, the manuscript order must be read over the telephone to the driver of the assisting locomotive at the token station. The driver must write down the order, repeat it to the train-control officer who, if it is correct, must advise the driver accordingly and record the latter's surname on his copy. The driver must, similarly, record the train-control officer's surname on his order.

- 3012.5 Should the driver's assistant (if he goes to seek assistance) proceed to a token station at one end of the section in which the failure occurred, and an opposing train is already at or en route to that token station, assistance must be rendered in terms of train-working rule No. 233(2). If the train-control officer at the telegraph station can be contacted by telephone from the token station, the driver's assistant must advise him of the circumstances.
- 3012.6 If the driver's assistant proceeds to a telegraph station and the train-control officer there decides that assistance can more readily be afforded from the token station immediately beyond the failed train, the provisions of train working rule No. 233(4)(a)(ii) or (b), as the case may be, must be complied with.
- 3012.7 Should the complete failed train clear the section concerned at a token station, the driver's assistant must advise the train-control officers concerned, and the token by which the train proceeded must be returned to the instrument at the token station in the prescribed manner. (If the station at the other end of the section concerned is a telegraph station and assistance was afforded in accordance with subclause 3012.2, a token must immediately thereafter be withdrawn at the telegraph station and kept locked away until the assisting locomotive has cleared the telegraph section.) **UNDER NO CIRCUMSTANCES MAY THE TOKEN ON WHICH THE FAILED TRAIN PROCEEDED, BE PLACED IN THE REVOLVING MAGAZINE OF THE INSTRUMENT AT ONE OR THE OTHER END OF THE SECTION BEFORE IT HAS BEEN ASCERTAINED THAT THE SECTION HAS BEEN CLEARED COMPLETELY.**
- 3012.8 Before normal working is resumed, it must be ascertained that the failed train complete has arrived within the clearance marks at the token/telegraph station at one end of the section and, if the assisting locomotive had proceeded on a manuscript order, K and KI messages must first be exchanged for the telegraph section or the section concerned, as the case may be.
- 3012.9 If necessary, the Advices Regarding Train Arrangements of the trains affected by the failure, must be amended. (See subclause 3010.5.)
- 3012.10 Should there not be a train-control officer on duty on each side, i.e. if the section in which assistance is rendered does not form part of a telegraph section or extended telegraph section with an attended station at each end (as in the case of a branch line, the terminal station of which is unattended), the train-control officer concerned must comply with the provisions of this clause except that the procedure contained in subclause 3012.3 will always be applicable and that the prescribed messages will not be exchanged.
- 3013.0 SUBSIDIARY INSTRUMENT : DESCRIPTION OF**
- 3013.1 The object of a subsidiary instrument at an unattended place between two stations, hereinafter referred to as "intersiding", is to allow of a train being removed from the main/running line at that place, or to allow of a train entering the main/running line there and proceed to the station at one or the other end of the section, whereafter normal through working may be resumed on the main/running line.

3013.2

The subsidiary instrument is installed in a suitable shelter at the intersiding. The instrument is depicted in figures 8 and 9.

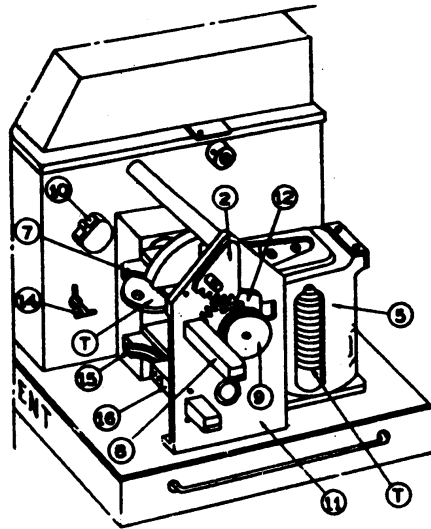


FIG. 8

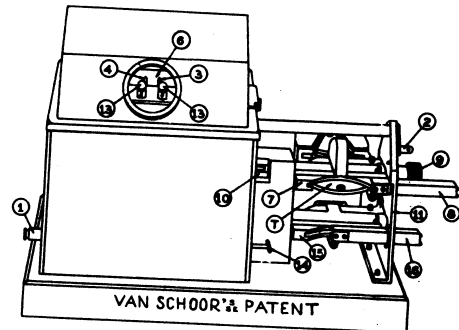


FIG. 9

- | | |
|---|--|
| <ul style="list-style-type: none"> 1. Receive switch 2. Camshaft lever 3. Out-lock pointer 4. In-lock pointer 5. Token storage magazine 6. Dial 7. Revolving magazine 8. Revolving magazine slide cover 9. Revolving magazine grip | <ul style="list-style-type: none"> 10. Counter 11. Magazine end bracket 12. Shutter 13. Indicator lamps 14. Special points key 15. Key release magazine 16. Key release magazine slide cover T. Train tokens |
|---|--|

3013.3

The instrument does not have a bell and a send switch. Two indicator lamps take the place of the galvanoscope in an ordinary absolute instrument. (The glowing of both lamps while the receive switch is being pressed, indicates that current is being received from both stations on either side.) The instrument has a magazine and which is hereinafter referred to as the "key release magazine".

3013.4

The camshaft lever and magazine shutter operate in a manner reverse to that of an ordinary absolute instrument. When the camshaft lever is in the normal (forward) position, the magazine slide cover can be opened, but the lock pointers cannot move. When the camshaft lever is pressed backwards, the lock pointer can move on receipt of current, but the magazine slide cover cannot then be opened.

3013.5

The name of the station (attended or unattended) at each end of the section in which the subsidiary instrument is provided, is engraved on the nameplate on the base of the instrument.

3013.6

Except as provided in clause 3015.0, a train may proceed from the telegraph/token station concerned to the intersiding or vice versa only after the driver has received an absolute tablet for the section concerned.

3014.0

SUBSIDIARY INSTRUMENTS : PROCEDURE TO BE FOLLOWED

3014.1

Despatch of train to and arrival of train from intersiding – When a train has to enter a section, whether it is a section between two telegraph stations (attended stations), between a telegraph and a token station or between two token stations, to proceed only as far as the intersiding (see subclause 3013.1) and there to be shunted from the main/running line, or when a train clears that section after having been admitted onto the main/running line at the intersiding, the procedure as applicable in the case of ordinary through absolute working (see clause 3005.0 or 3009.0, as the case may be) must be followed.

3014.2

Arrival of train at intersiding

3014.2.1

On arrival of the train complete at the intersiding, the driver's assistant must obtain the token from the driver, place it in the key release magazine of the subsidiary instrument, close the cover, tilt the front of this magazine upwards, turn the special points key three-quarters of a turn anti-clockwise and withdraw the key. The driver's assistant must then unlock and reverse the intersiding points and, when the train complete has drawn clear of the main/running line, he must restore the points to the normal position and lock them. Thereafter he must replace the special points key in the keyhole of the subsidiary instrument, turn it clockwise three-quarters of a turn, press the front of the key release magazine downwards and withdraw the token from the magazine and place it in the revolving magazine.

- 3014.2.2 The driver's assistant must not place the token in the revolving magazine before the train complete is clear of the main/running line. Suitably worded boards to serve as reminder hereof are provided at subsidiary instruments.
- 3014.2.3 The driver's assistant must ring the train-control officer at the controlling station (the station from which trains normally run to the intersiding) or, if the said station is unattended at that point, the nearest attended station, and advise him that the train complete is clear of the main/running line and that the points have been set and locked for that line. The driver's assistant must thereupon press the camshaft lever and then hold in the receive switch and, if there is a train-control officer at one or each end of the section concerned, the train-control officer(s) must, at the same time, hold in his/their send switch(es). (Current will automatically be returned from an unattended station after the driver's assistant has held in the receive switch for 6 seconds.) When the in-lock pointer moves, the driver's assistant must turn the revolving magazine inwards while still holding in the receive switch and pressing the camshaft lever. After the revolving magazine has started to move, the camshaft lever and receive switch may be released and the magazine must be turned fully inwards. The driver's assistant must then assure the train-control officer at the controlling station or the nearest attended station, as the case may be, that the token has been replaced and the latter must endorse his train register accordingly. Unless this assurance has been received, trains must not be despatched over the section concerned in the event of the token instruments failing. (See subclauses 3011.1, 3011.3, 3027.2 and 3027.3.)
- 3014.3 Departure of train from intersiding**
- 3014.3.1 When a train that is standing clear of the main/running line at the intersiding, has to proceed to one or the other end of the section, the driver's assistant must first ring the train-control officer at the controlling station or, if this station is unattended at that point, the nearest attended station, advising him of what is required. Thereafter that train-control officer must arrive at a clear understanding with the train-control officer at the attended station (if there is one) beyond the intersiding.
- 3014.3.2 If the section is clear of trains and the train-control officer has given permission for the train to be admitted onto the main/running line, the driver's assistant must prepare the subsidiary instrument for the withdrawal of a token by sliding a token from the token storage magazine into the revolving magazine. Thereafter the procedure in respect of the exchange of current as described in subclause 3014.2.3 must be followed to send current to and receive current at the said instrument. When the out-lock pointer moves, the driver's assistant must turn the revolving magazine to the forward position while still holding in the receive switch and pressing the camshaft lever. (After the revolving magazine has started to move, the camshaft lever and receive switch may be released.)
- 3014.3.3 Thereafter the driver's assistant must remove the token from the revolving magazine, advise the train-control officer that this has been done, obtain the special points key as laid down in subclause 3014.2.1 and admit the train onto the main/running line. Thereupon he must reset and lock the intersiding points, replace the special points key in accordance with the said subclause 3014.2.1 and remove the token from the key release magazine. The token must be placed in an absolute pouch and handed to the driver.
- 3014.4 Camshaft lever to be left in normal position** – Every time after a token has been placed in or withdrawn from an instrument by means of the revolving magazine, the driver's assistant must satisfy himself that the camshaft lever has returned to the normal (forward) position. Should the station on each side or on only one side be attended, the train-control officer at the controlling station must exchange one bell signal with the other train-control officer, or the train-control officer at the attended station must send current to and receive current back from the unattended station, as the case may be, to prove that the camshaft lever at the intersiding has returned to the normal position.
- 3014.5 Train proceeding through section but having to shunt at intersiding** – When the intersiding points are to be reversed because a train proceeding through the section has to shunt at the intersiding, the special points key must be obtained and replaced as provided in subclause 3014.2.1. The token must be left in the key release magazine while the shunting is in progress. After the special points key has been replaced, the token must be handed to the driver in an absolute pouch.
- 3015.0 DESPATCH OF TRAINS TO AND FROM INTERSIDING WHEN INSTRUMENTS HAVE FAILED**
- 3015.1 The official in charge at the controlling station has an emergency points key with which the intersiding points must be unlocked only when the Van Schoor train token instruments are defective, and he must keep this key locked away. Every time the key is to be used in accordance with subclauses 3015.2 and 3015.3, he must appoint a competent employee to take it to the intersiding or bring it back from there.
- 3015.2 If, in the case of automatic working, the Van Schoor train token instruments in the section in which the intersiding is situated, are defective and a train has to depart to or from the intersiding while one or more other trains are still in the telegraph section, the train may be despatched on a manuscript order or combined message and line clear order, as the case may be (see subclauses 3011.1.1 and 3011.1.2). The messages exchanged and authority issued must be amplified to the effect that the section will be regarded as blocked until the emergency points key has been received back at the controlling station. The said key must be obtained and used and the intersiding points set and locked as provided in the following subclause 3015.3.

3015.3 Running of trains to and from intersiding during telegraph order working

3015.3.1 If the Van Schoor train token instruments are defective and telegraph order working has been introduced between the telegraph stations in accordance with clause 3027.0, trains may run between one or the other of these stations and the intersiding as provided in subclauses 3015.3.2, 3015.3.3 and 3015.3.4.

3015.3.2 Train from telegraph station to intersiding

3015.3.2.1 If a train has to run from one of the telegraph stations to the intersiding, the two train-control officers must exchange the following messages on ordinary telegram forms, and the train-control officer at the station from where the train must depart, must issue an order as shown, to the driver:

QUESTION MESSAGE

Date

From To

..... last departure.

*..... last arrival.

The Van Schoor train token instruments being defective, may I, *after arrival of train No., despatch train No. to intersiding?

The emergency points key *is being taken along by the driver's assistant,./must be sent to the intersiding.

The telegraph section must be blocked against all opposing and following trains until advice is received that train No. is clear of the main line at the intersiding and the emergency points key has been received back at *this/ your station.

Time

Train-control officer

* Omit what is not required.

REPLY MESSAGE

Date

From To

..... last departure, noted.

*..... last arrival, correct.

The Van Schoor train token instruments being defective, you may, *after arrival of train No., despatch train No. to intersiding.

The emergency points key is *being taken along by the driver's assistant, noted/must be sent to the intersiding, correct.

The telegraph section is blocked against all opposing and following trains until advice is received that train No. is clear of the main line at the intersiding and the emergency points key has been received back at *your/this station.

Time

Train-control officer

* Omit what is not required.

STATION TO INTERSIDING ORDER

..... station

Date

To the driver of train No.

The Van Schoor train token instruments are defective. This order is your authority to proceed to intersiding.

The necessary messages have been exchanged and the telegraph section is blocked against all opposing and following trains until advice is received that your train is clear of the main line at the intersiding and the emergency points key has been received back at *this station/..... station.

No., the last opposing train, arrived here at

No., the last train in the same direction, left here at

The emergency points key for the operation of the intersiding points *is in the driver's assistant's possession/will be sent from station to the intersiding.

Time

Train-control officer

* Omit what is not required.

- 3015.3.2.2 The train-control officer at the controlling station must obtain the emergency points key from the official in charge and hand it to the driver's assistant or, if the train is running from the other end of the telegraph section, send it to the intersiding with the competent employee mentioned in subclause 3015.1.
- 3015.3.2.3 At the intersiding, the driver's assistant must use the emergency points key to unlock the intersiding points and when the train complete is clear of the main/running line, he must reset and lock the points in the normal position, advise the train-control officer at the controlling station accordingly and send the key back to the controlling station with the competent employee.
- 3015.3.2.4 After the train has been despatched to the intersiding, no other train may enter the telegraph section before the emergency points key has been received back at the controlling station, except when the provisions of train working rule No. 227 or 229, as the case may be, apply.
- 3015.3.2.5 When the emergency points key has been handed to the official in charge at the controlling station, the train-control officers on either side of the telegraph section must exchange the following messages on ordinary telegram forms:

FORWARDED MESSAGE

Date

From

To

Train No. is clear of the main line and the emergency points key has been received back at this station. Do you agree to the blocking of the telegraph section being lifted?

Time

Train-control officer

REPLY MESSAGE

Date

From

To

I note that train No. is clear of the main line and that the emergency points key has been received back at your station. I agree to the blocking of the telegraph section being lifted.

Time

Train-control officer

3015.3.3

Train from intersiding to telegraph station

3015.3.3.1

If a train has to run from the intersiding to one of the telegraph stations, the telegraph section must be clear of all trains before the movement is authorised. The two train-control officers must exchange the following messages on ordinary telegram forms, and the train-control officer at the controlling station must issue an order, as shown, to the driver:

QUESTION MESSAGE

Date
From To
..... last departure.
* last arrival.

The Van Schoor train token instruments being defective, may I, *after arrival of train No., despatch the emergency points key to intersiding together with an order for train No. to proceed from the intersiding to station? The telegraph section must be blocked against all other trains until train No. complete has cleared the telegraph section and the emergency points key has been received back at this station.

Time
Train-control officer

* Omit what is not required.

REPLY MESSAGE

Date
From To
..... last departure, noted.
* last arrival, correct.

The Van Schoor train token instruments being defective, you may, * after arrival of train No., despatch the emergency points key to intersiding together with an order for train No. to proceed from the intersiding to station. The telegraph section is blocked against all other trains until train No. complete has cleared the telegraph section and the emergency points key has been received back at your station.

Time
Train-control officer

* Omit what is not required.

INTERSIDING TO STATION ORDER

..... station
Date

To the driver of train No.

The Van Schoor train token instruments are defective. This order is your authority to proceed from intersiding to station. The necessary messages have been exchanged and the telegraph section is blocked against all other trains until your train has arrived at station and the emergency points key has been received back at this station.

Time
Train-control officer

3015.3.3.2 The train-control officer must hand the emergency points key and order to the competent employee (see subclause 3015.1) who must take them by the quickest means to the driver's assistant of the waiting train at the intersiding. After the train has been admitted to the main line, the driver's assistant must reset and lock the points in the normal position and hand the driver his order. The driver's assistant must also take along the emergency points key and hand it to the train-control officer at the controlling station or, should his train proceed to the other end of the telegraph section, return it to the said train-control officer with the employee who brought it.

3015.3.3.3 After the emergency points key has been sent to the intersiding, no train may enter the telegraph section before the train at the intersiding has cleared that section and the emergency points key has been handed to the official in charge at the controlling station, except when the provisions of train working rule No. 227 or 229, as the case may be, apply. As soon as both conditions have been met, the train-control officers on either side of the telegraph section must exchange the following messages on ordinary telegram forms:

FORWARDED MESSAGE

Date
From To
Train No. has arrived at this station with the emergency points key. Do you agree to the blocking of the telegraph section being lifted?

OR

Train No. has arrived at this station. Has the emergency points key been received back at your station and do you agree to the blocking of the telegraph section being lifted?
Time
Train-control officer

REPLY MESSAGE

Date
From To
I note that train No. has arrived at your station with the emergency points key and I agree to the blocking of the telegraph section being lifted.

OR

I note that train No. has arrived at your station. The emergency points key has been received back at this station and I agree to the blocking of the telegraph section being lifted.
Time
Train-control officer

3015.3.4 Train running from telegraph station to intersiding and returning to that station before another train is worked through the section

3015.3.4.1 If a train has to proceed from one of the telegraph stations to the intersiding and return to that station before another train proceeds through the telegraph section, the provisions of clause 6011.0, Section 6, of this appendix and subclause 3015.3.2.2 hereof must be complied with. The SB and SBI messages must be suitably amplified with regard to the emergency points key. (See messages in subclause 3015.3.2.1.)

3015.3.4.2 Before P and PI messages are exchanged, the train-control officer at the controlling station must satisfy himself that the emergency points key has been received back at his station. The P and PI messages must be amplified accordingly. (See messages in subclause 3015.3.3.3.)

3015.4 Every time the competent employee (subclause 3015.1) is sent to the intersiding with the emergency points key, he must receive clear instructions with regard to the person to whom he must hand the key.

3015.5 Running of trains to and from intersiding during pilot working

3015.5.1 If, in the event of failure of all communication, pilot working has been introduced between the telegraph stations (see subclause 3027.3) and a train has to proceed to or from the intersiding, the pilotman must take the emergency points key with him when he leaves the controlling station. The train to or from the intersiding must always be the last train in each direction, i.e. it must always be accompanied by the pilotman. When the pilotman accompanies a train to the intersiding, he must not leave it before the train complete is clear of the main line and the points have been reset and locked in the normal position. The pilotman must hand the emergency points key to the train-control officer as soon as he again arrives at the controlling station in the course of his duties.

3015.5.2 Should all communication fail when the emergency points key is not at the controlling station, the train-control officer at that station must regard the telegraph section as blocked until the employee appointed to carry the key to and from the intersiding or the driver's assistant of the train concerned, as the case may be, has returned the key.

3015.6 Main line at intersiding not to be entered without authority – When a train standing at the intersiding cannot or may not be despatched from there on an absolute tablet, the driver's assistant must not unlock the points with the emergency points key before he has satisfied himself that he has the correct authority, viz. a combined message and line clear order or an intersiding to station order, or, in the case of pilot working, that the pilotman is present.

3016.0 TOKEN TO BE KEPT IN INSTRUMENT

3016.1 Except where otherwise specifically provided, the train-control officer or driver's assistant, as the case may be, must place the token in the instrument immediately it is received from the driver or other authorised official.

3017.0 WARNING ADVICE : WHEN TO BE ISSUED

3017.1 Except on those sections where absolute working is the only method permitted at any time, or at places where tokens are issued/exchanged by the locomotive personnel themselves, a train-control officer must furnish the driver of each train with a warning advice.

3017.2 On sections where interworking is also in force, only the nature of the token needs to be shown on the warning advice if a train is proceeding on an absolute tablet.

3017.3 In automatic working, an Advice Regarding Train Arrangements is issued to the driver (see subclause 3010.1).

3018.0 RELEASE OF TOKEN FOR SHUNTING OR OTHER WORK

3018.1 To obtain an absolute tablet for shunting or other work outside the area protected by fixed signals, it must be withdrawn in the normal manner (if the station in advance is attended, after the signal "release tablet for shunting or other work" (5.2) has been exchanged).

3018.2 When the shunting is completed and the line is clear again, the tablet must be replaced in the instrument in the normal manner (if the station in advance is attended, after the signal "shunting completed, tablet replaced" (2.5) has been exchanged). (See train working rule No. 220.)

3019.0 USE OF INSTRUMENTS AND BELLS

3019.1 Instruments and bells must be used with care, and exclusively for the purposes provided in these instructions. Bell signals must be given slowly and distinctly, and there must be a distinct pause between the sets of beats.

3019.2 When electrical interference is experienced or suspected – If lightning or other electrical interference is likely to cause current to be received, train-control officers and, where applicable, drivers' assistants must not send current or attempt to withdraw tokens from instruments before arriving at a clear understanding over the telephone with the train-control officer(s) concerned and, where applicable, before distinct bell signals have been exchanged. (See clause 3027.0 hereof in connection with the failure of token instruments.)

3019.3 Acknowledgement of signals – All bell signals must be acknowledged in the prescribed manner, and a signal must not be considered understood unless it is correctly acknowledged. When a signal is not acknowledged, that signal must be repeated at short intervals until it is acted upon.

3019.4 Exchange of bell signals between adjoining attended stations – The following provisions must be observed with regard to the bell signals as indicated (see clause 3003.0 for full list):

3019.4.1 The "testing of bells and instruments" signal (16 beats) must be used to ascertain whether the bells and instruments are in perfect order, and then only when a train has not been signalled. The train-control officer at each end of the section must also withdraw and replace an absolute tablet.

- 3019.4.2 The **“train entering section” signal** (2 beats) must be given to the station in advance immediately a train enters the section. (See subclause 1032.4, Section 1 of this appendix.)
- 3019.4.3 After the “train entering section” signal (2 beats) has been exchanged for a train with two steam locomotives in front, the **“train double-headed” signal** (1.2.1) must be sent to the train-control officer in advance who, after acknowledging the signal, must record it in his train register.
- 3019.4.4 The **“train waiting” signal** (2.3.2) must be given when the section is occupied for an unusual length of time, and a train is waiting to proceed.
- 3019.4.5 After the train-control officer has received the token and satisfied himself that the train complete is within the area protected by fixed signals, the train may be considered as having cleared the section, and the **“train arrived” signal** (2.1) must be given to the station in rear.
- 3019.4.6 The **“repeat” signal** (4.3) must be given when an indistinct signal has been received and, in acknowledgement thereof, the signal last given must be repeated.
- 3019.4.7 The **“cancel” signal** (3.5) must be given when the signal previously given or the arrangement previously made must be cancelled and the token withdrawn in connection therewith returned to the instrument. A signal may not be cancelled before it has been acknowledged. An entry must be made in the train register of the time the “cancel” signal is exchanged.
- 3019.4.8 Should a train-control officer send a wrong “is line clear” signal, he must send the **“amend” signal** (5.3). After the signal has been acknowledged, the correct “is line clear” signal must be given.
- 3019.4.9 If, owing to an obstruction or for another reason, a train for which “line clear” has already been given must be stopped at the adjoining station, the **“obstruction danger” signal** (6 beats) must be sent to that station. The train-control officer receiving the signal must stop the approaching train. Having done this, he must lock away the token unless or until he has ascertained that the section up to the following station is clear, in which case he must give the “cancel” signal (3.5) and replace the token in the instrument. The train must not be allowed to depart before the “obstruction removed” signal (2.1) has been exchanged and “line clear” has again been obtained in the prescribed manner.
- 3020.0 ASSISTING LOCOMOTIVE PROCEEDING THROUGH SECTION**
- 3020.1 A through assisting or banking locomotive must not be detached from the train being assisted or banked except at a telegraph station or as laid down in the train working rules applicable to a failure or other temporary obstruction.
- 3020.2 After the “train entering section” signal (2 beats) has been exchanged for a train that is being assisted to the station in advance by a banking locomotive, the “banking locomotive in rear of train” signal (2.2) must be given to the train-control officer at the station in advance who, after acknowledging it, must record it in his train register. The “train arrived” signal (2.1) must not be given before the banking locomotive has arrived.
- 3021.0 MATERIAL TRAINS**
- 3021.1 A material train may run on an absolute tablet or on an interworking tablet. Except in the circumstances mentioned in clause 11007.0, it is not necessary to protect the train.
- 3021.2 The train must run as an ordinary goods train and a stop order (see clause 1046.4.3) must be issued to the driver.
- 3021.3 The train must always move forward and must not set back, not even for a short distance. The train must also not be propelled for the work to be carried out or to clear the section on completion of the work. If the nature of the work to be done, will entail that the train must set back or, if trucks must be detached in accordance to train working rule No. 222 (9) to expedite the loading and unloading or if the train has to set back to the original departing station, a second driver’s assistant must be rostered on the train to control the movements.
- 3022.0 STOPPING AND EXAMINING OF TRAIN**
- 3022.1 Should anything unusual be noticed on a passing train, the train-control officer or the driver’s assistant concerned, as the case may be, must advise the train-control officer at the telegraph station in advance. Except in the case of automatic working, a train-control officer through whose station such train has run, must first exchange the “stop and examine train” signal (7 beats) with the station in advance before the information is transmitted by telephone to the train-control officer at that station. The latter must stop the train and deal with it as occasion may require. (See train working rule No. 110.)

3023.0 TRAIN PASSED WITHOUT MARKER

- 3023.1 Should it be observed that a train is passing through a telegraph or token station, or interloop, without a marker, or if the tail lamp is not illuminated, the train-control officer or the driver's assistant concerned, as the case may be, must, without delay, advise the train-control officer at the telegraph station on each side. In the case of adjoining attended stations, the train-control officer must first give the "train passed without marker" signal to the station in advance (9 beats) and to the station in the rear (4.5). The token with which the train arrived, must not be replaced in an instrument, but must be locked away or, at a token station or interloop, be safeguarded by the driver's assistant. Unless or until it has been established that the train was complete, no further train must be despatched into the preceding or following section.
- 3023.2 Should the line be obstructed, the provisions of subclause 3024.4 must be complied with.
- 3023.3 The train-control officer at the telegraph station in advance must stop the approaching train and instruct the driver's assistant to replace the marker or relight the tail lamp, if not already done.

3024.0 RUN-AWAY VEHICLES

- 3024.1 If a vehicle or train is running away, the train-control officer or the driver's assistant concerned, as the case may be, must at once advise the train-control officer at the telegraph station in the direction of which the vehicle or train is running. Should the incident occur at a telegraph station, the train-control officer, except in the case of automatic working, must first exchange the "obstruction danger" signal (6 beats) with the other train-control officer and then furnish him with further information by telephone. Should the telephone fail, the "vehicles running away" signal (2.5.5) must be exchanged after the "obstruction danger" signal has been sent and acknowledged. The train-control officer receiving the signal(s) and/or information, must stop a train about to enter the section concerned and adopt every means possible to stop or divert the run-away vehicle or train from the running line, failing which he must advise the telegraph station in advance of the occurrence as provided above.
- 3024.2 Should the attempt to stop a train for which a token has been obtained, be successful, the token must be locked away until the obstruction has been removed, whereafter it must be replaced in the instrument in the prescribed manner. (See subclause 3019.4.9.)
- 3024.3 In the event of a train having entered the section before the run-away occurs, a locomotive must not be sent to remove the run-away vehicles before it has been established that they have come to a stop and are not being propelled.
- 3024.4 After it has been established where the run-away vehicles have come to a stop, a locomotive must be sent to clear them. The train-control officer despatching the locomotive must exchange suitable messages on ordinary telegram forms with the train-control officer at the other end of the telegraph section (if there is an attended station beyond the point concerned) and issue a manuscript order to the driver of the locomotive as authority to clear the vehicles. (See train working rule No. 227(6) and (7) and clause 3012.0 hereof.) Should some of the vehicles have become derailed, the provisions of train working rule No. 229(2) or (3), as the case may be, must be complied with.

3025.0 TRANSFER OF TOKENS

3025.1 Use of transfer devices

- 3025.1.1 The number of tokens in an instrument must be watched in order that tokens may be transferred in good time from the instrument at the other end of the section and train delays avoided.
- 3025.1.2 When a driver's assistant operates an instrument at a token station, he must check the number of tokens in it. Should there be less than six tokens in the instrument, he must advise the train-control officer concerned (see subclause 3010.4), and the latter must record particulars in his train register.
- 3025.1.3 Tokens must normally be transferred only by means of the transfer magazine, in its carrier. The number of tokens transferred must always be an even number, and not more than ten may be placed in the said magazine. (The use of the transfer magazine does not affect the normal operation of the instruments.)
- 3025.1.4 The transfer magazine, with the carrier, must be sent in good time to the place where tokens accumulate.
- 3025.1.5 In order to transfer tokens with a transfer magazine, the train-control officer or driver's assistant, as the case may be, must couple the transfer magazine to the token instrument's token storage magazine, turning both key spindles so as to engage the keys, thereafter turning the lock barrels anti-clockwise, thus opening the token slots in the transfer and token storage magazines. He must move the agreed number of tokens from the token storage magazine to the transfer magazine, and thereafter uncouple the transfer magazine by reversing the process. As soon as the transfer magazine, with the tokens, arrives at the other end of the section, the train-control officer/driver's assistant must couple the transfer magazine to the token storage magazine as described above. He must transfer all the tokens to the token storage magazine, uncouple the transfer magazine and place it in the carrier, and then advise the other train-control officer, or train-control officer concerned, that this has been done.
- 3025.1.6 When it is necessary to transfer tokens from a telegraph-/token station to another telegraph-/token station, the train-control officers controlling the telegraph section must decide on the even number of tokens to be transferred and the train by which they are to be conveyed.

- 3025.1.7 Should the tokens have to be transferred from a telegraph station to an adjacent telegraph station, the train-control officer at the station at which the number of tokens has diminished must, shortly before the train is due to depart from the opposite end of the telegraph section, give the "transfer of tablets" signal (4.4.4.4) which the other train-control officer must acknowledge before complying with the provisions of subclause 3025.1.5.
- 3025.1.8 If tokens are to be transferred from a token station, the train-control officer concerned (see subclause 3010.4) must instruct the driver's assistant of the train by which the tokens must be conveyed, to withdraw the required even number of tokens agreed upon and to take them along in the transfer magazine.
- 3025.1.9 Should tokens have been transferred to a token station, the driver's assistant of the train by which the tokens were conveyed, must advise the train-control officer as soon as all the tokens have been replaced in the instrument at the token station.
- 3025.1.10 Under no circumstances may drivers' assistants transfer tokens without the authority of one of the train-control officers.
- 3025.1.11 Each train-control officer must record the number of tokens transferred in his train register against the entry for the train by which the transfer magazine was conveyed.
- 3025.2 Transfer devices out of order or not available : Transfer of tokens by telecommunication maintenance official**
- 3025.2.1 If the transfer devices are out of order but the token instruments may still be used (see subclause 3025.3) or the transfer magazine is not available on the section, the telecommunication maintenance official must be summoned when tokens need to be transferred.
- 3025.2.2 The train-control officers must decide on the even number of tokens to be transferred and, in the case of two adjacent attended stations, the train-control officer at the station to which tokens are to be transferred must send the maintenance official the "transfer of tablets" signal (4.4.4.4) which he must acknowledge. The maintenance official must remove from the instrument (by means of the revolving magazine) the required even number of tokens, personally take them to the other end of the section and there place them in the instrument by means of the revolving magazine. A token withdrawn by the maintenance official for transfer purposes may not be used for the working of a train.
- 3025.2.3 When the maintenance official withdraws tokens that he transfers from or restores them to an instrument, he must record the number of each token in the train register and sign the entry or, in the case of a token station, furnish the numbers to the train-control officer(s) controlling the telegraph section. (Should the tokens be transferred from or to an attended station, the train-control officer at that station must check the numbers.) A train-control officer must furnish to the train-control officer at the other end of the telegraph section all the information that he receives, in writing or by telephone, from the maintenance official. Each train-control officer must record in the train register the information he receives by telephone. He must insert the time against and sign each entry made by him or by the maintenance official.
- 3025.2.4 Should the maintenance official travel by train or motor trolley, the token on which the train proceeded must be placed in the instrument at the arrival station by the train-control officer and not by the maintenance official. Thereafter the latter must place in the instrument all the tokens that he has transferred, and the train-control officer must ensure that he does so.
- 3025.2.5 When the maintenance official withdraws tokens from or restores them to an instrument at an unattended station, he must advise the train-control officer(s) controlling the telegraph section before he commences to work on the instrument and also when he has finished doing so.
- 3025.2.6 While the maintenance official is withdrawing tokens from or restoring them to an instrument, the send switch of neither of the instruments must be pressed and a token must not be electrically withdrawn from or replaced in the instrument. (It is, however, not necessary to suspend Van Schoor train token working while the maintenance official is transferring tokens.)
- 3025.3 Transfer devices unsafe** – If the transfer devices are out of order, permitting tokens to be removed irregularly from the token storage magazine or the transfer magazine, the apparatus as a whole must be failed and the procedure laid down for conflicting tokens must be followed. (See subclause 3029.6.)
- 3026.0 CLOSING AND OPENING OF STATIONS**
- 3026.1 Closing of station**
- 3026.1.1 Prior to closing his station, a train-control officer must exchange the "closing of station" signal (7.5.5) with the train-control officer at each adjacent attended station. (See clause 8043.0, Section 8 of this appendix and train working rules Nos. 88 and 89.)

- 3026.1.2 The “closing of station” signal must not be exchanged with the adjacent station before the last train for which “line clear” was given to proceed therefrom/thereto, has arrived complete and the “train arrived” signal (2.1) has been exchanged for such train, unless the station that is to close will be a token station while it is closed (see subclause 3026.1.4), and in such a case the personnel of an approaching train are in possession of an Advice Regarding Train Arrangements that is valid to a station beyond the one that is closing.
- 3026.1.3 After a station has been closed, telegraph order working must be introduced over the extended telegraph section, unless each instrument at each intermediate station in the extended telegraph section is an automatic instrument, in which case Van Schoor train token working must be continued. In the event of telegraph order working having been introduced, all trains must be stopped at the station at the entrance to the extended telegraph section to ensure that the correct telegraph order tokens are handed to the locomotive personnel.
- 3026.1.4 If Van Schoor train token working is to continue, the train-control officer at the station that is closing must, before he goes off duty, turn the control switch of each instrument clockwise to the automatic position by means of the special automatic key.
- 3026.1.5 Should a station on a section to which automatic working normally applies, remain open to control an extended telegraph section over which telegraph order working will have to be introduced (see subclause 3026.1.3), the train-control officer must withdraw a tablet from the instrument for the adjacent section concerned and lock it away until normal working may be resumed.
- 3026.1.6 Under no circumstances may trains be worked simultaneously by means of the Van Schoor train token system and the telegraph order system in the same extended telegraph section.**
- 3026.2 Opening of station**
- 3026.2.1 On resuming duty at a closed station, the train-control officer must take the following steps in the order shown:
- 3026.2.1.1 Carry out the applicable terms of train working rule No. 90;
- 3026.2.1.2 if the station has automatic instruments, turn the control switch of each instrument that is set at “automatic” anti-clockwise to the normal position by means of the special automatic key;
- 3026.2.1.3 if telegraph order working has been in operation over the extended telegraph section, satisfy himself that the telegraph section on either side is clear of trains;
- 3026.2.1.4 exchange the “opening of station” signal (5.5.5) with the train-control officer at each adjacent attended station. If, during automatic working before the opening of the station, a tablet has not already been withdrawn for a train, each train-control officer must also withdraw and replace an absolute tablet for test purposes;
- 3026.2.1.5 if the station at the other end of an adjacent section is unattended and a tablet has not already, before the opening of the station, been withdrawn for a train, in the prescribed manner (for test purposes) withdraw an absolute tablet from and replace it in the instrument for that section;
- 3026.2.1.6 if telegraph order working has been in operation over the extended telegraph section, exchange K and KI messages with the train-control officer on each side.
- 3026.3 Disposal of automatic key** – At a station equipped with automatic instruments, the automatic key must be kept locked away when it is not used for the opening or closing of the station. If the station is permanently unattended, the control switches must remain in the automatic position and the automatic key kept in a safe place under lock and key.
- 3026.4 Train-control officers to furnish particulars on Advices Regarding Train Arrangements to each other when stations are closed or opened**
- 3026.4.1 When a station at the entrance to a telegraph section over which automatic working is in operation, closes, the train-control officer must read the contents of the Advice Regarding Train Arrangements that he issued to each train which, at the time of closing, has not yet cleared the telegraph section indicated in the advice, in full to the train-control officer at the place as indicated below, and the latter must write it down:
- 3026.4.1.1 If there will be a train-control officer at each end of the extended telegraph section, to the train-control officer in the rear (i.e. at the station on the same side of the train as the station that is closing); or
- 3026.4.1.2 if there will be a train-control officer at one end only of the extended section (cp. subclause 3012.10), to that train-control officer.
- 3026.4.2 If the advice regarding train arrangements of a train en route to a station that is due to open, is valid to a place beyond the station, the contents of the advice must, similarly, be read in full to the train-control officer at that station when it opens. Should it not be necessary to amend the arrangements for the section in advance, the train-control officer must sign the driver's Advice Regarding Train Arrangements before letting the train depart.

3026.4.3 The train-control officer to whom the Advice Regarding Train Arrangements is read, must write it down on an Advice Regarding Train Arrangements and repeat it to the train-control officer who has read it. The latter must confirm whether the advice, as repeated, is correct.

3026.5 Telephones out of order when station is opened

3026.5.1 If, on reopening a station, the train-control officer finds that the telephones are out of order, he must, after placing all the main line signals (where there are semaphore signals) to "danger" and switching the automatic instruments (where provided) to normal, send the "opening of station" signal (5.5.5) to each adjacent attended station. The train-control officer receiving the signal, must not acknowledge the signal by repeating it unless the entire extended telegraph section (if telegraph order working has been in operation over the extended section) or the section between his station and the station that is being opened (if Van Schoor train token working has continued) is clear of trains. After the signal has been exchanged, normal working may be resumed between the stations exchanging the signals. Should the section not be clear, the train-control officer receiving the signal, must acknowledge it by giving one beat.

3026.5.2 If the "opening of station" signal (5.5.5) is acknowledged by one beat only or no beat is received in reply thereto, or if the adjacent station is not an attended station, the train-control officer at the station that opens must regard the adjacent section concerned as blocked until –

3026.5.2.1 a train proceeding on an absolute tablet arrives at his station or a "train arrived" signal (2.1) is received from the adjacent station (indicating, in both cases, that Van Schoor train token working is still in operation on the sections on either side), the tablet has been replaced in the instrument in the prescribed manner and, where applicable, the "opening of station" signal (5.5.5) is thereafter again sent and fully acknowledged; or

3026.5.2.2 telephone communication is restored (see subclause 3027.2); or

3026.5.2.3 pilot working has been introduced over the section in accordance with subclause 3027.3 (also see subclause 3026.5.3.)

3026.5.3 Should pilot working be in operation over the extended telegraph section when a station in that section has to open, the train-control officers must arrive at a clear understanding by means of the pilotman and, if expedient, pilot working between the two open stations should be discontinued and introduced on either side of the station that is due to open.

3026.6 Opening of token station in the event of an accident – Should an accident or washaway occur at a token station, between a telegraph station and a token station or between two token stations, the token station(s) concerned must be opened for train working, if necessary.

3026.7 Closed stations with semaphore signals – Opposing trains must not be despatched to a closed station equipped with semaphore signals to cross there, even though the station ought to be open when the trains arrive there. (See clause 6021.0, of this appendix.)

3027.0 FAILURE OF TOKEN INSTRUMENTS

3027.1 Tablet working to be suspended

3027.1.1 If a token instrument, including an interworking or a subsidiary instrument, becomes defective, Van Schoor train token working must be suspended over the whole telegraph section. (See subclause 3027.5.1.)

3027.1.2 Except in the cases mentioned in subclause 3029.6, a token withdrawn prior to the instrument becoming defective, may be used to work the train concerned forward. In the case of interworking, the train may proceed on the interworking tablet only if it had been released before the instrument failed.

3027.1.3 All the tokens that are out of the instruments when the failure occurs, must be promptly locked away, except as provided in subclause 3027.1.2. Should the train-control officer, on arrival of a train, be unable to place the token in the instrument, he must immediately lock it away. (See clause 3028.0.)

3027.1.4 Should the bell signalling devices fail, the token instruments as a whole must be regarded as defective. Similarly the instruments must not be used when electrical interference is experienced to such an extent that it is unsafe to use them.

3027.1.5 After tablet working has been suspended, train-control officers, and drivers' assistants where applicable, must not tamper with the instruments. Send switches and bells may not be used at all, although the telephonette may be used if in order.

3027.1.6 Should the glass in the observation aperture in the lid of any token instrument be broken, the provisions of subclause 3029.6 must be complied with.

3027.1.7 If the counter of a token instrument becomes defective, the operation or safety of the instrument will not be affected, and tablet working may be continued.

3027.1.8 When token instruments are defective, the train-control officer must advise all concerned as provided in clause 10008.0 and subclause 10010.1.19, Section 10, of this appendix.

- 3027.2 Token instruments failed : telephones in order**
- 3027.2.1 Should a token instrument fail, telegraph order working (see Section 6 of this appendix) must be introduced over the telegraph section concerned and, where there are token stations with loops, they must be regarded as interloops. While the instruments are out of action, all trains must be stopped at the station controlling entry to the telegraph section on which the instrument has failed, to ensure that the correct telegraph order tokens are delivered to the locomotive personnel.
- 3027.2.2 Under no circumstances may trains be worked simultaneously by means of the Van Schoor train token system and the telegraph order system in the same telegraph section.**
- 3027.2.3 The reason why telegraph order tokens are issued must be endorsed on each of them.
- 3027.2.4 In the case of automatic working, arrangements may be made to convert a token station into a telegraph station in order to limit telegraph order working to a shorter section. Should there be an attended station on one side only (as in the case of a branch line on which the terminal station is an unattended station), a suitable unattended station must be opened as telegraph station and trains despatched according to the telegraph order system. Until the said station is open, trains may, however, be authorised by means of manuscript orders or combined message and line clear orders, as the case may be, to proceed over the "failed" section whilst the provisions of subclause 3011.1.3 are strictly complied with. The telecommunication maintenance official must repair the instrument without delay.
- 3027.3 Failure of token instruments and telephones** – If the token instrument and the telephone fail at a telegraph station, pilot-working (see train working rule No.230) must be introduced. The train-control officer at each end of the telegraph section must fill in three pilot-working forms and send a person competent to act as pilotman with two of the forms (one for the said person and one for the train-control officer at the other end of the telegraph section) together with written particulars of trains in respect of which advice has not yet been received that they have cleared the telegraph section, to the station at the other end of the telegraph section. These two persons must be on the look-out for each other, and when they meet, they must both go to that end from which the first train has to proceed. The person returning must hand the forms in his possession to the train-control officer who must immediately cancel them together with his copy thereof. Provided it has been established that the telegraph section is clear of all trains or that the token of a train that may still be in the telegraph section has been withdrawn and the assurance obtained that the train will not be moved, the person from the other end must read and sign both the forms in his possession in the presence of the train-control officer and hand them to the train-control officer, who must also read and sign both forms and hand the pilotman's copy back to him. Should a person with pilot-working forms have been sent from each end of the telegraph section in accordance with this subclause, neither of them must deliver his forms at the opposite end of the telegraph section without the other one being present and the latter's forms first having been cancelled.
- 3027.4 Substitution of telegraph order working for pilot-working** – If, after pilot working has been in operation over a telegraph section, telegraph order working can be substituted while the instruments are still out of action, the train-control officers must exchange suitable messages, similar to K and KI messages but worded as follows, on ordinary telegram forms:

Question message

The *telephones/line having been restored to order, and the telegraph section between and being clear of all trains, I propose to introduce telegraph order working until the train token instruments have been repaired.

Reply message

The telegraph section between and being clear of all trains, I agree to telegraph order working being introduced until the train token instruments have been repaired.

*Omit "telephones" or "line", as the case may be.

- 3027.5 Reintroduction of tablet working**
- 3027.5.1 Tablet working must not be reintroduced before an authorised employee of the telecommunication section has repaired the token instruments, the telegraph section is clear of trains and, except as provided in subclause 3027.5.2, K and KI messages have been exchanged. The officials in charge at the telegraph stations concerned must send a full report to the operations manager.
- 3027.5.2 On a section where there is an attended station at one end only (see subclause 3012.10) and no trains ran under telegraph order working while the instruments were out of order (see subclause 3027.2.4), automatic working may be resumed after the restoration of the instruments without K and KI messages being exchanged. The train-control officer must record in his train register the time normal working was resumed without the exchange of those messages.

- 3027.6 INSTRUMENTS NOT TO BE TAMPERED WITH – WHILE TELEGRAPH ORDER WORKING OR PILOT-WORKING IS IN OPERATION OVER A TELEGRAPH SECTION OR EXTENDED TELEGRAPH SECTION, LOCOMOTIVE PERSONNEL MAY UNDER NO CIRCUMSTANCES WITHDRAW OR ATTEMPT TO WITHDRAW A VAN SCHOOR TRAIN TOKEN FROM AN INSTRUMENT AT ANY PLACE BETWEEN THE TWO TELEGRAPH STATIONS CONCERNED, OR IN ANY WAY OPERATE OR ATTEMPT TO OPERATE THE INSTRUMENTS, EXCEPT TO PUT AN INSTRUMENT OUT OF ACTION, ON INSTRUCTIONS FROM ONE OF THE TWO TRAIN-CONTROL OFFICERS CONCERNED, BY BREAKING THE SEAL OF AND PRESSING THE LINE BREAK SWITCH.**
- 3028.0 PROCEDURE TO SEAL INSTRUMENTS**
- 3028.1 If tablet working has to be suspended on a telegraph section owing to defective token instruments or a token having been damaged or lost, all the instruments for the telegraph section concerned at both telegraph stations, including interworking instruments, must be sealed. In addition, where automatic working applies –
- 3028.1.1 the driver's assistant must put the instrument at the token station at one end of the section concerned out of action in the prescribed manner (see subclauses 3011.1.2.1 and 3011.1.5.1);
- 3028.1.2 if there is a subsidiary instrument between two token stations, irrespective of whether the instruments for the section between these two token stations are defective, the train-control officer at the controlling station must arrange for the instrument at one of the token stations to be put out of action as soon as possible in the prescribed manner should a train already be at the intersiding or have to be despatched to the intersiding before normal working is resumed; and
- 3028.1.3 should a conflicting token (see subclause 3029.6) have been withdrawn, the train-control officer(s) concerned must arrange for the instrument at the telegraph/token station at each end of the section concerned to be sealed and/or put out of action in the prescribed manner.
- 3028.2 Except in the case of a failed train standing at an interloop [see train working rule No. 227(7)(d)(iii)], tablet working (station to station) may be continued if an interloop cannot be used for the crossing of trains, provided the interworking instruments are sealed at both telegraph stations. Until such time as crossings can again take place, each train requiring to run over the telegraph section must be stopped and the driver informed of the circumstances in writing.
- 3028.3 The following procedure must be adopted to seal a token instrument at a telegraph station:
- 3028.3.1 Absolute types:** Leave within the revolving magazine any token that may be in it. Close the magazine cover, and ensure that the camshaft lever is in its normal forward position. Pass a length of string through the hole in the knob on the camshaft lever and through the adjacent hole in the magazine end bracket. Draw the string tight, knot the ends and seal. Pass a length of string through the hole in the lid grip adjacent to the lock and through the hole in the lock barrel, draw the string tight, knot the ends and seal. (This sealing of the lid is in addition to the existing seal applied by the technical personnel.)
- 3028.3.2 Interworking instruments:** Leave within the magazine any token that may be in it. Ensure that the slide cover or covers is/are closed and that the camshaft lever is in the normal position, i.e. to the left. Pass a length of string through the hole in the knob on the camshaft lever and through the adjacent hole in the magazine end bracket. Draw the string tight, knot the ends and seal. Pass a length of string through the hole in the lid grip adjacent to the lock and through the hole in the lock barrel. Draw the string tight, knot the ends and seal.
- 3028.4 String, lead seals and sealing pliers or, if lead seals and sealing pliers are not available, string and sealing wax, must be used to seal instruments. Unavoidable knots in the string must be properly sealed. The string must in all cases be drawn tight. The seals must be broken only by or on the instructions of the authorised employee of the telecommunication branch.
- 3029.0 TRAIN TOKEN DAMAGED OR LOST, OR CONFLICTING TOKENS WITHDRAWN**
- 3029.1 Token damaged**
- 3029.1.1 On no account may an attempt be made to place a damaged token in an instrument.
- 3029.1.2 Should a token be damaged, the train-control officer must –
- 3029.1.2.1 secure under lock and key the damaged token;
- 3029.1.2.2 seal the instrument(s) (clause 3028.0) and introduce telegraph order working (subclause 3027.2);
- 3029.1.2.3 advise the operations manager and the telecommunication maintenance official.
- 3029.1.3 Should a token be damaged and it cannot be placed in the instrument at a token station, the driver's assistant must place the instrument concerned out of action by breaking the seal on the line break switch and pressing the switch until it locks, and advise the train-control officer at one of the telegraph stations concerned. Thereafter the provisions of subclauses 3011.1.5.2 and 3029.1.2 must be complied with.

- 3029.1.4 If a token is damaged before the departure of the train for which it has been withdrawn, the damaged token must be used to work the train forward over the section to which it applies, provided the names of the places concerned on it are decipherable.
- 3029.1.5 On arrival, the telecommunication maintenance official must take action as follows:
- 3029.1.5.1 If an absolute token has been damaged, he must –**
- 3029.1.5.1.1 take possession of the damaged token;
- 3029.1.5.1.2 ensure that the instruments are in good working order;
- 3029.1.5.1.3 withdraw another “through” token and place the instruments in phase so that normal working may be resumed (in the case of a telegraph station, this must be done in the presence of the train-control officer);
- 3029.1.5.1.4 record in the train register the serial number of the damaged token and also that of the token withdrawn or, in the case of a token station, furnish the numbers to the train-control officers concerned which they must enter in their train registers; and
- 3029.1.5.1.5 in accordance with subclause 3029.3, forward the tokens to the signalling service and repair workshops, Langlaagte, for the damaged token to be repaired or replaced.
- 3029.1.5.2 If an interworking token has been damaged, he must –**
- 3031.1.5.2.1 take possession of the damaged token;
- 3029.1.5.2.2 personally ensure that the intertoken at the other end of the telegraph section has been replaced in the instrument and cannot be withdrawn;
- 3029.1.5.2.3 ensure that the instruments are in good working order;
- 3029.1.5.2.4 in the presence of the train-control officer concerned, restore the instruments for “through” working by removing the absolute tablet from the controlling interworking instrument and placing it in the through-working instrument, then prove that the instruments are in phase, and next withdraw an absolute tablet to place the instruments out of phase;
- 3029.1.5.2.5 record in the train register particulars of the damaged token and of the other tokens withdrawn/retained; and
- 3029.1.5.2.6 in accordance with subclause 3029.3, forward the interworking token of the instrument concerned, and also the absolute tablet withdrawn, to the technical superintendent, signalling service and repair workshops, Langlaagte, for the damaged token to be repaired or replaced.
- 3029.1.6 When an interworking token has been damaged, telegraph order working must continue until such time as the interworking instruments are restored for normal working, unless the Chief Executive (Spoornet) decides that the “through” instruments are to be placed in phase for “through” working, in which case it will not be possible to arrange a crossing at the interloop.
- 3029.2 Token lost**
- 3029.2.1 Should a token be lost and, after a thorough search, has not been found, the train-control officer must –
- 3029.2.1.1 continue to search for the missing token;
- 3029.2.1.2 secure under lock and key all other tokens that may concurrently be out of the instrument and that cannot be replaced in the instrument;
- 3029.2.1.3 seal the instrument(s) or have it put out of action (clause 3028.0) and introduce telegraph order working (subclause 3027.2); and
- 3029.2.1.4 advise the operations manager and the telecommunication maintenance official.
- 3029.2.2 Except where otherwise authorised by the Chief Executive (Spoornet), the telecommunication maintenance official should proceed to the section concerned only after expiry of 48 hours after the token was lost. After arrival, he must take action as follows:
- 3029.2.2.1 If an absolute token is lost, he must –**
- 3029.2.2.1.1 withdraw an absolute token and satisfy himself that the instruments are in phase so that normal working may be resumed (in the case of a telegraph station, this must be done in the presence of the train-control officer);
- 3029.2.2.1.2 record in the train register the serial number of the lost token and of the token withdrawn or, in the case of a token station, furnish the numbers to the train-control officers concerned which they must enter in their train registers; and
- 3029.2.2.1.3 in accordance with subclause 3029.3, forward the token to the signalling service and repair workshops, Langlaagte, for the lost token to be replaced.

3029.2.2.2 If an interworking token is lost, he must –

- 3029.2.2.2.1 personally ensure that the intertoken at the other end of the telegraph section have been replaced in the instrument and cannot be withdrawn;
- 3029.2.2.2.2 in the presence of the train-control officer concerned, restore the instruments for “through” working by removing the absolute tablet from the controlling interworking instrument and placing it in the through-working instrument, then prove that the instruments are in phase, and next withdraw an absolute tablet to place the instruments out of phase;
- 3029.2.2.2.3 record in the train register particulars of the lost token and of the other token withdrawn/retained; and
- 3029.2.2.2.4 provided authority has been obtained from the operations manager, forward the absolute tablet withdrawn, to the signalling service and repair workshops, Langlaagte in accordance with subclause 3029.3, for the missing interworking token to be replaced.
- 3029.2.3 When an interworking token is lost, the instruments concerned will automatically be out of action, and telegraph order working must remain in operation, unless the central operating office decides that, after expiry of 48 hours, the “through” instruments are to be placed in phase for “through” working, in which case it will not be possible to arrange a crossing at the interloop.
- 3029.2.4 If the missing token is found after telegraph order working has been introduced, but before the instruments have been adjusted and an absolute token has been despatched to the signalling service and repair workshops, Langlaagte for the purpose of obtaining another interworking token, the telecommunication maintenance official must promptly be advised. The official in charge of the station concerned must obtain authority from the central operating office to resume normal working after the exchange of K and KI messages.
- 3029.2.5 If the missing token is found after an absolute token has been despatched to Langlaagte for the purpose of obtaining another token, or after it has been replaced with another token, the token that has been found must be handed to the nearest station official in charge who must lock it away and advise the central operating office. The latter must send particulars of the token that has been recovered to the Executive Manager (Transtel) who, in turn, must issue instructions for the replacement token to be destroyed and for the recovered token, if undamaged, to be replaced in service with all records suitably amended.
- 3029.2.6 Before a replacement token is placed in service, the central operating office must issue a circular giving particulars of the missing token and cancelling its further use. A copy of this circular must be fixed to the instrument at each end of the section affected. The circulars must remain fixed to the instruments for a period of six months or until the lost token has been found.

3029.3 Replacement of damaged or lost tokens

- 3029.3.1 The telecommunication maintenance official must make a secure parcel of all the tokens to be sent to the signalling service and repair workshops in compliance with subclauses 3029.1.5 and 3029.2.2, and send them, together with a covering statement of the circumstances on the prescribed form, in block letters, to the official in charge of the signalling service and repair workshops, Langlaagte. Should a missing token have to be replaced, the document must also contain the reference number and date of the central operating office’s authority. (See subclause 3029.2.2.)
- 3029.3.2 The official in charge of the signalling service and repair workshops at Langlaagte must promptly send to the telecommunication maintenance official a new token to replace the token damaged or lost, and return the additional token(s), sent to him by the telecommunication maintenance official in terms of these instructions, with the new token.
- 3029.3.3 In the case of “through” tokens, the replacement token will bear the same number as the lost token, but followed by the letter A. If that token is also lost, the second replacement token will bear the same number, followed by the letter B, and so forth. In the case of a crossing tablet the replacement token will be engraved with an A. If this token is also lost, the second replacement token will be engraved with a B, etc.
- 3029.3.4 As soon as practicable after the tokens have been received from the signalling service and repair workshops at Langlaagte, and provided the central operating office has given authority and, in the case of a lost token, the circular mentioned in subclause 3029.2.6 has been issued, the telecommunication maintenance official must place the tokens in the instrument concerned. (In the case of a telegraph station, this must be done in the presence of the train-control officer.) He must record the serial numbers of the tokens replaced in the train register and sign the entry or, in the case of a token station, furnish the numbers to the train-control officers concerned, which they must record in their train registers. Should normal token working have been suspended as a result of the loss of or damage to a token, the entry must also state that the instruments have been restored for normal working.

- 3029.3.5 In all cases of tokens being despatched from one point to another, they must either be properly labelled and sent by hand by a trustworthy employee, or they must be securely made up in a parcel, sealed and clearly labelled, and consigned as a "value" parcel.
- 3029.4 Resumption of normal working after instruments are restored** – Where telegraph order working has been introduced, it must remain in operation until the instruments have been restored. Before normal working is resumed, the telegraph section must be clear of trains, and K and KI messages must be exchanged.
- 3029.5 Trains not to be worked simultaneously under different systems of train control** – Under no circumstances may trains be worked simultaneously in the same telegraph section by means of the Van Schoor train token system and the telegraph order system.
- 3029.6 Withdrawal of conflicting tokens from token instruments**
- 3029.6.1 When conflicting tokens are withdrawn, or a token is withdrawn or can be withdrawn by other than the normal functioning of the token instrument, the train-control officer at the opposite end of the telegraph section must be advised and the instruments must immediately be sealed or put out of action in the manner described in clause 3028.0, to prevent any token being withdrawn or replaced at either end of the section concerned.
- 3029.6.2 No attempt may be made to withdraw a further token or return a token to one of the instruments, nor may the instruments be adjusted or tampered with.
- 3029.6.3 All tokens out of the instruments must be placed under lock and key, and no Van Schoor train token may be used for despatching a train over the section concerned. As soon as the telegraph section is clear of trains, telegraph order working must be introduced.
- 3029.6.4 The train-control officers must, by telegram or telephone, advise the central operating office, the telecommunication maintenance official and the branch manager (telecommunication) when the conditions described in subclause 3029.6.1 prevail. The central operating office will then, without delay, advise the Chief Executive (Spoornet) and the Executive Manager (Transtel).
- 3029.6.5 The telecommunication maintenance official must not break the seals or adjust the instruments in any way. Only the branch manager (telecommunication) may break the seals and examine the instruments, where possible, in the presence of the Section Manager (Train Control).
- 3029.6.6 The central operating office must, as soon as possible, furnish a full report on the occurrence to the Chief Executive (Spoornet) and the Executive Manager (Transtel) and attach a copy of the report of the branch manager (telecommunication.)
- 3030.0 EXAMINATION, TESTING AND REPAIRING OF TRAIN CONTROL INSTRUMENTS**
- 3030.1 The branch manager (telecommunication) must personally examine and test each Van Schoor train token instrument in the region at least once in each calendar year, and he must "fail" each instrument before commencing such work. (See subclauses 3030.3 and 3030.4.) After testing the instruments, he must forward a certificate to the central operating office, intimating that all the instruments in the region are in safe working order. These examinations and tests must be carried out in addition to the ordinary examinations and tests by the telecommunication maintenance official. The Area Manager (Transtel) must in his annual report to the Executive Manager (Transtel) confirm that all the instruments have been tested and found to be in safe working order.
- 3030.2 The telecommunication maintenance official must thoroughly examine all the Van Schoor train token instruments in his area at least once a month, exercising his discretion whether certain instruments require attention more frequently than others. When an instrument is defective, he must promptly repair it, except in circumstances for which other instructions are issued. He must leave the instruments in safe working order when departing from the station, except when the instruments have been "failed" and are sealed.
- 3030.3 Procedure when instrument has to be examined or tested, or work has to be carried out on it**
- 3030.3.1 When a token instrument has to be examined or tested, or repair or maintenance work of any nature has to be carried out thereon or on the connecting wires, the telecommunication maintenance official concerned (see subclauses 3030.1 and 3030.2) must, in each instance, "fail" the instruments for the section concerned for the full duration of the work. This may be done if –
- 3030.3.1.1 the last train to have proceeded over the section with a Van Schoor train token has cleared the section and the token has been replaced in the instrument; and
- 3030.3.1.2 a train will not have to depart with such a token over the section affected within 5 minutes after the train-control officer has been advised of the work. Except when the provisions of subclause 3030.4 apply, the telecommunication maintenance official must make an endorsement in the train register which he and the train-control officer must sign.

- 3030.3.2 The telecommunication maintenance official must take special precautions when working on an automatic instrument to prevent the irregular withdrawal of tokens.
- 3030.3.3 Token instruments may be tested or repaired by a duly authorised employee only, and other persons may not interfere with bells, wires or parts of the instruments.
- 3030.3.4 When, for any purpose, the telecommunication maintenance official requires to remove one or more tokens, he must record the number and section engraved on each token in the train register or, should he be at a token station, furnish these to one of the train-control officers concerned, which that official must enter in the train register. The telecommunication maintenance official or train-control officer, as the case may be, must sign the entry and record the time. Except when the provisions of subclause 3030.4 are applicable, the telecommunication maintenance official, after he has examined, tested or worked on a token instrument, must certify in the train register that he is leaving the apparatus (described in full) in a safe working order. The train-control officer must append his signature to each entry made by the telecommunication maintenance official in his train register, to indicate that he has taken note thereof.
- 3030.4 Authority to examine or test, or carry out work on, an instrument at a token station**
- 3030.4.1 When the telecommunication maintenance official concerned (see subclauses 3030.1 and 3030.2) has to perform the work mentioned in subclause 3030.3 at a token station, he must first contact the train-control officer(s) controlling the telegraph section and request authority by filling in paragraph 1.1 of form Work On Automatic Van Schoor Train Token Instruments At Token Stations and reading it to the train-control officer(s). The latter must also record the particulars on a form Work On Automatic Van Schoor Train Token Instruments At Token Stations and, provided a train does not occupy the section concerned or has to enter it within 5 minutes of commencement of the work, must give authority by completing paragraph 1.2 of the form and reading it to the telecommunication maintenance official. The latter must complete paragraph 1.2 of his form by inserting the particulars read to him.
- 3030.4.2 As soon as the work has been completed and before the instruments are put in phase, the telecommunication maintenance official must request authority to restore the instruments, and the train-control officer(s) must grant this authority provided the section concerned is clear of trains, by completing paragraphs 2.1 and 2.2 of the form work on automatic Van Schoor train token instruments at token stations and reading the particulars to each other.
- 3030.4.3 When the telecommunication maintenance official, in the case of a defective instrument, cannot contact the train-control officer(s) at all, he may proceed with the work. If, after completion of the work, communication has been restored, the provisions of subclause 3030.4.2 must be complied with.
- 3030.4.4 Should there be an attended station on either side, both train-control officers must fill in a form Work On Automatic Van Schoor Train Token Instruments At Token Stations. The train-control officer who does not read the authority to the telecommunication maintenance official, must confirm the arrangement by noting it.
- NOTE:** *A specimen of form Work On Automatic Van Schoor Train Token Instruments At Token Stations appears at the end of this section.*
- 3030.5 Should a train have to be despatched over the telegraph section while the instruments are out of action, telegraph order working must be introduced, but not before the last train to have run on a Van Schoor train token, has cleared the telegraph section. However, where automatic working is in operation, Van Schoor train token working on that portion of the telegraph section not affected, may continue should an instrument be "failed" in order that it may be examined or tested, or maintenance work carried out on it. In such cases, trains must be authorised in accordance with subclause 3011.1 to proceed over the section(s), the instruments of which have been "failed".
- 3030.6 Before normal working is resumed over the section or telegraph section, as the case may be, messages K and KI must be exchanged.

BERIG INSAKE TREINREËLINGS
ADVICE REGARDING TRAIN ARRANGEMENTS

OUTOMATIESE BEDRYF – VAN SCHOOR-TREINTEKENSTELSEL
AUTOMATIC WORKING – VAN SCHOOR TRAIN TOKEN SYSTEM

TELEGRAAFTRAJEK TELEGRAPH SECTION		na to		§
Aan drywer en drywersassistent van treinnommer <i>To driver and driver's assistant of train number</i>				
#	(1)	U trein is gereël om – <i>Your train is arranged to –</i>		
#	(1)			
†		treinnommer <i>train number</i>	∅	
†			∅	
op				-tekenstasie <i>token station</i>
at				
†		treinnommer <i>train number</i>	∅	
†			∅	
op				-tekenstasie <i>token station</i>
at				
†		treinnommer <i>train number</i>	∅	
†			∅	
op				-tekenstasie <i>token station</i>
at				
†		treinnommer <i>train number</i>	∅	
†			∅	
op				-tekenstasie <i>token station</i>
at				
#	(2)	Voorafgaande/Volgende treinnommer <i>Preceding/Following train number</i>	∅	moet <i>must</i>
#	(2)		∅	
dieselfde trein(e) as u trein op <i>cross the same train(s) as your train at</i>				
#	(3)	TELEFONE WEIER <i>TELEPHONES FAILED</i>	Aangesien telefoonverbinding tussen <i>As telephone communication between</i>	-stasie en <i>station and</i>
#	(3)			
gelyktydige <i>station has failed, you must cautiously approach intermediate token</i>				
binnelating toegerus is nie, versigtig nader en gereed wees om u trein by die inryswissel te stop. [Kyk klousule 3011.2 <i>stations not equipped for simultaneous entry and be prepared to stop your train at the facing points [See clause 3011.2</i>				
van Algemene Aanhangsel (deel I)] <i>of General Appendix (Part I)]</i>				
Tyd <i>Time</i>		∅ Drywersassistent <i>∅ Driver's assistant</i>	Treinbeheeramptenaar <i>Train-control officer</i>	
(4)		VERANDERDE TREINREËLINGS [Kyk klousule 3010.5 van Algemene Aanhangsel (deel I)] <i>ALTERED TRAIN ARRANGEMENTS [See clause 3010.5 of General Appendix (Part I)]</i>		
(4)				
Aangesien treinnommer(s) <i>As train number(s)</i>		‡	‡	is u trein nou gereël om – <i>your train is now arranged to –</i>
†		treinnommer <i>train number</i>	∅	
†			∅	
op				# -teken-/tekenstasie <i># token/telegraphstation</i>
at				
†		treinnommer <i>train number</i>	∅	
†			∅	
op				# -teken-/tekenstasie <i># token/telegraphstation</i>
at				
†		treinnommer <i>train number</i>	∅	
†			∅	
op				# -teken-/tekenstasie <i># token/telegraphstation</i>
at				
(Hierdie berig moet herhaal word aan die treinbeheeramptenaar wat die veranderde bedryf magtig) <i>(This message must be repeated to the train-control officer authorising the altered working)</i>				
Tyd <i>Time</i>	Drywersassistent <i>Driver's assistant</i>	van treinnommer <i>of train number</i>	op <i>at</i>	
Treinbeheeramptenaar <i>Train-control officer</i>		op <i>at</i>		

§ Kantoordatumstempel of, as drywersassistent vorm invul, naam van uitreikstasie en datum
 § Office date stamp or, if driver's assistant completes form, name of issuing station and date
 # Gedeeltes wat nie nodig is nie, moet deurgehaal en gearrafeer word
 # Parts not required must be ruled through and initialled
 † Vul in "te kruis met", "verby te gaan by" of "pad te gee vir", na gelang van die geval
 † Fill in "cross", "pass" or "shunt for", as the case may be
 ∅ Vul in aard van trein
 ∅ Fill in character of train
 ‡ Vul in die rede vir die veranderde bedryf
 ‡ Fill in the reason for the altered working

**GESAMENTLIKE BERIG EN LYNVRYORDER
COMBINED MESSAGE AND LINE CLEAR ORDER**

**OUTOMATIESE BEDRYF – VAN SCHOOR-TREINTEKENSTELSEL
AUTOMATIC WORKING – VAN SCHOOR TRAIN TOKEN SYSTEM**

**TEKENINSTRUMENTE BUITE WERKING OP TEKENSTASIE
TOKEN INSTRUMENTS OUT OF ACTION AT TOKEN STATION**

**VRAAGBERIG
QUESTION MESSAGE**

Van: Drywer van treinnommer <i>From: Driver of train number</i>	Aan: Treinbeheeramptenaar <i>To: Train-control officer</i>
op at	op at
Die treintekeninstrumente tussen <i>The train token instruments between</i>	
en and	is buite werking <i>is out of action</i>
Mag treinnommer <i>May train number</i>	ry van <i>proceed from</i>
na to	? ?
Tyd <i>Time</i>	Datum <i>Date</i>
Drywer <i>Driver</i>	

**ANTWOORDBERIG-EN-RYORDER
REPLY MESSAGE AND PROCEEDING ORDER**

(Die drywer moet hierdie berig herhaal aan die treinbeheeramptenaar wat die magtiging gee) <i>(The driver must repeat this message to the train-control officer who gives the authority)</i>	
Van: Treinbeheeramptenaar <i>From: Train-control officer</i>	Aan: Drywer van treinnommer <i>To: Driver of train number</i>
op at	op at
Aangesien die treintekeninstrumente tussen <i>As the train token instruments between</i>	
en and	buite werking is, is hierdie order u magtiging om <i>are out of action, this order is your authority to</i>
te ry van proceed from	na to
Die trajek is vry van alle ander treine en sal vry gehou word totdat u aankom op <i>The section is clear of all other trains and will be kept clear until you arrive at</i>	
# Berigte is tussen hierdie stasie en <i># Messages have been exchanged between this station and</i>	-stasie <i>station</i>
gewissel en die treinbeheeramptenaar op bogenoemde stasie is dit eens met hierdie magtiging <i>and the train-control officer at the latter station is in agreement with the authority</i>	
Drywer van treinnommer <i>Driver of train number</i>	op at
Datum <i>Date</i>	Tyd <i>Time</i>
Treinbeheeramptenaar <i>Train-control officer</i>	

Skrap as daar slegs een bediende stasie is
Delete when there is only one attended station

**WERK AAN OUTOMATIESE VAN SCHOOR-TREINTEKENINSTRUMENTE OP TEKENSTASIES
WORK ON AUTOMATIC VAN SCHOOR TRAIN TOKEN INSTRUMENTS AT TOKEN STATIONS**

**1. Aansoek om besetting te neem
Application to take occupation**

1.1	Van: Telekommunikasiebeampte <i>From: Telecommunication official</i>	Aan: Treinbeheeramptenaar <i>To: Train-control officer</i>
	†	†
	†	†

op ‡ at ‡		-tekenstasie token station	op ‡ at ‡	-telegraafstasie telegraph station
Mag ek besetting neem van die tekeninstrumente vir die trajek ‡ May I take occupation of the token instruments for the section ‡				
tot by ‡ to ‡		van from		tot ongeveer to approximately
op on				?
1.2	Van: Treinbeheerampptenaar From: Train-control officer		Aan: Telekommunikasiebeampte To: Telecommunication official	
	† †		† †	
op ‡ at ‡		-telegraafstasie telegraph station	op ‡ at ‡	-tekenstasie token station
U mag besetting neem van die tekeninstrumente vir die trajek ‡ You may take occupation of the token instruments for the section ‡				
tot by ‡ to ‡		van from		tot ongeveer to approximately
op on				
Kennis geneem deur treinbeheerampptenaar † Noted by train-control officer †				
op ‡ on ‡				-telegraafstasie telegraph station

**2. Teruggawe van instrumente
Restoration of instruments**

2.1	Van: Telekommunikasiebeampte From: Telecommunication official		Aan: Treinbeheerampptenaar To: Train-control officer	
	† †		† †	
op ‡ at ‡		-tekenstasie token station	op ‡ at ‡	-telegraafstasie telegraph station
Mag ek die tekeninstrumente vir die trajek ‡ May I restore the token instruments for the section ‡				
tot by ‡ to ‡				weer in werking stel? ?
Tyd Time			Datum Date	
2.2	Van: Treinbeheerampptenaar From: Train-control officer		Aan: Telekommunikasiebeampte To: Telecommunication official	
	† †		† †	
op ‡ at ‡		-telegraafstasie telegraph station	op ‡ at ‡	-tekenstasie token station
U mag die tekeninstrumente vir die trajek ‡ You may restore the token instruments for the section ‡				
tot by ‡ to ‡				weer in werking stel
Tyd Time			Datum Date	
Kennis geneem deur treinbeheerampptenaar † Noted by train-control officer †				
op ‡ at ‡				-telegraafstasie telegraph station

† Vul naam van werknemer in
† Fill in name of employee
‡ Vul naam van telegraaf- of tekenstasie in
‡ Fill in name of telegraph or token station

OPMERKING. – Wanneer daar 'n bediende stasie aan weerskante is, moet hierdie vorm deur beide treinbeheerampptenare ingevul word. Die treinbeheerampptenaar wat nie die magtiging aan die kommunikasiebeampte oordra nie, moet die reëling bevestig deur daarvan kennis te neem wanneer die reëling getref word.

NOTE. – When there is an attended station on each side, this form must be completed by both train-control officers. The train-control officer who does not communicate the authority to the telecommunication official must confirm the arrangement by "noting" it at the time of the communication.

**WAARSKUBERIG
WARNING ADVICE**

VAN SCHOOR-TREINTEKENSTELSEL
VAN SCHOOR TRAIN TOKEN SYSTEM

Kantoordatumstempel
Office date stamp

Aan die drywer (# en die Metrokondukteur) van treinnommer

SECTION 4

CONTROL OF TRAINS BY MEANS OF THE RADIO TRAIN ORDER SYSTEM

4001.0 DEFINITIONS

- 4001.1 In the instructions in this section, unless inconsistent with the context –
- 4001.1.1 **control office:** means the office from where train movements in the radio train order territory are controlled by the train-control officer;
- 4001.1.2 **destination station:** means the order station depicted on the train order as the limit of the authority of the train order;
- 4001.1.3 **order station:** means a fixed place in the radio train order territory where trains can cross or pass each other or an intersiding where trains cannot cross or pass each other;
- 4001.1.4 **radio train order territory:** means the territory in which the running of trains is authorised by the train-control officer;
- 4001.1.5 **section:** means the line between two order stations;
- 4001.1.6 **starting station:** means the order station depicted on the train order from where the train order authority starts;
- 4001.1.7 **train-control officer:** means the train-control officer on duty in the control office;
- 4001.1.8 **train order:** means a completed combined message and proceeding order on the prescribed form exchanged between the driver and the train-control officer and confirmed as correct.

4002.0 OBJECT AND DESCRIPTION

- 4002.1 The object of the radio train order system is to permit a single section of the line to be converted into an up or down line, according to the immediate traffic requirements.
- 4002.2 The system provides for absolute working only. Except as provided for in clauses 4015.0, 4017.0, 4018.0 and 4020.0, two trains may not be allowed to be in the same section simultaneously, i.e. –
- 4002.2.1 in the case of trains running in the same direction, a train order may not be issued to a following train before advice is received that the preceding train complete has cleared the section; and
- 4002.2.2 in the case of opposing trains, a train order may not be issued which will allow a train to enter a section whilst the opposing train is still in the section.
- 4002.3 The driver's authority to enter a section is a train order exchanged between the driver and the train-control officer. A driver may not enter a section unless he is in possession of a train order which is completed in full, repeated to the train control officer and confirmed as correct.
- 4002.4 The train-control officer must enter full particulars of all authorities issued in the authority register. He must allocate an authority number in respect of each authority issued and record the instruction to the driver in the column concerned.

NOTE: A specimen of the train order and the authority register appear at the end of these instructions.

4003.0 BOARDS

- 4003.1 The beginning and end of the radio train order territory are indicated by boards bearing suitable wording or symbol. The boards are erected a short distance beyond the outermost points or, in certain cases, at the signal preceding the outermost points. The boards indicate the beginning and end of the radio train order territory and also serve to warn drivers that they should have the correct train order for the section. [See train working rule No. 22(6).]

4004.0 CONTROL EQUIPMENT

- 4004.1 *Control office*
- 4004.1.1 **Train diagram** – on which particulars of all train arrangements/movements and other relevant information must be recorded/plotted;
- 4004.1.2 **Radio console** – for communication between the train-control officer and the drivers;

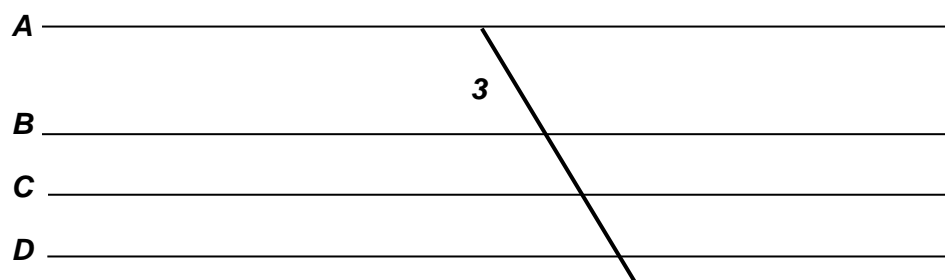
- 4004.1.3 **Tape recorder** – for the recording of all conversations with the train-control officer; and
- 4004.1.4 **Authority register** – for the recording of all authorities issued by the train-control officer;
- 4004.2 *Locomotive/motor-powered vehicle*
- 4004.2.1 **Radio** for communication between the train-control officer and the drivers. A radio for the driver's use is supplied to him or is installed in the locomotive, while drivers of motor-powered vehicles make use of portable radios; and
- 4004.2.2 A pad of **Combined Message and Proceeding Orders (Train Orders)**.
- 4005.0 PREPARATION AND EXCHANGE OF TRAIN ORDER**
- 4005.1 The driver must complete a separate train order for each authority on the prescribed form.
- 4005.2 The train order must contain all the necessary information. Spaces not required must be crossed out and initialled. On the train order as well as in the authority register no alterations may be made, abbreviations used or particulars erased or deleted. The prescribed forms must be completed legibly with a ballpoint pen.
- 4005.3 The train order must be exchanged while the train is stationary and as near to the departure time of the train as is consistent with the avoidance of delay to the train.
- 4005.4 The train-control officer must repeat the question message to the driver and he must insist that the driver repeat to him the authority in full (i.e. the applicable portions) and in the correct order. The numbers of the paragraphs not applicable, with an indication that it is deleted, must also be repeated.
- 4005.5 If a train has not proceeded through the section, e.g. a train which had entered or departed the section at an order station between the starting and destination stations and that train is the last arrival and/or last departure, the train order issued to a subsequent train to proceed over that section must show the arrival and departure times of that train.
- 4005.6 Numbering of train orders and serial numbers on authority register**
- 4005.6.1 The question messages completed by drivers must be numbered consecutively by first entering the train number and thereafter the consecutive number in the space "*Message No.*", e.g. "*2708/1, 2708/2, etc.*". The consecutive number for each train must begin with 1 (one).
- 4005.6.2 The train-control officer must number authorities that he issues consecutively for each month and enter it in the authority register. The numbers for each month must begin with 1 (one).
- 4005.7 Times and dates to be recorded**
- 4005.7.1 The actual time and date at which a train order is completed must be recorded thereon. If it is completed exactly at midnight, "*24:00*" must be recorded thereon.
- 4005.7.2 If the train shown on the train order as "*last arrival*" or "*last departure*" arrived or departed on a day prior to that on which the train order is issued, the date as well as the time such train arrived or departed must be shown.
- 4005.8 Filing of train orders and authority register**
- 4005.8.1 Drivers (drivers of motor-powered vehicles included) must hand all train orders in at their depots for forwarding to the official assigned by the operations manager. Similarly the train-control officer at the control office must forward the authority register and the train diagram to the assigned official. The assigned official must control the train orders, authority register and train diagram and file it for six months.
- 4005.9 The official in charge at the control station or, if the official in charge does not participate in trains working, the train-control officer taking over shift, must daily, by carefully scrutinising the authority register and comparing it with the train diagram ensure that the train-control officers, or the train-control officer from whom he takes over, strictly observes the instructions in regard to the working of trains according to this system. The officer concerned must also endorse the train diagram and the authority register daily that he has carried out these instructions. When inspection officers visit the control office, they must likewise sign the train diagram and the authority register to indicate that the instructions are being observed.
- 4005.10 Completion of train orders**
- 4005.10.1 The driver of a train which is ready to depart from an order station, must complete the question message of the train order and thereafter read it out to the train-control officer who must write down the particulars in the authority register and repeat it.

- 4005.10.2 Before the train-control officer reads the reply message to the driver he must –
- 4005.10.2.1 ensure that no conflicting movements will be authorised;
- 4005.10.2.2 ensure that the last train complete in the same or opposite direction has cleared the section. If the driver of the last train to enter the section has not reported, the train-control officer must contact him to establish if he has cleared the section and, if so, ensure that the train order for the section concerned is cancelled (see clause 4011.0); and
- 4005.10.2.3 indicate on the train diagram to where he is authorising the train (see sub-clause 4006.3).
- 4005.10.3 If the messages are exchanged by telephone, or by means of the radio on another train, the train-control officer must indicate to the driver from which order station(s) he must phone to confirm that his train complete has arrived.
- 4005.10.3.1 If the messages are exchanged by telephone the train-control officer must, when he reads out the authority to the driver, switch in on the radio in order that drivers who are in the territory can listen in (see clause 4007.1).
- 4005.10.4 After the train-control officer has complied with the provisions of sub-clause 4005.10.2 he must complete the authority register, compare it with the train diagram and read out the contents to the driver who must write it down and repeat it to the train-control officer (see sub-clause 4005.4).
- 4005.10.5 If the reply message as repeated is correct, the train-control officer must confirm it by saying “*RIGHT*”, and furnish his surname to the driver who must write it down on his copy.
- 4005.10.5.1 The reply message which is repeated and confirmed as correct together with a verbal authority from the train-control officer, will serve as the driver's authority to proceed to the destination station. (See clause 1042.0 of this appendix.)
- 4005.10.6 Should the radio or telephone fail before the reply message has been written down completely, repeated and confirmed, the driver must write the word “*CANCELLED*” across the front of the form as well as the reason for the cancellation. Similarly the train-control officer must cancel the authority by ruling it through and write the reason in the appropriate column on the authority register. The driver must keep the cancelled train order together with the other train orders.
- 4005.10.7 As soon as communication is restored, new question and reply messages must be exchanged by the driver and train-control officer and be confirmed.
- 4005.10.8 A train order can be issued to a driver to proceed over one or more consecutive sections. The portion of line, for which the train order was issued, may not extend beyond the first place where another train must be crossed, passed or shunted for.

EXAMPLE 1

A, B, C and D are order stations.

No. 3 must proceed from A to D without having to cross an opposing train at B or C.

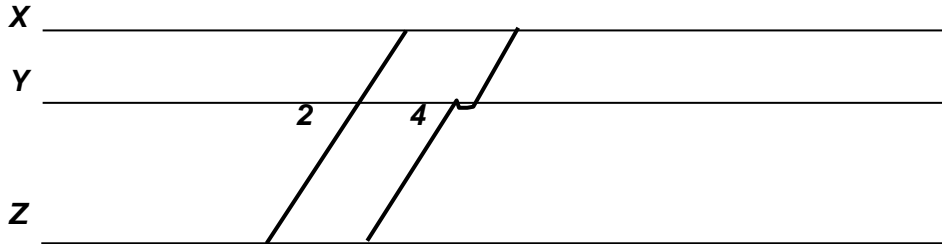


A train order to proceed from A to D must be issued to No. 3.

EXAMPLE 2

X, Y and Z are order stations.

Nos. 2 and 4 must proceed from Z to X. No. 2 depart first from Z. No opposing trains are to be crossed.

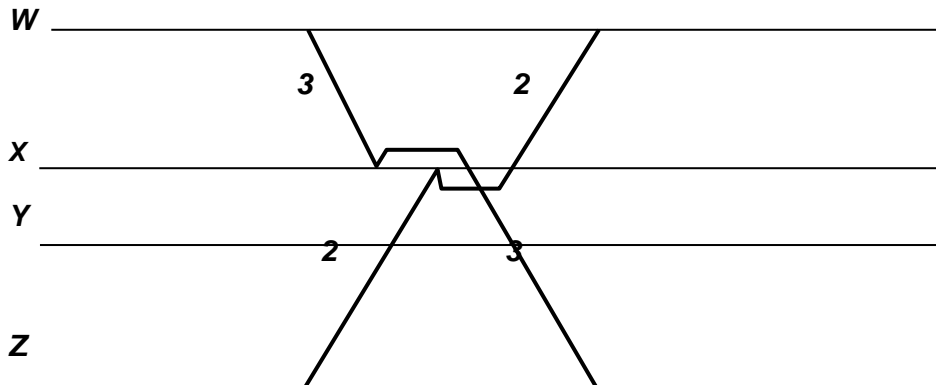


A train order to proceed from Z to X must be issued to No. 2. As soon as advice is received that No. 2 complete has arrived at Y, a train order must be issued to No. 4 to proceed to Y. On arrival at Y the train order for No. 4 lapses and after advice has been received that No. 2 complete has arrived at X, a train order must be issued to No. 4 to proceed from Y to X.

EXAMPLE 3

W, X, Y and Z are order stations.

No. 3 must proceed from W to X and No. 2 must proceed from Z to X to cross there and thereafter continue their respective journeys.

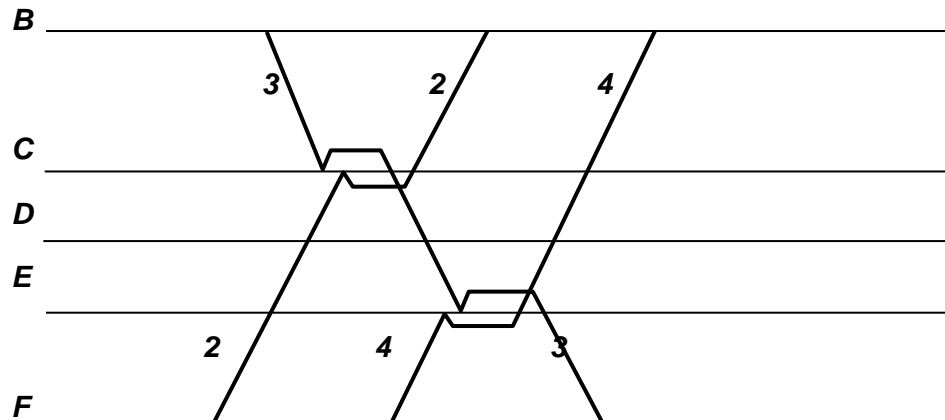


A train order to proceed from Z to X must be issued to No. 2, and a train order to proceed from W to X must be issued to No. 3. On arrival at X the train orders lapse. At X a new train order must be issued to No. 2 to proceed from X to W or another train order station beyond W where the first train must be crossed, passed or shunted for, and a new train order must be issued to No. 3 to proceed from X to Y, Z or another train order station beyond Z where the first train must be crossed, passed or shunted for.

EXAMPLE 4

B,C,D,E and F are order stations.

No. 3 must cross No. 2 at C and No. 4 at E, whereafter the three trains must continue their respective journeys.



A train order to proceed from F to C must be issued to No. 2 and to proceed from B to C to No. 3 and to proceed from F to E to No. 4. After arrival of Nos. 2 and 3 at C a train order to proceed from C to B or another order station beyond B where the first train must be crossed, passed or shunted for must be issued to No. 2 and a train order to No.3 to proceed from C to E. After arrival of Nos. 3 and 4 at E a train order must be issued to No.3 to proceed from E to F or another order station beyond F where the first train must be crossed, passed or shunted for. Furthermore a train order to proceed from E to D,C,B or another order station beyond B where the first train must be crossed, passed or shunted for, must be issued to No.4.

4006.0 TRAIN DIAGRAM

- 4006.1 The train-control officer must enter particulars of all train movements in the radio train order territory on the train diagram.
- 4006.2 In addition to the train number, the train-control officer must record the driver's surname and the number of the driver's radio set against the train number on the train diagram.
- 4006.3 When a question message is received the train-control officer must by means of a green dotted line and more or less according to the running times indicate on the train diagram to where the train is going to be authorised. (Green must not be used for any other purpose on the train diagram.)
- 4006.4 As soon as the reply message is completed, read, repeated and confirmed as correct, the train-control officer must enter the authority number in green against the dotted line. The lines indicating the actual running times must be brought on in the prescribed colour (not green) when the driver reports in terms of clauses 4009.0 or 4011.0.

NOTE: An example of a train diagram appears at the end of these instructions.

4007.0 COMMUNICATION

- 4007.1 The radios must be switched on continuously and ready for listening. When a train order is read out to a driver, drivers who are in the radio train order territory must specially listen in and control if a conflicting train order is not issued. Should it appear that a conflicting train order is issued it must immediately be brought to the notice of the train-control officer.
- 4007.2 Conversations over the radio or, should the radio fail, by telephone is not private. Before any train arrangements are made, the train-control officer must request any other persons who may be busy on the radio or telephone to stop their conversation.
- 4007.3 If the radio fails, the person who wishes to contact the train-control officer must try to establish communication by means of the radio on another train or by telephone.
- 4007.4 Where reference is made to radio communication or the use of radio communication is assumed, the instructions concerned also apply when telephone communication is used.
- 4007.5 A special book titled "*Communication defect book*" must be kept in the control office. When the train-control officer receives information or becomes aware of a radio/telephone defect, he must, without fail, record full particulars thereof in this book and immediately advise the Transtel maintenance official thereof. The book must be ruled as follows:

- 4007.5.1 *The number of the entry which must be furnished to the maintenance official and recorded by him;*
- 4007.5.2 *the date and time the fault occurred/was reported;*
- 4007.5.3 *surname and grade of person reporting the defect;*
- 4007.5.4 *telephone/radio number and place;*
- 4007.5.5 *nature of defect;*
- 4007.5.6 *date and time reported to maintenance official;*
- 4007.5.7 *signature of train-control officer;*
- 4007.5.8 *date and time repaired; and*
- 4007.5.9 *surname and signature of maintenance official.*
- 4007.6 Faults discovered by employees must be reported immediately to the train-control officer.
- 4007.7 As soon as the defects have been repaired, the maintenance official must advise the train-control officer accordingly or sign the communication defect book.

4008.0 IDENTIFICATION

- 4008.1 The person who wishes to communicate with the train-control officer must when the train-control officer responds to a call, identify himself by stating –
 - 4008.1.1 his surname and grade;
 - 4008.1.2 which train he is working;
 - 4008.1.3 at which order station his train is standing; and
 - 4008.1.4 from where he is speaking (if not from his control cab).
- 4008.2 The train-control officer must make use of the available aids e.g. train diagram, authority register, etc. to establish that he is in fact speaking to the employee concerned. Unless the train-control officer can positively identify the employee concerned, no train arrangements must be made.
- 4008.2.1 The train-control officer, in turn, must identify himself to the employee concerned by furnishing his surname, grade and the name of the control office.

4009.0 DRIVER TO REPORT

- 4009.1 The driver must, when he observes the warning board at an order station, contact the train-control officer and inform him that he is approaching the order station and confirm the information on his train order. Immediately after the train has passed through the order station the driver must again contact the train-control officer and give him the assurance that his train is complete and furnish the time he has passed through. The train-control officer must enter the time of passage on his train diagram.

4010.0 ADMITTANCE OF TRAINS TO DESTINATION STATIONS

NOTE: The rule of the road, as laid down in train working rule No. 213, does not apply to order stations in the radio train order territory. At dispatch from the starting point and during transit, the provisions of clause 1036.0 of this Appendix must be strictly adhered to.

- 4010.1 The train order in the driver's possession authorises him to proceed as far as the facing points, or the points prescribed in local instructions or the board indicating the end of the RTO territory, as the case may be, of the destination station only. Except where otherwise provided for, the driver of the first or only train arriving at the destination station may only enter the destination station after verbal authority has been obtained from the train-control officer.
- 4010.2 The train-control officer must keep in touch with trains approaching destination stations.

- 4010.3 On near approach of a train to the destination station, the train-control officer must inform the driver –
- 4010.3.1 whether or not his train is to cross, pass or shunt for another train;
- 4010.3.2 onto which line the train is to be or will be admitted; and
- 4010.3.3 if a crossing is arranged, which train is to be admitted first.
- 4010.4 Should the train-control officer fail to timeously inform the driver, the driver must contact the train-control officer and obtain the information. If communication cannot be established, the driver must stop outside the facing points and remain there until communication is established or until otherwise authorised, i.e. an "all right" hand signal displayed by the driver of the train already in the order station. If radio communication cannot be established, it must be endeavoured to contact the train-control officer telephonically.
- 4010.4.1 If opposing trains arrive at a destination station simultaneously and, radio communication between the train-control officer and the drivers of both trains cannot be established to submit or obtain the information mentioned in sub-clause 4010.3 and it is impossible to communicate with the train-control officer telephonically, the drivers must arrive at a clear understanding as to which train is to be admitted first and onto which line each train is to be admitted.
- 4010.5 When a crossing is arranged, the driver of the train admitted first, is responsible for admitting the opposing train.
- 4010.6 If the destination station is equipped with self-normalising points (including stations equipped for simultaneous entry), the driver(s) may, after having obtained the necessary verbal authority from the train-control officer, enter the station according to the prescribed instructions for self-normalising points.
- 4011.0 WHEN TRAIN ORDER MUST BE CANCELLED**
- 4011.1 Immediately a train complete has stopped within the clearance marks at the destination station, the driver must cancel his train order by writing the words "*TRIP COMPLETED*" across the form. Thereafter he must communicate with the train-control officer, give him the assurance that his train complete has arrived and furnish the time of arrival. The train-control officer must immediately when the information is received, enter particulars on his train diagram, as well as on the authority register.
- 4012.0 STOPPING AND EXAMINING OF TRAINS**
- 4012.1 Should the attention of the train-control officer be directed to anything unusual on a train (see train working rule No. 110) he must have the train stopped as soon as possible and have it examined.
- 4012.2 Should there be reason to believe that the line is or can be damaged or obstructed, the train-control officer must not allow another train to proceed over the section(s) concerned, and where applicable, over an adjoining parallel line before the line has been examined and it has been ascertained that it is safe for the passage of trains.
- 4013.0 SHUNTING**
- 4013.1 Before any shunting is commenced on a running line, the permission of the train-control officer must be obtained. The employee in charge of the shunting must advise the driver of the anticipated time required for shunting and the driver must obtain permission from the train-control officer. The train-control officer will decide when shunting may commence and the time allowed. Under no circumstances may this time be extended without the train-control officer's permission.
- 4013.2 When shunting is completed, the driver must advise the train-control officer accordingly, stating, if necessary, on which line the train is now standing, and confirm that all other running lines are clear of traffic.
- 4013.2.1 If radio communication cannot be established, the employee in charge of the shunting must telephonically obtain permission to shunt.
- 4013.3 When the running line outside the facing points at an order station is to be occupied for shunting purposes, the terms of train working rule No. 220(4) must be complied with.
- 4014.0 MATERIAL TRAIN WORKING IN RADIO TRAIN ORDER TERRITORY**
- 4014.1 Material trains must be announced in terms of train working rule No. 222 except that it will not be necessary to stipulate where the material train will cross other trains.
- 4014.2 When a material train has to work in a section it must proceed with a train order completed in terms of clause 4005.10 and the train need not be protected.
- 4014.3 The place and time the material train must clear the section must be indicated on the train order. The driver's train order must be countersigned by the permanent way official in charge of the work.

4014.4 The driver of the train and the permanent way official in charge of the work must do everything to clear the section within the time stipulated by the train-control officer. The time allowed by the train-control officer can however at the discretion of the train-control officer be extended.

4015.0 BALLAST TAMPING MACHINE WORKING IN RADIO TRAIN ORDER TERRITORY

4015.1 Before the tamping machine departs from an order station to work in the section, and the working area is not adjacent to the order station, the Track Inspector must obtain authority from the train-control officer in terms of clause 4005.10.

4015.2 After the Track Inspector has complied with the provisions of clause 2008.0, of this Appendix, he must advise the train-control officer that he has arrived complete and that he has cancelled the train order. The Track Inspector must forward the cancelled train order(s) to the official assigned by the Operations Manager. (See clause 4005.8.)

4015.3 When the tamping machine, for whatever reason, has to proceed from the working area in a section to another place in the same section or to the adjacent order station, and the movement will not be carried out in the process of tamping, authority must be obtained from the train-control officer.

4015.3.1 If the tamping machine must proceed in the same direction as the last train, the train-control officer must ensure that the section concerned is clear of all trains before the tamping machine is dispatched. If the tamping machine must proceed in the opposite direction as the last train, the tamping machine may be dispatched as soon as the train complete has passed the tamping machine at the off-tracking platform.

4015.4 Drivers of trains nearing the section, in which the tamping machine is working, must have a train order to the order station adjacent to the section in which the tamping machine is working.

4015.5 When authority is given for a train to enter the section in which the tamping machine is working, the driver must be warned of the exact kilometre points between which the tamping machine is working, also the kilometre point (to the nearest 0,5 km) where the machine will be off-tracked for the train to pass.

4016.0 WHEN A TRAIN HAS TO BE DIVIDED OR BECOMES DIVIDED ACCIDENTALLY

4016.1 When, for whatever reason, a driver decides to clear his train from the section in two portions, the provisions of train working rule No. 226(1) must be complied with. Should there be radio communication between the driver and the train-control officer, the driver must advise the train-control officer and obtain instructions from him with regard to the disposal of the first portion.

4016.2 The driver's assistant must first afford protection in the rear and thereafter accompany the driver.

4016.3 If communication cannot be made with the train-control officer, the driver may take the first portion of the train to the first order station and detach it. If the first order station is also the destination station, the driver must not enter without authority from the train-control officer. After the first portion is detached and secured in terms of train working rule No. 136, the train-control officer must be advised of the circumstances and oral authority obtained from him to return to clear the second portion of the train.

4016.4 After the second portion of the train has been cleared from the section, the driver must give the train-control officer the assurance that the train complete is clear of the section.

4016.5 The train order must not be cancelled until the train complete has been cleared from the section.

4017.0 LOCOMOTIVE FAILURE

4017.1 When a locomotive fails in a section and cannot proceed but can be safely moved with the assistance of another locomotive, the driver must as soon as possible communicate with the train-control officer, identify himself and thereafter furnish particulars of the failure and kilometre point, the nature of assistance required and the assurance that the train will not be moved. In addition he must furnish all other particulars that may be necessary in the circumstances. The train-control officer must, if possible, advise the driver from what end the assisting locomotive will be dispatched.

4017.2 As soon as the train-control officer has advised the driver that he is sending assistance by rail, he must request the driver to cancel his train order for the rest of the trip by writing "CANCELLED" across the form and to write the reason in brief thereon. Similarly the train-control officer must cancel his authority and indicate the reason. The train diagram must be endorsed accordingly.

4017.3 The driver must thereafter arrange for protection to be afforded in terms of clause 11007.0 of this Appendix.

- 4017.4 After the driver of the "failed" train has requested the assistance of another locomotive, he must in no circumstances move his train or allow it to be moved before the assisting locomotive has arrived or before the train-control officer has authorised him otherwise.
- 4017.5 Should communication not be established from the place where the "failed" train is standing, the driver must hand a written advice, according to the following example, to the driver's assistant:
- From driver..... Train No.*
- Locomotive(s) No(s).*
- The locomotive of my train has failed completely and my train is standing at kilometre point..... in the section between and and the assistance of another locomotive is required. I will not move my locomotive or train or allow it to be moved before the required assistance has arrived or unless I am authorised alternatively by the train-control officer. The train order in my possession is cancelled for the rest of the trip.*
- Time..... Date.....*
- Signature of driver*
- 4017.6 Provided the necessary protection is afforded in the front and the rear, the driver's assistant must by the quickest means proceed to the nearest place from where telephone communication can be established, read the written advice in full to the train-control officer and find out what he must do. The train-control officer must record details of the failure and the driver's assistants' surname on the train diagram and repeat the gist of the message to the train assistant. The driver's assistant must record the time and date the driver's message was conveyed to the train-control officer and the train-control officer's surname at the end of the message and sign it. When the driver's assistant returns to his train, he must attach the written advice to his train journal. If assistance is sent from that end in which the driver's assistant has proceeded, the train-control officer can instruct him to accompany the assisting locomotive.
- 4017.7 The assisting locomotive must be dispatched with a train order completed in terms of clause 4005.10 and it must indicate to where the "failed" train must be cleared. The authority issued in these circumstances must, inter alia, indicate the following:
- 4017.7.1 The actual kilometre point to where the assisting locomotive may proceed; and
- 4017.7.2 details of the place to where the "failed" train must be cleared.
- 4017.8 When the assisting locomotive with the "failed" train has cleared the section, the driver of the "failed" train must give the train-control officer the assurance that his train complete is clear of the section and, if the "failed" train is left at the order station, that the train will not be moved. Until such time as the assurance is received, no other train arrangements may be made for that section.
- 4017.9 After the train has been cleared from the section, a new train order must be issued to the assisting locomotive and if the "failed" train can proceed, for this train in terms of sub-clause 4005.10.
- 4018.0 WHEN A TRAIN CANNOT PROCEED DUE TO ACCIDENT OR OTHER OBSTRUCTION**
- 4018.1 When, due to an accident, washaway or other obstruction a train cannot proceed, the driver must contact the train-control officer and furnish to him full details of the mishap, the nature of the obstruction, the kilometre point, the nature of assistance required and the assurance that the train will not be moved. In addition he must furnish all other information that may be necessary in the circumstances. The train-control officer must, if possible, indicate to the driver from what end assistance will be sent. Except as provided for in sub-clause 4019.1, the driver must also give the train-control officer the assurance that the train order in his possession is cancelled for the rest of the trip. (See sub-clause 4017.2.)
- 4018.2 If, due to injury, the driver is unable to comply with the provisions of sub-clause 4018.1, the driver's assistant must, if possible, furnish full particulars to the train-control officer and give the assurance that the train order for the rest of the trip is cancelled.
- 4018.3 If communication with the train-control officer cannot be established, but the locomotive with or without a portion of the load can go forward this may be done. The procedure set out in clause 4016.0 must be followed and the driver must, on arrival at the first order station furnish full details as described in sub-clause 4018.1 to the train-control officer.

4018.4 If communication cannot be made from the place where the train is standing and the locomotive cannot proceed, the driver must complete a written message in accordance with the following example and hand it to the driver's assistant:

From driver..... Train No. Locomotive(s) No(s).

*Due to.....(insert reason) my train cannot proceed, and is standing at kilometre point..... * in the section between and..... . The service of a *breakdown train/lorry is required. The train will not be moved until authorised by the train-control officer. The train order in my possession is cancelled for the rest of the trip.*

Time..... Date

Signature of driver

**Delete if not applicable.*

4018.5 Provided the necessary protection is afforded in the front and the rear, the driver's assistant must by the quickest means proceed to the nearest place from where telephone communication can be established, read the written advice in full to the train-control officer and find out what he must do. The train-control officer must record details of the failure and the train assistant's surname in the train diagram and repeat the gist of the message to the train assistant. The driver's assistant must record the time and date the driver's message was conveyed to the train-control officer and the train-control officer's surname at the end of the message and sign it. When the driver's assistant returns to his train, he must attach the written advice to his train journal. If assistance is sent from that end in which the train assistant has proceeded, the train-control officer can instruct him to accompany the assisting locomotive.

4018.6 A breakdown train or assisting locomotive, which must enter an obstructed portion of the line, must be dispatched in terms of clause 4017.7.

4018.7 The train-control officer may allow a breakdown train or assisting locomotive to enter the obstructed section from either side provided the driver of each train is authorised to proceed to the nearest half-kilometre point short of the obstruction.

4018.7.1 Before authorising the breakdown train or assisting locomotive, the train-control officer must ensure that the portion of line concerned up to the obstruction is clear of trains and that the authority is not conflicting to an authority already issued.

4018.8 After the obstruction is removed and the section is clear of trains, the driver of the last train clearing the section must give the train-control officer the assurance that his train complete has arrived. If assistance is rendered from each end, the driver of the last train in each direction must give the assurance. (See sub-clause 4017.9.)

4019.0 WHEN ASSISTANCE IS RENDERED BY ROAD

4019.1 If the obstruction is such that assistance by rail is not necessary but can be removed by assistance by road or any other means, such procedure may be followed. In such circumstances the train-control officer can authorise the driver to proceed with the train order in his possession after the obstruction is cleared and he has been advised accordingly.

4020.0 RUN-AWAY VEHICLES

4020.1 Should a vehicle or train run away, the employee concerned must at once advise the train-control officer. The train-control officer must immediately on receipt of the message, stop a train about to enter the section concerned and request the driver to adopt every means possible to stop or divert the run-away vehicle or train from the main line.

4020.2 Should the attempt to stop the train for which a train order has been issued, be successful, the train-control officer must request the driver to cancel his train order. Similarly the train-control officer must cancel his authority. (See sub-clause 4017.2.)

4020.3 In the event of a train having entered the section before the runaway occurs, the train-control officer must, if radio communication is available, contact the driver and inform him of the circumstances.

4020.4 After it has been established where the runaway vehicle(s) or train have come to a standstill and it is not being propelled, a locomotive must be sent to clear the section. The driver must be in possession of a train order completed in terms of sub-clause 4005.10.

4021.0 REARRANGING OF CROSSINGS WHEN, DUE TO AN ACCIDENT, DELAY OR ANY OTHER CAUSE A TRAIN CANNOT PROCEED

4021.1 If, due to an accident, delay or any other cause, a train cannot proceed and the train-control officer decides to alter the crossing arrangements or to bring an opposing train nearer, he must, before issuing new train orders, ensure that the train order for each train involved in the altered arrangements have been cancelled in terms of sub-clause 4017.2.

4022.0 RUNNING LINE AT ORDER STATION TEMPORARILY OCCUPIED

4022.1 When a running line at an order station is, or will be, occupied temporarily, e.g. when a failed train or a defective vehicle is left thereupon, the train order of each train authorised to the order station concerned, must be suitably amplified in accordance with the following examples:

"Train No. has failed and is standing at It will not be moved".

"Main line/loop occupied by vehicles", etc.

"Preceding train No. performs work at order station", etc.

4022.2 When a running line at an order station is temporarily occupied by a failed train or (a) vehicle(s) no crossing must be arranged at the order station.

4023.0 WHEN ALL COMMUNICATION FAILS

4023.1 Should all communication fail and will not be restored to normal in a reasonable time, a sufficient number of order stations must be opened as temporary telegraph stations and telegraph order working in terms of Section 6 of this Appendix introduced. (See clause 8027.0 of this Appendix).

4023.2 Reintroduction of Radio train order system

4023.2.1 The radio train order system must not be reintroduced until the communication is restored, each section is clear of trains and all telegraph orders have been withdrawn and cancelled.

4023.2.2 Before the radio train order system is resumed the train-control officer in the control office must exchange messages K and KI with the train-control officer at each temporary telegraph station. The train-control officers must record in their train registers the time normal working was reintroduced.

4024.0 TAPE RECORDER

4024.1 While a conversation is being held with the train-control officer by radio or telephone the conversation is recorded by a tape recorder.

4024.2 The train-control officer must under no circumstances interfere with the tape recorder secured in a cabinet under lock and key or handle the tapes. It will exclusively be the duty of the Transtel maintenance official (Radios) to change the tapes as soon as they are full, and to put each of the full tapes in the correct drawer. Each tape must be erased before re-use. When tapes are changed, the counter of the tape recorder, where provided, must be reset to "zero".

4024.3 At the start of his shift, the train-control officer must, where possible, ensure that there is sufficient tape on the tape recorder, and must record his surname and the time and date by means of the radio/telephone, on the tape recorder.

4024.4 Should the tape recorder fail, the train-control officer must advise the Transtel maintenance official as soon as possible and the latter must repair the fault without delay. The Area Manager (Transtel) must arrange for a report regarding the fault to be submitted to the Executive Manager (Transtel). In the event of the tape recorder's alarm sounding and the train-control officer being unable to switch it off by pressing the reset button, it must be regarded as an urgent fault and the maintenance official must be summoned without delay.

4024.5 Authority for occupation of a tape recorder cabinet to perform work of whatever nature on it, must be given by the train-control officer.

4024.6 A special book titled *"Occupation of tape recorder cabinet by Transtel maintenance official (Radios)"* must be kept at the control office. Full particulars of the occupation of the tape-recorder cabinet to change tapes or perform repair or maintenance work, must be recorded in this book, namely –

4024.6.1 *the number of the entry which must also be furnished to the maintenance official and recorded by him as authority number to proceed with the work;*

4024.6.2 *the date and time the fault occurred and was reported to the maintenance official;*

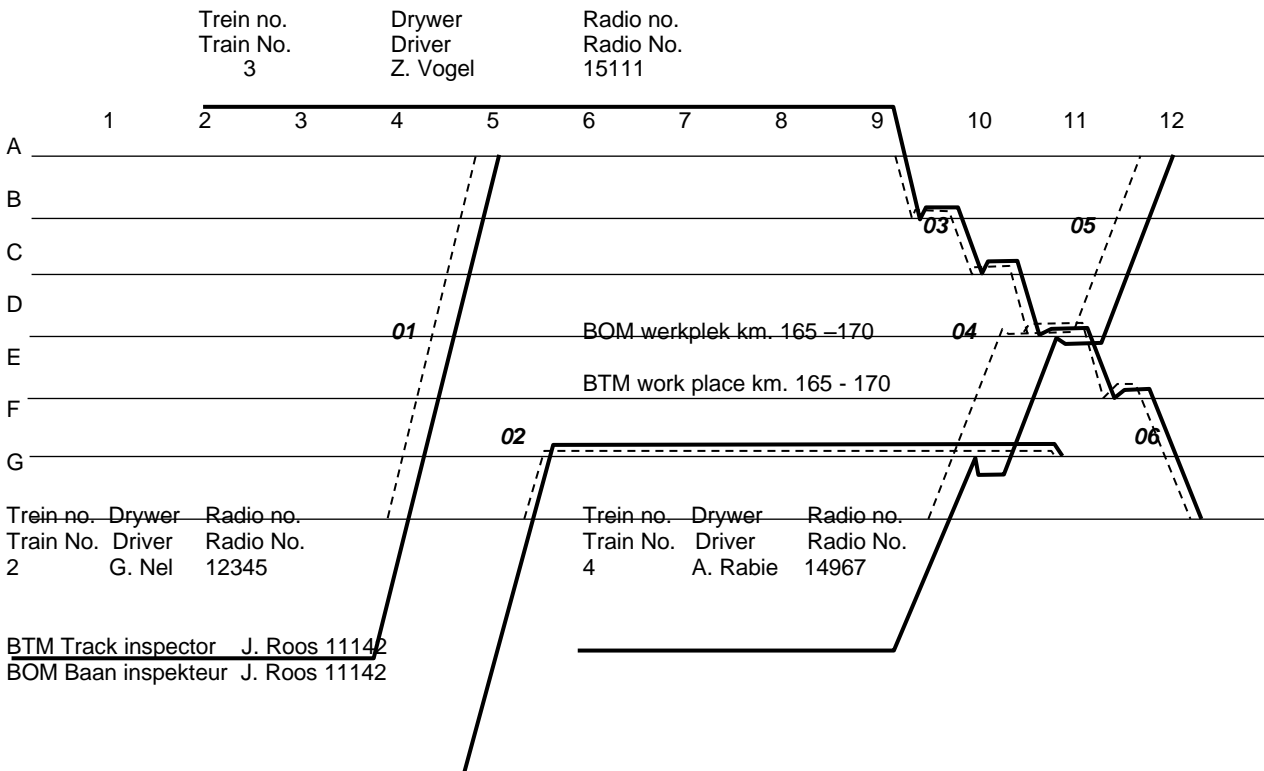
4024.6.3 *the fault reference number;*

4024.6.4 *the date and time occupation was taken and the work was completed;*

- 4024.6.5 *the reason for the occupation;*
 - 4024.6.6 *the number displayed by the counter functioning together with the alarm-reset button;*
 - 4024.6.7 *relevant remarks next to which the maintenance official must record that he has taken note thereof; and*
 - 4024.6.8 *the signature of the train-control officer, as well as the signature (with time and date) of the maintenance official.*
- 4024.7 In the event of an accident or irregularity where a conversation between the train-control officer and the driver or other employee is likely to be of importance, the train-control officer must obtain the tape recorder's counter reading and record it on the train diagram together with the details of the occurrence. The senior operating official in the Operations Manager's Office must indicate whether and when the maintenance official should remove the tape and to whom he should hand it. The train-control officer must arrange accordingly. The maintenance official must remove the tape in the presence of the train-control officer. The official to whom the tape is handed (in the carrier specially provided for this purpose) is responsible for its safe custody.

VOORBEELD (TREINDIAGRAM) – EXAMPLE (TRAIN DIAGRAM)

Trein no. 2 word gemagtig (magtiging no. **01**) van G na A. Geen teenoorgestelde treine betrokke.
 Train No. 2 is authorised (authority No. **01**) from G to A. No opposing trains concerned.
 Ballasonderstopmasjien word gemagtig (magtiging no. **02**) van F na kilometerpunt 168 tussen F en E.
 Keer terug na F om te oornag.
 Ballast tamping machine is authorised (authority No. **02**) from F to kilometre point 168 between F and E.
 Return to F to overnight.
 Trein no. 3 word gemagtig (magtiging no. **03**) van A na D. Kruis trein no. 4 (magtiging no. **04**) by D.
 Train No. 3 is authorised (authority No. **03**) from A to D. Cross train No. 4 (authority No. **04**) at D.
 Trein no. 3 word gemagtig (magtiging no. **06**) van D na G.
 Train No. 3 is authorised (authority No. **06**) from D to G.
 Trein no. 4 word gemagtig (magtiging no. **05**) van D na A.
 Train No. 4 is authorised (authority No. **05**) from D to A.



**GESAMENTLIKE BERIG EN RYORDER
COMBINED MESSAGE AND PROCEEDING ORDER**

**RADIOTREINORDERSTELSEL
RADIO TRAIN ORDER SYSTEM**

VRAAGBERIG

QUESTION MESSAGE

(1)	Berignommer	(2)	Datum	(3)	Tyd
(1)	<i>Message number</i>	(2)	<i>Date</i>	(3)	<i>Time</i>
(4)	Treinnommer	(5)	Drywer	(6)	By*
(4)	<i>Train Number</i>	(5)	<i>Driver</i>	(6)	<i>At*</i>

ANTWOORD BERIG EN RYORDER

REPLY MESSAGE AND PROCEEDING ORDER

(7)	Magtigingsnommer				
(7)	<i>Authority Number</i>				
(8)	Laaste vertrek nommer		die laaste trein in dieselfde rigting het		
(8)	<i>Last departure number</i>		<i>the last train in the same direction arrived</i>		
	by*		aangekom om		
	at*		at		
(9)	Laaste aankoms nommer		die laaste teenoorgestelde trein het by		aangekom om
(9)	<i>Last arrival number</i>		<i>the last train opposing train arrived at</i>		<i>at</i>
(10)	Die trajek tussen		en		orderstasies is vry van
(10)	<i>The section between</i>		<i>and</i>		<i>order stations is clear of trains</i>

U MAG VERTREK NA*

YOU MAY DEPART TO*

OPDRAG:

INSTRUCTION:

(11)	U trein is gereël om ‡
(11)	<i>Your train is arranged to ‡</i>

\$ (12)	Wanneer u by*		aankom moet u skakel en bevestig dat u trein volledig is
\$ (12)	<i>On arrival at*</i>		<i>you must phone and confirm that your train is complete</i>
+ (13)	WAARSKUWING : Die ballasonderstopmasjien werk in die trajek tussen kilometerpunte*		en*
+ (13)	WARNING : <i>The ballast tamping machine is working in the section between kilometre points*</i>		<i>and*</i>

U trein moet die onderstopmasjien verbygaan by*
*Your train must pass the tamping machine at**

(14)	Naam van treinbeheerampptenaar	(15)	Tyd
(14)	<i>Name of train-control officer</i>	(15)	<i>Time</i>
(16)	Rit voltooi (tyd)		
(16)	<i>Trip completed (time)</i>		

Handtekening van drywer
Signature of driver

Vul ontbrekende gegewens in en skrap al die onnodige woorde/reëls onderwyl treinbeheerampptenaar die magtiging lees
Fill in the missing details and delete all the unnecessary words/lines while train-control officer is reading authority

HERHAAL DAN VOLLEDIGE MAGTIGING AAN HOM

THEN REPEAT AUTHORITY TO HIM IN FULL

- * Naam of besonderhede van plek of kilometerpunt, na gelang van die geval
Name or particulars of place or kilometre point, as the case may be
- ‡ Vul rede in: "te kruis met trein no.__(aard)", "trein no.__(aard) verby te gaan", "pad te gee vir trein no.__(aard)", "trein no. __uit die trajek te ruim", ens.
Fill in reason: "cross train No.__(character)", "pass train No. __ (character)", "Shunt for train No. __ (character)", "clear train No. __ out of the section", etc.
- \$ Moet voltooi word wanneer treinorder per telefoon of deur middel van die radio op 'n ander trein gewissel word
Must be completed where train order is exchanged by telephone or by means of a radio on another train
- + Moet voltooi word wanneer die ballasonderstopmasjien in die trajek werk
Must be completed when the ballast tamping machine is working in the section

37/268300 SPOORNET 211

RADIOTREINORDERSTELSEL: MAGTIGINGSREGISTER
RADIO TRAIN ORDER SYSTEM: AUTHORITY REGISTER

Vraagberig/Question message							Antwoordberig en Ryorder/Message and Proceeding order															
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) Laaste Vertrek/Last Departure			(9) Laaste Aankoms/Last Arrival			(10)		(11)	(12)	(13) Ballasonderstopmasjien Ballast Tamping Machine		(14)	(15)	(16)	
Berig No. Message No.	Datum Date	Tyd Time	Trein no. Train no.	Drywer Driver	By/At Plek/ place	Magtiging No. Authority No.	Voorafgaande/Preceeding			Teenoorgestelde/Opposing			Die trajek tussen orderstasies is vry van treine The section between order stations is clear of trains	U mag vertrek na (plek) You may depart to (place)	U trein is gereël om (vul in rede) # Your train is arrange to (insert reason) #	Skakel van (plek/place) Phone from (plek/place)	Werk tussen Work between	Gaan verby by Pass at	Handtekening (treinbeheer- amtenaar) Signature (train-control officer)	Tyd Time	Gekanseleer (rede) Rit voltooi (tyd) Cancellation (reason) Trip complete (time)	
							Trein No. Train No.	Aangekom by Arrived at	Tyd Time	Trein No. Train No.	Aangekom by Arrived at	Tyd Time										

Vul in rede : "te kruis met trein no. _____ (aard)", "trein no. _____ (aard verby te gaan", "pad te gee vir trein no. _____ (aard)", "trein no. _____ (aard) uit die trajek te ruim", ens.
 # insert reason : "cross train no. _____ (character)", "pass train no. _____ (character)", "shunt for train no. _____ (character)", "clear train no. _____ (character) out of section", etc.

SECTION 5

5000.0 WOODEN TRAIN STAFF AND PAPER TICKET SYSTEM

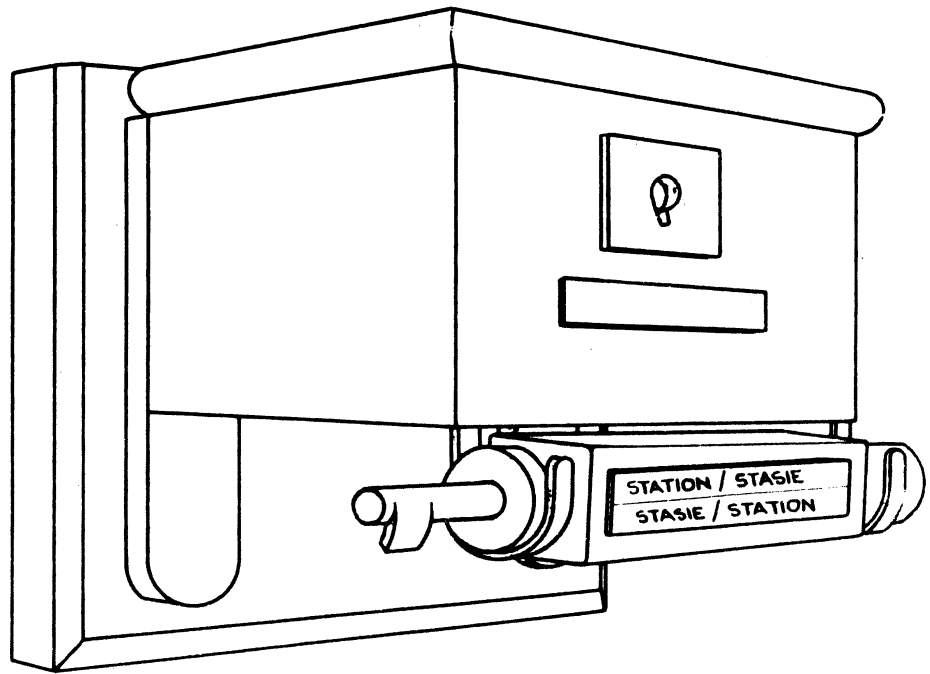
5001.0 Description of apparatus

5001.1 The apparatus used for the control of trains on single lines by means of the wooden train staff and paper ticket system, consists of a wooden box, provided with an inside spring lock and fitted with a bracket to hold the train staff (see fig. 1). The key to open the box is fitted to the train staff. The paper tickets must be locked away in the wooden box.

5001.2 The name of the train staff station at each end of the section to which it applies, is engraved on the staff and the paper tickets must have the names of the places between which they are operative, written thereon.

5001.3 The wooden box, train staff and paper tickets are of the same colour for a section, and there are different colours for adjoining sections.

Fig. 1



SKETCH OF WOODEN STAFF BOX
(with train staff on bracket)

TREINSTAFKAARTJIE (KLEUR)
TRAIN STAFF TICKET (COLOUR)

*	-lyn	Nommer
*	line	Number
†	na	-trajek
†	to	section

Aan die drywer van treinnommer
To the driver of train number

U word gemagtig, nadat u die treinstaf vir hierdie trajek gesien het, om te vertrek na ‡
You are authorised, after seeing the train staff for this section, to proceed to ‡

en die treinstaf sal volg
and the train staff will follow

Geen trein sal toegelaat word om te volg totdat u trein volledig daar aangekom het nie
No train will be allowed to follow until your train complete has arrived thereat

Datum	Tyd
Date	Time

Handtekening van treinbeheerampenaar
Signature of train-control officer

Stasie
Station

OPMERKING: Die drywer moet onmiddellik by aankoms hierdie kaartjie aan die treinbeheerampenaar oorhandig op die stafstasie waarheen hy gemagtig is om te vertrek, of aan die drywersassistent in die geval van 'n onbediende stafstasie.

NOTE: This ticket must immediately on arrival be given up by the driver to the train-control officer at the staff station to which he is authorised to proceed or, in the case of an unattended staff station, to the driver's assistant.

- * Voeg naam van taklyn in
** Insert name of branch line*
- † Voeg naam van treinstaftrajek in
† Insert name of train staff section
- ‡ Voeg naam van stasie in
‡ Insert name of station

5001.4 Paper tickets must be completed in duplicate and the copy left in the paper ticket book. The paper tickets in each book must be numbered consecutively on completion. When a paper ticket book is full, it must be retained for six months at the controlling station for reference purposes.

5001.5 When a driver's assistant observes that the supply of paper tickets is nearly exhausted at a token station, he must report it to the train-control officer at the telegraph station in advance and record the action taken on his train journal. The train-control officer receiving the report must make arrangements to have the supply of paper tickets replenished together with an adequate supply of carbon paper as early as possible.

5002.0 DESPATCH OF TRAINS AND DISPOSAL OF PAPER TICKETS

5002.1 A driver may not enter a section unless he is in possession of the correct token for the section. If a paper ticket is handed to him he must also see the train staff.

5002.2 After a train has been despatched on the train staff, no other train must be despatched in the same direction until the train staff for that particular section has been returned, except as provided in clauses 5013.0 and 5014.0.

5002.3 If two or more trains are proceeding in the same direction before an opposing train requires to proceed from the staff station in advance, a paper ticket must be given to the driver of each train except the last train. The driver of the last train must carry the train staff. Before delivering a token to the driver, the train-control officer must ensure that the section is clear of opposing trains, and except as provided in subclauses 5002.4 and 5002.5, the last train in the same direction complete has arrived at the following telegraph or token station.

- 5002.4 When a driver's assistant has to issue a token for his own train at a token station, he must first communicate with the train-control officer at the telegraph station behind that train (the station in advance if the station in the rear cannot be contacted or if there is no open station in the rear) and confirm that his train and, where applicable, the opposing train complete has/have arrived and establish from the train-control officer if the following section is clear of trains. Should it not be possible to contact one or the other telegraph station within 5 minutes, he may, provided his or the preceding train is not a special explosives train, after expiration of normal running time plus 30 minutes, advise his driver of the circumstances, ensure that he is in possession of the correct token for the section ahead and authorise him to proceed. The driver's assistant must endorse the reason for the delay on his train journal.
- 5002.5 When an train-control officer has to issue a token at a telegraph station and the preceding train has not reported after expiration of normal running time plus 30 minutes the train-control officer may, provided the preceding train or the waiting train is not a special explosives train, advise the locomotive personnel in writing of the circumstances, hand the token to the driver and authorise him to depart.
- 5002.6 If the waiting train or the preceding train is a special explosives train, the waiting train must not be despatched until advice is received that the preceding train has cleared the section.
- 5002.7 As soon as a train arrives at a telegraph or token station, the driver must hand the train staff or paper ticket to the train-control officer/driver's assistant. If the train has travelled with the train staff, the train staff must be placed on the bracket of the wooden staff box. If the train has travelled on a paper ticket the ticket must be cancelled. The train-control officer must daily forward the cancelled paper tickets to the Operations Manager and the driver's assistant must attach them to his train journal.
- 5003.0 ALTERED PAPER TICKETS NOT TO BE CANCELLED**
- 5003.1 If an error is made when preparing a paper ticket, it must not be cancelled but corrected, and the correction must be initialled by the train-control officer or driver's assistant issuing the ticket.
- 5004.0 ADVISING DEPARTURE AND ARRIVAL OF TRAINS**
- 5004.1 The train-control officer must advise the train-control officer in advance the time of departure of each train and the train-control officer at the latter station must advise the train-control officer at the telegraph station in rear, the time of arrival of each train.
- 5005.0 WORKING BANKED TRAINS**
- 5005.1 Banking locomotive not proceeding through section**
- 5005.1.1 When a banking locomotive is intended to return to the station from which it started without proceeding through the section, a paper ticket must be issued to the driver of the train locomotive and the train staff must be issued to the driver of the banking locomotive.
- 5005.2 Banking locomotive proceeding through section**
- 5005.2.1 When a banking locomotive proceeds with the train to a staff station, the train staff or paper ticket, as the case may be, must be delivered to, and carried by the driver of the leading locomotive. The train-control officer must advise the telegraph station in advance when a banking locomotive is proceeding through the section.
- 5005.3 A through banking locomotive must not be detached from the train it is banking except at a staff station, or except as laid down in train working rule No. 227 or 229, as the case may be.
- 5006.0 MATERIAL TRAIN REQUIRING TO STOP IN SECTION**
- 5006.1 Driver of material train to carry train staff**
- 5006.1.1 The train must run as an ordinary goods train and a stop order (see subclause 1046.4.3 of this appendix) must be issued to the driver.
- 5006.1.2 The train must always move forward and must not set back, not even for a short distance. The train must also not be propelled for the work to be carried out or to clear the section on completion of the work. If the nature of the work to be done, will entail that the train must set back or, if wagons must be detached in accordance to train working rule No. 222 (9) to expedite the loading and unloading or if the train has set back to the original departing station, a second driver's assistant must be rostered on the train to control the movements.

5007.0 TRAINS PASSING AT TOKEN STATIONS

5007.1 When a train is losing time or is partly disabled and it is decided by the locomotive personnel to let a following train pass it at a token station, this may be done. If the train, which is permitted to pass the delayed or disabled train, is travelling on a train staff, the tokens must be so exchanged by the locomotive personnel at the token station that the last train to leave the token station will proceed on the train staff. The locomotive personnel must furnish full particulars of the arrangement to the train-control officer at the telegraph station in advance.

5008.0 TRAIN STAFF FOR SHUNTING PURPOSES

5008.1 A train may be allowed outside the area protected by fixed signals, for shunting or other purposes, only when the driver is in possession of the train staff for that section. (See train working rule No. 220.)

5009.0 BREAKDOWN TRAIN OR LIGHT LOCOMOTIVE REPLACING DISABLED LOCOMOTIVE

5009.1 A breakdown train proceeding to clear the line, or a light locomotive proceeding to assist or replace a locomotive which has become disabled in section, must be given precedence over all other trains and, information in regard to the running of such train or light locomotive must be sent forward. (See train working rule No. 213.)

5010.0 STOP AND EXAMINE TRAIN

5010.1 Should anything unusual be noticed on a train passing a station, information must be immediately sent to the telegraph station in advance and the provisions of train working rule No. 110 must be observed. The train-control officer receiving the intimation must stop the train and deal with it as occasion may require.

5011.0 TRAIN PASSED WITHOUT MARKER

5011.1 Should a train pass a telegraph station without a marker, the train-control officer must, at once advise the telegraph station on each side and, unless it has been ascertained that the line is not obstructed, prompt action must be taken to warn the driver of the following train entering the section. If the line is obstructed steps must be taken to clear the obstruction in accordance with the provisions of subclause 5012.3 hereof.

5011.2 The train-control officer in advance must stop the approaching train and instruct the driver's assistant to replace the marker or to relight the tail lamp.

5012.0 RUN-AWAY VEHICLES

5012.1 If a vehicle or train is running away, the train-control officer must at once advise the train-control officer at the telegraph station towards which the vehicles are running. The train-control officer receiving the advice must stop any train about to enter the same section and adopt every means possible to stop or divert the vehicles, failing which he must pass the information to the next station.

5012.2 If a train has entered the section before the runaway occurs, a locomotive must not be sent to remove the runaway vehicles until it has been ascertained that they are not being propelled by such a train.

5012.3 If the line is obstructed by vehicles which have run away, the train-control officer must establish where such vehicles have come to a standstill. If they have not become derailed, a locomotive must be sent to clear the vehicles. The train-control officer who despatches the locomotive must exchange suitable messages on ordinary telegram forms with the train-control officer at the other end of the telegraph section concerned and must issue a manuscript order, as authority to clear the vehicles, to the driver of the locomotive. If the vehicles have become derailed, the provisions of train working rule No. 229 (2) or (3), as the case may be, must be observed.

5013.0 TRAIN STAFF AT WRONG END OF SECTION

5013.1 Communication in order

5013.1.1 If a train, by which the train staff should be sent, is delayed through accident or other unforeseen cause and the train-control officer is without any means of transferring the train staff to the other end of the section in time to prevent an opposing train being seriously delayed, the train-control officer at the other end of the section concerned must be advised. The train-control officer in possession of the train staff may then authorise the train-control officer at the other end of the telegraph section to despatch the train under telegraph order working, as set out in Section 6 of this appendix. The reason for the issue of telegraph order tokens must be clearly shown on the messages and tokens, and the tokens must be collected by the driver's assistant concerned at the end of the journey and attached to the train journal.

- 5013.1.2 Before the train-control officer, in possession of the train staff, authorises the issue of a telegraph order token, he must ensure that every train which has left his station with a paper ticket has reached the telegraph station at the other end of the section concerned. He must also see that his paper tickets are locked away in the box and that the train staff is locked in a safe or drawer from which it must not be removed, except by himself.
- 5013.1.3 The train staff must be kept under lock and key until the section is again clear of trains and messages K and KI have been exchanged.
- 5013.1.4 A full report of the circumstances under which telegraph order working was introduced must be submitted to the central operating office.
- 5013.2 Communication failed**
- 5013.2.1 If there is no communication, or if communication has failed, the train-control officer requiring the train staff must send a competent employee, equipped with properly completed pilot-working forms, along the line to the telegraph station at which the staff is held. The train-control officer at the other end, should he discover the error, must despatch an employee along the line with the train staff. When the employees meet, the one holding the pilot-working forms must take the train staff and return to his station. He must hand the train staff and the pilot-working forms to the train-control officer who must cancel the pilot-working forms.
- 5014.0 TRAIN STAFF DAMAGED OR LOST**
- 5014.1 Train staff damaged**
- 5014.1.1 Should a train staff be damaged and cannot be used for unlocking the staff boxes, the central operating office must be advised and the train staff placed under lock and key. Where communication exists, trains must be worked over the section affected in accordance with the telegraph order system. (See subclause 5013.1 hereof.)
- 5014.1.2 If communication has failed, the train-control officer in possession of the damaged train staff must arrange for pilot working to be introduced. (See subclause 5013.2 hereof.)
- 5014.2 Train staff lost**
- 5014.2.1 Should a train staff be lost and communication is in order, every possible enquiry and search must be made for the missing train staff, and when it has been established beyond doubt that the train staff cannot be found, trains must be worked in accordance with the provisions of subclause 5013.1 hereof. A report giving full particulars of the missing train staff must be sent to the central operating office. Before normal working is again resumed, messages K and KI must be exchanged.
- 5014.2.2 In the event of there being no communication or if communication fails, pilot working must be introduced in accordance with the provisions of subclause 5013.2 hereof, by the train-control officer at the telegraph station at each end of the telegraph section and, as there is no train staff, both persons proceeding along the line must have pilot-working forms. When these persons meet, they must go to that end from which the first train has to depart. The person who returns must hand all the forms in his possession to the train-control officer, who must at once cancel them. The person from the other end must then read and sign both forms in his possession in the presence of the train-control officer and hand them to the train-control officer, who must also read and sign both forms and hand the pilotman's copy back to him. (See train working rule No. 230.)
- 5015.0 ADVICE TO LOCOMOTIVE PERSONNEL OF TOKEN TO BE ISSUED TO DRIVER AT TOKEN STATIONS**
- 5015.1 A train-control officer, before despatching a train into a section in which there are one or more token stations, must furnish the driver with an Advice Regarding Running of Trains, showing particulars of the trains to be crossed or passed and the nature of the token to be given to the driver of the train and the opposing train or trains at each token station in the section, i.e., whether the wooden train staff or paper ticket is to be issued.
- NOTE:** *A specimen of the Advice Regarding Running of Trains is contained in the schedule to this section.*
- 5016.0 TELEGRAPH STATION CLOSED DURING CERTAIN HOURS**
- 5016.1 A telegraph station which closes during certain hours is provided with a small window, which must be kept locked with an ordinary Chubb lock except when being used by drivers' assistants of trains to obtain the train staff and paper tickets. The train-control officer, before going off duty, must see that the train staff (if available) and tickets are placed in proper position at the small window. He must also carry out the provisions of train working rules Nos. 88 and 89 and leave instructions in the night staff book to the respective driver's assistants as to the shunting or other work to be done at his station and any adjoining token station(s). Driver's assistants must be careful to read and comply with these instructions.

- 5016.2 The driver's assistant of each train arriving at a closed station must make an entry in the night staff book showing that he has carried out the instructions therein contained. He must sign the book and insert the arrival and departure times of his train at the token station.
- 5016.3 The driver's assistant of the first train to arrive at a token station is held to be the official in charge of train working for the time being, and he must perform the duties, connected with the train staff and paper ticket working, for his own or any other train that may be crossing or passing his train.
- 5016.4 When the driver's assistant has received the train staff or paper ticket from the driver, he must, in the case of the train staff, place it in its proper place and hand the staff or paper ticket for the section over which the train is about to proceed to the driver. If the train is to proceed on a paper ticket, the train staff, which he, after showing it to the driver, must replace it in its proper position on the bracket of the train staff box.
- 5016.5 Should an accident or unusual circumstance occur and the locomotive personnel is in doubt as to the correct course to follow, they must call the central operating office, who in turn must inform the relevant section manager who must take control.
- 5016.6 On arrival the section manager must examine the night staff book, train staff boxes and paper tickets, and communicate with the telegraph stations on each side, satisfying himself that all is in order for normal working. All records made overnight by drivers' assistants in the night staff book must be entered in full in the train register.

5017.0 TOKEN STATIONS

- 5017.1 At token stations a shelter is provided wherein the wooden staff box is housed. This shelter is provided with a small window, which must be kept locked with an ordinary Chubb lock, except when it is necessary for a driver's assistant to obtain the key of the office door. The key is fastened to a chain inside the small window.
- 5017.2 The train-control officer at a telegraph station adjoining a token station must advise drivers' assistants when a crossing has to take place at the token station, and give instructions as to the nature of the token to be issued to the driver. (See clause 5015.0 hereof.)
- 5017.3 Every driver's assistant is responsible to perform the duties connected with the train staff and paper ticket working for his own train. The driver's assistant must place the train staff received from the driver in its proper position. Should the train have travelled on a paper ticket, that token must be retained and cancelled by the driver's assistant and attached to the train journal.
- 5017.4 The driver's assistant must hand the train staff or paper ticket for the section over which the train is about to proceed to the driver. If the train is to proceed on a paper ticket, the driver's assistant must, after showing the train staff to the driver, replace it in its proper position on the bracket of the wooden staff box.
- 5017.5 Should an accident happen at a token station, and serious delay is likely to occur, the central operating office must be informed by the most expeditious means, and the latter official must make prompt arrangements for the satisfactory working of trains.

5018.0 INSTITUTION OF SPECIAL WORKING WHEN TRAIN STAFF IS AT THE WRONG END OF THE SECTION AND SPEAKING COMMUNICATION AVAILABLE

(Applicable only on sections of line where there are token stations)

- 5018.1 Drivers working trains on wooden train staff sections must have a pad of Combined Message and Line Clear Orders. A specimen of the combined message and line clear order is included in the schedule to this section.
- 5018.2 Definition of terms** – For the purpose of these instructions, a –
- 5018.2.1 waiting train:** shall mean a train that cannot proceed owing to the train staff being at the wrong end of the section; and
- 5018.2.2 delayed train:** shall mean a train, at the end of the section where the train staff is available but which, owing to late running or other circumstances, is being held.
- 5018.3 When a train cannot proceed from –
- 5018.3.1 a telegraph to a token station with or without an intervening token station;
- 5018.3.2 a token station to a telegraph station with or without an intervening token station;
- 5018.3.3 a token station to a token station with of without an intervening token station; or
- 5018.3.4 a telegraph station to a telegraph station with an intervening token station;

due to the train staff being at the wrong end of the section, owing to the opposing train running late or from any other cause, and there are no means of transferring the train staff to the other end of the section in time to prevent serious delay, special working may be introduced strictly in accordance with the following instructions:

5018.4 Train requiring to proceed from a telegraph station to a token station

- 5018.4.1 In the event of a train being unable to proceed from a telegraph station to a token station owing to the non-arrival of the train staff due to the late running of an opposing train or other cause, authority may be obtained for the waiting train to proceed to the token station to cross the delayed train after communication has been established with the driver's assistant of the delayed train at the token station. A definite arrangement must be arrived at between the train-control officers at the telegraph stations on each side and the driver's assistant of the delayed train, after which messages as per the following specimens must be exchanged between the train-control officers at the two telegraph stations.
- 5018.4.2 After the messages have been exchanged, the driver's assistant of the delayed train, who is in possession of the train staff, may authorise the despatch of the waiting train to the token station. On giving this authority, the driver's assistant of the delayed train must retain in his possession the train staff for the section in advance and see that the section is kept clear of trains until the arrival of the waiting train.
- 5018.4.3 The train-control officer at the telegraph station at which the train is waiting must, after receiving the assurance from the driver's assistant of the delayed train that the train staff is in his possession and will be retained until the arrival of the waiting train, satisfy himself that all trains which may have left the token station on paper tickets have arrived, that the section is clear of opposing trains and thereafter issue the prescribed manuscript order to the driver's assistant of the waiting train to proceed to the token station.
- 5018.4.4 When there is no telegraph station in rear of the delayed train with which messages can be exchanged, the train-control officer must exchange the messages and complete the arrangements with the driver's assistant of the delayed train at the token station and the final paragraph of the manuscript order must be amended accordingly. (See examples I and II.)
- 5018.4.5 The messages and manuscript order must be worded as follows:

QUESTION

From To

..... last departure.

..... last arrival.

*

.....

May I authorise No. to proceed from to?

The train staff for the section to

is held by at

REPLY

From To

..... last departure, noted.

..... last arrival, correct.

*

.....

You may authorise No. to proceed from to

I note that the train staff for the section to

is held by at

* Explanation of altered working.

MANUSCRIPT ORDER

To driver of train No.
Train No. is delayed at token station.
The wooden train staff for the section to is held by
the driver's assistant of train No. atwho has given an assurance
that the section will be kept clear of opposing trains until you arrive at
This is your authority to proceed from to
Messages have been exchanged between this station and
station and the train-control officer at the latter station is in agreement with the arrangement.
Station
Train-control officer Date Time

5018.5 Train requiring to proceed from a token station to a telegraph station

5018.5.1 In the event of a train being unable to proceed from a token station to a telegraph station, owing to the non-arrival of the train staff caused by the late running of the opposing train or other cause, authority for the waiting train to proceed to the telegraph station in advance may be obtained after the train-control officers at the telegraph stations concerned have exchanged messages as per specimen shown in subclause 5018.4.5 hereof. The train-control officer at the telegraph station in advance must then authorise the driver's assistant of the waiting train, in terms of the Combined Message and Line Clear Order to proceed from the token station. The driver's assistant, on receipt of the necessary authority, must fill in the Combined Message and Line Clear Order, repeat it to the train-control officer, and after getting an acknowledgement that it is correct, take it as his authority to proceed. If the telegraph station in the rear is closed when a waiting train is to proceed from a token station, the train-control officer at the telegraph station in advance, after satisfying himself that he holds the train staff for the section over which the waiting train has to run and that a train has not left his station on a paper ticket in the direction of the token station, where a train is waiting to enter the section, must authorise the driver's assistant of the waiting train in terms of the Combined Message and Line Clear Order to depart from the token station to the telegraph station. (See examples III, IV, V and VI and subclause 5018.14 hereof.)

5018.6 Train requiring to proceed from a token station to a token station

5018.6.1 In the event of a train being unable to proceed from one token station to another token station owing to the non-arrival of the train staff due to the late running of an opposing train or other cause, the driver's assistant of the delayed train must take possession of the train staff for the section in advance, and keep it in his custody until the arrival of the opposing train(s), communicate with the train-control officer at the telegraph station on each side and advise them of the position. A definite arrangement must be arrived at by the exchange of messages between the train-control officers at the telegraph stations, after which the train-control officer at the telegraph station in advance will instruct the driver's assistant of the delayed train who is in possession of the train staff to authorise, by means of the prescribed Combined Message and Line Clear Order, the waiting train to proceed to the token station at which the delayed train is standing. The driver's assistant of the waiting train must then fill in the Combined Message and Line Clear Order, repeat it to the driver's assistant of the delayed train and, after getting an acknowledgement that it is correct, take it as his authority and proceed to the token station at which the delayed train is standing. (See examples VII and VIII.)

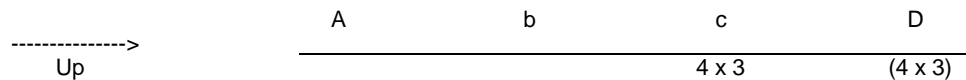
5018.7 Train requiring to proceed from a telegraph station to a telegraph station with one or more token stations intervening

5018.7.1 In the event of a train being unable to proceed from one telegraph station to another telegraph station with one or more token stations intervening owing to the train staffs being at the wrong ends of the sections, due to the late running of an opposing train or other cause, the train-control officer at the telegraph station in possession of the train staff may, if he is satisfied that the sections are clear of opposing trains, authorise the despatch of the waiting train to his station. Before giving this authority he must place the train staff under lock and key and see that the section is kept clear of opposing trains until the arrival of the train for which authority to proceed has been given. The train-control officers at the telegraph stations must exchange messages A and AI, and an A order in accordance with Section 6 of this appendix must be issued to the driver of the waiting train, the intervening token station/stations being treated as non-existent. (See examples IX and X and clause 5014.0 hereof.)

- 5018.8 It must be distinctly understood that the introduction of the special working prescribed herein is only to be resorted to when the waiting train or trains would otherwise suffer lengthy delay waiting the transfer of the train staff. The train-control officer authorising a train to proceed on a Combined Message and Line Clear Order or A order must see that the train staff in his possession is securely locked away prior to the introduction of the special working.
- 5018.9 Where the driver's assistant of a delayed train is in possession of the train staff (see examples I, II, VII, and VIII) he must see that it is not allowed out of his custody until the arrival of the opposing train or trains, authorised to proceed on a line clear or manuscript order.
- 5018.10 Resumption of normal working** – On the termination of the special working herein authorised, the train-control officers at the telegraph stations must exchange messages K and KI before the resumption of normal working.
- 5018.11 When the special working is authorised between two token stations the driver's assistant of the train who has authorised the despatch of a train to the token station and the driver's assistant of the train which has proceeded on a Combined Message and Line Clear Order must, on the termination of the special working, communicate with the telegraph station on each side, the train-control officers at which must exchange K and KI messages before the resumption of normal working. In the event of the telegraph station in rear closing before the arrival of the train at the telegraph station in advance, the train-control officer at the latter staff station must satisfy himself that the section is clear of trains before re-introducing normal working.
- 5018.12 Trains may not be worked between telegraph stations, whether attended or unattended, simultaneously by two systems of train control. When the train staff is available, trains must be worked under the wooden train staff and paper ticket system.
- 5018.13 For the purpose of these instructions a telegraph station will include telegraph stations which are closed during certain hours. (See clause 5016.0 hereof.)
- 5018.14 The instructions contained in the preceding subclauses and following examples are in addition to, and not in lieu of, the instructions contained in clause 5014.0 hereof.

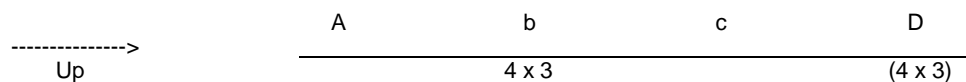
EXAMPLES OF SPECIAL WORKING

Example I – A and D are telegraph stations; b and c are token stations.



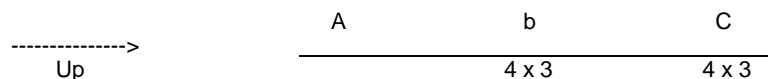
4 is booked to cross 3 at D but is unable to proceed beyond c in time to avoid serious delay to 3 at D. The train staff for the section c – D is at c. The train-control officer at D must take the initiative and after communicating with the driver's assistant of 4 at c and the train-control officer at A, carry out the requirements of subclause 5018.4 hereof and arrange for the despatch of 3 to c.

Example II – A and D are telegraph stations, b and c are token stations.



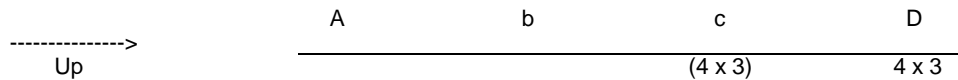
4 is booked to cross 3 at D but is unable to proceed beyond b in time to avoid serious delay to 3 at D. The train staff for the section b - c is at b and the train staff for the section c – D is at c. The train-control officer at D must take the initiative and after communicating with the driver's assistant of 4 at b and the train-control officer at A, carry out the requirements of subclause 5018.4 hereof and arrange for the despatch of 3 to b, treating c as non-existent.

Example III – A and C are telegraph stations, b is a token station.



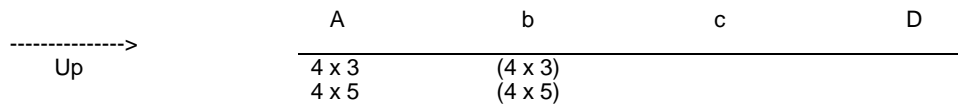
4 is booked to cross 3 at b. Owing to 3 running late, serious delay would be caused to 4 if the booked crossing were adhered to. The train staff for the section b – C is at C. If the train-control officer at C is unable to transfer the train staff to b, he must comply with subclause 5018.5 hereof and arrange for 4 to proceed from b to C.

Example IV – A and D are telegraph stations, b and c are token stations.



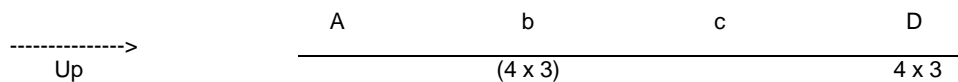
4 is booked to cross 3 at c. Owing to 3 running late serious delay would be caused to 4 if the booked crossing were adhered to. The train staff for the section c – D is at D. If the train-control officer at D is unable to transfer the train staff to c, he must comply with subclause 5018.5 hereof and arrange for 4 to proceed from c to D.

Example V – A and D are telegraph stations, b and c are token stations.



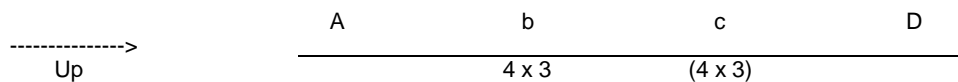
4 is booked to cross 3 and 5 at b. Owing to 4 running late serious delay would be caused to 3 and 5 if the booked crossing were adhered to. The train staff for the section A – b is at A. If the train-control officer at A is unable to transfer the train staff to b, he must comply with subclause 5018.5 hereof and arrange for 3 and 5 to proceed from b to A.

Example VI – A and D are telegraph stations, b and c are token stations.



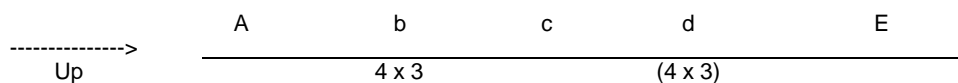
4 is booked to cross 3 at b. Owing to 3 running late serious delay would be caused to 4 if the booked crossing were adhered to. The train staff for the section b – c is at c, and the train staff for the section c – D is at D. If the train-control officer at D is unable to transfer the respective train staffs from D to c and c to b, he must comply with subclause 5018.5 hereof and authorise the trainmen of 4 to proceed from b to D, c being treated as non-existent.

Example VII – A and D are telegraph stations, b and c are token stations.



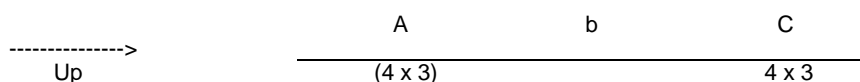
4 is booked to cross 3 at c but owing to late running will seriously delay 3 at c if the booked crossing were adhered to. The train staff for the section b – c is at b and the train staff for the section c – D is at c on arrival of 3. The driver's assistant of 4 must take the initiative immediately on arrival at b and if the train staff cannot be transferred in time to avoid serious delay to 3 at c, he must communicate with the train-control officers at A and D after which 3 may be authorised to proceed from c to b in terms of subclause 5018.6 hereof.

Example VIII – A and E are telegraph stations, b, c and d are token stations.



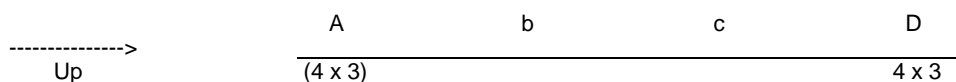
4 is booked to cross 3 at d but owing to late running will seriously delay 3 at d if the booked crossing were adhered to. The train staff for the section b - c is at b and the train staff for the section c – d is at c. The train staff for the section d – E is at d on arrival of 3. The driver's assistant of 4 must take the initiative immediately on arrival at b and if the train staffs cannot be transferred in time to avoid serious delay to 3 at d he must communicate with the train-control officers at A and E, after which 3 may be authorised to proceed from d to b in terms of subclause 5018.6 hereof, c being treated as non-existent.

Example IX – A and C are telegraph stations, b is a token station.



4 is booked to cross 3 at A but owing to the late running of 3 the crossing requires to be made at C. The train staff for the section A – b is at b and the train staff for the section b – C is at C. The train-control officers at A and C must exchange messages A and AI and the train-control officer at A must issue an order A to 4 to proceed from A to C in terms of subclause 5018.7 hereof, b being treated as non-existent.

Example X – A and D are telegraph stations, b and c are token stations.



4 is booked to cross 3 at A but owing to the late running of 3 the crossing requires to be made at D. The train staff for the section A – b is at b, the train staff for the section b – c is at c and the train staff for the section c – D is at D. The train-control officers at A and D must exchange messages A and AI and the train-control officer at A must issue an order A to 4 to proceed from A to D, in terms of subclause 5018.7 hereof, b and c being treated as non-existent.

5019.0 PROCEDURE TO BE FOLLOWED WHEN THE ASSISTANCE OF THE LOCOMOTIVE OF A PRECEDING TRAIN IS REQUIRED

- 5019.1 Should a train require the assistance of a preceding train, the latter having proceeded on a paper ticket, arrangements may be made for the locomotive of the train to return to assist the failed train, after a clear understanding has been arrived at between the train-control officer and the driver of the preceding train, or the drivers of the trains concerned, as the case may be. If arrangements are made between the drivers of the trains concerned, and communication can be established with the telegraph station in advance and in the rear of the trains, this must be done, and the authority of the train-control officers obtained for the necessary assistance to be rendered.
- 5019.2 In the event of one or other of the trains having arrived at a telegraph station, the train-control officer must, even if he has gone off duty, be called upon to make the necessary arrangements with the driver's assistant of the delayed train.
- 5019.3 If there are no telegraph stations with which communication can be established, the driver's assistant of the disabled train may forward, to the driver of the preceding train, the necessary "line clear" message, after which a manuscript order may be issued by the driver of the preceding train, authorising him to return with his locomotive to assist the disabled train. The driver of the assisting locomotive must, before acting on the manuscript order, repeat over the telephone, to the driver of the disabled train, the "line clear" message, also the manuscript order, and thereby satisfy himself that the section over which he is required to run is clear and that the disabled train will not be moved until the arrival of the assisting locomotive.
- 5019.4 The foregoing procedure may only be resorted to when the locomotive of the disabled train can move or be moved, but is unable to work the train forward without involving serious delay.

5019.5

The message and order should read as follows:

MESSAGE

From #train-control officer/driver's assistant/driver To #train-control officer/driver's assistant/driver
of train no. of train no.
at at.....
Locomotive of train No. has †.....
at and locomotive of train No
is required to assist. Train staff for the section to
has been locked up/is in possession of the driver's assistant of train No. at
The section is clear of trains and will be kept clear until locomotive of train No. arrives.
This message is your authority to issue a manuscript order to #the driver of/for your train No.....
to return to

.....
#Train-control officer/Driver's Assistant/Driver.

Time

Date..... At.....

NOTE – Message must be confirmed by train-control officers if on duty at the telegraph stations.

Delete words not required.
† Insert "failed" or "partially failed".

MANUSCRIPT ORDER

To driver of train No. at †..... staff station
Locomotive of train No. has failed at
Your locomotive is required to work the train forward. Train staff for
to section # has been locked up/is in possession of driver's assistant of train No.
at. The section is clear of trains and will be kept clear until your locomotive arrives
at †

This is your authority to return to †

#Train-control officer/Driver's assistant/Driver of train No.
at

Date Time.....

† Insert name of staff station
Delete words not required

5020.0

LINE OBSTRUCTED BY WASHAWAY OR OTHER OBSTRUCTION

5020.1

When an accident, derailment, washaway or other obstruction occurs between a telegraph station and a token station or between two token stations, and it becomes necessary to send a material or other train from the telegraph station to the scene of obstruction, the following method of working over the obstructed section must be adopted:

- 5020.1.1 The train-control officer at the telegraph station at that end of the section from which the train is to be despatched, after having securely locked up the train staff and paper tickets for the section affected, must inform the train-control officer at the telegraph station on the other side of the obstruction, by the quickest means, of the circumstances and the arrangements he is about to make. After a clear understanding has been arrived at, pilot working must then be introduced between the telegraph station and the point of obstruction, in accordance with the provisions of train working rule No. 230. When there is no telegraph station on the other side of the obstruction, messages R and RI will not be exchanged. Pilot working must not be introduced until it has been definitely ascertained that the line between the telegraph station and the point of obstruction is safe for the train to proceed.
- 5020.1.2 In the event of the train staff being at the token station, the train-control officer at the telegraph station, at that end from which the train is required to proceed, must obtain and secure the train staff for the section of line concerned before introducing pilot working in terms of the foregoing subclause 5020.1.1.
- 5020.1.3 Should the train-control officer at the telegraph station, from which the train is required to proceed under pilot-working, be unable to obtain the train staff for the obstructed section, he must arrange, if possible, for the train staff to be obtained and locked up by the train-control officer at the telegraph station on the other side of the obstruction and obtain an assurance that this has been done prior to the introduction of pilot working.
- 5020.1.4 Where the conditions are such that it is not possible for the train staff at the token station to be obtained and locked up by one or other of the train-control officers at the telegraph station on either side of the obstruction, pilot working may be introduced between the telegraph station and the scene of obstruction. In the case of a washaway, the train-control officer must obtain the assurance of the responsible track official that the line between the telegraph station and the point of obstruction is clear of trains and is otherwise safe for the passage of the train. As soon as access can be obtained to the token station, the train staff must be obtained and placed in the custody of the pilotman, who must, if pilot working is continued for a lengthy period, arrange to hand the train staff for safe custody to the train-control officer at the telegraph station at that end of the section from which pilot-working has been introduced. As soon as the train staff has been thus secured, the train-control officer at the other telegraph station concerned must be advised.
- 5020.1.5 When communication has failed and it is not possible to establish communication between the two telegraph stations concerned, the train-control officer who introduces pilot-working must arrange to inform the train-control officer at the telegraph station on the other side of the obstruction as early as possible, in writing, of the actual position and the means adopted to effect clearance of the obstruction. A material or other train must not proceed beyond the original point of obstruction until the train staff for the section affected has been obtained and placed in possession of the pilotman. Before the train proceeds the train-control officers at the telegraph stations concerned must have been advised in regard to the state of the line and have come to a clear understanding regarding the further procedure to be adopted. Care must be taken to see that another train is not allowed to proceed on a train staff or paper ticket until pilot-working has been cancelled and an assurance has been obtained, in writing, from the responsible track official that the line is clear and safe for the train to proceed. [See train working rule No. 232 (3).]
- 5020.1.6 When an accident, derailment, washaway, or other obstruction occurs between two token stations, the earliest opportunity must be taken to appoint an train-control officer at the token station from which it is arranged to work the material or other train under pilot working.

**BERIG INSAKE LOOP VAN TREINE
ADVICE REGARDING RUNNING OF TRAINS**

**HOUITREINSTAF-EN-PAPIERKAARTJESTELSEL
WOODEN TRAIN STAFF AND PAPER TICKET SYSTEM**

Kantoordatumstempel
Office date stamp

Aan drywer van treinnommer
To driver of train number

Drywer is in besit van # houttreinstaf/papierkaartjie
Driver holds # wooden train staff/paper ticket

Voorafgaande treinnommer † het aangekom
Preceding train number † has arrived

op om
at at

Voorafgaande/Volgende treinnommer † moet
Preceding/Following train number † must

dieselfde trein(e) as u op -tekenstasie(s) kruis
cross the same train(s) as your train at token station(s)

U trein is gereël om:
Your train has been arranged to:

‡	treinnommer	†	by	-tekenstasie
‡	train number	†	at	token station
‡	treinnommer	†	by	-tekenstasie
‡	train number	†	at	token station
‡	treinnommer	†	by	-tekenstasie
‡	train number	†	at	token station
‡	treinnommer	†	by	-tekenstasie
‡	train number	†	at	token station

Die volgende tekens moet aan die drywer van u trein uitgereik word [kyk subklousules 5016.3 en 5017.3 van die Algemene Aanhangsel (deel I)]:

The following tokens must be issued to the driver of your train [see subclauses 5016.3 and 5017.3 of the General Appendix (Part I)]:

*	van	na
*	from	to
*	van	na
*	from	to
*	van	na
*	from	to
*	van	na
*	from	to

Handtekening van treinbeheerampenaar
Signature of train-control officer

Tyd
Time

Gedeeltes wat nie nodig is nie, moet deurgehaal en gearafeer word

Sections not required must be ruled through and initialled

† Aard van trein(e) moet aangetoon word

† Character of train(s) must be shown

‡ Voeg in "te kruis met", "verby te gaan by" of "pad te gee vir", na gelang van die geval

‡ Insert "cross", "pass" or "shunt for", as the case may be

* Voeg in aard van teken

* Insert nature of token

**GESAMENTLIKE BERIG EN LYNVRYORDER
COMBINED MESSAGE AND LINE CLEAR ORDER**

(Instel van spesiale bedryf wanneer die houttreinstaf aan die verkeerde ent van die trajek is)
(Introduction of special working when wooden train staff is at the wrong end of the section)

**VRAAGBERIG
QUESTION MESSAGE**

Van drywer van treinnommer <i>From driver of train number</i>	op <i>at</i>	
Aan # treinbeheerampstenaar/drywer van treinnommer <i>To # train-control officer/driver of train number</i>	op <i>at</i>	
Treinnommer <i>Train number</i>		het nog nie aangekom nie. Mag ek vertrek <i>has not yet arrived. May I proceed</i>
van <i>from</i>	na <i>to</i>	? ?

**ANTWOORDBERIG-EN-RYORDER
REPLY MESSAGE AND PROCEEDING ORDER**

Van # treinbeheerampstenaar/drywer van treinnommer <i>From # train-control officer/driver of train number</i>	op <i>at</i>	
Aan drywer van treinnommer <i>To driver of train number</i>	op <i>at</i>	
Treinnommer <i>Train number</i>	het/is † <i>has/is †</i>	op <i>at</i>
Die houttreinstaf vir die trajek <i>The wooden train staff for the section</i>	na <i>to</i>	
# is in besit van die drywersassistent van treinnommer <i># is held by the driver's assistant of train number</i>	/is toegesluit op <i>/is locked up at</i>	
Die trajek is vry van alle treine en sal vry gehou word totdat u op <i>The section is clear of all trains and will be kept clear until you arrive at</i>		aankom
Hierdie order is u magtiging om te vertrek van <i>This order is your authority to proceed from</i>	na <i>to</i>	
* Berigte is gewissel tussen hierdie stasie en <i>* Messages have been exchanged between this station and</i>		-stasie, en die treinbeheerampstenaar op <i>station, and the train-control officer at</i>
laasgenoemde stasie is dit eens met die reëling <i>the latter station is in agreement with the arrangement</i>		
Drywer van treinnommer <i>Driver of train number</i>	op <i>at</i>	
Tyd <i>Time</i>	Datum <i>Date</i>	

OPMERKINGS: Die drywer moet hierdie berig herhaal aan die treinbeheerampstenaar of drywer wat die magtiging gee
NOTE: *This message must be repeated by the driver to the train-control officer or driver giving the authority*

Skrap onnodige woorde

Delete words not required

† Gee rede waarom trein nie kan voortgaan nie, bv. "onklaar geraak", "laat", ens.

† *Insert reason why train cannot proceed, e.g. "failed", "late", etc.*

* Skrap as daar geen bediende stasie agter die wagtende trein is waarmee verbinding verkry kan word nie

* *Delete when there is no attended station in rear of the waiting train with which communication can be obtained*

Hierdie order moet saam met die drywersassistent se joernaal aan die einde van die reis ingedien word

This order must be submitted with the driver's assistant's journal at the end of the trip

SECTION 6

CONTROL OF TRAINS ON SINGLE LINES BY MEANS OF THE TELEGRAPH ORDER SYSTEM

6001.0 PREPARATION AND EXCHANGE OF TRAIN MESSAGES

6001.1 Drawing of train-arrangement diagram and exchange of train messages

6001.1.1 Train-control officers must, before exchanging messages, draw a train-arrangement diagram on the special form (which must be provided for this purpose) to reflect the planned running of trains through the telegraph section. A separate message for each train must be completed on the prescribed question and reply message form before despatch and at time of receipt.

6001.1.2 The spaces not required on message forms must be crossed out and initialled. In the messages no alterations may be made, abbreviations used or particulars erased or deleted. A ball-point pen or indelible pencil must be used to complete messages.

6001.2 Except as provided in subclause 6001.2.1 the last train that has departed or will depart from the telegraph station to pass through the telegraph section, and the last train that has passed through the telegraph section from the opposite direction, must be shown in the messages as the "last departure" and "last arrival", respectively. Should a train not have passed through the telegraph section, as provided in clause 6011.0, 6012.0, 6013.0 or 6014.0 and such train is the "last departure" or "last arrival", the messages and tokens must be amplified to include the departure or arrival thereof, in addition to the departure and arrival of the last trains through the section.

6001.2.1 When authority is requested or is given to despatch a train after the arrival of opposing trains, particulars of all the opposing trains still to arrive, and not only of the last such train, must be reflected on the messages. The messages must also be amplified to indicate that no train will be allowed to follow the preceding train in each consecutive section.

6001.3 When train messages to be exchanged – Train messages must be exchanged as near to the departure time of trains as is consistent with the avoidance of delays to the trains.

6001.4 Use of telephone

6001.4.1 All train messages must be exchanged by telephone or radio. (If the radio is used, the train-control officers must identify each other beyond any doubt.) Messages must be completed legibly on the prescribed question and reply message forms and repeated in full to the train-control officer forwarding the message. Train-control officers must remain at the telephone/radio until the message forms have been duly completed.

6001.4.2 The train-control officer who forwards a question or reply message must ensure that it is correctly repeated and immediately record particulars thereof in the train register.

6001.4.3 The train-control officer that takes over shift where the telegraph order system is in operation must ensure daily, by carefully scrutinising and comparing the train messages, tokens and train-arrangement diagrams of the previous shift, that the train-control officer from whom he takes over strictly observes the instructions with regard to the working of trains according to that system. He must also endorse in the train register daily that he has carried out this instruction. When inspection officers visit stations and signal cabins, they must likewise sign the train registers to indicate that the instructions are being observed.

6001.4.4 The foregoing must also be observed when the telegraph order system is introduced temporarily.

6001.4.5 Any disregard of these instructions must be reported to the central operating office without delay.

6001.5 Numbering of messages – Train messages must be numbered in a separate series, starting with No. 1 on the first day of each month.

6001.6 Filing of message forms and train-arrangement diagrams – Forms with train messages and train-arrangement diagrams must be filed for six months. The forms must be packed flat (not rolled) and be made up in a separate package for each calendar month.

6002.0 PREPARATION OF ORDERS

6002.1 Information to be shown in spaces provided

6002.1.1 The train-control officer at each end of the telegraph section must make out the orders in accordance with the messages exchanged, after the messages have been exchanged.

6002.1.2 Orders must contain all necessary information. Spaces not required must be crossed out and initialled.

6002.1.3 Alterations, abbreviations or erasures may not be made on orders. Double-faced carbon paper must be used when preparing the tokens.

6002.2 Times and dates to be inserted

6002.2.1 The actual time and date at which a token is completed must be shown thereon. If it is completed exactly at midnight, "24:00" must be inserted thereon.

6002.2.2 If a train shown on a token as the "last arrival" or "last departure" actually arrived or departed on a day prior to that on which the token is issued, the date, as well as the time, such train arrived or departed must be shown.

6002.3 Preparation and delivery of tokens

6002.3.1 Tokens must not be made out until the prescribed question and reply messages have been exchanged between the train-control officers concerned. After a train token has been completed, the train-control officer must compare it with the train-arrangement diagram to ensure that it is correct. In each case the train-control officer must again communicate with the train-control officer at the other end of the telegraph section and confirm the correctness of the primary information on the completed token, e.g. the name of the interloop where a crossing is going to take place.

6002.3.2 The train-control officer at the despatch station must, when he hands an order to the locomotive personnel, also advise them in writing from which place equipped with warning boards they are to contact him to confirm that their train has arrived complete or must establish whether the section they are about to enter is clear of trains.

6002.3.3 Interworking and station to station tokens, section blocked-orders, as well as material train crossing and material train warning orders, must be prepared in duplicate. The driver must receive the copy. The originals of all these documents must be kept for record purposes.

6002.3.4 The train-control officer or other authorised official must hand the driver his copy of the "station to interloop" or "station to station" token directly to him. (See subclause 6007.1.)

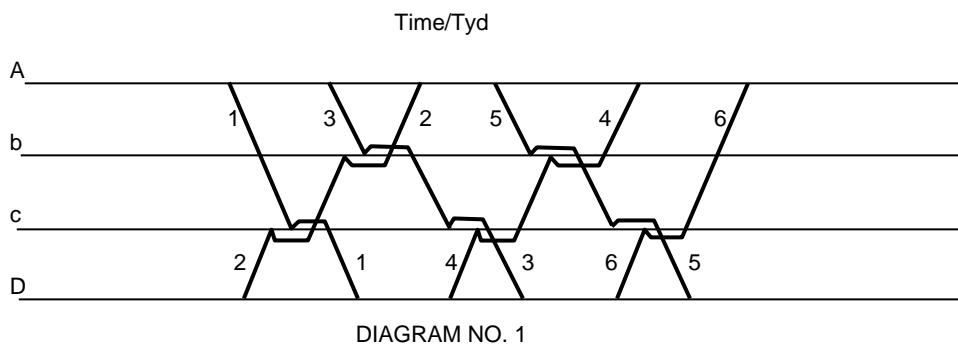
6002.4 Numbers and characters of trains to be shown

6002.4.1 All "station to interloop" and "interloop to interloop" tokens must show the number and character of each train to be crossed at the interloop.

6002.4.2 If a breakdown train is included in the crossing, the tokens must be amplified to show whether the breakdown train is en route to clear the section or is returning to its depot, as the case may be.

6002.5 Particulars of entire crossing arrangement to be furnished

6002.5.1 During interworking, full particulars of all the crossings constituting the whole crossing arrangement must be furnished under the heading, "Particulars of crossing arrangement" on all "outward" tokens, i.e. C orders, in accordance with the following example:



6002.5.1.1 A and D are telegraph stations and b and c are interloops. The crossings between trains Nos. 2, 4 and 6 and 1, 3 and 5 take place as indicated.

6002.5.1.2 The following particulars must be shown under the heading "Particulars of crossing arrangement" on the "orders C" issued to the locomotive personnel of each up train:

"No. 2 crosses No. 1 at c, No. 3 at b and No. 5 at A; No.4 crosses No. 1 at D, No. 3 at c and No. 5 at B; No. 6 crosses No. 3 at D and No. 5 at c".

6002.5.1.3 The following particulars must be shown under the said heading on the "orders C" issued to the locomotive personnel of each down train:

"No. 1 crosses No. 2 at c and No. 4 at D; No. 3 crosses No. 2 at b and No. 4 at c; No. 5 crosses No. 2 at A, No. 4 at b and No. 6 at c."

NOTE: Where a crossing between opposing trains is shown at the telegraph station, it shall only mean that, as far as the telegraph section is concerned, the crossing takes place thereat. The actual crossing may take place at an interloop beyond the station, thus in the adjoining telegraph section.

6002.6 Alterations or cancellations

- 6002.6.1 Alterations or cancellations must not be made and considered as complete until –
- 6002.6.1.1 all the tokens originally issued have been withdrawn from the locomotive personnel and destroyed together with the original(s) thereof and the train-arrangement diagram and the messages concerned have been endorsed "cancelled";
- 6002.6.1.2 separate messages (see following examples) have been exchanged on ordinary telegram forms to cancel the previous arrangements; and
- 6002.6.1.3 a new train-arrangement diagram has been drawn and messages for the altered train arrangements are exchanged before a train included therein enters the section. (See subclause 6022.1 in regard to the procedure to be followed in the event of all communication failing before train arrangements are completed.)

QUESTION

I intend cancelling * messages for train(s) No(s). to proceed to/cross at and have withdrawn and destroyed the token(s).

REPLY

I agree to cancellation of * messages for train(s) No(s)to proceed to/cross at..... Token(s) withdrawn and destroyed, noted. # I have withdrawn and destroyed the token(s) issued at this station.

* Insert nature of messages exchanged, e.g. A and AI or B and BI, as the case may be.
Delete if not applicable.

- 6002.7 **Tokens to be legible** – All telegraph orders must be filled in a bold, legible manner in order that locomotive personnel may have no difficulty in reading and understanding these important documents.
- 6002.8 **Filing of tokens** – The original copies of tokens must be filed for six months in the same manner as messages. (See subclause 6001.6.)
- 6002.9 **Driver's assistant to collect tokens** – On completion of the journey, the driver's assistant must collect all the tokens from his driver and hand them in together with his train journal, at his home depot.
- 6002.10 **Locomotive personnel not to use tokens intended for other trains** – Locomotive personnel may only proceed on a token issued for their own train, and must not depart on a token intended for another train, except as provided in the instructions relating to delayed or failed trains (see clauses 6008.0, 6009.0 and 6010.0.)

6003.0 TOKENS: HOW AND WHEN TO BE ISSUED

- 6003.1 Except as provided in subclauses 6003.2 and 6022.2, a train-control officer must not deliver a token or have it delivered unless the prescribed messages have been exchanged and he has satisfied himself that all the opposing trains previously authorised to approach his station, have actually arrived complete thereat, and he has also been notified that the last train in the same direction has arrived complete at the following telegraph station or other place in the telegraph section equipped with warning boards.
- 6003.2 If, after expiry of normal running time plus 30 minutes no report has been received from the preceding train, the train-control officer may, provided that neither the train waiting to depart nor the preceding train is a special explosives train, despatch the train in accordance with arrangements already completed and warn the locomotive personnel in writing that the preceding train may still be in the section and that they are to report their train's arrival at the next interloop or other place equipped with warning boards. (See clause 6022.0.)
- 6003.3 Should the train waiting to depart or the preceding train be a special explosives train, the train waiting to depart may not be despatched prior to the receipt of the report that the preceding train has cleared the section.
- 6003.4 **Driver to receive correct token** – The driver of every train will be responsible for ensuring that he gets the proper token to depart from a station, and that it meets the requirements of these instructions. The driver must establish from the time at which and date on which the token was completed, whether the token applies to his particular train.

6003.5 **Departure and arrival of trains**

- 6003.5.1 As soon as practicable after the departure of every train, the train-control officer must advise the train-control officer at the telegraph station in advance of the departure time and, as soon as practicable after the arrival of each train, the train-control officer must advise the train-control officer at the telegraph station in the rear of the arrival time.

- 6003.5.2 Upon arrival at the place in the telegraph section as directed by the train-control officer, the driver's assistant must contact the train-control officer in order that he can confirm with the driver's assistant that the train complete has arrived, and whether or not it is within the clearance mark in the rear. The train-control officer must also confirm that the section(s) in advance is/are clear. If no contact can be made with the one or the other telegraph station within 5 minutes, the driver's assistant must notify the driver of the circumstances. After expiry of normal running time plus 30 minutes, and provided that neither his train nor the preceding train is a special explosives train, and after ensuring that he is in possession of the correct token for the next section, the driver may depart. The driver's assistant must indicate the reason for the delay on his train journal.

- 6003.5.2.1 If his train or the preceding train is a special explosives train, the driver may only depart after report has been received that the preceding train has arrived complete.

- 6003.5.2.2 If the train-control officer receives confirmation that the train is not within the clearance mark in the rear of the place in the telegraph section as directed, a following train may not be despatched to that place until confirmation has been received that the previous train complete is within the clearance mark at the rear.

- 6003.5.3 The driver must, when he is authorised to depart in accordance with the provisions of subclause 6003.2 or 6003.5.2, proceed "on sight" to the next telegraph station or other place equipped with warning boards. He must regulate the speed in such a way that the train can be stopped short of an obstruction within the distance he can see ahead.

- 6003.5.4 If, however, a telegraph station has to close prior to the arrival of the train at the telegraph station in advance, the train-control officer need not remain on duty beyond the scheduled time for the purpose of receiving the "train arrived" advice.

6004.0 **EXAMINATION OF TRAIN MESSAGES**

- 6004.1 If necessary, a driver may, before leaving a telegraph station, be allowed to examine all messages and/or other documents regarding the running of his train. A driver may also communicate with the train-control officer at the telegraph station in advance if necessary.

6005.0 **STATION TO STATION WORKING: NATURE OF MESSAGES TO BE EXCHANGED AND TOKEN TO BE ISSUED**

- 6005.1 When a train must proceed from one telegraph station to another without having to cross a train at an interloop, an order A must be issued.

Example: V and Y are telegraph stations and w and x are interloops. No. 2 must proceed from V to Y.

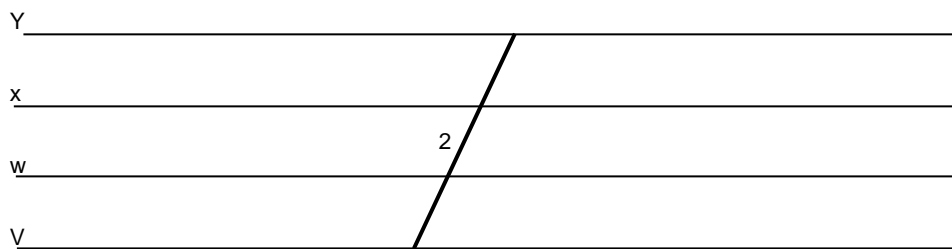


DIAGRAM NO. 2

Exchange messages A and AI for No. 2 to proceed from V to Y. V must issue order A to No. 2 to proceed from V to Y.

6006.0 **INTERWORKING: DESCRIPTION AND EXAMPLES**

- 6006.1 Under the telegraph order system, one train in each direction may be arranged to cross at an interloop, or at different interloops in the same telegraph section. Messages B and BI must be exchanged for each crossing between two trains at an interloop.

6006.2

One train crossing one train – If one train in each direction must cross at an interloop and thereafter proceed to the telegraph station in advance, each train must proceed on an “outward” order and each driver must carry an “inward” order for the opposing train.

Example: V and Y are telegraph stations and w and x are interloops. No. 2 must cross No. 1 at interloop w.

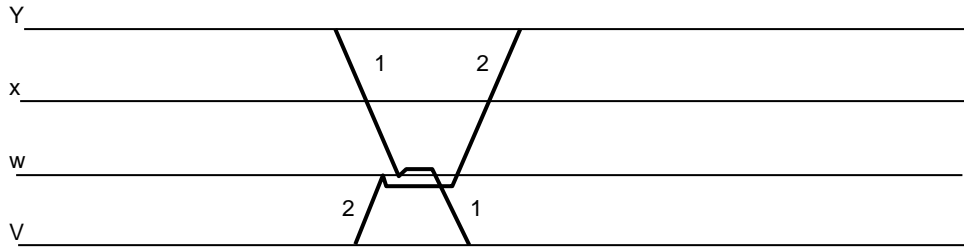


DIAGRAM NO. 3

Exchange messages B and BI for Nos. 1 and 2 to cross at w.

V must issue order C to No. 2 to proceed from V to w; order G to the driver to bring in No. 1 from w to V. Y must issue order C to No. 1 to proceed from Y to w; order G to the driver to bring in No. 2 from w to Y. The characters of the opposing trains must be shown on the tokens concerned. Particulars of the crossing arrangement must be shown under the appropriate heading on the “outward” tokens.

6006.3

One train crossing one train at different interloops – When one train must cross an opposing train at an interloop and thereafter proceed to another interloop to cross another opposing train before reaching the next telegraph station, the following procedure must be adopted:

6006.3.1

Station to interloop – The train must proceed to the first place of crossing on an “outward” order, and the driver must carry an “inward” or “intermediate” order, as the case may be, for the train which his train has to cross.

6006.3.2

Interloop to interloop – If the train has to proceed from an interloop to cross another train at another interloop before reaching the next telegraph station, it must proceed from one to the other place of crossing on an “intermediate” order, which must be carried by and obtained from the driver of the train which it crosses.

6006.3.3

Interloop to station – The train must proceed from the last place of crossing to the telegraph station on an “inward” order, which must be carried by and obtained from the driver of the train which it crosses.

Example: V and Y are telegraph stations and w and x are interloops. No. 2 must cross No. 1 at w and No. 3 at x. No. 4 must cross No. 3 at w.

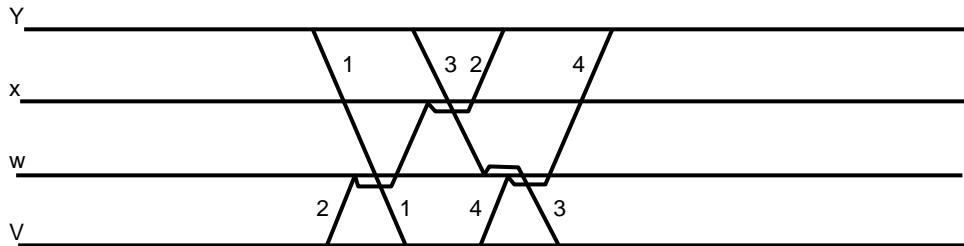


DIAGRAM NO. 4

Exchange messages B and BI for No. 2 to cross No. 1 at w, B and BI for No. 2 to cross No. 3 at x, and B and BI for No. 4 to cross No. 3 at w.

V must issue order C to No. 2 to proceed from V to w; to the driver order G to bring in No. 1 from w to V, and order E to take No. 3 from x to w; order C to No. 4 to proceed from V to w; order G to the driver to bring in No. 3 from w to V.

Y must issue order C to No. 1 to proceed from Y to w; order E to the driver, to take No. 2 from w to x; order C to No. 3 to proceed from Y to x; to the driver order G to bring in No. 2 from x to Y and order G to bring in No. 4 from w to Y.

The characters of the opposing trains must be shown on the tokens concerned.

Particulars of the crossing arrangement must be shown under the appropriate heading on all the “outward” tokens.

6007.0 INTERWORKING: GENERAL

6007.1 Handing over of tokens at interloop – When a train carrying a token for an opposing train arrives at the interloop before the opposing train, the copy of the token intended for the driver must be handed directly to him.

6007.2 Responsibility of locomotive personnel at an interloop – Except as provided in subclause 6007.4, the driver of a train arranged to cross at an interloop must satisfy himself that the proper token is held before leaving such interloop. (See train working rule No. 204.)

6007.3 A train passing another at an interloop – A train may not be arranged to pass another train at an interloop, except on certain branch lines as provided in clause 6012.0, or when the first train has become partially disabled or is losing time. In these circumstances the locomotive personnel may arrange to exchange the tokens in terms of clause 6008.0.

6007.4 Train delayed at interloop awaiting opposing train

6007.4.1 In interworking, if it is found after a train has been despatched, that the other train included in the crossing arrangement is later than expected, or cannot proceed owing to accident or other cause, the train-control officer must advise the train-control officer at the other end of the telegraph section concerned. They must thereafter arrive at an agreement and confirm it by the exchange of suitable messages on ordinary telegram forms, before the token of the waiting train is despatched. A written explanation giving the reason for the altered working, together with the token, must then be sent by the most expeditious means, by a competent employee, to the locomotive personnel of the train waiting at the interloop to enable them to proceed. (See also clause 6009.0.)

6007.4.2 Should speaking communication exist between the interloop and the station on each side, the waiting train can be authorised telephonically to proceed to the interloop concerned or next station. The train-control officers controlling the telegraph section must arrive at a clear understanding and confirm it by the exchange of suitable messages on ordinary telegram forms. The train-control officer at the next station must exchange with the driver of the waiting train the manuscript order below for the train to proceed to the interloop concerned or to the telegraph station, as the case may be. The driver must repeat the order to the train-control officer. Thereafter the driver must sign the order and take it as his authority to proceed to the interloop/telegraph station.

6007.4.3 The manuscript order must be worded as follows and the train-control officer who issues it, must keep a copy thereof:

From train-control officer at Date

To driver of train No. at

The section between interloop and # interloop/station is clear of trains and will be kept clear until you arrive at # interloop/station. This order is your authority to proceed from interloop to # interloop/station + there to cross train No.ø.....

Driver

Delete what is not applicable.
+ Delete if train is being authorised to proceed to station.
ø Insert character(s) of train(s).

6007.4.4 The foregoing procedure must be resorted to only when the waiting train would otherwise suffer lengthy delay.

6007.5 Locomotive personnel losing token

6007.5.1 If a driver loses a token intended for an opposing train, the locomotive personnel of the opposing train must, themselves, obtain authority by telephone in accordance with subclauses 6007.4.2 and 6007.4.3 for their train to proceed to the interloop concerned in advance or the next telegraph station, as the case may be.

6007.5.2 If, owing to the absence of speaking facilities, the terms of subclause 6007.5.1 cannot be observed, the driver of the train that can proceed must, immediately on arrival at the station in advance, inform the train-control officer thereof of the circumstances. This train-control officer must at once inform the train-control officer at the other end of the section of the token that has been lost and of the train that is waiting at the interloop concerned for the necessary authority to proceed. The latter official must immediately thereafter exchange suitable messages, on ordinary telegram forms, with the train-control officer at the other end of the telegraph section and send, by the quickest means, a manuscript order in accordance with the example in subclause 6007.4.3 to the waiting train to enable it to proceed to the interloop concerned in advance or the next telegraph station.

6008.0 TRAINS LOSING TIME: WHEN TOKENS ARE EXCHANGED

6008.1 When a train is partially disabled or is losing time, the driver may let a following train pass it at an interloop. When this is done, the driver of the train that is being passed, must record full particulars on the tokens held by the locomotive personnel of both trains. In the case of interworking, the tokens must be exchanged. The circumstances must be reported to the train-control officer at the station in advance.

Example: Y and V are telegraph stations and w and x are interloops. No. 2 must cross No. 3 at x. No. 4 must cross No. 3 at w. No. 2 becomes partially disabled at w, and the locomotive personnel decide to send No. 4 ahead of No. 2 to x.

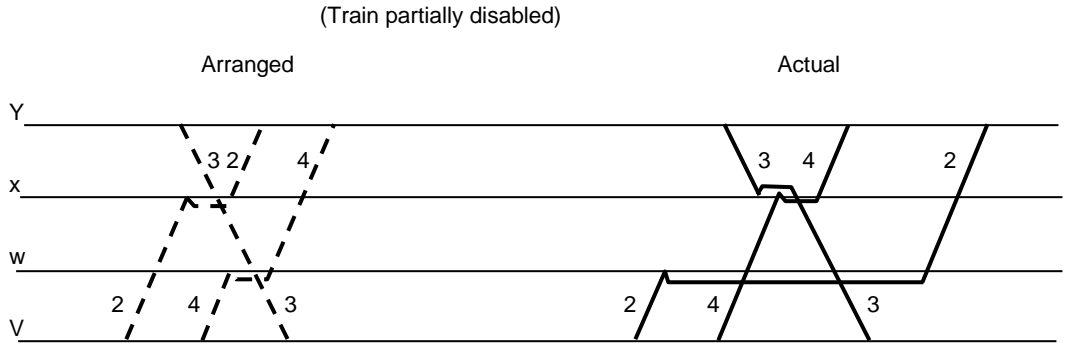


DIAGRAM NO. 5

Exchange messages B and BI for Nos. 2 and 3 to cross at x and B and BI for Nos. 4 and 3 to cross at w. V must issue order C to No. 2 to proceed from V to x; order E to the driver to bring No. 3 from x to w; order C to No. 4 to proceed from V to w; order G to the driver to bring in No. 3 from w to V. Y must issue order C to No. 3 to proceed from Y to x; to the driver, order G to bring in No. 2 from x to Y, and order G to bring in No. 4 from w to Y.

The characters of the opposing trains must be shown on the tokens concerned. Particulars of the crossing arrangement must be shown under the appropriate heading on all the "outward" tokens.

6008.2 The driver of No. 4, on arrival at w, obtains from the locomotive personnel of No. 2 their order C to proceed to x, and from the driver of No. 2, the "carried" order E to bring No. 3 from x to w and hands to the driver of No. 2 order C originally held by No. 4 to proceed from V to w, and order G for No. 3 to proceed from w to V. The circumstances necessitating the exchange must be endorsed on all the tokens concerned by the driver of No. 2 at w. On arrival of No. 4 at x, the driver of No. 3 must hand the order G, carried for No. 2, to No. 4. The driver of No. 4 must endorse the reason for the exchange of the tokens on the orders G for Nos. 2 and 4 before the driver departs to Y. The driver of No. 3, on arriving at w, hands over to the driver of No. 2 order G, originally carried for No. 4, to proceed from w to Y.

6009.0 REARRANGEMENT OF CROSSING WHEN TRAIN LOSES TIME

6009.1 When a train for which interworking has been arranged, is losing time, and a train has already entered the telegraph section from the opposite end, an train-control officer may allow a following train to pass the first-mentioned train at his station. Before this is done, the train-control officer must endorse the reason for the alteration on the tokens concerned, and thereafter exchange them, advising the train-control officer at the other end of the section. On arrival at the interloop, the driver of the train which has passed the delayed train must obtain and endorse the token, intended for the delayed train, with the reason for the altered working. If none of the trains affected has entered the section, fresh arrangements must be made. (See subclause 6002.6.)

6010.0 TRAIN COMPLETELY DISABLED: WITHDRAWAL AND ENDORSEMENT OF TOKENS

6010.1 When a train is completely disabled and is taken to and left at an interloop, all the tokens must be withdrawn from the locomotive personnel of the disabled train, and a written assurance obtained from them that the train will not be moved. This assurance, together with the tokens withdrawn, must be delivered to the train-control officer at the telegraph station in advance, who must advise the train-control officer at the telegraph station in the rear.

6010.2 When the telegraph section is clear of the opposing train arranged to cross the disabled train, tokens may be issued to subsequent trains to pass through the section, but such tokens must be endorsed:

"Train No. is totally disabled at and will not be moved."

6010.3 This course must be followed until all concerned have been advised that the disabled train has been removed from the interloop.

Example: V and Y are telegraph stations and w and x are interloops. No. 2 must cross No. 3 at x. No. 4 must cross No. 3 at w. No. 2 becomes totally disabled at w and is unable to proceed any further.

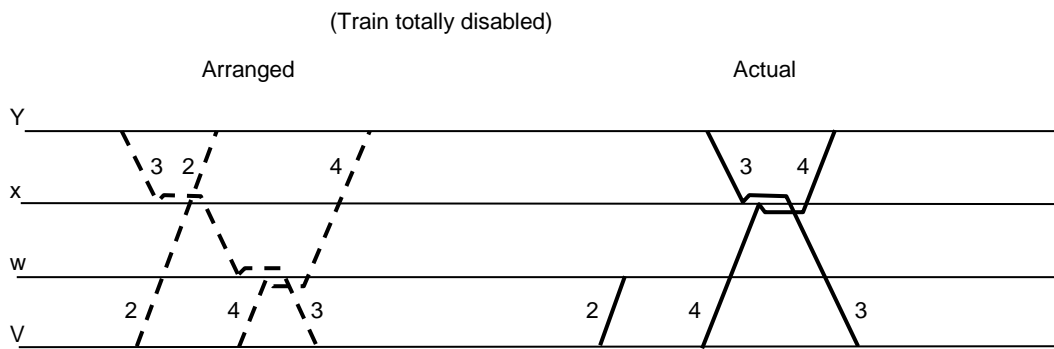


DIAGRAM NO. 6

Exchange messages B and BI for Nos. 2 and 3 to cross at x, and B and BI for Nos. 4 and 3 to cross at w. V must issue order C to No. 2 to proceed from V to x; order E to the driver to bring No. 3 from x to w; order C to No. 4 to proceed from V to w; order G to the driver to bring in No. 3 from w to V.

Y must issue order C to No. 3 to proceed from Y to x; to the driver, order G to bring in No. 2 from x to Y, and order G to bring in No. 4 from w to Y.

The characters of the opposing trains must be shown on the “outward” tokens concerned.

Particulars of the crossing arrangement must be shown under the appropriate heading on all the “outward” tokens.

On arrival of No. 4 at w, the driver must obtain from No. 2 order C issued to take No. 2 to x, and order E carried by No. 2 for No. 3 to proceed from x to w. The reason for the exchange of the tokens must be endorsed thereon by the driver of No. 2 at w. No. 4 then proceeds to x on the order C obtained from No. 2, and on arrival at x, the driver must hand to No. 3 the order E (originally carried by No. 2) to take it from x to w, and also the order G to take it from w to V. No. 4 must obtain from No. 3 order G brought for No. 2 to proceed from x to Y, and also order G brought for No. 4 to proceed from w to Y.

6011.0 TRAINS (EXCEPT MATERIAL TRAINS) PROCEEDING FROM A TELEGRAPH STATION TO AN INTERMEDIATE POINT AND RETURNING THEREFROM

6011.1 When a train, except if it is a material train (see clause 6013.0) or a train on a branch line as provided in clause 6012.0, has to proceed from a telegraph station to a point short of the telegraph station in advance, and to return therefrom without proceeding to the latter station, the line must be blocked against all opposing and following trains by the exchange of messages SB and SBI. An order SB must thereafter be handed to the driver.

6011.2 After the despatch of the train, no other train may be allowed to enter the telegraph section from the one or the other end (except as provided in train working rule No. 227 or 229, as the case may be) unless the train proceeding on the SB order has returned complete to the original departure point, and the train-control officer thereat has received the SB order from the driver.

6011.3 A train proceeding on an SB order must not proceed further into the telegraph section than the point indicated on the order.

6011.4 As soon as a train has returned and the SB order has been delivered to the train-control officer, messages P and PI must be exchanged.

6011.5 When a train has to proceed to a place in the telegraph section where there are no run-round facilities for the locomotive, the vehicles may be propelled in one direction provided a second driver's assistant is rostered on the train to control the movements.

6012.0 TRAIN RETURNING TO TELEGRAPH STATION AFTER CROSSING ANOTHER TRAIN OR BEING PASSED BY IT IN THE TELEGRAPH SECTION

6012.1 On certain branch lines stipulated in the local appendices, provided the prescribed messages have been exchanged between the train-control officers controlling the telegraph section, a train may be despatched from a telegraph station to an interloop –

6012.1.1 there to cross an opposing train or to be passed by another train in the same direction and thereafter to return to the original telegraph station, or

6012.1.2 to proceed further after crossing an opposing train at the interloop, and subsequently to return to the original telegraph station without proceeding to the telegraph station in advance.

6012.2 The following are examples of the working that may be adopted and the procedure to be followed in regard to the exchange of messages and the issue of tokens:

6012.2.1 **Example:** A and E are telegraph stations and b, c and d are interloops. No. 3 must proceed to c to cross No. 2 and thereafter to return to A as No. 4.

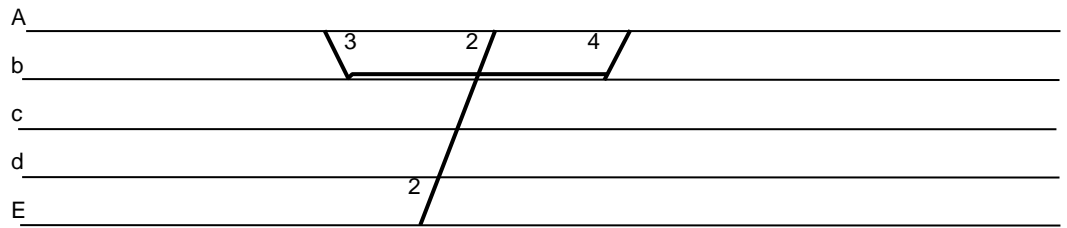


DIAGRAM NO. 7

A and E must exchange messages B and BI for No. 3 to cross No. 2 at c, and B and BI for No. 3 to cross No. 4 at c.
 A must issue order C to No. 3 to proceed from A to c; to the driver of No. 3 order G for No. 2 to proceed from c to A, and order G for No. 4 to proceed from c to A.
 E must issue order C to No. 2 to proceed from E to c.
 Particulars of the crossing arrangement must be shown under the appropriate heading on both the "outward" tokens.

6012.2.2 **Example:** A and E are telegraph stations and b, c and d are interloops. No. 3 must proceed to c, shunt for No. 5 at c, and thereafter return to A as No. 4.

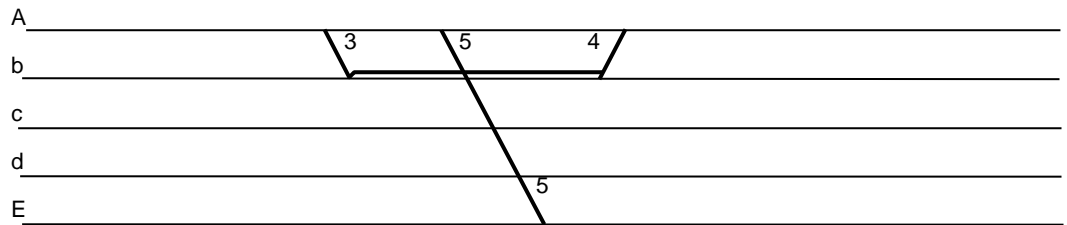


DIAGRAM NO. 8

A and E must exchange messages B and BI for No. 3 to cross No. 4 at c, showing No. 3 to shunt for No. 5 at c, and messages A and AI, suitably amplified, for No. 5 to proceed from A to E, passing No. 3 at c.
 A must issue order C to No. 3 to proceed from A to c, endorsed "Shunt for No. 5 at c", and order A to No. 5 to proceed from A to E, endorsed "Pass No. 3 at c"; order G to the driver of No. 5 to bring in No. 4 from c to A.
 The character of the opposing train must be shown on the token concerned.
 Particulars of the crossing arrangement must be shown under the appropriate heading on the "outward" token as follows: "No. 3 shunts for No. 5 and crosses No. 4 at c".

6012.2.3 **Example:** A and E are telegraph stations and b, c and d are interloops. No. 3 must cross No. 2 at c, then proceed to d, and thereafter return to A as No. 4.

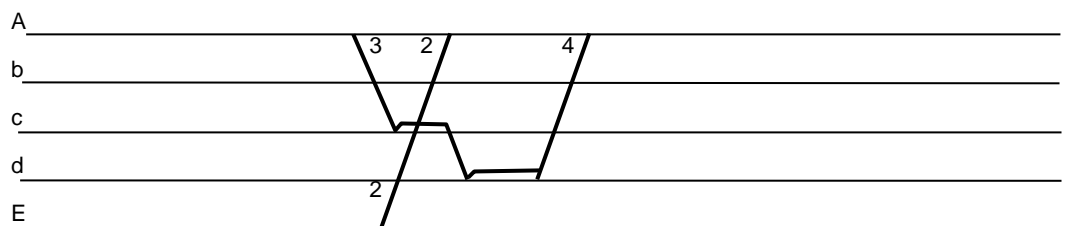


DIAGRAM NO. 9

A and E must exchange messages B and BI for No. 3 to cross No. 2 at c, and B and BI for No. 3 to cross No. 4 at d.
 A must issue order C to No. 3 to proceed from A to c; to the driver of No. 3 order G to bring in No. 2 from c to A, and order G to bring in No. 4 from d to A.
 E must issue order C to No. 2 to proceed from E to c; order E to the driver of No. 2 to bring No. 3 from c to d.
 The characters of the opposing trains must be shown on the tokens concerned.
 Particulars of the crossing arrangement must be shown under the appropriate heading on the "outward" tokens.

6012.3 Except as provided in train working rule No. 227 or 229, as the case may be, or where otherwise specially provided in the local appendix in respect of a particular telegraph section, no other train may be allowed to enter the telegraph section from the one or the other end until all the trains involved in an interworking arrangement as described in subclause 6012.1, have cleared the telegraph section.

6013.0 WORKING OF MATERIAL TRAINS

6013.1 Material train to run to a time table – A material train must be announced and run in accordance with train working rule No. 222. The notice issued in connection with the running of a material train must be compiled in accordance with the example shown hereunder:

**SPECIMEN NOTICE
MATERIAL TRAIN WORKING**

Notice No. Office

Date

Material train working in section

On a material train will work in the

telegraph section(s) under the direction of Track Inspector

Places or kilometre points between which the material train will work in the telegraph section(s):

.....

* Working hours : to :

Enters telegraph section at (place) at :

Returns to at :

Crosses all trains at

Stables at

..... to provide locomotive and personnel.

..... to supply drosided trucks for the work.

* The working hours is the period from the time when the material train must enter the telegraph section until it is due to arrive at one or the other of the two telegraph stations after completion of the work

6013.2 Portable telephone and portable radios to be provided – Except where otherwise provided by the central operating office the track inspector must arrange for the following to be provided:

6013.2.1 A portable telephone, or radios, for communication between the driver and the train-control officers; and

6013.2.2 three portable radios for conversations between the track inspector and the two employees affording protection (see subclause 6013.15.)

6013.2.3 The driver of the material train must ensure that the said instruments are available before his train enters the section in which it has to work.

6013.3 Messages and orders

6013.3.1 Before a material train may enter a section to work, messages Z and ZI must be exchanged and order Z issued to the locomotive personnel as authority to proceed. The train-control officer must also notify the locomotive personnel in writing at what time and at which place the material train is to clear the section. If the train is to leave the section at an interloop or ballast siding, the train-control officer is to be advised of the arrival time thereat. This must be done each time the material train is despatched from a telegraph station to work in the section.

6013.3.2 Before departure of a material train from an interloop (or ballast siding) the driver must establish from the train-control officer whether the section is clear of trains and at what time and at which place the material train is to clear the section. An entry in this respect must be made on the train journal.

6013.4 Issue of tokens for other trains

6013.4.1 A material train at work in a telegraph section does not interfere with the exchange of the usual messages and the issue of tokens and warning orders required for all other trains passing over the telegraph section.

6013.4.2 Except where there are no interloops in the telegraph section, the train-control officer at the telegraph station must, before despatching a train, notify the locomotive personnel in writing from which place they have to ascertain whether the material train has cleared the next section. (See subclause 6013.6.1.1.)

6013.4.3 If there are no interloops in the telegraph section, no train may be despatched before the material train has cleared the telegraph section. The tokens must be amplified to indicate at what time the material train has cleared the telegraph section. A warning order L, in addition to the usual train tokens, must be issued to the driver. (See subclause 6013.5.1.)

6013.5 Despatch of trains if material train is announced to cross all trains at next telegraph station

6013.5.1 If a train must enter the telegraph section during the working hours of a material train announced to cross all trains at the next telegraph station, the train messages must be amplified to the effect that the train will cross the material train at the next station. A warning order L, in addition to the usual station to station or station to interloop token, must be issued to the driver. (See subclause 6013.4.2.)

NOTE: The phrase "will cross the material train at the next telegraph station" does not necessarily mean that the material train is already standing or will still be standing at the next station, but indicates that cognisance must be taken of the fact that the material train occupies or may occupy the line when the other train approaches its working area, even though the working hours of the material train may have expired.

Example: Y and V are telegraph stations and x and w are interloops. The material train's working hours is from 07:00 to 12:00 and it must cross all trains at Y as announced in the material train working notice. No. 2 must cross No. 3 at x. No. 4 must cross No. 5 at w. Nos. 6 and 8 must proceed from V to Y.

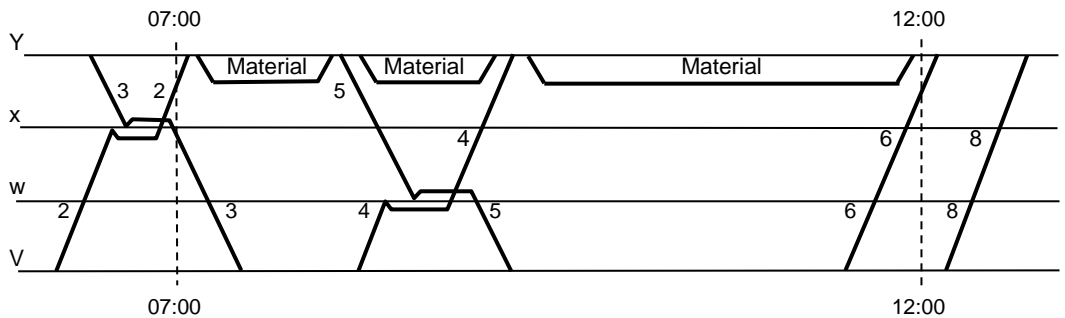


DIAGRAM NO. 10

Exchange messages B and BI for Nos. 2 and 3 to cross at x, amplified that No. 2 will cross the material train at Y.

V must issue order C to No. 2 to proceed from V to x and warning order L to cross the material train at Y; order G to the driver of No. 2 to bring in No. 3 from x to V.

Y must issue order C to No. 3 to proceed from Y to x; order G to the driver to bring in No. 2 from x to Y.

The characters of the opposing trains must be shown on the tokens concerned.

Particulars of the crossing arrangement (excluding the material train) must be shown under the appropriate heading on all the "outward" tokens.

Exchange messages Z and ZI for the material train to proceed as per material train working notice.

Y must issue order Z to the material train to proceed as per material train working notice.

Exchange messages B and BI for Nos. 4 and 5 to cross at w, amplified that No. 4 will cross the material train at Y, and messages Z and ZI for the material train to proceed as per material train working notice.

V must issue order C to No. 4 to proceed from V to w and warning order L to cross the material train at Y; order G to the driver of No. 4 to bring in No. 5 from w to V.

Y must issue order C to No. 5 to proceed from Y to w; order G to the driver of No. 5 to bring in No. 4 from w to Y; order Z to the material train to proceed as per material train working notice.

The characters of the opposing trains must be shown on the tokens concerned.

Particulars of the crossing arrangement (excluding the material train) must be shown under the appropriate heading on the "outward" tokens.

Exchange messages Z and ZI for the material train to proceed as per material train working notice.

Y must issue order Z to the material train to proceed as per material train working notice.

Exchange messages A and AI for No. 6 to proceed from V to Y, amplified that No. 6 will cross the material train at Y.

V must issue order A to No. 6 to proceed from V to Y and warning order L to cross the material train at Y.

Exchange messages A and AI for No. 8 to proceed from V to Y.

V must issue order A to No. 8 to proceed from V to Y.

6013.5.2 Under no circumstances may a material train announced to cross all trains at a telegraph station, be despatched from that station on a Z order while that section, in which the material train is to work, is occupied by an opposing or preceding train. (Also see subclause 6013.10.)

6013.6 Dispatch of trains if material train is announced to cross all trains at an interloop

6013.6.1 If a train or trains is/are expected to enter or to be in the telegraph section during the working hours of a material train, announced to cross all trains at an interloop, the following procedure must be followed:

6013.6.1.1 If the train(s) will cross the material train at the interloop (or material siding) indicated in the material working notice, messages H and HI, in addition to the ordinary messages, must be exchanged for each such crossing with the material train, and a copy of crossing order H must be handed to the driver of the train proceeding to cross the material train; OR

6013.6.1.2 if the material train has to be held back at a station pending the arrival or departure of another train, or if the material train has been authorised to proceed to a telegraph station during the working hours and a train has to be despatched from the station at one or each end of the telegraph section whilst the material train is being held at the station concerned, the question and reply messages respectively for the other train(s) must be amplified as follows: "Material train must/will (as the case may be) be held back at station until after arrival/departure (as the case may be) of train No.", and "Material train must be held back at station until after arrival/departure of train No., correct" or "Material train will be held back at station until after arrival/departure of train No., noted", as the case may be. The A order or "outward" inter-tokens, as the case may be, must be amplified as follows: "Material train being held back at station until after arrival/departure of train No." (in the case of an "outward" inter-token, by entering the amplification under the heading, "Particulars of crossing arrangement").

6013.7 Material train having to proceed from interloop to telegraph station during working hours or on completion of work

6013.7.1 A material train which is announced to cross all trains at an interloop, may not proceed to a telegraph station on the Z order, irrespective of whether or not the work it has to perform has been completed, unless the Z order has been duly amplified in accordance with subclause 6013.7.3.

6013.7.2 The driver must communicate with the telegraph station to which the material train has to proceed and advise the train-control officer thereat that the train is ready to depart to the station.

6013.7.3 The train-control officers controlling the telegraph section must come to an agreement and ensure that the material train has crossed all the trains that are in the telegraph section and that had to be crossed in accordance with the exchanged messages H and HI. The telegraph section must then be blocked against opposing and following trains by the exchange of messages J and JI. The train-control officer at the station to which the material train must proceed, must exchange with the driver the prescribed amplification of the Z order, viz "Authority to proceed from interloop to telegraph station", which the driver must record on the reverse side of the order form. Thereafter the driver must repeat the amplification to the train-control officer. The driver must then sign the amplification take the Z order thus supplemented as his authority to proceed to the telegraph station.

6013.7.4 As soon as the material train arrives at the telegraph station, the Z order must be handed to the train-control officer and he must immediately cancel it.

Example (to be read together with subclauses 6013.6 and 6013.7):

Y and V are telegraph stations and x and w are interloops. The material train's working hours are from 07:00 to 15:00 and it must cross all trains at x as announced in the material train working notice. No. 2 must cross No. 3 at x. No. 4 must cross No. 5 at w and No. 7 at x. Nos. 6 and 8 must proceed from V to Y.

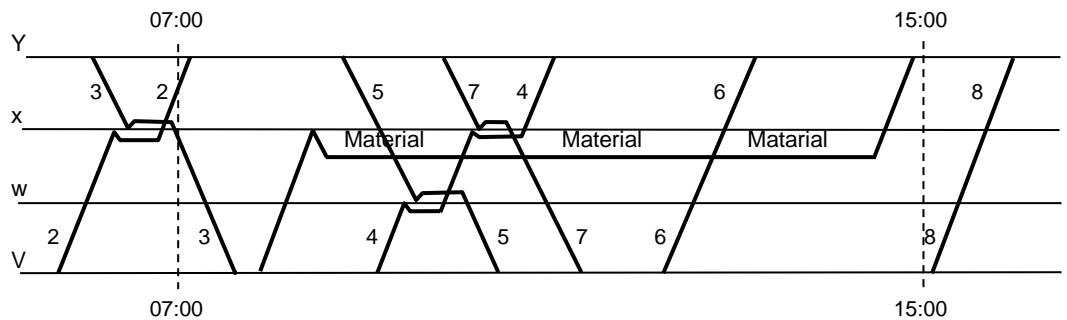


DIAGRAM NO. 11

Exchange messages B and BI for Nos. 2 and 3 to cross at x, amplified that the material train must/will be held back at V.

V must issue order C to No. 2 to proceed from V to x; order G to the driver to bring in No. 3 from x to V.

Y must issue order C to No. 3 to proceed from Y to x; order G to the driver to bring in No. 2 from x to Y.

The characters of the opposing trains must be shown on the tokens concerned.

Particulars of the crossing arrangement and a note indicating that the material train is being held back at V, must be shown under the heading "Particulars of crossing arrangement" on both the "outward" tokens.

Exchange messages Z and ZI for the material train to proceed as per material train working notice.

V must issue order Z to the material train to proceed as per material train working notice.

Exchange messages B and BI for No. 4 to cross No. 5 at w and B and BI for No. 4 to cross No. 7 at x, and messages H and HI for each train to cross the material train at x.

V must issue order C to No. 4 to proceed from V to w and crossing order H to cross the material train at x; to the driver of No. 4, order G to bring in No. 5 from w to V, and order G to bring in No. 7 from x to V.

Y must issue order C to No. 5 to proceed from Y to w and crossing order H to cross the material train at x; order E to the driver of No. 5 to take No. 4 from w to x; order C to No. 7 to proceed from Y to x and crossing order H to cross the material train at x; order G to the driver of No. 7 to bring in No. 4 from x to V.

The characters of the opposing trains must be shown on the tokens concerned.

Particulars of the crossing arrangement (including the material train) must be shown under the appropriate heading on all the "outward" tokens.

Exchange messages A and AI for No. 6 to proceed from V to Y and messages H and HI for that train to cross the material train at x.

V must issue order A to No. 6 to proceed from V to Y and crossing order H to cross the material train at x.

Exchange messages J and JI for the material train to proceed from x to Y.

Y must exchange the prescribed amplification of the Z order with the driver of the material train to proceed from x to Y.

Exchange messages A and AI after arrival of the material train at Y for No. 8 to proceed from V to Y.

V must issue order A to No. 8 to proceed from V to Y.

6013.8 Crossing with material train at a place other than the booked crossing place

6013.8.1 A crossing must not be arranged with a material train at a place in the telegraph section if it is not the booked crossing place, unless the material train is at a telegraph station and has not yet entered the telegraph section.

6013.8.2 When interworking is arranged at other than the booked crossing place, the material train and other train concerned must proceed to the crossing place on the usual inter-tokens. The driver of the material train must carry the necessary token for the opposing train. Z and ZI messages must be exchanged and after the words "material train working notice No.", amplified "after crossing train No. at". A Z order, amplified, "Must be handed to the driver after crossing No. at", must be handed to the driver's assistant of the material train and to the driver the inter-token for his train and the carried token. The driver's assistant of the material train must not deliver the Z order to his driver until the crossing has been completed.

Example: Y and V are telegraph stations and x and w are interloops. The material train's working hours are from 07:00 (the time it must enter the telegraph section at Y), and it must cross all trains at V as announced in the material train working notice. No. 2 must proceed from V to Y. To obviate a delay to No. 2, it must cross the material train at x instead of at V.

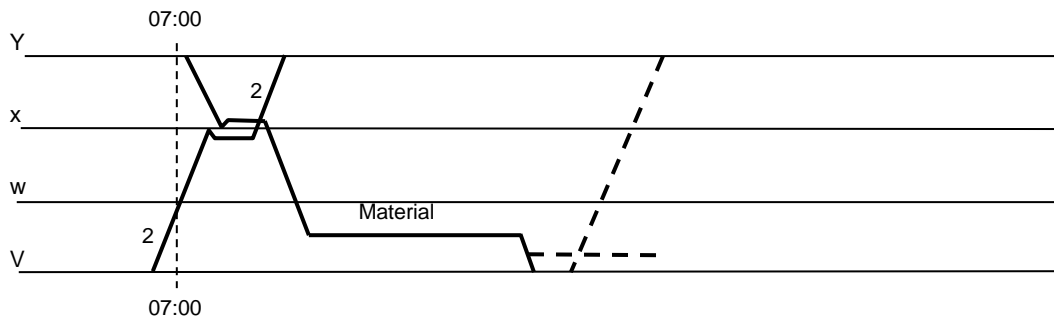


DIAGRAM NO. 12

Exchange messages B and BI for No. 2 and the material train to cross at x; also messages Z and ZI for the material train to proceed as per material train working notice, amplified, "after crossing train No. 2 at x".

V must issue order C to No. 2 to proceed from V to x.

Y must issue order C to the material train to proceed from Y to x; to the driver order G to bring in No. 2 from x to Y, and to the driver's assistant an order Z endorsed: "To be handed to the driver after having crossed No. 2 at x".

The characters of the opposing trains must be shown on the tokens concerned.

Particulars of the crossing arrangement must be shown under the appropriate heading on the "outward" tokens.

(Should the material train working notice have stipulated that the material train must cross all trains at w, the procedure in this case would have been the same.)

6013.9 Ordinary train tokens to be amplified

6013.9.1 When the material train is the last train to have arrived at and/or departed from one of the telegraph stations controlling the telegraph section in which a material train is working or has worked, the token issued to a subsequent train over that section must show the arrival and departure times of the last through trains, and must be amplified to show the time the material train arrived and/or departed.

6013.9.2 Each station to station and station to interloop token issued to a driver who, in terms of these instructions, must also receive a warning order L or crossing order H, must be endorsed that the warning order L or crossing order H, as the case may be, is attached.

6013.10 Other trains not to be delayed – The material train must be shunted clear of the main line timeously to prevent delays to other trains. The driver must keep in touch with the telegraph station at each end of the section so that other trains will not be delayed but full advantage may nevertheless be taken of the available time for maintenance work. The train-control officer concerned at the telegraph station at each end of the section must give prompt response to telephone calls from the driver of the material train whilst it is in the section.

6013.11 Driver of material train to know at what time to expect other trains – A train must not be allowed to enter a telegraph section in which a material train works or will work unless the driver of the material train has been advised of its expected departure time, and the train must also not be allowed to depart before the expected departure time as furnished to the driver of the material train. A driver must not make up time between the telegraph station and the place where his train must cross the material train.

6013.12 Failure of communication

6013.12.1 If communication fails between the stations while the material train is in the telegraph section and pilot working has to be introduced in accordance with subclause 6022.1, maintenance work must be suspended and the material train shunted clear of the main line. Should communication with the driver of the material train also be interrupted, the person proceeding along the line with the necessary pilot-working forms must take along written instructions to this effect from the train-control officer to the driver of the material train. Should the material train be crossing other trains at an interloop, the material train must stand clear on the loop until pilot working has been introduced and the pilotman accompanies the driver to the telegraph station concerned or authorises him by means of a pilotman's ticket to proceed to that station.

6013.12.2 If the driver of the material train is unable to communicate with either of the stations, he must let his train return to the place where it has to cross other trains and there receive further instructions from the train-control officer(s).

6013.13 **Change in working hours of material train** – A change in the working hours of a material train, namely if it is evident beforehand that the train will enter the telegraph section in which it has to work appreciably later than announced, or if it clears the telegraph section before the booked time, must be made known by telegram and a copy thereof handed to the locomotive personnel of other trains affected.

6013.14 **Arrival of material train to be advised** – Each time the material train arrives at the telegraph station at the one or the other end of the telegraph section, the train-control officer thereat must withdraw and cancel the Z order and advise the train-control officer at the opposite end that the material train has cleared the section.

6013.15 **Protection of material train** – Before a material train enters a section in which it has to work, the track official in charge must appoint two competent employees to protect the train. The driver must satisfy himself that those employees understand the duties to be undertaken and that they are equipped with the necessary hand-signalling equipment and detonators. While the material train is working in the working area outside an area protected by fixed signals, irrespective of whether it is moving or is stationary, it must be protected in both directions in accordance with subclause 11010.11. The driver is responsible for seeing that protection is afforded, but all concerned should co-operate closely to ensure that the prescribed distance is maintained between the material train and each employee affording protection.

6014.0 **BANKED OR ASSISTED TRAINS**

6014.1 **Banking locomotive proceeding through section** – When a train is to be banked through a telegraph section, the word “banked” must be inserted after the number of the train in the question and reply messages. The token handed to the driver of the leading locomotive must be amplified accordingly.

6014.2 **Detaching of assisting locomotive** – A through assisting or banking locomotive must not in any circumstances be detached from the train it is assisting or banking, except at a telegraph station, or except as laid down in train working rule No. 227, 229 or 233.

6014.3 **Assisting locomotive not proceeding through the section** – When a banking or assisting locomotive does not assist the train to the telegraph station in advance, the messages exchanged for the train must be amplified as follows:

Question Message

“Banking (or assisting) locomotive is assisting train No. to * and returning to this station.”

Reply Message

“Banking (or assisting) locomotive assisting train No. to * and returning to your station, noted.”

* The place (kilometre point, interloop, etc.) where the banking/assisting locomotive will be detached, must be inserted here.

6014.4 The driver of the banking or assisting locomotive must be handed a token authorising him to proceed to and return from the intermediate point. Except as provided in train working rule No. 227(3), the train-control officer despatching the train must not allow another train to enter the section from that end until the banking or assisting locomotive has returned and he has received the token from the driver. Immediately on his return, the driver of the banking or assisting locomotive must hand the token to the train-control officer, who must file it for reference purposes.

6014.5 **Specimen of token** – The token to be given to the driver of the banking or assisting locomotive must read as follows:

..... station.

Date

To driver of locomotive banking/assisting train No.

Messages having been exchanged, you are hereby authorised to proceed to*, assisting

train No. No train will be allowed to enter the section from this end until you return to this station and hand this token back to me.

Train-control officer

Time

* The place (kilometre point, interloop, etc.) where the banking/assisting locomotive will be detached, must be inserted here.

6015.0 DESPATCH OF TRAIN WHICH IS TO PERFORM SHUNTING OR OTHER WORK IN THE TELEGRAPH SECTION

6015.1 When a train is required to perform shunting or other work in the telegraph section, the messages and the token for such train must be amplified in accordance with the provisions of subclauses 6001.2.1 and 6002.1.2 and the locomotive personnel must be notified in writing to indicate from which place in the telegraph section equipped with warning boards, the locomotive personnel must advise if their train has arrived complete. Except as provided in train working rule No. 227 or 229, the train-control officer at the telegraph station in the rear may not despatch a following train before he has been advised that the preceding train has arrived complete at the following telegraph station or other place in the telegraph section equipped with warning boards, as the case may be.

6016.0 BREAKDOWN TRAIN OR LIGHT LOCOMOTIVE REPLACING DISABLED LOCOMOTIVE

6016.1 A breakdown train proceeding to clear the line, or a light locomotive proceeding to assist or replace a locomotive which has become disabled in section, must be given precedence over all other trains, and information in regard to the running of such breakdown train or light locomotive must be sent forward. (See train working rule No. 213 and clause 1036.0 of this appendix.)

6017.0 STOPPING AND EXAMINING OF TRAIN

6017.1 Information must be sent immediately to the telegraph station in advance should anything unusual be noticed on a train passing through a station, and the provisions of train working rule No. 110 must be observed. The train-control officer receiving the information must stop the train and deal with it as the occasion may require.

6018.0 TRAIN PASSED WITHOUT MARKER

6018.1 Should a train pass through a station without a marker or, at night, a tail light, the train-control officer must at once advise the train-control officer at the telegraph station on each side, and, unless it has been ascertained that the line is not obstructed, prompt action must be taken to warn the driver of the next train to enter the section. If the line is obstructed, steps must be taken to clear the obstruction in accordance with subclause 6019.2.

6018.2 The train-control officer at the telegraph station in advance must stop the approaching train and instruct the driver's assistant to replace the marker or relight the tail lamp.

6019.0 RUN-AWAY VEHICLES

6019.1 Should vehicles or a train be running away, the train-control officer must at once advise the train-control officer at the telegraph station towards which the vehicles or train is running. The train-control officer receiving the advice must stop any train about to enter the same section and adopt every means possible to stop or divert the vehicles or train, failing which he must pass the information to the next telegraph station.

6019.2 When vehicles run away, the train-control officer must ascertain where such vehicles have come to a standstill in the section. Should the vehicles not have become derailed, a locomotive must be sent to clear them. The train-control officer despatching the locomotive must exchange suitable messages, on ordinary telegram forms, with the train-control officer at the other end of the section concerned, and issue a manuscript order to the driver of the locomotive as his authority to clear the vehicles. In the event of the vehicles having become derailed, the obstruction must be cleared in accordance with the provisions of train working rule No. 229(2) or (3).

6019.3 In the event of a train having entered the section before the run-away occurs, a locomotive must not be sent to remove the run-away vehicles in terms of subclause 6019.2 until it has been ascertained that they are not being propelled.

6020.0 OPENING AND CLOSING OF STATIONS

6020.1 Opening – On re-opening a telegraph station on a section normally worked under the telegraph order system, the train-control officer must comply with the provisions of train working rule No. 90.

6020.2 When the speaking instruments fail – If, on re-opening a telegraph station, a train-control officer finds that the speaking instruments have failed, he must not interfere in any way with the train working arrangements unless he has received written intimation regarding the running of trains, as provided in clause 6021.0.

6020.3 Closing – When a train has been despatched under the telegraph order system from a telegraph station and, at the scheduled time of closing of such station, it has not yet arrived at the telegraph station in advance, the train-control officer need not remain on duty beyond the scheduled time of closing.

- 6020.4** **When a train-control officer must remain on duty** – In the event of a train for which a train-control officer has given “line clear” and due to arrive at the telegraph station concerned prior to the scheduled time of closing, being delayed after entering the section, that train-control officer must remain on duty until the train arrives and must hand the token for the section in advance to the locomotive personnel.
- 6020.5** **When a train-control officer need not remain on duty** – A train-control officer at a telegraph station need not remain on duty beyond the scheduled time of closing, if a train approaching his station carries a token valid to a station or interloop beyond his station.
- 6020.6 Messages exchanged and tokens issued for the movement of trains over an extended telegraph section, must be amplified as follows:

“..... station(s) closed.”
- 6021.0** **STATION OPENING WHILST TRAIN IS IN SECTION**
- 6021.1** **Stations with semaphore signals** – If a station has semaphore signals and trains may therefore not be arranged to cross there while the station is closed (see subclause 8043.3), opposing trains or trains following each other may also not be despatched into the extended telegraph section with tokens made out to that station because it is due to open while the trains are en route thereto. Under these circumstances, only one train running in one or the other direction may be despatched to the station, which is due to open, with a token made out thereto. The messages exchanged and the token issued, must be amplified as follows:

“..... closed station is due to open by the time train No. arrives there”.
- 6021.2** **Stations without semaphore signals** – When arrangements are made for opposing trains, or for one or more trains proceeding in the same direction, to proceed into an extended telegraph section to a closed station without semaphore signals, and such station is due to open whilst the trains are en route, a token, made out to the telegraph station which is due to be open by the time the trains are due to arrive there, must be issued to each train. The messages exchanged and the tokens issued must be amplified as follows:

“..... closed station is due to be open by the time train No. arrives there”. The messages and tokens must also be amplified to show the number and character of the train to be crossed, in case of opposing trains being worked to the closed station.
- 6021.3 When a train is despatched in accordance with subclause 6021.1.2 or 6021.2, the train-control officer must send written information by the driver to the train-control officer at the telegraph station which is due to open, showing the trains still in the extended telegraph section at the time the telegraph station opens, and particulars of any alterations made in the normal working which may affect the subsequent despatch of trains from that station. After sending this information, no alterations must be made in the arranged working over the extended telegraph section before it has been ascertained that communication is in order at the station which is due to open, and the train-control officer thereat is advised of the proposed alterations.
- 6021.4 If a train arrives at a telegraph station (with or without semaphore signals) where the train-control officer has, in the meantime, assumed duty, and the token held is valid to a station or interloop beyond, the train-control officer at the telegraph station must sign it. Should it be necessary, on account of accident, irregularity or serious delay, to alter the existing train arrangements, the train-control officer must, before making any alteration, advise the train-control officer at the station on each side and obtain their authority.
- 6022.0** **ALL COMMUNICATION FAILED**
- 6022.1 Except as provided in subclause 6022.2, pilot working must be introduced in accordance with subclause 3027.3 in the event of all communications failing, also when the telephones fail before completion of the train arrangements. However, should the telephones fail before the completion of an intended amendment to or cancellation of previous train arrangements (see subclause 6002.6), the arrangements already completed must be acted upon. If the last train to be despatched in accordance with the arrangements already completed will run on a station-to-station order, a person competent to act as pilotman, with the necessary pilot-working forms, may proceed by that train to the station in advance.
- 6022.2 If a train has to be despatched in the direction of a terminal station on a branch line and there is no train, locomotive or motor trolley at the terminal station and between the station from where the train has to be despatched and the terminal station, and it is therefore not possible for an opposing train to be on the line, pilot working need not be introduced. The words “Messages A and AI having been exchanged” on the token issued to the driver must be crossed out and the words “All communication has failed. As the telegraph section is clear of trains,” substituted therefor in red ink. The train-control officer must initial these amendments. The driver must also be notified in writing that the train-control officer at the next station has no knowledge of the train’s approach or of its expected time of arrival, as the case may be.

6023.0

MESSAGES AND TOKENS

6023.1

Classification of messages and tokens – The particulars of the messages to be exchanged and the orders and warnings to be issued are as follows:

Prefix of order or warning	Prefixes of telegraph messages to be exchanged		Name of order or warning		
	Question or proposal	Reply			
A	A	AI	Station to station order		
C } E } G }	B	BI	{ Station to interloop order Interloop to interloop order Interloop to station order		
H			H	HI	Material train crossing order
L					Material train warning order
Z	Z } J }	ZI } JI }	Material train proceeding order		
SB	SB } P }	SBI } PI }			

STASIE-TOT-STASIEORDERBERIG
STATION TO STATION ORDER MESSAGE

VRAAGBERIG QUESTION MESSAGE		Kantoordatumstempel <i>Office date stamp</i>
Voorvoegsel A <i>Prefix</i>		
# Ontvang/Gestuur om <i># Received/Sent at</i>	Berignommer <i>Message number</i>	
Van <i>From</i>	Aan <i>To</i>	
Laaste vertrek <i>Last departure</i>	# Laaste aankoms <i># Last arrival</i>	
# Treinnommer <i># Train number</i>	is nog in die telegraaftrajek <i>is still in the telegraph section</i>	
# Nadat <i># After</i>	aangekom het, <i>has/have arrived,</i>	
mag ek <i>may I despatch</i>	na* <i>to*</i>	-stasie afstuur? <i>station?</i>
Geen trein sal toegelaat word om dié trein in elke agtereenvolgende trajek te volg nie <i>No train will be allowed to follow this train in each consecutive section</i>		

ANTWOORD
REPLY

Voorvoegsel AI <i>Prefix</i>		
# Ontvang/Gestuur om <i># Received/Sent at</i>	Berignommer <i>Message number</i>	
Van <i>From</i>	Aan <i>To</i>	
Laaste vertrek <i>Last departure</i>	, kennis geneem <i>, noted</i>	# Laaste aankoms <i># Last arrival</i> , korrek <i>, correct</i>
# Treinnommer <i># Train number</i>	is nog in die telegraaftrajek, kennis geneem <i>is still in the telegraph section, noted</i>	
# Nadat <i># After</i>	aangekom het, mag u / # U mag <i>has/have arrived, you may despatch / # You may despatch</i>	
afstuur na* <i>to*</i>	-stasie <i>station</i>	
Geen trein sal toegelaat word om dié trein in elke agtereenvolgende trajek te volg nie <i>No train will be allowed to follow this train in each consecutive section</i>		
Tyd <i>Time</i>	Datum <i>Date</i>	
Treinbeheeramptenaar <i>Train-control officer</i>		

Skrap nie-toepaslike of onnodige woorde of reëls
Delete words or lines not applicable or necessary
 * Voeg in naam van stasie
** Insert name of station*

KRUISINGSBERIG
CROSSING MESSAGE

VRAAGBERIG QUESTION MESSAGE		Kantoordatumstempel <i>Office date stamp</i>
Voorvoegsel <i>Prefix</i> B		
# Ontvang/Gestuur om <i># Received/Sent at</i>	Berignommer <i>Message number</i>	
Van <i>From</i>	Aan <i>To</i>	
# Laaste vertrek / Sal laaste vertrek wees <i>#_Last departure / Will be last departure</i>	# Laaste aankoms <i># Last arrival</i>	
# Treinnommer <i># Train number</i>	‡ ‡	is nog in die telegraaftrajek <i>is still in the telegraph section</i>
# Nadat <i># After</i>		aangekom het, <i>has/have arrived,</i>
# sal ek / Ek sal <i># I will send on</i>		aanstuur om <i>to cross</i>
op <i>at</i>		-tussenuitwykspoor te kruis <i>interloop</i>
Geen trein sal toegelaat word om dié treine in elke agtereenvolgende trajek te volg nie <i>No train will be allowed to follow these trains in each consecutive section</i>		

ANTWOORD
REPLY

Voorvoegsel <i>Prefix</i> BI		
# Ontvang/Gestuur om <i># Received/Sent at</i>	Berignommer <i>Message number</i>	
Van <i>From</i>	Aan <i>To</i>	
# Laaste vertrek / Sal laaste vertrek wees <i>#_Last departure / Will be last departure</i>	, kennis geneem <i>, noted</i>	# Laaste aankoms <i># Last arrival</i> , korrek <i>, correct</i>
# Treinnommer <i># Train number</i>	‡ ‡	is nog in die telegraaftrajek, korrek / kennis geneem <i>is still in the telegraph section, correct / noted</i>
# Nadat <i># After</i>		aangekom het stem ek in dat / # Ek stem in dat <i>has/have arrived, I agree to / # I agree to</i>
met <i>crossing</i>	op <i>at</i>	-tussenuitwykspoor kruis <i>interloop</i>
Geen trein sal toegelaat word om dié treine in elke agtereenvolgende trajek te volg nie <i>No train will be allowed to follow these trains in each consecutive section</i>		
Tyd <i>Time</i>	Datum <i>Date</i>	
Treinbeheeramptenaar <i>Train-control officer</i>		

- # Skrap nie-toepaslike of onnodige woorde of reëls
Delete words or lines not applicable or necessary
- ‡ Voeg in aard van trein
‡ Insert character of train

MATERIAALTREINKRUISINGSBERIG
MATERIAL TRAIN CROSSING MESSAGE

Kantoordatumstempel
Office date stamp

**VRAAGBERIG
QUESTION MESSAGE**

Voorvoegsel **H**
Prefix

Ontvang/Gestuur om
Received/Sent at

Berignommer
Message number

Van
From

Aan
To

Die materiaaltrein is geskeduleer om alle treine by
The material train is scheduled to cross all trains at

-tussenuitwykspoor te kruis.
interloop.

Stem u in dat treinnommer
Do you agree to train number

met die materiaaltrein by daardie tussenuitwykspoor kruis?
crossing the material train at that interloop?

**ANTWOORD
REPLY**

Voorvoegsel **HI**
Prefix

Ontvang/Gestuur om
Received/Sent at

Berignommer
Message number

Van
From

Aan
To

Ek stem in dat treinnommer
I agree to train number

met die materiaaltrein by
crossing the material train at

-tussenuitwykspoor kruis.
interloop.

Tyd
Time

Datum
Date

Treinbeheeramptenaar
Train-control officer

Skrap nie-toepaslike of onnodige woorde of reëls
Delete words or lines not applicable or necessary

**BERIG INSAKE AANVULLING VAN MATERIAALTREINRYORDER
AMPLIFICATION OF MATERIAL TRAIN PROCEEDING ORDER MESSAGE**

Kantoordatumstempel
Office date stamp

**VRAAGBERIG
QUESTION MESSAGE**

Voorvoegsel
Prefix **J**

Ontvang/Gestuur om
Received/Sent at

Berignommer
Message number

Van
From

Aan
To

Laaste vertrek
Last departure

Laaste aankoms
Last arrival

Treinnommer
Train number

is nog in die telegraaftrajek
is still in the telegraph section

Mag ek materiaaltrein magtig om te vertrek van
May I authorise material train to proceed from

na
to -telegraafstasie
telegraph station

nadat dit gekruis het met treinnommer op
after having crossed train number at ?
.....?

Bogenoemde trajek sal teen alle teenoorgestelde treine gesluit word totdat u berig ontvang dat die materiaaltrein op hierdie stasie aangekom het. Geen trein moet toegelaat word om die materiaaltrein in elke agtereenvolgende trajek te volg nie.
The abovementioned section will be blocked against all opposing trains until you are advised that the material train has arrived at this station. No train must be allowed to follow the material train in each consecutive section.

**ANTWOORD
REPLY**

Voorvoegsel
Prefix **JI**

Ontvang/Gestuur om
Received/Sent at

Berignommer
Message number

Van
From

Aan
To

Laaste vertrek
Last departure , kennis geneem
, noted

Laaste aankoms
Last arrival , korrek
, correct

Treinnommer
Train number is nog in die telegraaftrajek, kennis geneem
is still in the telegraph section, noted

U mag materiaaltrein magtig om te vertrek van
You may authorise material train to proceed from

na
to -telegraafstasie
telegraph station

nadat dit gekruis het met treinnommer op
after having crossed train number at

Ek stem in dat die bogenoemde trajek teen alle teenoorgestelde treine gesluit word totdat ek berig ontvang dat die materiaaltrein op u stasie aangekom het. Geen trein sal toegelaat word om die materiaaltrein in elke agtereenvolgende trajek te volg nie.
I agree to the abovementioned section being blocked against all opposing trains until I am advised that the material train has arrived at your station. No train will be allowed to follow the material train in each consecutive section.

Treinbeheeramptenaar
Train-control officer

Datum
Date

Tyd
Time

Skrap nie-toepaslike of onnodige woorde of reëls
Delete words or lines not applicable or necessary

**MATERIAALTREINORDERBERIG
MATERIAL TRAIN ORDER MESSAGE**

Kantoordatumstempel
Office date stamp

VRAAGBERIG
QUESTION MESSAGE

Voorvoegsel Prefix Z		
# Ontvang/Gestuur om # Received/Sent at	Berignommer Message number	
Van From		Aan To
Laaste vertrek Last departure		# Laaste aankoms # Last arrival
# Treinnommer # Train number	is nog in die telegraaftrajek is still in the telegraph section	
# Nadat # After		aangekom het, has/have arrived,
kan materiaaltrein vertrek volgens kennisgewingnommer may material train proceed as per material train working notice number		insake materiaaltreinbedryf? ?
Die trajek tussen The section between	en and	moet teen alle teenoorgestelde treine must be blocked against all opposing
en treine wat volg gesluit word totdat u berig ontvang dat materiaaltrein by and following trains until you are advised that material train has arrived at		aangekom het

ANTWOORD
REPLY

Voorvoegsel Prefix ZI		
# Ontvang/Gestuur om # Received/Sent at	Berignommer Message number	
Van From		Aan To
Laaste vertrek Last departure	, kennis geneem , noted	# Laaste aankoms # Last arrival , korrek , correct
# Treinnommer # Train number	is nog in die telegraaftrajek, kennis geneem is still in the telegraph section, noted	
# Nadat # After		aangekom het, mag u / # U mag materiaaltrein magtig om te vertrek has/have arrived, you may / # You may authorise material train to proceed
volgens kennisgewingnommer as per material train working notice number		insake materiaaltreinbedryf
Ek stem in dat die trajek tussen I agree to the section between	en and	
teen alle teenoorgestelde treine en treine wat volg gesluit word totdat ek berig ontvang dat materiaaltrein being blocked against all opposing and following trains until I am advised that material train		
by has arrived at		aangekom het
Treinbeheeramptenaar Train-control officer	Datum Date	Tyd Time

Skrap nie-toepaslike of onnodige woorde of reëls
Delete words or lines not applicable or necessary

“TRAJEK GESLUIT”-ORDERBERIG
“SECTION BLOCKED” ORDER MESSAGE

VRAAGBERIG QUESTION MESSAGE		Kantoordatumstempel Office date stamp
Voorvoegsel Prefix SB		
# Ontvang/Gestuur om	Berignommer	

# Received/Sent at	Message number
Van From	Aan To
Laaste vertrek Last departure	# Laaste aankoms # Last arrival
# Nadat # After	aangekom het, has/have arrived,
is ek van plan om / # Ek is van plan om I propose despatching / # I propose despatching	af te stuur na to
Die telegraaftrajek moet teen alle teenoorgestelde treine en treine wat volg gesluit word totdat u berig ontvang The telegraph section must be blocked against all opposing and following trains until you are advised	
dat that	na hierdie stasie teruggekeer het has returned to this station
# Treinnommer # Train number	is nog in die telegraaftrajek is still in the telegraph section

**ANTWOORD
REPLY**

Voorvoegsel Prefix	SBI
# Ontvang/Gestuur om # Received/Sent at	Berignommer Message number
Van From	Aan To
Laaste vertrek Last departure	, kennis geneem , noted
# Nadat # After	# Laaste aankoms # Last arrival
aangekom het, stem ek in dat / # Ek stem in dat has/have arrived, I agree to / # I agree to	, korrek , correct
na proceeding to	na u stasie teruggekeer het has returned to your station
en treine wat volg gesluit word totdat ek berig ontvang dat and following trains until I am advised that	na u stasie teruggekeer het has returned to your station
# Treinnommer # Train number	is nog in die telegraaftrajek, kennis geneem is still in the telegraph section, noted
Tyd Time	Datum Date
Treinbeheeramptenaar Train-control officer	

Skrap nie-toepaslike of onnodige woorde of reëls
Delete words or lines not applicable or necessary

**KANSELLEERBERIG INSAKE "TRAJEK GESLUIT"-BEDRYF
CANCELLATION MESSAGE OF "SECTION BLOCKED" WORKING**

VRAAGBERIG QUESTION MESSAGE	Kantoor datumstempel Office date stamp
Voorvoegsel Prefix	P
# Ontvang/Gestuur om # Received/Sent at	Berignommer Message number
Van From	Aan To
Treinnommer Train number	het na hierdie stasie teruggekeer has returned to this station
en "trajek gesluit"-bedryf is gekanselleer	

and "section blocked" working is cancelled

ANTWOORD
REPLY

Voorvoegsel

Prefix

PI

Ontvang/Gestuur om

Received/Sent at

Berignommer

Message number

Van

From

Aan

To

Ek neem kennis dat

I note that

na u stasie teruggekeer
has returned to your station

het en dat "trajek gesluit"-bedryf gekanselleer is

and that "section blocked" working is cancelled

Tyd

Time

Datum

Date

Treinbeheeramptenaar

Train-control officer

Skrap nie-toepaslike of onnodige woorde of reëls

Delete words or lines not applicable or necessary

Order

A

Stasie <i>Station</i>	Datum <i>Date</i>
--------------------------	----------------------

Aan drywer van treinnommer
To driver of train number

U word gemagtig om te vertrek na -telegraafstasie
You are authorised to proceed to *telegraph station*

Geen trein sal toegelaat word om u trein in elke agtereenvolgende trajek te volg nie
No train will be allowed to follow your train in each consecutive section

LAASTE AANKOMS

LAST ARRIVAL

Treinnommer <i>Train number</i>	‡	, die laaste teenoorgestelde trein, het hier aangekom om <i>, the last opposing train, arrived here at</i>
------------------------------------	---	---

LAASTE VERTREK

LAST DEPARTURE

Treinnommer <i>Train number</i>	‡	, die laaste trein in dieselfde rigting, het <i>, the last train in the same direction, arrived</i>
------------------------------------	---	--

by <i>at</i>	aangekom om <i>at</i>
-----------------	--------------------------

WAARSKUWING

WARNING

Treinnommer <i>Train number</i>	‡	is nog in die telegraaftrajek <i>is still in the telegraph section</i>
------------------------------------	---	---

OPDRAG

INSTRUCTION

Wanneer u by <i>When you arrive at</i>	aankom, moet u skakel, bevestig dat u trein volledig is en <i>you must phone, confirm that your train is complete and</i>
---	--

toestemming verkry om voort te gaan
obtain permission to proceed

† NEEM KENNIS

† NOTE

Treinbeheeramptenaar <i>Train-control officer</i>	Tyd <i>Time</i>
--	--------------------

‡ Voeg in aard van trein

‡ *Insert character of train*

Skrap nie-toepaslike of onnodige woorde of reëls

Delete words or lines not applicable or necessary

† Net toelaatbare aantekeninge

† *Permissible endorsements only*

Order **C**

UITGAANDE
 OUTWARD

Stasie <i>Station</i>	Datum <i>Date</i>
Aan drywer van treinnommer <i>To driver of train number</i>	
U word gemagtig om te vertrek na <i>You are authorised to proceed to</i>	-tussenuitwykspoor, <i>interloop,</i>
en daar te wag om treinnommer <i>and to remain there to cross train number</i>	te kruis
Geen trein sal toegelaat word om u trein in elke agtereenvolgende trajek te volg nie <i>No train will be allowed to follow your train in each consecutive section</i>	

LAASTE AANKOMS
 LAST ARRIVAL

Treinnommer
Train number , die laaste teenoorgestelde trein, het hier aangekom om
, the last opposing train, arrived here at

LAASTE VERTREK
 LAST DEPARTURE

Treinnommer ‡
Train number ‡ , die laaste trein in dieselfde rigting, het
, the last train in the same direction, arrived

by aangekom om
 at at

WAARSKUWING
 # WARNING

Treinnommer ‡ is nog in die telegraaftrajek
Train number ‡ *is still in the telegraph section*

OPDRAG
 # INSTRUCTION

Wanneer u by aankom, moet u skakel, bevestig dat u trein volledig is en
When you arrive at you must phone, confirm that your train is complete and
 toestemming verkry om voort te gaan
obtain permission to proceed

BESONDERHEDE VAN KRUISREËLING
 PARTICULARS OF CROSSING ARRANGEMENT

† NEEM KENNIS
 † NOTE

Treinbeheeramptenaar <i>Train-control officer</i>	Tyd <i>Time</i>
--	--------------------

- ‡ Voeg in aard van trein
- ‡ *Insert character of train*
- # Skrap nie-toepaslike of onnodige woorde of reëls
- # *Delete words or lines not applicable or necessary*
- † Net toelaatbare aantekeninge
- † *Permissible endorsements only*

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Order **E**

TUSSENIN

INTERMEDIATE

Stasie <i>Station</i>	Datum <i>Date</i>
Aan drywer van treinnommer <i>To driver of train number</i>	
U word gemagtig om te vertrek na <i>You are authorised to proceed to</i>	
om treinnommer <i>cross train number</i>	† † te kruis
Geen trein sal toegelaat word om u trein in elke agtereenvolgende trajek te volg nie <i>No train will be allowed to follow your train in each consecutive section</i>	

† NEEM KENNIS
† NOTE

WAARSKUWING
WARNING

Treinnommer † is nog in die telegraaftrajek
Train number † is still in the telegraph section

OPDRAG
INSTRUCTION

Wanneer u by aankom, moet u skakel, bevestig dat u trein volledig is en
When you arrive at you must phone, confirm that your train is complete and
toestemming verkry om voort te gaan
obtain permission to proceed

Hierdie order word deur teenoorgestelde treinnommer saamgeneem
This order is being carried by opposing train number

Treinbeheeramptenaar <i>Train-control officer</i>	Tyd <i>Time</i>
--	--------------------

- ‡ Voeg in aard van trein
- ‡ *Insert character of train*
- † Net toelaatbare aantekeninge
- † *Permissible endorsements only*
- # Skrap nie-toepaslike of onnodige woorde of reëls
- # *Delete words or lines not applicable or necessary*

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Order

G

INKOMENDE

INWARD

Stasie <i>Station</i>	Datum <i>Date</i>	
Aan drywer van treinnommer <i>To driver of train number</i>	op <i>at</i>	-tussenuitwykspoor <i>interloop</i>
U word gemagtig om te vertrek na <i>You are authorised to proceed to</i>		-telegraafstasie <i>telegraph station</i>
Die lyn sal vry gehou word van teenoorgestelde treine totdat u daar aangekom het <i>The line will be kept clear of opposing trains until you have arrived there</i>		
Geen trein sal toegelaat word om u trein in elke agtereenvolgende trajek te volg nie <i>No train will be allowed to follow your train in each consecutive section</i>		

† NEEM KENNIS

† NOTE

WAARSKUWING

WARNING

Treinnommer <i>Train number</i>	‡	is nog in die telegraaftrajek <i>is still in the telegraph section</i>
------------------------------------	---	---

OPDRAG

INSTRUCTION

Wanneer u by <i>When you arrive at</i>	aankom, moet u skakel, <i>you must phone, confirm</i>
---	--

bevestig dat u trein volledig is en toestemming verkry om voort te gaan
that your train is complete and obtain permission to proceed

Hierdie order word deur teenoorgestelde treinnommer <i>This order is being carried by opposing train number</i>	saamgeneem
--	------------

Treinbeheeramptenaar <i>Train-control officer</i>	Tyd <i>Time</i>
--	--------------------

† Net toelaatbare aantekeninge

† *Permissible endorsements only*

Skrap nie-toepaslike of onnodige woorde of reëls

Delete words or lines not applicable or necessary

‡ Voeg in aard van trein

‡ *Insert character of train*

Order **H**

Stasie <i>Station</i>	Datum <i>Date</i>
--------------------------	----------------------

Aan drywer van treinnommer
To driver of train number

WAARSKUWING
WARNING

Die materiaaltrein is in die trajek tussen
The material train is in the section between

en
and

op
at

Treinbeheeramptenaar
Train-control officer

Tyd
Time

MATERIAAL
MATERIAL

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Order **Z**

Stasie <i>Station</i>	Datum <i>Date</i>
--------------------------	----------------------

Aan die drywer van die materiaaltrein
To the driver of the material train

U word gemagtig om volgens u kennisgewing no. insake materiaaltreinbedryf te vertrek
You are authorised to proceed as per your material train working notice No.

Die trajek tussen en
The section between and

is gesluit teen alle teenoorgestelde treine en treine wat volg totdat u trein
is blocked against all opposing and following trains until your train has arrived

by aangekom het
at

LAASTE AANKOMS
LAST ARRIVAL

Treinnommer , die laaste teenoorgestelde trein, het hier aangekom om
Train number , the last opposing train, arrived here at

LAASTE VERTREK
LAST DEPARTURE

Treinnommer , die laaste trein in dieselfde rigting, het
Train number , the last train in the same direction, arrived

by aangekom om
at at

† NEEM KENNIS
 † NOTE

Treinbeheeramptenaar <i>Train-control officer</i>	Tyd <i>Time</i>
--	--------------------

† Net toelaatbare aantekeninge
 † *Permissible endorsements only*

(Op agterkant van Order Z gedruk/Printed on reverse side of Z order)

MAGTIGING OM VAN TUSSENUITWYKSPoor NA TELEGRAAFSTASIE TE RY
AUTHORITY TO PROCEED FROM INTERLOOP TO TELEGRAPH STATION

SPOORNET

Van treinbeheeramptenaar op
From train-control officer at

Datum
Date

Tyd
Time

Aan die drywer van die materiaalrein by
To the driver of the material train at

Hierdie order is u magtiging om te vertrek na
This order is your authority to proceed to

-stasie
station

Die trajek tussen
The section between

en
and

is vry van teenoorgestelde treine en sal so gehou word totdat u aankom
is clear of opposing trains and will be kept so until you arrive

op
at

-stasie
station

Geen trein sal toegelaat word om u trein in elke agtereenvolgende trajek te volg nie
No train will be allowed to follow your train in each consecutive section

WAARSKUWING

WARNING

Treinnommer
Train number

‡
‡

is nog in die telegraaftrajek
is still in the telegraph section

OPDRAG

INSTRUCTION

Wanneer u by
When you arrive at

aankom, moet u skakel,
you must phone, confirm

bevestig dat u trein volledig is en toestemming verkry om voort te gaan
that your train is complete and obtain permission to proceed

Drywer van materiaalrein
Driver of material train

Skrap nie-toepaslike of onnodige woorde of reëls

Delete words or lines not applicable or necessary

‡ Voeg in aard van trein

‡ Insert character of train

Order **L**

Stasie
Station

Aan drywer van treinnommer
To driver of train number

Die materiaaltrein is in die trajek en werk tussen
The material train is in the section and working between

en en is aangekondig om alle treine te kruis
and and is booked to cross all trains

op -telegraafstasie
at telegraph station

Die materiaaltrein is vry van die telegraaftrajek
The material train is clear of the telegraph section

Let goed op
Keep a good look-out

Tyd <i>Time</i>	Datum <i>Date</i>
--------------------	----------------------

Treinbeheeramptenaar
Train-control officer

Skrap nie-toepaslike of onnodige woorde of reëls
Delete words or lines not applicable or necessary

Order
SB

Stasie <i>Station</i>	Datum <i>Date</i>
--------------------------	----------------------

Aan drywer van treinnommer
To driver of train number

U word gemagtig om te vertrek na
You are authorised to proceed to
en na hierdie stasie terug te keer
and return to this station

Die telegraaftrajek is gesluit teen alle teenoorgestelde treine en treine wat volg totdat u na hierdie stasie teruggekeer het
The telegraph section is blocked against all opposing and following trains until you have returned to this station

LAASTE AANKOMS
LAST ARRIVAL

Treinnommer , die laaste teenoorgestelde trein, het hier aangekom om
Train number , the last opposing train, arrived here at

LAASTE VERTREK
LAST DEPARTURE

Treinnommer , die laaste trein in dieselfde rigting het
Train number , the last train in the same direction, arrived

by aangekom om
at at

† NEEM KENNIS
† NOTE

Treinbeheeramptenaar <i>Train-control officer</i>	Tyd <i>Time</i>
--	--------------------

† Net toelaatbare aantekeninge
† *Permissible endorsements only*

SECTION 7

CONTROL OF TRAINS OVER UNI- AND BIDIRECTIONAL LINES BY MEANS OF THE COLOUR-LIGHT SIGNALLING SYSTEM

7001.0 DEFINITIONS

- 7001.1 In these instructions (and in any instructions that may be issued to supplement them), unless inconsistent with the context –
- 7001.1.1 **control panel:** means a train-control officer's illuminated diagram on which signals, points, track circuits, routes and train positions are indicated and on which control buttons or switches are mounted;
- NOTE:** Where "panel" is referred to in this section, it will also mean a control panel where a console is not in use.
- 7001.1.2 **controlling section:** means the portion of the line between a stop signal and the following stop signal, together with the overlap beyond the latter signal;
- 7001.1.3 **block section:** means a uni- or bidirectional running line extending from a telegraph station or interlocking area to the next telegraph station or interlocking area, starting at an absolute stop signal and terminating at such a signal and on which only one train is allowed at a time, or any portion of a signalled line, the length of which is such that the first stop signal at its end is preceded by a warning signal or distance board;
- 7001.1.4 **continuous signals:** means the stop signals in a signalled area, each of which, when it displays a "proceed" aspect, will indicate by means of that aspect if the next stop signal is at "proceed" or at "danger";
- 7001.1.5 **unidirectional running line:** means a running line over which the running of trains is controlled by means of fixed signals in one direction only, viz. in either the up or the down direction;
- 7001.1.6 **flank protection:** means protection afforded a movement by points or (a) derail(s) not situated in the route over which the movement takes place, and/or a signal displaying a red light situated alongside an adjoining line;
- 7001.1.7 **centralised traffic control:** means the control from a single office, centre or signal cabin over the running of trains and shunting movements in a signalled area which, as a rule, includes two or more interlocking areas and the limits of which are indicated by means of suitable boards;
- 7001.1.8 **signalled area (signalled territory):** means an area in which train and shunting movements are controlled by fixed signals;
- 7001.1.9 **signalled line or section:** means a line or section over which the running of trains is controlled exclusively by fixed signals;
- 7001.1.10 **interlocking area:** means an area in which all the signals and, where provided, the points are interlocked in one particular signal cabin or relay room. The number of each signal in the interlocking area, as indicated on the signal post, is preceded by the same code;
- 7001.1.11 **CTC:** means centralised traffic control;
- 7001.1.12 **CTC territory (CTC area):** means the area in which centralised traffic control is applicable;
- 7001.1.13 **console:** means a control desk on which control buttons for the operation of points, signals and related apparatus are mounted;
- 7001.1.14 **crossing place:** means a single interlocking area in CTC territory, equipped with two or more running lines, points and signals, where trains may cross or pass each other as arranged by the train-control officer and which is connected at each end to another interlocking area or station by means of a single running line;
- 7001.1.15 **multiline:** means a portion of a CTC area, equipped with two or more bidirectional running lines, points and signals, where trains may cross or pass each other and where the length of each of the two longest bidirectional running lines is such that –
- (a) two or more trains in the same direction can be admitted thereto by means of fixed signals and/or
- (b) it includes one or more block sections.
- 7001.1.16 **overlap:** means the track circuit or circuits controlling the aspect of a signal but which is/are situated beyond the next stop signal;

- 7001.1.17 **proceed ‘on sight’:** means to proceed and to regulate the speed in such a way that the train can be stopped short of an obstruction within the distance the driver can see ahead;
- 7001.1.18 **panel:** means an illuminated diagram on which signals, points, track circuits, routes and train positions are indicated to the train-control officer;
- 7001.1.19 **route:** (also called “block”) means that portion of a signalled line between a stop signal and the next stop signal in the same direction, or the track-circuited portion of the line beyond a signal controlling approach to a non-signalled line;
- 7001.1.20 **senior train-control officer:** means the officer, irrespective of his grade, on duty in and in charge of a traffic control office, and who supervises one or more train-control officers at the console(s) or control panel(s);
- 7001.1.21 **track circuit:** means a portion of the line through which an electrical current is passed to determine whether that portion of the line is occupied or not and which forms part of the control equipment of signals and/or running line points;
- 7001.1.22 **position (plus or minus) of points:** means the position in which panel-operated points are set. In the plus position the points are set for the line on the right and in the minus position for the line on the left, as seen when the points are approached in the facing direction;
- 7001.1.23 **section entry signal:** means the signal controlling entry to a block section in a CTC area or the outermost controlled signal of a station controlling entry to a uni- or bidirectional running line between that station and the next station;
- 7001.1.24 **twin single line section:** means two signalled single lines, next to each other, between two stations and controlled jointly by those stations;
- 7001.1.25 **bidirectional running line:** means a running line over which the running of trains in both directions are controlled by means of fixed signals;
- 7001.1.26 **time release:** means the time that has to elapse after a movement has taken place or a cancellation action has been carried out, before a route can be set up for a further movement;
- 7001.1.27 **traffic control office:** means the office, centre or signal cabin from where train and shunting movements in a CTC area are controlled;
- 7001.2 Where the word “station” is used in this section, it implies the whole of the continuous signalled area controlled from a particular train control office in that area, and not only the place where the train control office is situated. (See subclause 7030.2.6.)

7002.0 OBJECT AND DESCRIPTION

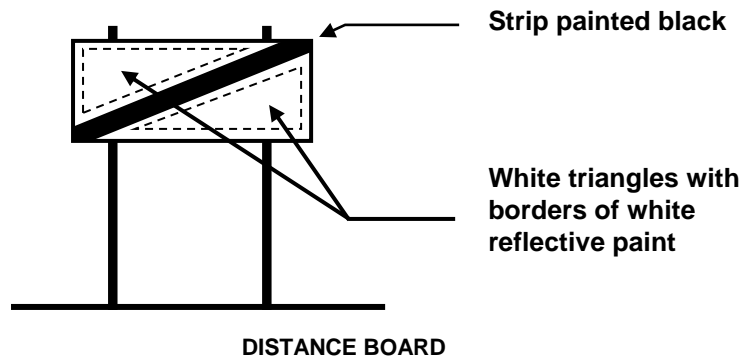
- 7002.1 The object of colour-light signals is to control the movement of trains and afford protection against conflicting movements.
- 7002.2 Separate lengths of the line, each forming part of an electrical circuit, and which are known as “track circuits”, or each having an axle counter at either end, form the basis on which colour-light signals are controlled electrically. These lengths of line are separated from adjoining portions of the line by insulation. Apart from the fact that a signal connected to the insulated length of the line may be operated from a console, control panel or lever frame to convey the intention of the train-control officer, the aspect of the signal is determined by whether or not such length of track is occupied by a train or vehicle.
- 7002.3 In addition to levers, switches or push buttons provided for the operation of points and signals, illuminated indications are used on the diagrams or panels in train control offices, e.g. white strip lights indicating that a track circuit is unoccupied and red strip lights indicating that it is occupied.
- 7002.4 A stop signal displaying a “proceed” aspect will automatically display a danger aspect when the front end of the train passes the signal, and it will not again be able to display a “proceed” aspect before the rear part of the train has cleared the overlap beyond the next stop signal.
- 7002.5 In the case of a warning signal, where applicable, and of a repeat signal, the aspect of the signal changes simultaneously with that of the relevant stop signal, e.g. a green light displayed by the former signal, changes to yellow when the front end of a train has passed the stop signal.
- 7002.6 **Multi-aspect signalling** – The signalling in signalled areas in which a driver receives an indication beforehand by means of an aspect including two colour lights (yellow above yellow or green above yellow, as the case may be – see train working rule No. 22) that he will proceed over points set for the turnout, is known as multi-aspect signalling. Features of multi-aspect signalling are that the driver of a train approaching a signal displaying a “proceed” aspect, needs to observe the aspect only when his train reaches the signal and that an aspect consisting of a single yellow light has only one meaning, viz. “Proceed, but stop at the next signal unless it is seen to be at ‘proceed’”.

7003.0 THROUGH PARALLEL BIDIRECTIONAL RUNNING LINES

7003.1 Where two parallel bidirectional running lines in a signalled area extend through that area, they are known as No. 1 main line and No. 2 main line. Except where otherwise provided, No. 1 main line is the main line to the left as seen by the driver of a down train and No. 2 main line the main line to the left as seen by the driver of an up train.

7004.0 BOARDS

7004.1 When a board, as illustrated below, is erected next to the line in signalled territory, it serves to warn drivers that they are approaching a stop signal that may be at "danger". The board is known as a distance board.



NOTE: Where this board is in use, it is provided in lieu of and not in addition to a warning signal. (See subclause 7005.5.)

7004.2 In an area in which distance boards are in use, the following meaning must be attached to a green light displayed by a signal: "Proceed – next signal displays a proceed aspect or is preceded by a distance board". [See train working rule No. 22(3)(c).]

7004.3 Where a token section adjoins signalled territory, a board with the word TOKEN and facing in the direction of trains departing to the token section, is provided a short distance beyond the outermost points or, in certain cases, at or on the signal preceding the outermost points. The board serves to warn drivers that they should have the correct token for the section. [See train working rule No. 22(6).]

7004.4 Where necessary, a board with the word NON-TOKEN is provided at the signal controlling entry to a "non-token" single-line section to indicate the start of such section.

7004.5 Boards bearing a suitable wording or symbol and erected at the signals concerned, indicate the beginning and end of CTC territory.

7005.0 USE OF SIGNALS

7005.1 Colour-light signals are used to control train movements –

7005.1.1 over uni- and bidirectional running lines in CTC areas;

7005.1.2 over uni- and bidirectional running lines outside CTC areas, i.e. –

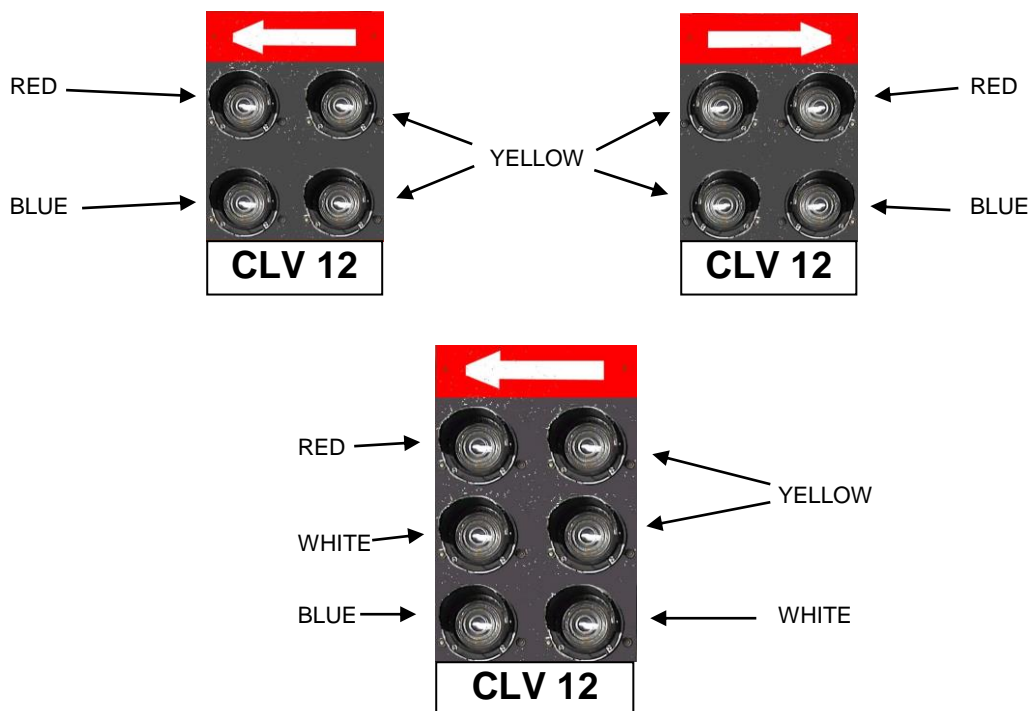
7005.1.2.1 for the admittance and departure of trains at telegraph stations and remote-controlled interlocks and

7005.1.2.2 for the working of trains over sections on which a system of token working is not applicable, namely over double-line sections and "non-token" single-line and multiple single-line sections, and which are jointly controlled by the train-control officers at two different stations. (Also see subclause 7005.11.1 for the use of colour-light signals for shunting movements.)

7005.2 The various aspects that may be displayed by colour-light signals and the meanings that must be attached thereto, are described in train working rule No. 22.

7005.3

In certain yards a colour-light signal on a short post is used next to each yard line concerned to control the departure of trains, thus –



When the signal displays two yellow lights, it shall mean: "Proceed, but be ready to pass next signal at restricted speed". [This is an exception to train working rule No. 22 (3)(e).] The other aspects that the signal is capable of displaying must be observed as provided in the said rule.

7005.4 Signal displaying emergency aspect

7005.4.1 Operation – If, owing to a defect in the electrical apparatus, e.g. a defective points or other track circuit, or a defect in the signal itself, a signal equipped with a blue light cannot be placed at "proceed", and the one-position-light shunt signal on the same signal post cannot be placed at "caution" owing to an electrical fault or if there is no one-position-light shunt signal affixed to the post, the signal may be operated to display the emergency aspect as the driver's authority to pass the signal, provided –

7005.4.1.1 the points (where provided) are correctly set for the train movement (if necessary, after the special emergency key provided for this purpose has been used);

7005.4.1.2 no conflicting movements are allowed;

7005.4.1.3 the train concerned already occupies the track circuit immediately in front of the signal;

7005.4.1.4 the senior train-control officer, where there is one, has satisfied himself that it is essential that the signal and, where applicable, the points concerned, has/have to be operated by means of the special emergency key(s) before providing the key(s) for this purpose; and

7005.4.1.5 the provisions of train working rule No. 96(3) and (4) are complied with if the train is admitted into a goods yard.

7005.4.2 The train-control officer must observe the passage of the train and if the blue light is not extinguished after the train has passed the signal (as will happen in the event of the track circuits both in front of and beyond the signal being faulty), he must restore the signal to "danger" by operating the appropriate push buttons.

7005.4.3 A progressive number is displayed on the console after a set of points or a signal has been operated by means of an emergency key. The train-control officer must record this number, together with an explanation for the use of the key, in the special book to be kept for this purpose.

- 7005.4.4** **Observance** – Before acting on an emergency aspect, a driver must stop his train at the signal. Thereafter, provided the line ahead is clear as far as he can see, he may proceed past the signal, but he must proceed “on sight” (see subclause 7001.1.17) until he has arrived at the next colour-light stop signal. He must also expect to find that colour-light signal at “danger”, but even if he can see that the signal is displaying a “proceed” aspect, he must, nevertheless, proceed “on sight” until he has arrived at the signal. En route to the next colour-light signal, the driver may pass intermediate two-position-light shunt signals, irrespective of the position displayed. Should the train be admitted into a yard, the driver must not proceed further than the clearance mark at the opposite end of the siding.
- 7005.5** **Warning signal** [See train working rule No. 22(4).]
- 7005.5.1 Where necessitated by the distance from the previous stop signal, a stop signal is preceded by a warning signal. The warning signal operates together with the stop signal it precedes, i.e. the aspect it displays, changes with that of the stop signal.
- 7005.5.2 The purpose of a warning signal is to indicate to a driver that he is approaching a stop signal and whether or not the latter signal is displaying a “proceed” aspect.
- 7005.5.3 A warning signal has no “danger” aspect. When it displays no light at all, the driver must immediately reduce speed and be prepared to stop at the next signal at “danger”. He must advise the train-control officer concerned of the defective signal at the first opportunity.
- 7005.6** **Admittance of train to yard**
- 7005.6.1 Where a signal displaying a goods or siding aspect is used to admit a train onto an arrival line connecting the main line(s) to the goods yard, the signal authorises a driver to proceed only as far as the stop board short of the yard. If the arrival line is not track-circuited, the train-control officer must first confer with the control shunter or responsible shunter concerned and satisfy himself that the arrival line is clear up to the stop board.
- 7005.6.2 When a train is to be admitted into a yard and a shunter is not available for the purpose of complying with train working rule No. 96(3) and (4), the train-control officer must, beforehand, arrange with the driver’s assistant of the train, after the train has stopped at the signal short of the yard, to satisfy himself and assure him (the train-control officer) that the hand points over which the train has to proceed, are correctly set and that the siding onto which the train is to be admitted, is clear. After the signal has been operated, the driver’s assistant must comply with the provisions of train working rule No. 96(4).
- 7005.7** **Departure of trains to token working sections**
- 7005.7.1 A signal controlling the departure of trains from a signalled area to a token working section may only be operated after the token for the section has been obtained. In the case of CTC, the train-control officer concerned, driver’s assistant or other authorised person, as the case may be, must advise the train-control officer that the token for the section ahead has been obtained. Should the driver have to obtain the token himself, he must advise the train-control officer as soon as he is in possession thereof.
- 7005.8** **Observance of signals**
- 7005.8.1 If a driver is unable to act promptly on a “proceed” aspect displayed by a signal, the train-control officer must immediately be notified of the circumstances.
- 7005.9** **Trains delayed at signals**
- 7005.9.1 If a train has stopped at a signal at “danger” and speaking communication can be established with the train-control officer (see clause 7006.0), the driver must immediately notify the train-control officer, unless the reason for the delay is self-evident, e.g. when an opposing train is being admitted to a place not equipped for simultaneous entry. If the signal still remains at “danger” after the train-control officer has been notified, the driver must, unless otherwise instructed, communicate with the train-control officer at regular intervals of not more than five minutes.
- 7005.9.2 If the signal is a section entry signal, speaking communication cannot be established and the signal cabin is situated in the same interlocking area as the signal, the driver’s assistant must be sent to the signal cabin to notify the train-control officer and, where applicable, to obtain an SD2 authority.
- 7005.9.3 All delays at signals must be recorded on the train journal.
- 7005.9.4 Train-control officers must record particulars of the delays to trains at signals and also an explanation of the circumstances in the train register.
- 7005.10** **Trains to stop short of signals**
- 7005.10.1 When a train is stopped at a stop signal, whether or not it is displaying a “proceed” aspect, the driver must be careful to see that the front of the locomotive or train does not come to a stop beyond the signal.

7005.11 Control over shunting movements

- 7005.11.1 If shunting has to be performed where there is no position-light shunt signal or the position-light shunt signal cannot be operated, a colour-light signal may be operated for a shunting movement provided a clear understanding has been arrived at beforehand between all concerned. The next controlled signal, where there is one in the particular interlocking area, must be kept at "danger".
- 7005.11.2 Great care should be taken when a signal controlling entry to a route over which shunting has to be done, is defective or, for some other reason, cannot be operated, e.g. in the case of a shunting movement not moving to a point clear of the block joint behind a panel-operated signal in order that the signal may be operated for the reverse movement and, in these circumstances, part of the route behind the movement has already been cancelled automatically. The train-control officer must correctly set all the interlocked points in the route by means of the independent operation thereof and satisfy himself that the correct indications appear to ensure that the route is locked, or obtain an assurance from the shunter that the points are correctly set. Thereafter the train-control officer may authorise the driver to pass the signal at "danger" for shunting purposes only (except as provided in subclause 7005.11.3.2, an authority number need not be given) or he may instruct the shunter to authorise the driver verbally to pass the signal at "danger".
- 7005.11.3 If shunting has to take place past a section entry signal that cannot be operated for the shunting movement, the train-control officer must satisfy himself that the controlling section of the signal is clear and that no conflicting movement will take place. Thereafter he must authorise the driver to pass the signal at "danger" –
- 7005.11.3.1 in the case of a unidirectional running line, by displaying a "caution" hand signal [see train working rule No. 24(2)] or having it displayed, or by authorising the driver verbally or instructing the shunter to authorise him verbally (authority number not required);
- 7005.11.3.2 in the case of a bidirectional running line, by issuing an authority number (see subclause 7029.8) and the instruction, "Pass at 'danger' for shunting purposes only" to the driver or, where an authority register is not in use, by authorising the driver in writing to pass the signal at "danger" for shunting purposes only.

7005.12 Signal not displaying any light

- 7005.12.1 When a signal does not display any light while the line between that signal and the next signal is or may be occupied, the last controlled signal preceding the defective signal must not be placed at "proceed" for a train unless or until the train-control officer has warned the driver, in writing or telephonically, of the defective signal.

7006.0 RADIO AND TELEPHONE COMMUNICATION

7006.1 Radio communication

- 7006.1.1 In certain signalled areas the train-control officers and drivers, and track maintenance officials under whose supervision ballast tamping machines operate, communicate by means of radios. A radio for the driver's use is supplied to him or is installed in the locomotive.
- 7006.1.2 Where radio communication is in use, special instructions for the operation of the radio equipment are issued by the Chief Executive (Spoornet). The instructions indicate, inter alia, whether the radio communication will be the primary means of communication between drivers and train-control officers (i.e. whether it will take the place of signal telephones – see subclause 7006.2) or whether it will serve as an additional or emergency means of communication (cp. subclause 7006.4).
- 7006.1.3 Drivers may be authorised by radio to depart instead of a "right-away" hand signal being displayed.
- 7006.1.4 Where reference is made in these instructions to telephonic conversations or the use of the telephone is assumed, the instructions concerned also apply where radio communication is in use.

7006.2 Signal telephone

- 7006.2.1 Near each stop signal in CTC areas in which radio communication is not exclusively used and at remote-controlled interlocks, and also at certain signals at/on single-line and double-line stations and sections, a telephone or telephone plug point, affording direct communication with the train-control officer concerned, is provided. Conversations conducted by means of this telephone or a telephone plugged into this plug point (hereinafter called the signal telephone), is private as nobody but the train-control officer and the caller can take part in the conversation. The box housing the telephone must be kept locked when the telephone is not in use. (The lock is locked and unlocked by means of a Chubb key.)
- 7006.2.2 In addition to the signal telephone or suitably marked signal telephone plug point, a plug point for the use of signalling maintenance staff and/or a plug point for the emergency line may be provided in the telephone box. (Conversations over the emergency line are not private.)

- 7006.2.3 As soon as the train-control officer responds to a call on the signal telephone, the member of the locomotive personnel concerned must identify himself by stating –
- 7006.2.3.1 his name and grade,
- 7006.2.3.2 which train he is working,
- 7006.2.3.3 at which signal his train is standing, and
- 7006.2.3.4 from where he is speaking.
- 7006.2.4 The train-control officer must make use of the available aid(s), e.g. illuminated diagram, train register, etc. to establish that he is, in fact, speaking to the employee concerned of the train concerned. Unless the train-control officer can positively identify the employee concerned, no train arrangements may be made.
- 7006.2.5 The train-control officer, in turn, must identify himself to the member of the locomotive personnel concerned by furnishing his name and that of the place where his signal cabin/office is situated.
- 7006.2.6 The signal telephones must be used only for matters relating to the movement of trains or the working of the train control apparatus.
- 7006.2.7 Where locomotive personnel wish to communicate with the train-control officer, they must make use of the signal telephone in preference to an additional or emergency means of communication that may be available.

7006.3 Siding telephone

- 7006.3.1 Where there are hand-operated points from a running line to a siding, a telephone or telephone plug point – called the siding telephone/telephone plug point – in addition to the signal telephones or signal telephone plug points, is provided in a box at or near the hand points or relay room. This telephone/plug point may be used to speak to the train-control officer about shunting and other matters not necessarily related to the train control equipment.

7006.4 Emergency telephone

- 7006.4.1 In certain areas, at groups of signals and points and approximately 1 km apart throughout the section, emergency plug points are provided. Locomotive personnel may use these plug points to report an accident or other exceptional occurrence, or to contact the train-control officer concerned when a train has stopped at a signal at “danger” and no contact whatsoever can be made with the train-control officer by means of a signal telephone or by radio. (See subclause 7029.12.)
- 7006.5 The box in which a telephone or telephone plug point is provided can be identified by a letter T or a depiction of a telephone handset with which it is marked.
- 7006.6 Where signal telephone and/or emergency plug points are installed, drivers must be provided with the appropriate plug-in telephones. Similarly, on sections where there are siding telephone plug points, drivers must have plug-in telephones.
- 7006.7 Should a telephone fail in signalled territory, locomotive personnel requiring to contact the train-control officer concerned must try to use another telephone or telephone plug point. The failure must be reported to the train-control officer by means of the first telephone with which communication can be established and he must record particulars thereof in the “remarks” column of the train register.

7006.8 Use of telephone to convey written instructions to driver

- 7006.8.1 When an SD2 authority (see subclause 7030.2) or other written authority or instruction has to be handed to a driver in accordance with these instructions and telephonic communication is available between the driver and train-control officer, and if a delay will thereby be prevented, the driver’s assistant must fetch the document from the signal cabin or the contents of the document (except if it is a telegraph order – see subclause 7030.5.4.1) must be read out over the telephone to the driver who must write it down. (The final decision with regard to the procedure to be followed in each particular case rests with the train-control officer.) The provisions of subclauses 7006.2.3, 7006.2.4 and 7006.2.5 (identification of employees speaking to each other) must be strictly complied with. Where a printed form, e.g. an SD2 authority form, is not kept in the telephone box or in the driver’s possession for this purpose, another sheet of paper may be used.
- 7006.8.2 After a driver has written down the SD2 or other written authority or instruction and, where applicable, has deleted the non-applicable parts of the form, he must repeat the contents in full to the train-control officer who, if correct, must confirm it by saying “right”. The driver and train-control officer must record their own and each other’s names and the time on the document.
- 7006.8.3 All SD2 or other written authorities or instructions read out to drivers, must be numbered consecutively for each calendar month and each number furnished to the driver concerned. The train-control officer’s copy must be kept for six months.

7007.0 TAPPER-BELLS

7007.1 Where the train-control officers in two separate signal cabins jointly control one or more uni- or bidirectional running lines, bell communication is provided between the two cabins. Bell communication is, similarly, provided between certain traffic control offices and adjacent signal cabins. The applicable provisions of clauses 3003.0, 3019.0 and 3020.0, of this appendix must be complied with and the bells used to exchange the prescribed bell signals.

7007.2 Despatch of trains over double lines (unidirectional running lines)

7007.2.1 On double-line sections where the running of trains is controlled by means of colour-light signals, the bell code signal for the particular type of train as contained in the standard code of bell signals in Section 3 of this appendix must be sent to the next signal cabin as soon as each train departs from the station concerned. The bell signal must be acknowledged by repeating it.

7007.2.2 Train-control officers must keep in close touch with the running of trains in order that the best arrangements may be made without causing interference to the running of passenger and other important trains. Before a train-control officer allows a train that is not a passenger train to depart, he must ring the train-control officer in the next signal cabin and ascertain whether the latter can receive the train.

7007.3 Despatch of trains over single lines (bidirectional running lines)

7007.3.1 Before a train is despatched over a signalled single-line section, the train-control officers, where applicable, must arrive at a clear understanding in regard to the line over which the train must be despatched. (Particulars of the line must be recorded in the "remarks" column of the train register.) The train-control officer who has to despatch the train, must send the prescribed "is line clear" bell signal to the other train-control officer.

7007.3.2 On receipt of the "is line clear" bell signal, the train-control officer in the next signal cabin must, if the line is clear, give "line clear" by repeating the bell signal and operating his release lever or control switch or push button, as the case may be, to set up the route for the despatch of the train in that particular direction.

7007.3.3 The "train entering section" bell signal must be exchanged as soon as the train enters the section and on arrival of the train at the next station, the train-control officers must exchange the "train arrived" signal.

7007.4 On an electrified section, one beat must be given after the ordinary code used to signal forward a train (except a motor trolley or a light locomotive not en route to assist or replace the locomotive of a disabled train) or to request and to give "line clear" for it if it is hauled by a diesel or steam locomotive, e.g. express passenger train, 4- -1; ordinary passenger train, 3.1- -1. A distinct pause twice as long as that between the ordinary beats must be allowed between the standard code and the extra beat.

7008.0 SIREN TO ATTRACT THE ATTENTION OF LOCOMOTIVE PERSONNEL AND OTHER EMPLOYEES

7008.1 At strategic points such as in the vicinity of relay rooms and/or groups of signals in certain signalled areas, a siren is provided to attract the attention of locomotive and maintenance personnel should the train-control officer wish to communicate with them.

7008.2 Should the siren be sounded, the driver of a train must immediately communicate with the train-control officer.

7008.3 In the absence of a train, any other employee who may be in the vicinity when the siren is sounded, must immediately communicate with the train-control officer.

7009.0 AXLE COUNTERS

7009.1 Where a block section is not track-circuited throughout, there is an axle counter at each end of the section – one a short distance beyond the signal controlling entry to the section and the other a short distance beyond the next stop signal.

7009.2 The purpose of the axle counter is to ensure absolute working. When a train leaves a block section and the number of axles counted at the exit from the section agrees with the number counted at the entrance, the axle counters will be synchronised and the indication on the panel will show that the block section is clear.

7009.3 Failure of axle counters

7009.3.1 When the axle counters at the ends of a block section are not synchronised or, for any reason, fail –

7009.3.1.1 the panel for the section concerned will display a "section occupied" indication, and

7009.3.1.2 the signal(s) controlling entrance to the block section will not be able to display a "proceed" aspect.

- 7009.3.2 If, after the passage of a train through a block section, the indications on the panel do not show the section as being clear, the train-control officer, if he is unable to see for himself that the train is complete, must ensure that the train was complete when it cleared the section by –
- 7009.3.2.1 specifically requesting the driver of a waiting train to watch the train involved in the failure and then to give him the assurance that the said train is complete; or
- 7009.3.2.2 establishing, at the first opportunity, if the train involved in the failure is still complete, either by stopping the train and contacting its driver, or, if there is direct radio communication with the driver of that train, by contacting him. The driver may give the assurance only after he has established beyond any doubt that the train, in fact, is still complete; or
- 7009.3.2.3 obtaining an assurance from a responsible official at a suitable station or in a yard that the train was complete when it arrived at that place.

7009.4 Resetting of axle counters

- 7009.4.1 The axle counters controlling a particular block section are reset by the two train-control officers controlling the section or, in the case of CTC, by the train-control officer and the senior train-control officer (or other train-control officer, where a senior train-control officer is not on duty) who must simultaneously depress the appropriate push buttons. The two officials concerned may reset the axle counters only after they have satisfied themselves that the last train to have entered the block section before the failure, was still complete when it cleared the section, or only if there is absolute certainty that the train in no way caused the non-synchronisation of the axle counters.
- 7009.4.2 Before the two officials depress the axle counter reset buttons in respect of a block section next to which there is a parallel running line, they must satisfy themselves that the reset buttons are the correct ones for the main line concerned (e.g. No. 1 or No. 2 main line).

7009.5 Recording of progressive numbers on console or control panel

- 7009.5.1 Each time an axle counter is reset, a progressive number is registered on the console or control panel. This progressive number together with a concise but full explanation as to why the axle counter had to be reset, must be recorded in a special book kept for this purpose. The book must be ruled as follows:

DATE	TIME	SECTION	REASON FOR RESETTING	RESET BY	PRO NO.	REMARKS
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- 7009.5.2 A separate page must be used in the special book for each counter on the console or control panel.

7010.0 BLOCK SECTIONS WITH TRACK CIRCUITS

- 7010.1 If, after the passage of a train, the indications on the panel show that a block section that is track-circuited throughout, is still occupied, the procedure described in subclause 7009.3.2 must be followed. If it has been established beyond doubt that the train was still complete when it cleared the block section, the train-control officer concerned must advise the signalling maintenance official and the latter must take immediate steps to locate and repair the fault.

7011.0 SPECIAL KEYS

7011.1 Siding points keys

- 7011.1.1 Where there are hand points from a running line to a siding, the points are locked by means of a special lock which is fitted to a rod attached to the points blade. Locomotive or shunting personnel must not try to operate the siding points before the special lock has been unlocked. Before the points are locked after use, it must be ensured that the points blade is close against the stock rail.

- 7011.1.2 A special key to unlock the siding points lock is provided in the siding telephone box (see subclause 7006.3) or a separate box at the points at each end of the siding concerned or at the relay room. The key is locked in the key container either individually or by means of a main key (release key).

- 7011.1.3 The siding points key can be removed from the lock only after the points have been set and locked in the normal position.

7011.2 Isolating and earthing switch key

- 7011.2.1 Where the overhead power supply must be switched on for a siding, as mentioned in subclause 7011.1.1, when shunting has to be carried out, an additional key is provided onto which the isolating and earthing switch key, hereinafter referred to as the switch key, is welded. The switch key is either in the same key container as the siding points key(s), in which case it is unlocked by the same main key, or in a separate key container in the same box as the siding points key(s), in which case it is separately released by the train-control officer.

7011.3 Release and replacing of keys

- 7011.3.1 When the train-control officer releases the siding points key(s) and, where applicable, the switch key, an indication light will illuminate for approximately 20 seconds on the relevant key container(s). During this period the driver's assistant must remove the separate siding points key and, where applicable, the separate switch key, or turn the main key, locking the other key(s), from the horizontal to the vertical position and remove the key(s) concerned. Should the indication light(s) go out before the said key(s) is/are removed or turned, the train-control officer must be requested to again release the key(s).
- 7011.3.2 When the indication light(s) in the signal cabin or traffic control office indicate(s) that a switch key has been released without the key release button having been operated, or if the light(s) is/are out, the train-control officer must regard the siding(s) as energised and arrange for loading and unloading in the siding(s) to be stopped until it has been established that the siding(s) is/are, in fact, de-energised. The defect that caused a wrong or no indication to appear must be rectified without delay.
- 7011.3.3 When the train-control officer releases the siding points key(s), all the relevant protecting main signals are automatically locked in the "danger" position, and it will not be possible to operate these signals until the key(s) that had been removed has/have been returned to the normal place in the container and the main key, where applicable, has been turned back. It will, however, be possible to operate the position-light shunt signals for the running line on which the siding points are situated after the release of the siding points key(s). The switch key that is released separately is not interlocked with the signalling installation.
- 7011.3.4 In order not to delay through trains unnecessarily, the key(s) that has/have been removed from the siding points key container, must be replaced in the correct key hole(s) and the main key, where applicable, turned back as soon as the shunting operations have been completed. The switch key that has been released separately must, likewise, be replaced in the correct key container as soon as the shunting has been completed. After the key(s) has/have been replaced, the train-control officer must be advised accordingly and the box(es) concerned locked.

NOTE: *The manner in which the special keys are locked and released, may differ from section to section. There are, for example, places where the main key (release key) must be removed and used separately to unlock the siding points keys.*

7011.4 Switching out of part of interlocking area for shunting and use of shunting keys

- 7011.4.1 In order to allow freedom of movement when shunting has to be done, the interlocking at some places is such that the interlocked points concerned remain locked in the appropriate position and the shunt signal(s) concerned in the "caution" position when the siding points key is released. If, in these circumstances, there are no hand points locked by means of the special lock mentioned in subclause 7011.1.1, a key marked SHUNTING KEY/RANGEERSLEUTEL is used and is released in the same manner as a separate siding points key. Before the key is released, the train-control officer must set the relevant interlocked points correctly.
- 7011.4.2 After the siding points key or the shunting key, as the case may be, has been released, the employee in charge of the shunting or the control shunter, as the case may be, must not replace it in the key container until the shunting has been stopped and the shunting locomotive is standing clear at such a spot that further movement thereof to or over the relevant interlocked points will be prevented by means of a signal at "danger".
- 7011.5 Each key container, except one in which a shunting key is kept, is equipped with a sealed push button with which the separate siding points key, the main key or the switch key, as the case may be, can be released in emergencies should the release apparatus fail. When such a failure occurs, the train-control officer may telephonically grant permission for the seal on the relevant key release push button to be broken and for the button to be depressed to release the key concerned. After completion of the shunting, the provisions of subclause 7011.3.4 must be complied with. The train-control officer must arrange for the key release push button to be resealed as soon as possible. The train-control officer must record particulars of each occurrence as well as the time and date the signalling maintenance official has replaced the seal, in the train register.

7012.0 EMERGENCY POINTS OPERATING HANDLES

- 7012.1 Emergency points operating handles are provided to operate power-operated points in the event of the electric points machine(s) failing.
- 7012.1.1 At places where the emergency points operating handles are not interlocked with the signalling equipment, a fixed number of operating handles and wedges must be kept locked away in the signal cabin in the locker specially provided for the purpose (also see subclause 8012.4, of this appendix), unless there is an arrangement providing for the points at the particular place always to be cranked by the signalling maintenance official.

- 7012.1.2 In CTC areas, at remote-controlled interlocks and at certain stations, an emergency points operating handle which is interlocked with the signalling equipment, is provided in a box near each set or group of running line points. The box can be identified by the depiction of an operating handle on it. The handle is secured in the box by means of a Chubb key. Before an employee is authorised to remove the handle, all signals controlling movements over the relevant points or group of points, must be placed at "danger". When the handle is removed, an illuminated indication appears on the panel and all the relevant protecting signals are locked in the "danger" position.
- 7012.2 In addition to the train-control officer himself, only a signalling maintenance official or a qualified person such as a driver, driver's assistant or yard official may, on instructions from the train-control officer, use the operating handle when points cannot be operated from the console, control panel or lever frame or the train-control officer has no illuminated indication that the points are correctly set and locked. The train-control officer must furnish the number of the points (which also appears on the points machine) to the person who will use the operating handle.
- 7012.3 The operating handle must be inserted in the aperture under the hinged flap on the side of the points machine and cranked until the points are correctly set. When the handle becomes difficult to operate, it is an indication that the points blade is against the stock rail.
- 7012.4 The points may be operated with the operating handle only if –
- 7012.4.1 there is no vehicle standing on or foul of the points;
- 7012.4.2 no conflicting movement is allowed;
- 7012.4.3 a route for which the points afford flank protection has not been set up; and, where applicable –
- 7012.4.4 a route or overlap has not been set up over the points and irrespective of what the indication on the panel may be, the route or overlap has nevertheless been cancelled by means of the appropriate push buttons;
- 7012.4.5 the "call" on all points in the route has been cancelled by means of the appropriate push buttons; and
- 7012.4.6 a route has not been "stored" in respect of the interlocking area concerned.
- 7012.5 Examination of points and setting thereof by means of emergency points operating handle**
- 7012.5.1 In the case of trailing points, the train-control officer must instruct the driver or other employee concerned to examine the points on the ground and, if necessary, set them correctly by means of the operating handle. Should the handle have been used, it must be returned to and secured in its box or returned to the signal cabin, as the case may be, unless it has to be left in a points machine as provided in subclause 7012.5.2 or 7012.7.
- 7012.5.2 In the case of facing points, the train-control officer must instruct the driver or other employee concerned to use the operating handle to set the points correctly and to ensure that the points machine mechanism has fully completed its movement. Even though the points may seem to be correctly set, they must nevertheless be cranked to and fro to ensure that the movement of the mechanism has fully completed its movement. Except where otherwise specially provided in respect of the particular area or place, the operating handle must be left in the machine of the last set of facing points operated or tested until all the vehicles have proceeded over the points, whereafter the driver's assistant or other employee concerned must return the handle to and secure it in its box or return it to the signal cabin, as the case may be. (Where the driver has removed the operating handle from its box in these circumstances and his Chubb key is trapped in the lock of the box, the driver's assistant must remain behind at the points to return the operating handle to its box and return the Chubb key to the driver after all the vehicles have passed over the points.)
- 7012.6 Where points are compounded with other points, e.g. crossover points or safety points, or with a derail, or are equipped with a movable vee, all the points machines must be operated with the operating handle. The train-control officer must remind the person concerned thereof when instructing him to use the operating handle.
- 7012.7 1 in 20 sets of points have a movable vee with a points machine at the vee as well as at the points blades. (The machines are approximately 34 metres apart.) When the points machines are cranked, care must be taken to see that the points blades as well as the movable vee are correctly set for the same line. (Boards to serve as reminder hereof are affixed to the points machines of 1 in 20 sets of points.) Except where specially provided otherwise, the operating handle must be left in the machine at either the vee or the points blades until all the vehicles have passed over the points.
- 7012.8 In the case of a lever frame or a control panel, the train-control officer must place a reminder on the lever/switch/push button of each set of points in respect of which the operating handle has been used before authorising a movement over the points.
- 7012.9 The operating handle must be used in cases of emergency only, e.g. when the electrical apparatus fails or locking cannot be obtained on the points.

- 7012.10 Where operating handles which are kept in train control offices are used to test or set points, the wedges provided with the handles must be used to hold the points concerned firmly in the correct position while movements are taking place over them.
- 7012.11 The train-control officer must record in the train register particulars of all cases of points having been operated by means of the emergency points operating handle.
- 7012.12 Where emergency points operating handles are kept in train control offices, the officials in charge of the stations and inspection officers, during their visits to the train control offices, must ensure that the operating handles are kept locked away when not in use. The official in charge of each such station must send a report to the operations manager every month, furnish particulars of all cases of operating handles having been used and indicate the reasons for using them.

7013.0 CENTRALISED TRAFFIC CONTROL

7013.1 Recording of train movements

- 7013.1.1 In those CTC areas controlled from the larger train control offices, all train movements are automatically recorded by a train-graph recorder or train-time printer connected to the panel in the train control office.
- 7013.1.2 Where a train-graph recorder is in use, the senior train-control officer must satisfy himself at regular intervals that the recorder is functioning correctly and that its indication of the time is correct. In addition, the graph, where applicable, must be brought up to date regularly by drawing the necessary lines and inserting train numbers.

7013.2 Tape recorders in/at train control offices

- 7013.2.1 Tape recorders are provided in or at the most train control offices. While a conversation is being held with the train-control officer from a signal telephone, on the emergency line or by radio, or, at certain places, from another telephone (e.g. a p.a.x. telephone) or on another line (e.g. a line between a control point in a yard and the traffic control office), the conversation is recorded by a tape recorder.
- 7013.2.2 Train-control officers and senior train-control officers must under no circumstances interfere with the tape recorders secured under lock and key or handle the tapes. It will exclusively be the duty of the telecommunication maintenance official concerned or, if he is not available, the signalling maintenance official concerned, to change the tapes, except those of tape recorders that change the tapes automatically, on the 1st and 16th day of each month or, if the tapes are full before these dates, as soon as they are full, and to put each of the full tapes in the correct drawer. Each tape must be erased before re-use. When tapes are changed, the counter of the tape recorder must be reset to "zero".
- 7013.2.3 At the start of each shift, the senior train-control officer, where there is one, must record his name and the time and date on each tape concerned by means of the telephone. Each train-control officer must do the same with regard to his console's/control panel's tape recorder and, in addition, record the time and date at regular intervals during his shift.
- 7013.2.4 Should the tape recorder fail, the senior train-control officer or, if there is no senior train-control officer, the train-control officer concerned, must advise the telecommunication maintenance official as soon as possible and the latter must repair the fault without delay. [The Area Manager (Transtel) must arrange for a report regarding the fault to be submitted to the Executive Manager (Transtel).] In the event of a tape recorder's alarm sounding and the train-control officer being unable to switch it off by pressing the reset button, it must be regarded as an URGENT fault and the maintenance official must be summoned without delay.
- 7013.2.5 Authority for occupation of a tape recorder cabinet to perform work of whatever nature on it, must be given by the senior train-control officer or, if there is no senior train-control officer, the train-control officer concerned, and must be restricted to one tape recorder cabinet at a time.
- 7013.2.6 A special book titled "Occupation of tape recorder cabinet by telecommunication maintenance official" must be kept at each console or control panel in the traffic control office. Full particulars of the occupation of each tape recorder cabinet to change tapes or perform repair or maintenance work, must be recorded in this book, namely –
- 7013.2.6.1 the number of the entry which must also be furnished to the maintenance official and recorded by him as authority number to proceed with the work;
- 7013.2.6.2 the date and time the fault occurred and was reported to the maintenance official;
- 7013.2.6.3 the date and time occupation was taken and the work was completed;
- 7013.2.6.4 the reason for the occupation;
- 7013.2.6.5 where applicable, the time the alarm sounded;
- 7013.2.6.6 the number displayed by the counter functioning together with the alarm reset button;

- 7013.2.6.7 relevant remarks next to which the maintenance official must record that he has taken note thereof; and
- 7013.2.6.8 the signature of the train-control officer and, where there is one, the senior train-control officer, as well as the signature (with date and time) of the maintenance official.
- 7013.2.7 In the event of an accident or irregularity where a conversation between a train-control officer and a driver or other employee is likely to be of importance, the senior train-control officer or, if there is no senior train-control officer, the train-control officer concerned, must obtain the tape recorder's counter reading and record it in the occurrences book together with the details of the occurrence. The senior operating official in the central operating office must indicate whether and when the telecommunication maintenance official or, if he is not available, the signalling maintenance official, should remove the tape concerned from the tape recorder and to whom he should hand it. The senior train-control officer/train-control officer must then arrange accordingly. The officer to whom the tape is handed (in the carrier specially provided for this purpose) is responsible for its safe custody.
- 7013.2.8 Where a tape recorder changes tapes automatically, conversations are erased automatically after 24 hours. In the event of an accident or irregularity the tape concerned must be removed in good time – and not 24 hours after the occurrence – as conversations that may be relevant may have taken place long before the occurrence.
- 7013.3 “Line blocked” panel indication and reminders**
- 7013.3.1 Illuminated red warning cross** – When, for any reason, a portion of the line is temporarily closed for ordinary traffic, e.g. when a train is being divided or has become accidentally divided, or in the case of a locomotive failure, accident or other obstruction, the train-control officer must set up the illuminated red warning cross – where this facility is provided – on the panel for that portion of the line.
- 7013.3.2 Magnetic reminder caps and plates**
- 7013.3.2.1 In addition to magnetic reminder caps which are provided at all control panels or consoles with push buttons, various types of small magnetic reminder plates are provided at CTC panels. Train-control officers must freely use the reminder caps and plates.
- 7013.3.2.2 When, for any reason, signals or points are not to be operated, the train-control officer must place (a) magnetic reminder cap(s) over the interlocking area, signal or points push button(s) on the control panel/console. The train-control officer must also, if necessary, make use of one or more of the appropriate types of magnetic reminder plates described in subclause 7013.3.4.
- 7013.3.2.3 When it is necessary to temporarily block a portion of the line, the train-control officer must, in addition to setting up the illuminated red warning cross on the panel (see subclause 7013.3.1), where applicable place reminder caps on the push buttons used to call up the interlocking area concerned, or the interlocking area at each end of the section of line concerned. If necessary, the train-control officer must also make use of one or more of the appropriate types of magnetic reminder plates described in subclause 7013.3.4.
- 7013.3.2.4 After a driver has been authorised to pass a signal at “danger” and the train number cannot be advanced by operating the appropriate push buttons, the train-control officer must place a type A magnetic reminder plate, on which the number of the train has been inscribed, above the section of the panel concerned in terms of subclause 7029.17.
- 7013.3.3 The warning cross, magnetic reminder caps and/or magnetic reminder plates may not be removed until the circumstances that gave rise to the use thereof, no longer exist.
- 7013.3.4 Types and use of magnetic reminder plates** – The following types of magnetic reminder plates are provided in traffic control offices and must be used as indicated:
- 7013.3.4.1 Type A (blank) to be used for recording thereon, for example, train numbers, “occupied” indications and particulars of detached loads, by means of a black fibre pen. This plate is also to be used in conjunction with a type C, D or E plate, as the case may be, to indicate an occupation of signalling equipment, the track or overhead track equipment;
- 7013.3.4.2 type B (with letters BOM/BT) for use when heavy ballast tamping machine or material train is working on a running line;
- 7013.3.4.3 type C (with image of colour-light signal) to indicate the whereabouts of the signalling maintenance official and for use with a type A plate to indicate the occupation of points and signalling gear;
- 7013.3.4.4 type D (with image of rail) to indicate the whereabouts of the track master and for use with a type A plate to indicate occupation of the track; and
- 7013.3.4.5 type E (with image of electrical warning sign) for use with a type A plate to indicate occupation of the overhead track equipment.

7013.4 Advance advice of trains

7013.4.1 The train-control officer at a station adjacent to or forming part of a CTC area and the train-control officer must notify each other in good time of all trains proceeding to or from the CTC area, and also of delays or expected delays to such trains, so that the best arrangements regarding admittance and/or crossings inside or outside the CTC area, as the case may be, may be made.

7013.5 Trains losing time

7013.5.1 When a driver in CTC territory is unable to maintain the stipulated running times, he must advise the train-control officer in order that suitable arrangements may be made to prevent delays to opposing and following trains.

7013.6 Crossing or passing of trains in CTC territory

7013.6.1 When trains simultaneously approach a place where they have to cross and one or both must be admitted onto a running line or lines not equipped for simultaneous entry or passage, preference must be given to the train approaching on the up or steeper up grade, with due allowance for the loads conveyed by the trains.

7013.6.2 When trains have to cross or pass each other, the train-control officer must, by route storage (where in use) or otherwise, ensure that the route is set up for the line onto which the second train is to be admitted, as soon as the train arriving first is within the clearance marks.

7013.7 Shunting in CTC areas

7013.7.1 Before shunting is undertaken in a CTC area, permission must be obtained from the train-control officer. He must be advised of the movements to be carried out and the expected duration thereof. The time allowed must not be exceeded without his permission.

7013.7.2 At a place where the provisions of subclause 7011.4.1 are applicable, e.g. where there is a shunting neck at one or both ends of a loop on which hand-operated points to sidings are provided, a train that has to attach or detach traffic must be admitted to the loop concerned (or, where applicable, to the signalled goods siding). Where a derailer or safety points are provided at one end of the loop (or signalled goods siding), the train-control officer must reset the derail or safety points in the normal position before releasing the siding points key for the shunting operations.

7013.7.3 No vehicles may be left on running lines within a CTC area without the authority of the train-control officer, except during authorised shunting operations.

7013.7.4 In the event of failure of all communication, shunting may not be performed on running lines.

7013.8 Failure of signalling apparatus and all communication

7013.8.1 Should the signalling apparatus and all communication fail in a CTC area and it is not expected that one or the other will soon be restored, and alternative communication cannot readily be provided, emergency-working must be introduced in the affected section of the CTC area in accordance with the special instructions issued to train-control officers and others concerned. The emergency-working must continue until the apparatus and/or suitable communication has/have been restored or until another system of train control has been introduced in accordance with subclause 7013.9.

7013.8.2 The emergency-working section allocated to each pilotman will extend from a specified signal on a specified running line to a specified signal on a specified running line in the up as well as the down direction within the CTC area, based on the principle, inter alia, that a train must be admitted to the left-hand line of the two lines concerned (as seen in the direction of travel) at the place where two emergency-working sections adjoin each other.

7013.8.3 The pilotman must advise the driver of each train in his section (including a train standing at a signal indicating the starting point of his emergency-working section but excluding a train at a signal at the end of his section) that emergency working has been introduced, whereafter the driver must read and sign the pilotman's emergency-working form. The pilotman must thereupon hand to the driver a completed "Instruction not to move without pilotman" form. (Examples of the forms appear at the end of this section.)

7013.8.4 After a driver has been notified of the emergency working, he may not act on any "proceed" aspect until such time as he has been advised by the pilotman in writing that emergency-working has been cancelled and that he must again proceed on signal aspects.

7013.8.5 During emergency-working a driver must not allow his train to move on a running line without the pilotman, who must wear a pilotman's armband on his left arm, being on the locomotive and without having read and signed the pilotman's emergency-working form and ascertaining the extent of the emergency-working section. Signals in the emergency-working section may be passed only on authority of the pilotman. In all cases the driver must regulate the speed so as to be able to stop his train clear of any obstruction and within the distance he can see ahead.

- 7013.8.6 When the train approaches the signal at the end of the section of line over which it is being piloted, the pilotman must draw the driver's attention to this fact. Unless the signal indicates the end of the entire emergency-working area, the pilotman must hand the driver a completed "Instruction not to move without pilotman" form after the train has stopped at the signal.
- 7013.8.7 When emergency-working may be discontinued, the pilotman must proceed through his emergency-working section and inform the driver of each train in that section (including a train standing at a signal indicating the starting point of his emergency-working section but excluding a train at a signal at the end of his section), in writing, that emergency-working has been suspended and that the signal aspects must be acted upon.
- 7013.9 Suspension of CTC working**
- 7013.9.1 Introduction of other system of train control**
- 7013.9.1.1 If the signalling apparatus fails and it appears probable that such failure will continue for a prolonged period, or CTC working has to be suspended in order that changes may be effected or maintenance work carried out, the Chief Executive (Spoornet) will decide which system of train control must be introduced temporarily in the affected sector of the CTC territory and will issue a suitable notice to all concerned specifying the time and date of the change-over, the system of train control that will temporarily supersede CTC, the interlocking areas that must be opened as telegraph stations, particulars of any intermediate interlocking areas that will be used as interloops, and particulars of intervening points that will be clamped for the duration of the other system of train control. In the event of there being more than one loop at a temporary interloop, the notice must indicate which loop must be used for the crossing of trains.
- 7013.9.1.2 Irrespective of the time and date the other system of train control is being introduced, as specified in the special notice, the train-control officer at each telegraph station must contact the train-control officer in the traffic control office before resorting to the other system of train control and ascertain where all the trains are that are likely to affect the working arrangements at his station, and whether the telegraph section concerned is clear of trains. In addition, he must obtain all other information that the circumstances may require.
- 7013.9.1.3 Before a train-control officer introduces the other system of train control, he must obtain the authority of the train-control officer in the traffic control office to do so.
- 7013.9.1.4 The train-control officer, before authorising the train-control officers controlling a telegraph section to introduce the other system of train control, must ensure that the entire section between the telegraph stations which are about to be opened is clear of trains.
- 7013.9.1.5 All trains that are in the section at the time specified in the notice, are under centralised traffic control until they arrive complete within the clearance marks at the place which is to be opened temporarily as a telegraph station. Until this condition is met, all instructions relating to CTC must be observed. In no circumstances may centralised traffic control and another system of train control be in operation simultaneously in the same telegraph section.
- 7013.9.1.6 After the introduction of the other system of train control, the colour-light signals between the temporary telegraph stations must be regarded as non-existent, unless explicitly otherwise provided in the special notice.
- 7013.9.1.7 During the period the other system of train control is in operation, the train working rules and the instructions in this appendix relating to the working of trains by means of that system of train control, must be complied with.
- 7013.9.1.8 Should CTC working be superseded by telegraph order working, all trains must be stopped at the temporary telegraph stations in order that the locomotive personnel may ascertain that they have received the correct telegraph order tokens. All tokens must be endorsed with the reason for the issue thereof.
- 7013.9.1.9 During the period the other system of train control is in operation, all running line points must be operated by means of the emergency points operating handle. After use, the operating handle must be replaced in its container.
- 7013.9.2 Resumption of CTC working**
- 7013.9.2.1 Before resumption of CTC working, a special notice must be issued, specifying the time and date when the changeover will be effected.
- 7013.9.2.2 Before authorising a train-control officer at a temporary telegraph station to close the station for train working so that trains can again proceed by means of CTC, the train-control officer in the traffic control office must –
- 7013.9.2.2.1 obtain an assurance from the train-control officers concerned that the telegraph section on each side of the temporary telegraph station is clear of trains, that all hand points are correctly set and locked in the normal position, and that the siding points key(s) for locking the siding points (where applicable) and the emergency points operating handle(s) have been replaced in their respective containers; and

7013.9.2.2.2 instruct the train-control officer to advise the locomotive personnel of all trains that may be at his station, in writing, that CTC working has been resumed and that they must act on the signal aspects.

7013.9.2.3 After the provisions of subclause 7013.9.2 have been complied with, the train-control officer must advise the train-control officer in the traffic control office, endorse his train register accordingly and close the station for train working.

7013.9.2.4 Before authorising a train to proceed by means of signals, the train-control officer must satisfy himself from the indications on the panel that the line ahead is clear of trains, and that all is in order for the train to proceed in accordance with CTC working.

7013.10 Senior train-control officer's diary, train register, etc.

7013.10.1 The senior train-control officer must keep, inter alia, a diary, an occurrences book and a train register, and the train-control officer must keep a special authority register.

7013.10.2 Matters which will require attention on a specified date in the future must be recorded in the diary, and in the occurrences book all day to day occurrences pertaining to train movements or other CTC matters.

7013.10.3 All entries in the train register must be made legibly, in ink, and signed by the senior train-control officer on completion of each tour of duty. The senior train-control officer taking over duty must read and countersign the entries.

7013.10.4 Where there is no senior train-control officer, the train-control officer(s) must comply with the provisions of subclauses 7013.10.1, 7013.10.2 and 7013.10.3.

7014.0 REMOTE-CONTROLLED INTERLOOPS AND TOKEN STATIONS

7014.1 A remote-controlled interloop/token station is an interloop/token station equipped with colour-light signals and power-operated points to expedite the passage of trains worked under token working. All the instructions relevant to the particular token working system in operation on the telegraph section, remain applicable.

7014.2 Except as provided in subclause 7014.9.2, the rule of road as laid down in train working rule No. 213 does not apply to a remote-controlled interloop/token station (hereinafter called "interloop").

7014.3 The admittance and departure of trains, as in the case of a crossing place in CTC territory, are controlled by means of fixed signals and locomotive personnel, in normal circumstances, do not operate points. The applicable terms of train working rule No. 215 and subclause 7013.6.2 must be strictly observed.

7014.4 Before a driver passes the signal short of the trailing points at the interloop, he must satisfy himself that he is in possession of the correct token for the section in advance.

7014.5 The train-control officer at the telegraph station controlling the interloop, hereinafter called the "controlling station", must keep a book or, where practicable, insert additional columns in the train register, in which he must enter the times trains arrive at and depart from the interloop.

7014.6 Void

7014.7 Shunting at interloop

7014.7.1 The provisions of subclauses 7013.7.1, 7013.7.3 and 7013.7.4 also apply to an interloop.

7014.7.2 The train-control officer at the controlling station must not allow shunting to take place outside the signal controlling the departure of trains from the interloop while an opposing train is en route. Shunting must also not extend further beyond the said signal than is necessary.

7014.7.3 The colour-light signals concerned may be passed at "danger" during authorised shunting movements at the interloop. (See subclause 7011.3.3.)

7014.8 Running of trains if remote-control apparatus has failed

7014.8.1 While there is a fault in the remote-control apparatus, the indications on the panel must not be regarded as correct and the train-control officer at the controlling station must not attempt to operate the control switches or push buttons. The train-control officer must advise the train-control officer at the non-controlling station of the circumstances.

7014.8.2 Until such time as the remote-control apparatus has been restored, the driver of each train having to run over the telegraph section must, in writing, be –

7014.8.2.1 warned that the apparatus has failed;

7014.8.2.2 authorised to pass the outermost controlled signal at the interloop at "danger" provided the driver satisfies himself that the line is clear; and

7014.8.2.3 instructed to stop at the signal short of the first set of points.

7014.8.2.4 The provisions of subclauses 7005.9.1 and 7006.2.3 and the applicable provisions of clause 7029.0 must be complied with at the signal short of the first set of points and again at the signal short of the furthestmost points. (See subclause 7014.4.)

7014.8.3 If the remote-control apparatus cannot be restored within a reasonable space of time, the procedure as described in subclauses 7014.9.4 and 7014.9.5 may, on authority of the Chief Executive (Spoornet), be followed (although the telephones at the interloop may still be in order).

7014.9 Running of trains if remote-control apparatus and telephones have failed

7014.9.1 In the event of failure of all the telephones and the signals at an interloop, the train-control officer at the controlling station must send written authority by the quickest means to the interloop to authorise the driver of each train already occupying the telegraph section and which will be delayed at the interloop, to pass the signals concerned at "danger" provided –

7014.9.1.1 the driver has ascertained that the line is clear, and

7014.9.1.2 the points have been set and secured for the correct route in the prescribed manner by means of the emergency points operating handle (see subclause 7012.5).

7014.9.2 Should the failure occur during interworking and one of the trains have already entered the telegraph section, the other train involved in the crossing arrangement must be allowed to depart. If none of the trains that are to cross have entered the interloop, the locomotive personnel must comply with the provisions of train working rule No. 213. (Also see subclause 7014.4.)

7014.9.3 If no train has entered the section during the failure, and it will take a considerable time to have the points clamped in accordance with the provisions of subclause 7014.9.4, a waiting train may be despatched with an absolute token together with a written multiple authority (as an exception to the provisions of subclause 7029.7) to pass the signals concerned at "danger" after the driver has strictly observed the provisions of subclauses 7014.9.1.1 and 7014.9.1.2

7014.9.4 The train-control officers must advise the central operating office of the failure and arrange for the signalling maintenance official to clamp and lock the points at the interloop for the main line. Having done this, the maintenance official, in addition to making an entry to this effect in the special register in the relay room (see clause 8011.0 of this appendix), must make a suitable endorsement in the train register at one of the two stations concerned (preferably the controlling station) or send a written assurance to that station. (If trains are en route to the interloop to cross there, the points must be clamped and locked after the trains have departed from the interloop.) The clamps must not be removed before the last train to be despatched in terms of subclause 7014.9.5 has cleared the telegraph section.

7014.9.5 A combined message, authority and warning completed in strict accordance with the following example, must be given to the driver (copy to each) of each train before the train enters the telegraph section:

..... station
Date

To driver of train No.

The remote-control apparatus * and telephones at interloop has/have failed and the points there are * clamped and locked for the main line/not yet clamped and locked for the main line.

This is your authority to pass the signals at the interloop displaying "danger" aspects (red light or no light) * provided the points are set and secured for the correct route by means of the emergency points operating handle.

WARNING

When approaching the interloop, you must control the speed of your train in such a way that you will be able to stop short of an obstruction between the point from where the warning board affords protection AND THE CLEARANCE MARK AT THE OPPOSITE END OF THE INTERLOOP.

Time

Train-control officer

* Omit if not applicable.

7014.10 Reminders

7014.10.1 The train-control officer at the controlling station must place reminders on the relevant push buttons or switches when, for whatever reason, they are not to be operated, e.g. when shunting is performed at the interloop, and the reminders must not be removed until the circumstances that necessitated their use, no longer exist.

7015.0 TRAINS CROSSING OVER OR SETTING BACK

7015.1 When a train or a shunting movement has to proceed over a running line, from one running line to another, from a running line to a siding, from a siding to a running line or from one siding to another over a running line, and the movement cannot be authorised by means of a signal at “proceed” or “caution” because there is no signal or the signal has failed, the movement must be protected against train or shunting movements that can obstruct the relevant portion of the running line –

7015.1.1 by points or a derail set in such a way that it will deviate the conflicting movement; or

7015.1.2 by two consecutive stop signals, each displaying a “danger” aspect, and without any train/vehicle occupying the line between the two signals; or

7015.1.3 by one stop signal displaying a “danger” aspect, provided the track-circuited portion of the line immediately outside that signal is occupied by a stationary train; or

7015.1.4 in such other manner as will ensure the same degree of protection as would have been provided at the particular place by means of signals if the signal with which the movement was to be authorised had not failed.

NOTE: *If there is the slightest doubt about the application of subclause 7015.1.4 in a particular instance, the “stricter” provisions of subclauses 7015.1.1, 7015.1.2 and 7015.1.3 must be adhered to.*

7015.2 Immediately after a train or shunting movement has taken place from a running line to a siding, or vice versa, all the interlocked points for lines taking off the running line(s) must, through the independent operation thereof, be set in such a position as to protect the running line(s) against fouling movements.

7015.3 Train setting back

7015.3.1 When, for any reason, a train has stopped in signalled territory, it must not set back without the permission of the train-control officer concerned (the train-control officer in sole control of the running line or the train-control officer in the rear, as the case may be), except –

7015.3.1.1 if it is a material train working on a bidirectional running line with the consent of a train-control officer (see subclauses 7017.4 and 7017.5); or

7015.3.1.2 when the train has passed a platform next to which it had to stop, but then only provided the rear end of the train has not passed the next signal and the signal immediately behind the train is a “T” signal (see clause 7031.0). In such a case the driver, after having received the required signal from a competent employee, may set back as far as the platform only.

7015.3.2 A train-control officer granting permission for a train to set back must ensure that the movement can be carried out safely by keeping the necessary signal(s) behind the train at “danger” until he receives confirmation by means of the illuminated indications or otherwise that the setting-back movement has been completed, by placing reminders on the relevant levers/switches/push buttons and by taking such other steps as may be demanded by circumstances.

7015.3.3 During the setting-back movement all the signals, where provided, must be observed and all level crossings that cannot be protected by means of barriers must be protected by the driver’s assistant or other competent employee as in the case of a shunting movement. (See clause 9007.0, of this appendix.)

7015.3.4 Except in the case of a train authorised to set back as far as a platform only when its rear end has not passed the first signal beyond the platform, all the additional provisions as contained in clause 7032.0 must be complied with should a train have to set back from a point between two stations or interlocking areas on a unidirectional running line or a running line signalled for limited bidirectional working.

NOTE: *A running line that is signalled for limited bidirectional working is a running line equipped with more stop signals in the direction in which trains are normally despatched than in the opposite direction. In the “wrong” direction it may even consist of a single block section.*

7015.4 A shunting movement must not be carried out in the “wrong” direction on a unidirectional running line unless the movement is authorised by means of a position-light shunt signal at “caution”, or unless the train-control officer has given his permission and has seen to it that the movement is continuously protected against approaching trains in accordance with subclause 7015.1.

7016.0 OPENING AND CLOSING OF SIGNAL CABINS

7016.1 Where signal cabins from which colour-light signals or colour-light signalled sections are controlled, are to be closed during specified hours, special instructions with regard to the procedure to be followed to close and open the cabins appear in the local appendix or a special notice.

7017.0 MATERIAL TRAINS

- 7017.1 A material train that has to work in a signalled section or in a CTC area, must be announced in accordance with train working rule No. 222 except that, if it is a CTC area, it will not be necessary to stipulate where the material train will cross other trains.
- 7017.2 The movement of the material train is controlled by the signal aspects displayed and all fixed signals must be strictly observed, irrespective of whether the train is hauled or propelled.
- 7017.3 A material train must not set back, even for a short distance, on a unidirectional running line, except when such movement has been authorised by the train-control officer. (See subclause 7015.3 and clause 7032.0.)

NOTE: *The stipulation in subclause 7017.3 does not apply when an occupation has been taken to carry out the work.*

7017.4 Material train working in CTC territory

- 7017.4.1 Before a material train enters a CTC block section to work, or before it commences work on any other running line in the CTC area, the driver must telephonically obtain permission from the train-control officer and advise him of the time additional to the normal running time required for the work. In the case of a block section the train-control officer must advise the driver when and (if it is a bidirectional running line) where the material train must clear the section and the driver, in turn, must furnish this information to the track official.
- 7017.4.2 The locomotive and track personnel must be prepared to clear the block section or section of running line on which work is carried out within the time allowed. The time allowed may, however, be extended at the discretion of the train-control officer.

7017.5 Protection of material train

- 7017.5.1 While a material train is working in signalled territory, the train need not be protected, except when it is working outside a CTC area on a unidirectional running line (i.e. on a double-line section) between two stations, in which case it must be protected in rear as provided in subclause 11010.11. The track official must provide a competent employee to provide this protection under the supervision of the driver. (Should the outermost points of a station be within the protection distance, the employee must take up position short of the points.) The driver is responsible for seeing that protection is afforded, and he must satisfy himself that the employee understands the work and has the necessary hand-signalling equipment and detonators.
- 7017.5.2 In the case of CTC the train-control officer must observe all the applicable provisions of subclause 7013.3 and, while the material train is working on a running line next to which there are "T" signals (see clause 7031.0), he must see to it that the train is constantly protected in rear by at least one controlled signal at "danger".

7018.0 STOPPING AND EXAMINING OF TRAIN

- 7018.1 Should a train-control officer notice anything unusual on a passing train (see train working rule No. 110) or should his attention be directed to anything unusual, he must have the train stopped as soon as possible and have it examined. Where there is bell communication, he must first send the "stop and examine train" signal (7 beats) to the signal cabin towards which the train is proceeding before speaking to the train-control officer there. He must also advise the train-control officer at the signal cabin in rear.
- 7018.2 The train-control officer in the signal cabin to which the train is proceeding and who receives the signal and/or is otherwise requested to examine the train, must immediately place all the signals concerned to "danger", examine the train on arrival or have it examined and deal with it as occasion may require.
- 7018.3 Should there be reason to believe that the line is or can be damaged or obstructed, the train-control officer(s) must not allow another train to proceed over the line concerned and, where applicable, over an adjoining parallel line before the line has been examined and it has been ascertained that it is safe for the passage of trains.

7019.0 TRAIN PASSING WITHOUT MARKER

- 7019.1 Should a train-control officer notice that a train passing through has no marker attached (see train working rule No. 110) or should his attention be directed to that fact, he must have the train stopped as soon as practicable and establish whether it is complete. Where there is bell communication, he must send the "train passed without marker" signal (9 beats) to the signal cabin in advance and the "train passed without marker" signal (4.5) (where applicable, instead of the "train arrived" signal) to the signal cabin in rear.
- 7019.2 The train-control officer in the signal cabin to which the train is proceeding and who receives the signal or is otherwise advised, must stop the train and establish whether it is complete. The "train arrived" signal, where applicable, must not be given unless it has been ascertained that the train is complete.

7019.3 As soon as his attention has been directed to the fact that his train is running without a marker, the driver must arrange to have it replaced after ascertaining that his train is still complete.

7019.4 Unless it has been ascertained that the train is complete or that the line over which it has passed is clear, the first train to proceed over that line and also the first train to proceed over an adjoining parallel line, must be stopped and the driver warned orally to proceed cautiously. (Should the signal(s) not be able to display a "proceed" aspect for the running of such first train over the relevant line, it must first be established beyond any doubt that the line is clear before the driver is authorised to pass the signal(s) at "danger" – see clauses 7029.0 and 7030.0.)

7020.0 TRAIN UNUSUALLY LONG TIME IN SECTION

7020.1 Should a train be occupying a section for an unusually long period of time, the train-control officer must stop the first train having to pass through on a parallel line, inform the driver of the circumstances and instruct him to keep a sharp look-out.

7021.0 "OBSTRUCTION DANGER" SIGNAL

7021.1 Should it be necessary, owing to an obstruction, to have a train stopped by the train-control officer in an adjacent signal cabin, the "obstruction danger" signal (6 beats) must be sent to that cabin. The train-control officer receiving the signal must take prompt measures to stop the approaching train. He must not allow the train to proceed until he has received the "obstruction removed" signal (2.1 beats) and, where applicable, until the "is line clear" signal has again been exchanged.

7021.2 If necessary, the train-control officer must send the "obstruction danger" signal in both directions and take steps to stop trains on lines parallel to the one that is obstructed.

7021.3 Should the train-control officer receiving the "obstruction danger" signal stop a train for which "line clear" has been obtained, he must give the "cancel" signal (3.5).

7021.4 Should the train-control officer receiving the "obstruction danger" signal not be able to stop the train concerned, he must not acknowledge the "obstruction danger" signal, but immediately send the "vehicles running away" signal (2.5.5) or, if it is a unidirectional line, the "vehicles running away on right line" signal (4.5.5) (see subclause 7022.2) which must be acknowledged. (In the case of an electric train – if necessitated by the nature of the obstruction – the procedure laid down in the Electric Traction Instructions must be followed to isolate the overhead section and stop the train.)

7021.5 If the tapper-bells are out of order, the train-control officer concerned must communicate by telephone with the train-control officer in the adjacent signal cabin.

7022.0 RUN-AWAY VEHICLES

7022.1 Should a train or vehicles be running away on a running line or enter the section without authority (for the purpose of these instructions such train or vehicles are regarded as "run-away vehicles"), the train-control officer(s) must place all the relevant signals at "danger", not allow another train to enter the section of running line concerned or an adjacent parallel running line, and promptly take steps to stop the run-away vehicles or admit them into a siding or, should they be running away on the "wrong" line, to at least send them on the "right" line. (Should an electric train have entered the section without authority, the procedure as contained in the Electric Traction Instructions must be followed to stop the train.)

7022.2 Where there is bell communication, the train-control officer out of whose territory the vehicles are running away, must immediately give the "obstruction danger" signal (6 beats) to the signal cabin in the direction of which the vehicles are running away. Further information must then be furnished by telephone. Should the telephones fail, the 2.5.5 (run-away vehicles) signal or, if it is a unidirectional running line and the vehicles are running away in the "right" direction, a 4.5.5 signal (vehicles running away on "right" line) must be given to the signal cabin in advance after the "obstruction danger" signal has been acknowledged.

7022.3 Should the train-control officer receiving the bell signal(s) and/or telephonic message be unable to stop or divert the run-away vehicles, action in accordance with subclauses 7022.1 and 7022.2 must once again be taken.

7022.4 When run-away vehicles, after they have stopped or have been brought to a stop, are obstructing a block section or the section between two stations, they must be cleared in accordance with the instructions applicable to the clearance of a failed or derailed train, as the case may be, after it has been established where they are standing. In the event of a train having entered the section before a run-away occurred in the opposite direction on the same running line, a locomotive must not be sent to clear the run-away vehicles until it has been established that they are not being propelled.

7023.0 TRACK MAINTENANCE WORK

- 7023.1 Before commencing maintenance work on the track which is likely to affect the running of trains or the operation of the signalling apparatus, a track official must orally obtain permission from the train-control officer concerned to perform the necessary work between trains and inform him of the expected duration of the work. An entry thereof must be made in the train register.
- 7023.2 Where applicable, the train-control officer must, without delay, advise the signalling maintenance official and the maintenance manager (signals) or his deputy.
- 7023.3 In the event of the work not being completed by the time stipulated, the track official must request the train-control officer to extend the time. An entry thereof must be made in the train register.
- 7023.4 Before relaying or rerailling operations are commenced in areas where track circuits or axle counters are provided, the track inspector or other person in charge of the work, must make all the necessary arrangements with the maintenance manager (signals) or his deputy, who will be responsible for arranging for the signals affected to display the danger aspect, and for the disconnection of the track circuits or axle counters. The permanent way work must not be commenced until these arrangements have been completed.
- 7023.5 Normal working must not be resumed until the track circuits or axle counters, where they had been disconnected, have been reconnected, the maintenance manager (signals), or his deputy, has satisfied himself that the signals are in proper working condition and he has made and signed an entry to this effect in the train register. The train-control officer must countersign the entry. In the case of CTC the train-control officer must be advised by telephone and he must endorse the train register with the time the work was completed.
- 7023.6 When a track official, in the case of a track defect that has halted or will halt traffic, has to perform emergency repair work, he must, without delay, furnish full particulars to the train-control officer who must make an endorsement thereof in his train register. If the working of the signalling apparatus is affected or will be affected, as, for example, when a rail forming part of a track circuit or to which an axle counter is fitted, has broken, the train-control officer must advise the maintenance manager (signals) or his deputy without delay.
- 7023.7 Should the maintenance or repair work be performed in a block section, a train must not be despatched into the section while the work is in progress unless the train-control officer concerned has warned and fully informed the driver in writing or by telephone. (Also see subclause 7013.3.)
- 7023.8 When work is undertaken on the permanent way in a CTC area or at a remote-controlled interloop in accordance with this clause, the track official must countersign the entry made in the register in the relay room concerned by the signalling official concerned in terms of clause 8014.0, of this appendix.

7024.0 PRECAUTIONS BY TRACK MAINTENANCE PERSONNEL

- 7024.1 Contact between two rails by means of crowbars or other metallic objects must not be made on track-circuited sections, and metal gauges must not be used on these sections.
- 7024.2 Signalling equipment, including cable connections to the track, insulated rail joints, etc. must not be disturbed or damaged.
- 7024.3 Ballast tamping machines must not tamp where signal or axle counter apparatus is fixed to a rail. (A white board with a black letter "A", mounted beside the track, indicates the presence of an axle counter.)

7025.0 SANDING OF RAILS

- 7025.1 On track-circuited sections, drivers must not use more sand than necessary to ensure effective wheel adhesion, thus avoiding interference with track circuits. Where, in cases of emergency, heavy sanding is necessary, the driver must report the circumstances to the train-control officer at the following station or, in the case of CTC, as soon as is practicable to the train-control officer. The train-control officer must advise the signalling maintenance official and the maintenance manager (signals).
- 7025.2 In no circumstances must sand be used on points.

7026.0 DROPPING OF LOCOMOTIVE ASHES

- 7026.1 Drivers of steam locomotives must not drop ashes on the track, as an accumulation of ashes may lead to failure of track circuits.
- 7026.2 Ashes may only be dropped at those places specially provided therefor, as laid down in the working time book.

7027.0 TROLLEYS IN SIGNALLED TERRITORY

7027.1 Motor trolleys

7027.1.1 As motor trolleys, owing to the low mass and/or number of axles, do not always cause a short circuit between the two rails, a train-control officer must afford the running of a motor trolley special attention and watch the illuminated diagram, panel or control panel in respect of the running line concerned and satisfy himself that the trolley occupies and clears the track circuits properly, and that the stop signal immediately in the rear of the trolley returns to "danger", failing which, he must place the signal at "danger". This procedure must be followed until the motor trolley has arrived at its destination or has left the signalled territory. When a motor trolley is despatched in an area where automatic train control routing or similar systems occur, the automatic train routing must not be used to control signals for a train or second motor trolley following a motor trolley.

7027.1.2 On a double- or single-line section in respect of which illuminated track-circuit and signal indications are not provided for the whole section and there are no push buttons/switches for the intermediate signals to allow of the train-control officer(s) complying with the provisions of subclause 7027.1.1, a train or motor trolley may in no circumstances follow a motor trolley in that section. The train or motor trolley may only be despatched after advice has been received that the preceding motor trolley has cleared the section concerned.

7027.2 Push trolleys

7027.2.1 The wheels of all push trolleys (including trestle trolleys, rail transporters, etc.) which are used in areas with track circuits, must each be separately insulated so that they will not affect track circuits. Such push trolleys will, however, still affect axle counters and must not be pushed over the counters without permission first having been obtained from the train-control officer.

7028.0 DAMAGE TO OR DEFECTS IN TRAIN CONTROL EQUIPMENT

7028.1 Should an employee become aware of damage to or defects in points, signals, track circuits or other signalling apparatus, and also telephones used for train control and related purposes, he must advise the train-control officer concerned immediately. The latter must have the defect repaired and advise all persons concerned including, where applicable, the train-control officer at the other end of the section concerned.

7029.0 AUTHORITY TO PASS SIGNALS AT "DANGER" IF ONLY ONE TRAIN-CONTROL OFFICER IS INVOLVED

7029.1 The instructions in this clause are applicable to signals in CTC areas and at remote-controlled interloops, and to signals at stations provided those signals do not control entry to the adjacent sections, in other words to colour-light signals on uni- and bidirectional running lines where the train-control officer who operates or releases the signal, or in whose area the signal is, has sole control over the route beyond the signal.

7029.2 Should a stop signal not be displaying a "proceed" aspect owing to failure of the electrical equipment or for another reason, authority to pass the signal can be given by –

7029.2.1 instructing the hand-signalman, where such a person has been appointed, to display the prescribed hand signal to the driver (see train working rules Nos. 24 and 101); or

7029.2.2 operating the one-position-light shunt signal on the same post as the stop signal [see train working rule No. 46(2)(d)]; or

7029.2.3 operating the signal to display the emergency aspect if there is no one-position-light shunt signal or it cannot be operated (see subclause 7005.4); or

7029.2.4 authorising the driver telephonically to pass the signal at "danger" (see subclause 7029.9); or

7029.2.5 authorising the driver, or having him authorised, orally or in writing, to pass the signal at "danger" where this is laid down in other instructions applicable to the particular instance.

7029.3 Before the driver is authorised to pass the signal at "danger" the train-control officer must, in all cases, satisfy himself –

7029.3.1 that no conflicting movement has been, or will be, authorised in any manner;

- 7029.3.2 except when (a) the emergency aspect is used, (b) it is the intention to admit the train into an interlocking area onto a line that is occupied or obstructed at the forward end (see train working rule No. 94(1) and subclause 7029.8.2), or (c) it is specially provided for otherwise in these or other instructions (see subclauses 7014.8, 7014.9 and 7031.3), that the line over which he authorises the driver to proceed, is clear. Should there not be a white-light or other positive indication that the line is clear, the train-control officer must, in any manner dictated by the circumstances, satisfy himself that the line is clear. Should there be an indication that the line is clear but the signal, nevertheless, cannot be operated, the train-control officer, where there are points, must satisfy himself that the requirements of flank protection are met (a vehicle may, for instance, be obstructing a cross-over between the line concerned and an adjacent line);
- 7029.3.3 that the points concerned are correctly set and, where applicable, secured by means of the appropriate push buttons and/or reminders. Where the train-control officer has no illuminated indication that the points are correctly set and locked, he must arrange for the points to be examined and, where applicable, correctly set and/or secured by means of the emergency points operating handle and/or wedges (see clause 7012.0) before allowing a movement over them. Where emergency points operating handles that are interlocked with the signalling equipment (see subclause 7012.1.2) are in use and the distance between the signal at which a train is standing and the points renders it advisable, the driver may be instructed telephonically to satisfy himself, after having passed the signal at "danger", that the points are correctly set and, where applicable, secured in the prescribed manner before proceeding over them.
- 7029.4 If the signal displaying the danger aspect controls entrance to a block section in a CTC area, the train-control officer must authorise the driver telephonically (see subclause 7029.9) to pass the signal at "danger". (Should there be a one-position-light shunt signal on the same post, it may be operated after the driver has communicated with the train-control officer, but then only as an indication that the relevant points are correctly set.) In addition to complying with the provisions of subclause 7029.3, the train-control officer, before issuing the authority –
- 7029.4.1 except in the circumstances outlined in clauses 7035.0 and 7036.0, must check the panel indications, the automatic train-graph recorder (where there is one) and the train register and by any other means indicated by the circumstances, satisfy himself that the block section is clear of trains;
- 7029.4.2 if there is no white-light or other positive indication that the block section is clear and he is not certain beyond all doubt that, according to the panel indications received after the passage of the last train, the train was complete when it cleared the block section, must obtain an oral assurance in the prescribed manner that such train that was the last to have entered the block section concerned, was complete when it cleared the section (see subclauses 7009.3.2, 7010.1 and 7029.13);
- 7029.4.3 if it is a block section on a bidirectional running line –
- 7029.4.3.1 must test the indications on the panel by the operation of the appropriate push buttons;
- 7029.4.3.2 must endeavour to set the route direction indication in the direction in which the train will be authorised;
- 7029.4.3.3 must ensure that the signals controlling entrance at both ends to the block section concerned are at "danger" by the operation of the appropriate cancel push buttons;
- 7029.4.3.4 must place the illuminated red warning cross, where this facility is provided, on the panel for the portion of running line into which the train is to proceed;
- 7029.4.3.5 must establish either from the locomotive personnel or the indications on the panel that the signals concerned, including the signal(s) controlling entrance to the block section in the opposite direction, is/are at "danger" if there is any reason to suspect that the CTC coding is defective or if a CTC fault indication is displayed, or if there is uncertainty regarding the aspect a signal is actually showing (see subclause 7029.4.3.1);
- 7029.4.3.6 must switch out the interlocking area, the CTC coding of which is defective, where this facility exists. (If a route for a train movement has already been set up before failure of the CTC coding, the interlocking area must be switched out on completion of the train movement.)
- 7029.5 After a train has stopped at a stop signal at "danger" and the one-position-light shunt signal or the blue light, where provided on the same post, has not been operated, or there is no shunt signal or blue light, and speaking communication can be established with the train-control officer, the driver must comply with the provisions of subclauses 7005.9.1 and 7006.2.3. If the route ought to be clear but the signal cannot be operated, the train-control officer must comply with the provisions of subclause 7029.3 and, where applicable, subclause 7029.4, and thereafter authorise the driver by telephone to pass the signal.
- 7029.6 When a signal that may be passed at "danger" on telephonic authority, controls movements over one or more sets of facing points, the train-control officer must advise the driver onto which line his train will proceed. The driver must satisfy himself that each set of facing points is still set for the correct route before proceeding over it. Should the line be occupied or the forward end thereof obstructed, the train-control officer must advise the driver and the latter must proceed very slowly and stop at a safe distance from the train or vehicle(s) occupying or obstructing the line.

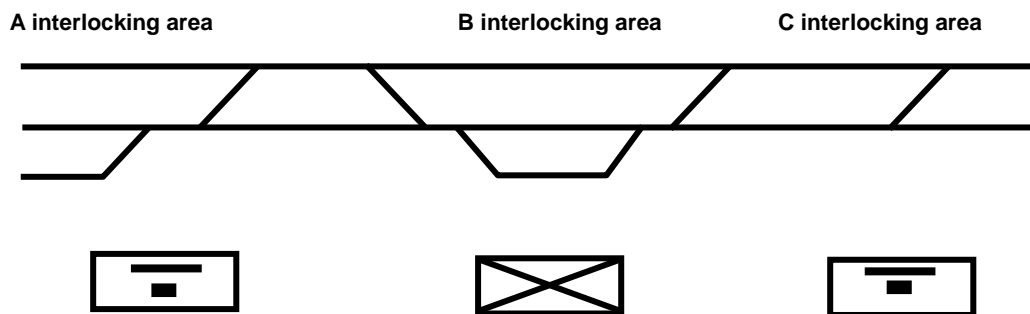
- 7029.7 When necessary, a “multiple” authority, i.e. a telephonic authority to pass two or more consecutive stop signals at “danger”, may be issued to a driver, subject to the following additional conditions:
- 7029.7.1 The portion of line pertaining to the authority issued, must not extend beyond the next signal preceding points.
- 7029.7.2 The overlap beyond the signal to which the train may proceed, must not be occupied by a train or vehicle and the points in the overlap must be correctly set and secured.
- 7029.7.3 The speed of the train must not exceed 20 km/h when the locomotive passes each signal in respect of which the driver already has an authority when he approaches it.
- 7029.7.4 The “multiple” authority may be issued only if it is known that the two or more consecutive signals, in spite of the fact that the line is clear, cannot display a “proceed” aspect.
- 7029.8 The train-control officer must enter full particulars of all telephonic authorities in the authority register (see example at end of this section). He must allocate an authority number in respect of each signal to be passed at “danger” and record, in ink, the reason therefor as well as the instruction to the driver strictly in accordance with the appropriate of the following examples in the column concerned (examples 7029.8.3 and 7029.8.4 apply to CTC only):
- 7029.8.1 # Signal/signals defective or cannot be operated. Pass signal/signals at “danger” and proceed “on sight” on the ø to destination signal, code, No. (where there is such a signal). (This authority must also be issued when the aspect of a signal becoming defective changes from “proceed” to “danger” immediately prior to the locomotive passing the signal and the locomotive, in these circumstances, stops beyond the signal.)
- 7029.8.2 # The ø is occupied. Pass signal at “danger” and stop your train at a safe distance from the train/vehicle(s) occupying/obstructing the line.
- 7029.8.3 # ø is occupied/obstructed at km as a result of † Pass signal/signals at “danger” and proceed “on sight” on the ø to kilometre point to ‡ and thereafter return/proceed to destination signal, code, No. at (place).
- 7029.8.4 # Tamping machine working on track circuit(s) between km and km and must be passed at km. Pass signal/signals at “danger” and proceed “on sight” on the ø to destination signal, code, No. (This example applies when a heavy ballast tamping machine is working in a CTC block section controlled by continuous track circuits and the machine, owing to unforeseen circumstances, cannot be removed clear of the line in good time to allow of the signal controlling entrance to the block section displaying a “proceed” aspect.)
- # Omit in every paragraph what is not applicable or necessary.
- ø Insert particulars of running line where signal controls entrance to two or more running lines, or where otherwise applicable.
- † Insert nature of obstruction, e.g. washaway, failure of train No., etc.
- ‡ Insert nature of work to be performed, e.g. “clear train out of section”, “rerail derailed vehicles”, etc.
- 7029.9 After the provisions of subclause 7029.8 have been complied with, the train-control officer must inform the driver briefly of the nature of the authority to be read (e.g. “authority to proceed to signal, code, No.”, “multiple authority to proceed to signal, code, No.”, “authority to clear failed train out of section”, etc.). He must then read the complete entry (with all the authority numbers in respect of all the signals to be passed at “danger” in the correct order) in the authority register to the driver, starting at column (1). In the case of a “multiple” authority (subclause 7029.7) or an authority in accordance with the example in subclause 7029.8.2, 7029.8.3 or 7029.8.4, or where there are distant points to be examined/secured after the train has passed a signal at “danger” (see subclause 7029.3.3), the driver must record the whole authority on an SD1 form and repeat it in full and in the correct order to the train-control officer. In the case of an authority that does not have to be recorded on an SD1 form, the driver must repeat to the train-control officer only the authority number in full and the code and number of the signal to which he may proceed. The train-control officer must insist that the driver repeat to him the authority as indicated here and in each instance he must indicate whether the authority, as repeated, is correct. (Drivers working in areas where trains are controlled by means of colour-light signals, must be in possession of a block of SD1 forms.)
- 7029.10 Serial numbers, starting with No. 1, must be entered consecutively for every 24-hour period, i.e. from midnight to midnight. The code and number of the signal to be passed at “danger” must form part of the authority number to be read to the driver, e.g. 7/LED106, where the first figure indicates the serial number of the authority and the following letters and figures indicate the code and number of the signal respectively. If a “multiple” authority is issued, the authority number for each consecutive signal must include a serial number, e.g. 7/LED106, 8/LED12, 9/LDS246.

- 7029.11 Should the telephone fail before an authority to pass a signal or series of signals at “danger” has been read and repeated to the train-control officer, the arrangements must be regarded as incomplete and must not be acted upon. (See subclause 7006.7.)
- 7029.12 When the signal telephones are out of order so that the driver cannot communicate with the train-control officer by this means, the emergency telephone line may be used to authorise a driver to pass a signal at “danger”. In such a case, the train-control officer must, however, request any persons who may be on the line, except the driver to whom the authority is to be issued, to unplug their handsets for such time as may be considered necessary, to enable him to identify beyond all doubt the driver to whom he wishes to speak, and to read the authority to him. When the signal telephone and the emergency telephone fail, any other means of communication as, for example, a portable radio temporarily placed at the driver’s disposal, may be used provided the train-control officer can, beyond all doubt, identify the driver.
- 7029.13 Except where the train-control officer has, beforehand, issued instructions to the contrary, the driver of a train that has passed, at “danger”, a CTC section entry signal on telephonic authority and has proceeded through the block section concerned, must, as soon as possible, give the train-control officer the assurance that the train is still complete and, where applicable, has arrived within the clearance mark(s)/points. Where there is no radio communication, the train-control officer must, for this purpose, keep the first suitable stop signal in advance at “danger”. Should the driver give the assurance, he must first ascertain or establish by personal observation that the train is still complete. The train-control officer must regard the block section as occupied until he has received the assurance from the driver, or from another responsible official as stipulated in subclauses 7009.3.2.1 and 7009.3.2.3, that the train was still complete after it had cleared the block section.
- 7029.14 Where there is a senior train-control officer, he must, if at all possible, personally satisfy himself that the applicable instructions are carried out before a driver is authorised telephonically to pass a signal – especially a section entry signal – at “danger”. He must, at regular intervals, check and countersign all the entries made in the authority register during his shift.
- 7029.15 Every time a driver passes a signal at “danger” on telephonic authority (“single” or “multiple”), he must proceed “on sight” (see subclause 7001.1.17) until he has arrived at the next stop signal. He must also expect to find the next stop signal at “danger”, but even if he can see that signal displaying a “proceed” aspect, he must, nevertheless, proceed “on sight” until he has arrived at the signal.
- 7029.16 Hand-signalmen**
- 7029.16.1 A driver must not be authorised by means of a hand signal to pass at “danger” a signal controlling entrance to a block section. (See subclause 7029.4.)
- 7029.16.2 When instruction is given to authorise a driver by means of a hand signal to pass a signal at “danger” in an area in respect of which an authority register is in use, an authority number must be allocated and the applicable particulars, namely date, time, train number, authority number, reason for authority and instruction to the hand-signalman, must be recorded in the authority register. The authority number must also be furnished to the hand-signalman.
- 7029.17 After a train-control officer has given a driver authority in accordance with any of the methods mentioned in subclause 7029.2 to pass a signal at “danger”, he must, without delay, place the number of the train in the applicable train number optic, where one is provided. If this cannot be done, or if there is no train number optic, the train-control officer must immediately place a small magnetic reminder plate (see subclause 7013.3.4) on which the number of the train has been inscribed, above the applicable section of the panel in order that the line up to the signal to which the driver is authorised to proceed, may, in this manner, be shown as occupied by his train. The number must be displayed until it has been established that the train has cleared the section of line concerned.
- 7029.18 Failure of CTC apparatus on multiline**
- 7029.18.1 When the CTC apparatus on a multiline fails and drivers have to be authorised to proceed in accordance with this clause, the train-control officer must arrange for trains to run on the running line (No. 1 or No. 2 main line) on the left in the direction of travel, except where a train has to stop alongside a platform and there is no suitable platform next to the running line concerned.
- 7029.18.2 Should a train already be occupying the “wrong” line on the multiline on which the failure occurred, it must, if possible, be crossed over onto the running line to the left in direction of travel.
- 7029.19 “Permanent red lights”**
- 7029.19.1 Where a signal equipped to display a red light only, is provided at the entrance to a yard, the driver of an approaching train must be authorised to pass the signal in accordance with the instructions regarding the working in the yard.
- 7030.0 AUTHORITY TO PASS SIGNALS AT “DANGER” IF TWO STATIONS CONTROL THE SECTION**
- 7030.1 This clause is applicable to the section entry signal (also if it is a semaphore signal controlling entrance to a section with colour-light signals) controlling entrance to the section between a station and the next station (see subclauses 7001.1.23 and 7001.3), and to the colour-light signals in the section between the two stations. It must be read in conjunction with clause 7029.0.

7030.2 SD2 authorities

- 7030.2.1 In all cases where drivers have to be authorised in writing by means of SD2 authorities in accordance with these instructions to pass one or more signals at “danger”, the train-control officers must see to it that each paragraph or item on the SD2 form that is not necessary or applicable, is deleted and initialled and that all the missing details are filled in in the remaining paragraphs/items. The SD2 authorities must be numbered consecutively for each calendar month.
- 7030.2.2 Where trains, in the event of a failure of the signalling power supply, have to be despatched by means of SD2 authorities, the arrangement applies to all the adjacent parallel running lines, unless it can be established beyond doubt that the signals on a particular line between the two places concerned are in no way affected by the failure.
- 7030.2.3 The train-control officer must stop each train approaching a section over which it has to proceed with an SD2 authority, in order that the authority (the first copy thereof) may be handed to the driver and the latter may make himself conversant with the circumstances before departing. The original copy of the authority must be filed for six months at the station, while the driver must hand in his copy at his depot at the end of the trip.
- 7030.2.4 Where SD2 authorities are often read to drivers (see subclause 7006.8), the official in charge may arrange for a supply of SD2 forms to be kept in the relevant signal telephone box.
- 7030.2.5 A train-control officer must not give “line clear” for a train to be despatched on an SD2 authority to a place under his control before he has satisfied himself that the preceding train complete has arrived and is protected in the rear against a following train by at least –
 - 7030.2.5.1 two stop signals at “danger”; or
 - 7030.2.5.2 a warning or stop signal displaying a yellow light, the next signal at “danger” and a clear overlap beyond the latter signal; or
 - 7030.2.5.3 a set of facing points set for a line (unoccupied) other than the one onto which the train has been admitted.
- 7030.2.6 Where a driver proceeds from station to station on an SD2 authority in accordance with these instructions, the authority authorises him to proceed only as far as the outermost stop signal of the control area of the next signal cabin (see subclause 7001.3). Should that signal be in an interlocking area other than the one in which the signal cabin controlling it is situated, the name of that other interlocking area must be indicated in the SD2 authority as the place to which the driver may proceed.

EXAMPLE



The signal cabin at A controls A and B as well as the section between A and B (A-B, therefore, actually forms a CTC area), while the B-C section is jointly controlled by A and C. A train that has to proceed from C to A, must be authorised to proceed to B only, where the driver must strictly observe all the signals.

- 7030.2.7 Where trains are to be despatched from station to station on an SD2 authority in accordance with these instructions when the signalling power supply in the section has failed, the procedure must also be followed if one or more of the intermediate stop signals beyond the section entry signal have failed for reasons other than a power supply failure, if this will mean that trains, as a whole, will be less delayed. In such a case, the section entry signal must be kept at “danger”.
- 7030.2.8 The train-control officer who issues an SD2 authority, must display the original copy thereof directly above the portion of the diagram/panel controlling the section of line concerned. The authority form must remain in that position until the train complete has cleared the section to which it applies.

7030.3 Danger hand signals

- 7030.3.1 Although a driver may be authorised to pass intermediate signals, he must, nevertheless, immediately act on a danger hand signal that may be displayed at any of the intermediate signals.

7030.4 Unidirectional running lines (double lines)

- 7030.4.1 If the signal controlling entrance to a unidirectional section cannot be placed at "proceed", but there is a white-light or other positive indication showing the line, including the overlap beyond the next signal, to be clear, the train-control officer must complete the relevant portions of an SD2 form and hand or send the form to the driver as his authority to pass the signal at "danger" and proceed only as far as the next stop signal.
- 7030.4.2 Where signal telephones are provided, a driver, in the circumstances and on the conditions mentioned in subclause 7030.4.1, may be authorised telephonically by means of an authority number to pass the signal at "danger" and proceed only as far as the next stop signal.
- 7030.4.3 Should there not be a white-light or other positive indication that the route beyond the section entry signal is clear, or should the signalling power supply in the section have failed completely or partially, absolute working must be introduced between the two stations. "Line clear" must be obtained for each train by exchanging the standard bell signals (see subclause 3003.1, of this appendix) or, should the tapper bells be out of order, by telephone and the driver authorised by means of an SD2 authority to proceed to the next station.
- 7030.4.4 When all communication between the two train-control officers also fails when the circumstances described in subclause 7030.4.3 prevail and "line clear" can, therefore, not be obtained separately for each train, a train may be despatched on an SD2 authority provided the time allowed the last preceding train to clear the section between the two stations, has expired, plus 30 minutes. The SD2 authority must indicate that, in addition to the signal(s), all communication has failed and that the driver may proceed "on sight" (see subclause 7001.1.17) to the place as indicated. The SD2 authority must also show the departure time of the last preceding train. (The driver must expect to find the line occupied until he arrives at the outermost stop signal of the place to which he is authorised to proceed, irrespective of the aspect/position of that signal or of a warning or repeat signal that precedes it.)

7030.5 Bidirectional running lines (single lines)

- 7030.5.1 Should the signal controlling entrance to a bidirectional section fail after "line clear" has already been obtained in the usual manner (see subclauses 7007.3.1 and 7007.3.2), the route has already been set up in the particular direction for the despatch of the train and the signalling apparatus otherwise appears to be in order, the train-control officer controlling the signal must arrive at a clear understanding with the train-control officer at the opposite end of the section. The train-control officers must observe the following provisions:
- 7030.5.1.1 Both must check the panel indications and the train registers and by all other means dictated by the circumstances, satisfy themselves that the block section to which the signal controls entrance, is clear of trains.
- 7030.5.1.2 Should there not be certainty beyond all doubt that the last train was complete when it cleared the block section, the train-control officer concerned must obtain a verbal assurance in the prescribed manner that such train that was the last to have entered the block section, was complete when it cleared the section (see subclauses 7009.3.2 and 7010.1).
- 7030.5.1.3 They must not try to alter the route direction.
- 7030.5.1.4 The train-control officer concerned must satisfy himself, from the panel or diagram, or otherwise, that all the opposing signals at his station are at "danger" and place reminders on the control switches, push buttons or levers of those signals.
- 7030.5.2 After the provisions of subclause 7030.5.1 have been complied with, the train-control officer who has to despatch the train must –
- 7030.5.2.1 complete the applicable parts of an SD2 form and hand or send the form to the driver as his authority to pass the signal at "danger" and proceed only as far as the next stop signal; or
- 7030.5.2.2 he may, where signal telephones are provided, authorise the driver telephonically by means of an authority number to pass the signal at "danger" and proceed only as far as the next stop signal.
- 7030.5.3 If "line clear" cannot be given by the operation of the applicable control switch, push button or lever, or if the signalling power supply is interrupted, the procedure in subclause 7030.5.4 or 7030.5.5, as the case may be, must be followed.

7030.5.4 Single single-line sections

- 7030.5.4.1 Unless otherwise provided in respect of a particular section, telegraph order working must be introduced if the circumstances mentioned in subclause 7030.5.3 prevail in respect of a non-token single-line section, i.e. a section with only one signalled bidirectional running line between the two stations. The station-to-station order issued to the locomotive personnel, in addition to the reason for the issue thereof, must bear an endorsement to the effect that the driver may pass, at "danger", the section entry signal, code, No. and, where applicable, all the intermediate signals in the telegraph section. Where necessary, this endorsement may be amplified to the effect that signal(s), code, No(s), en route to the section entry signal may be passed at "danger" (see subclause 7029.3).

7030.5.4.2 Under no circumstances may trains run in the same telegraph section according to the colour-light signalling system and telegraph order working simultaneously.

7030.5.4.3 Should all communication fail, pilot working must be introduced in accordance with subclause 3027.3, of this appendix.

7030.5.5 Multiple single-line sections

7030.5.5.1 Should the circumstances mentioned in subclause 7030.5.3 prevail in respect of a bidirectional running line on a non-token twin or other multiple single-line section, the two train-control officers, before any further trains are despatched over that line, must convert the running line into a unidirectional line in accordance with the "keep left" principle, namely that which requires trains to be despatched on the line to the left (or extreme left if there are more than two bidirectional lines) in the direction of travel. The train-control officers must arrive at a clear understanding beforehand and introduce working in accordance with this principle only after they, by observing the provisions of subclauses 7030.5.1.1 and 7030.5.1.2, have established beyond all doubt that all trains that had entered the telegraph section on the line in question before the failure, have cleared the section and were complete when they arrived.

7030.5.5.2 Absolute working must be maintained between the two stations and each train despatched over the running line concerned by means of an SD2 authority in accordance with the "keep left" principle. "Line clear" must be obtained by the exchange of the standard bell signals (see subclause 3003.1, of this appendix) or, if the tapper bells are out of order, by telephone.

7030.5.5.3 Should the telephone communication and the signalling apparatus (see subclause 7030.5.3) fail between two stations controlling a non-token twin or other multiple single-line section between them, each train-control officer must send a written message, drawn up strictly in accordance with the example hereunder, with a reliable messenger to the train-control officer at the other end of the section in order that working in accordance with the "keep left" principle (see subclause 7030.5.5.1) may be introduced to his station:

..... station

Date

To the train-control officer at station.

(1) It appears that the telephone communication as well as the signalling apparatus between your station and this station has failed.

(2) * According to my train register No. main line between your station and this station is clear of all trains

* Advice has not yet been received that train(s) No(s). that was/were despatched at from this station to your station over No. main line has/have arrived there.

* Train(s) No(s). that was/were despatched at from your station over No. main line to this station, has/have not yet arrived.

(3) You are hereby authorised to despatch trains in accordance with the "keep left" principle to this station over the above-mentioned No., main line, i.e. the left-hand bidirectional running line as seen by drivers proceeding from your station, by means of SD2 authorities in accordance with the applicable instructions # after the last opposing train complete has arrived at your station.

(4) No train will be despatched from this station over the said No. main line before normal working has been reintroduced over that line.

Time

Train-control officer.....

* Omit the sentences not applicable. The main line of which the number has to be furnished, is the left-hand bidirectional running line as seen by drivers departing from the station receiving this advice.

Omit "after the last opposing train complete has arrived at your station" if there cannot be an opposing train in the telegraph section on the running line in question.

7030.5.5.4 Should the messengers meet on the way, they must exchange the messages and return to their stations.

- 7030.5.5.5 After the written message has been received at the station at the opposite end of the section, trains may be despatched from there over the left-hand bidirectional running line (as indicated in the message) by means of SD2 authorities. (Should all communication have failed after despatch of at least one train in accordance with subclause 7030.5.5.2, following trains may be despatched in the same direction over the same running line by means of SD2 authorities, and the written message with regard to trains in that direction, will not be necessary.) The provisions of subclause 7030.4.4 must in all cases be strictly observed.
- 7030.5.5.6 The train-control officer at that end towards which trains are running in accordance with this subclause 7030.5.5, must observe the provisions of subclause 7030.5.1.4 to ensure that no movements in the opposite direction will take place on the same line.
- 7030.5.6 Resumption of normal working**
- 7030.5.6.1 Before normal working by means of signals is resumed over a bidirectional running line after working in accordance with subclause 7030.5.4 or 7030.5.5 has been in operation over that line, the line must be clear of trains and messages K and KI must be exchanged in respect of the particular line.
- 7030.6 Intermediate signals**
- 7030.6.1 When a train has stopped at a stop signal at "danger" on a uni- or bidirectional running line between two stations and telephonic communication has been established with the train-control officer at the next station (see subclauses 7005.9.1 and 7006.2.3), that train-control officer must satisfy himself that the line is clear as far as he has to authorise the driver to proceed by complying with all the applicable provisions of clause 7029.0. Thereafter, if the line is clear, the train-control officer must authorise the driver by means of (an) authority number(s) to pass the signal and, where applicable, one or more following signals (see subclause 7029.7) at "danger".
- 7030.6.2 Should an intermediate stop signal have failed and there is no white-light indication that the line between that signal and the next stop signal is clear, it must not be accepted that the line is clear, even though the following route(s) may be shown as unoccupied by means of the illuminated indications in the signal cabin, unless it has been ascertained that the last preceding train, complete, has passed the outermost stop signal at the next station and has passed over the overlap beyond the signal. Except as provided in subclause 7031.3 in respect of a single "T" signal at "danger", absolute working must in such a case be applied between the failed signal and the next station.
- 7030.6.3 The provisions of subclauses 7030.6.1 and 7030.6.2 are also applicable to a section entry signal alongside a unidirectional running line should the telephone at the signal afford communication with the train-control officer at the next station. Where required by local conditions, all trains may be authorised in this manner instead of by means of SD2 authorities to enter the section and, where applicable, to pass one or more intermediate signals at "danger". The train-control officer at the station to which the trains are running must satisfy himself that particulars of all the trains are entered in the correct order in the train register.
- 7030.6.4 If the train-control officer at the next station cannot be contacted, the driver, except in the case of a "T" signal (see subclause 7031.4), must contact the train-control officer at the station in the rear by means of the telephone at an opposing signal. In such a case the latter must act as an intermediary and convey the instruction of the train-control officer at the next station to the driver. If neither of the train-control officers can be contacted telephonically, the driver's assistant must proceed to the next station (station in rear in the circumstances mentioned in subclause 7030.6.3) to obtain written instructions.
- 7031.0 AUTHORITY TO PASS "T" SIGNALS AT "DANGER"**
- 7031.1 On certain running lines with continuous signals, there are intermediate stop signals, hereinafter called "T" signals, to facilitate the regular movement of trains following each other on the same line but, at the same time, to maintain a safe operating interval between those trains. These signals can always be identified by a black "T" letter on a separate small white board on the signal post. The signals function automatically, i.e. the aspect displayed by each signal is determined only by whether or not the controlling section of the signal is occupied by a train or vehicle and by the position of the next signal (in the case of a running line signalled for limited bidirectional working, provided the route is set in the "normal" direction).
- 7031.2 When a train has stopped at a "T" signal at "danger" and the train-control officer concerned, i.e. the train-control officer in the case of CTC, or the train-control officer at the next station, has been contacted by telephone, the driver must be authorised in the normal manner (see subclauses 7029.9 and 7030.6) by means of (an) authority number(s) to pass the signal and, where applicable, one or more following signals (see subclause 7029.7) if it can be established beyond all doubt that the line is clear as far as the signal to which the driver is authorised to proceed. (See subclause 7030.6.2.)
- 7031.3 If there is no white-light indication that the line between the "T" signal at "danger" and the next stop signal is clear and it cannot readily be established in a different manner (for example, by ascertaining whether the previous train, complete, arrived at the next station) that the line is clear, the train-control officer must instruct the driver to wait three minutes. Should the indication lights, after expiration of the three minutes, still fail to indicate the route as clear, he must advise the driver that he cannot establish whether the line up to the next signal is clear. Thereafter he may authorise the driver in the prescribed manner by means of an authority number to pass the signal at "danger" and proceed "on sight" (see subclause 7001.1.17) only as far as the next stop signal. (See subclause 7031.5).

- 7031.4 Should a train have stopped at a “T” signal at “danger” and the driver cannot contact the train-control officer, he must wait at the signal a further three minutes. If the signal, after the three minutes, still does not display a “proceed” aspect and he still cannot contact the train-control officer, the driver may pass the signal and he must proceed “on sight” (see subclause 7001.1.17) to the next stop signal. He must advise the train-control officer of the circumstances from the next signal or at the next signal cabin, as the case may be. (See subclause 7031.5.)
- 7031.5 When a driver passes a “T” signal at “danger” in accordance with subclause 7031.2, 7031.3 or 7031.4, he must proceed “on sight” (see subclause 7001.1.17) until he has arrived at the next stop signal. He must also expect to find the next stop signal at “danger”, but even if he can see that the next stop signal is displaying a “proceed” aspect, he must nevertheless proceed “on sight” until he has arrived at the signal.
- 7032.0 TRAINS HAVING TO PROCEED IN THE “WRONG” DIRECTION ON A UNIDIRECTIONAL RUNNING LINE**
- 7032.1 Trains may run in the “wrong” direction on a unidirectional running line between two stations or interlocking areas only if pilot working in accordance with train working rule No. 235 has been introduced over the relevant running line, if a train or vehicles have to be cleared out of the section (see train working rule No. 234 and clauses 7035.0 and 7036.0 hereof), or if the train-control officer concerned authorises the movement in accordance with this clause or any special instructions in respect of the particular section that may be contained in the local appendix. (Also see subclause 7015.3.)
- 7032.2 Trains having to return to the station/interlocking area in the rear**
- 7032.2.1 Should a train that has stopped on a unidirectional running line between two stations, or a part of such train, have to return over the “wrong” line to the station in the rear, the driver’s assistant must protect the train in rear by placing three detonators twenty metres apart on the rail at the prescribed distance from the train. He must thereafter go or send a competent employee to the station in the rear to obtain a wrong-line order (see example at the end of this section). Should the person concerned come across a following train, he must stop it and advise the driver of the circumstances before proceeding further. He must do likewise in respect of each following train. Each train must be protected in rear in the prescribed manner. Should the train-control officers receive advice that the train(s) have to return before the driver’s assistant or other competent employee arrives at the station in the rear, the train-control officer at that station must send a competent employee with the wrong-line order along the line to the train(s).
- 7032.2.2 Should two or more trains have to return to the station in the rear over the “wrong” line, one wrong-line order is sufficient for all the trains. In such instances the order must be filled in for and delivered to the driver of the last train to return, but before the order is handed to him, it must be shown to the driver of each other train that has to return, starting with the driver of the train that was the last to depart from the station concerned, and must be signed by each one. The driver of each train that has to return must not set his train in motion before reading and signing the order.
- 7032.2.3 In the case of a train in a CTC area that has to return to an interlocking area over a unidirectional running line, the train-control officer, after satisfying himself that the movement can be carried out with safety, must authorise each driver by telephone to return, starting with the driver of the last train to have departed from the interlocking area to which the trains are returning. The authority number (which will consist of a serial number only, as there are no signals in the “wrong” direction) must be followed by the reason for the authority and the instruction, as follows:
- “The is occupied/obstructed at km as a result of Proceed cautiously in the “wrong” direction from to” The driver must record the authority on an SD1 form and repeat it in full to the train-control officer, and the latter must indicate whether the authority, as repeated, is correct.
- 7032.2.4 A procedure similar to that described in subclause 7032.2.3 must be followed when a train has to return in the “wrong” direction to the interlocking area in the rear over a running line signalled for limited bidirectional working. In such a case, the authority issued to the driver must serve a dual purpose, namely, it must authorise him to proceed in the “wrong” direction and to pass the intermediate signal(s) at “danger”. (See subclauses 7029.7, 7029.8 and 7029.9.) Absolute working must be maintained between the place where each train stands and the interlocking area to which it returns, i.e. each train may be authorised to return only if the “limited bidirectional working” line is clear of other trains up to that interlocking area.
- 7032.2.5 Before a train-control officer authorises a driver to return, he must check the illuminated indications on the panel/diagram and the train register, make sure that the requisite signals behind the train are at “danger”, place reminders on the relevant levers/switches/push buttons and take such other steps as may be required by the circumstances. If a train-control officer has to authorise a driver to return to an area controlled by another train-control officer, he must confer with the said train-control officer and the latter must also comply with these stipulations.

- 7032.2.6 The driver of each train returning in the “wrong” direction, must proceed cautiously and blow the locomotive whistle frequently. Should he be following another train, he must maintain such a distance that he will avoid a collision with that train. The driver’s assistant or other competent employee travelling on the leading vehicle in the direction of travel, must keep a good look-out and observe signals and hand signals, and the driver must promptly act on hand signals that he displays or, where there is speaking communication, verbal instructions that he gives. The driver of the last train returning on a wrong-line order, must hand the order back to the train-control officer.
- 7032.3 Each train proceeding in the “wrong” direction on a unidirectional running line, must stop short of the first fixed signal, where there is one and irrespective of its position, the first points or clearance mark, or the platform, whichever of the four is the first, at the place to which the train is proceeding in the “wrong” direction. Thereafter the driver may proceed with caution if the signal, where there is one, is operated, or an “all right” or “caution” hand signal, or a verbal authority, is received from the train-control officer or hand-signalman. If the train is to be admitted by means of a shunt signal, hand signal or verbal authority, the train-control officer or hand-signalman must advise the driver or employee riding on the leading vehicle onto which line the train will be admitted and how far the driver may proceed.
- 7032.4 A train proceeding in the “wrong” direction on a unidirectional running line, or setting back on any running line, must not pass over a level crossing unless it is protected by means of barriers, or by the driver’s assistant or another competent employee as in the case of a shunting movement. (See clause 9007.0, of this appendix.)

7033.0 FAILURE OF SIGNALS AT LEVEL CROSSINGS

- 7033.1 In addition to being controlled by track circuits, signals at protected level crossings are controlled –
- 7033.1.1 by the barriers only; or
- 7033.1.2 by the barriers and from a lever frame, control panel or console in a signal cabin.
- 7033.2 Should a signal controlled by the barriers only fail, the crossing attendant, provided the line is clear up to the next signal, must authorise the driver in accordance with the applicable instructions in the local appendix to pass the signal at “danger” and proceed over the crossing.
- 7033.3 Should a signal at a protected level crossing fail and the signal is controlled by the barriers and from a lever frame, control panel or console, the train-control officer, unless he is in sole control of the section, must immediately advise the train-control officer at the other end of the section. While the signal is out of order, the train-control officer who is in sole control of the section or the train-control officer concerned, as the case may be, must stop each train and warn the driver that the signal short of the level crossing has failed and not to pass it unless a hand-signalman authorises him orally or by means of a yellow hand signal to pass the signal and proceed over the crossing. The hand-signalman must, in each instance, receive instructions from the train-control officer before authorising the driver to pass the signal, and where there is a crossing attendant, he may act as hand-signalman only if he has been instructed by the train-control officer to do so. (See train working rules Nos. 100 and 101.)
- 7033.4 When, in the case of a failure of the signals, or of the signals and telephones, trains are proceeding in accordance with clause 7030.0 over a section in which there are one or more level crossings, the provisions of subclauses 7033.2 and 7033.3 must be complied with in respect of the signals controlling movements over the crossings. Irrespective of the authority drivers may have to proceed to the next station, they must approach such signals cautiously and not pass the signal at “danger” without the authority of the crossing attendant/hand-signalman.

7034.0 VOID

7035.0 WHEN A TRAIN HAS TO BE DIVIDED OR BECOMES DIVIDED ACCIDENTALLY

7035.1 Driver divides train in section controlled by two stations

- 7035.1.1 When a driver decides to divide his train in a signalled section controlled by two stations, the provisions of train working rule No. 226(2) and (3) or No. 234(2), as the case may be, must be complied with, except where otherwise provided herein.
- 7035.1.2 The driver must advise the train-control officer at the next station of the circumstances from the first suitable point from where he can phone or, should there be no telephone or telephone plug point, immediately after arrival at the station, and act on his instructions. The said train-control officer must advise the train-control officer at the other end of the section and both must enter full particulars in their train registers.
- 7035.1.3 After the first portion of the train has been taken to the next station, the train-control officer must authorise the driver in writing to fetch the second portion of the train and, in the case of a bidirectional section, to pass, at “danger”, the signals en route to the point where the second portion of the train is standing. (The code and number of the first of these signals must be furnished.)
- 7035.1.4 The train-control officer’s copy of the written authority must be displayed directly above the relevant portion of the diagram/panel, and must remain there until the train, complete, has arrived at the station.

- 7035.2 Driver divides train in CTC territory**
- 7035.2.1 After a driver in a CTC area has decided to divide his train, the provisions of train working rule No. 226(2) must be complied with.
- 7035.2.2 The driver must advise the train-control officer from the first suitable point from where he can phone and obtain instructions from him with regard to the disposal of the first portion of the train.
- 7035.2.3 After the first portion of the train has been detached and secured in accordance with train working rule No. 136, the driver must obtain authority from the train-control officer to fetch the second portion of the load and, where applicable, to pass the signals concerned at "danger". (See clause 7029.0.)
- 7035.3 Complete train to clear section**
- 7035.3.1 In the case of CTC or where the train-control officer, owing to the distance or another reason, will not be able to see the train, the driver must give the train-control officer the assurance that his complete train has arrived after the second portion has been cleared from the section concerned. Thereafter the axle counters, where applicable, must be reset as stipulated in subclause 7009.4.
- 7035.4 Train accidentally divided**
- 7035.4.1 The provisions of subclauses 7035.1 to 7035.3 also apply should a driver decide to clear his train from the section in two portions after it has become divided accidentally.
- 7035.5 Driver to display caution when returning for second portion of train**
- 7035.5.1 When the driver returns for the second portion of the train, he must proceed at the appropriate reduced speed, especially when approaching level crossings in the "wrong" direction on a unidirectional running line, and he must blow the locomotive whistle in the prescribed manner.
- 7036.0 OBSTRUCTIONS ON SIGNALLED SECTIONS**
- 7036.1 Obstruction of section controlled by two stations**
- 7036.1.1 When a signalled section controlled by two stations is obstructed owing to the failure of a locomotive, an accident or a washaway or for another reason, the applicable provisions of the relevant train working rule(s) (see train working rules Nos. 226, 227, 228, 229, 230 and 234) must be complied with.
- 7036.1.2 Except when pilot working has been introduced (see train working rule No. 230(3) and (10), read in conjunction with train working rule No. 235(11)(a)(ii)), the driver's assistant or other competent employee riding on the leading vehicle in the direction of travel, must observe all the signals en route should a train that cannot continue, have to set back on a bidirectional running line. The driver must immediately act on hand signals that he displays or, where there is speaking communication, oral instructions that he gives. (See clause 7032.0 for procedure should a train have to set back on a unidirectional running line.)
- 7036.1.3 When an assisting locomotive or breakdown train, as the case may be, has to render assistance in a section and there are two or more parallel lines, the messages and manuscript authority [see train working rule No. 227(6)], the messages and pilot-working forms [see train working rule No. 230(1)] or the written authority [see train working rule No. 234(3)] must clearly indicate to which line they apply or over which line the assisting locomotive/breakdown train must proceed, as the case may be.
- 7036.1.4 Where applicable, the manuscript or written authority on which an assisting locomotive or breakdown train is despatched, must include an authority to pass, at "danger", the signals en route to the point of obstruction (the code and number of the first of these signals must be furnished) and, if the assisting locomotive/breakdown train has to return to the place from where it entered the section, the intermediate signals en route thereto.
- 7036.1.5 Before normal working is resumed in the case of a bidirectional running line, it must be clear of all trains and messages K and KI must be exchanged in respect of the particular line.
- 7036.2 Obstruction of running line in a CTC area**
- 7036.2.1 When a train in a CTC area cannot proceed owing to the failure of a locomotive, an accident, washaway or other obstruction, the driver must contact the train-control officer as soon as possible.
- 7036.2.2 The driver must identify himself and furnish the train-control officer with particulars of the occurrence and of the line(s) concerned, the nature of the obstruction, the kilometre point, the nature of the assistance required and the assurance that the train will not be moved. In addition, he must furnish any other information which the circumstances may require. The train-control officer must, if possible, indicate to the driver from which direction assistance will be sent.
- 7036.2.3 If the train-control officer cannot be contacted, but the locomotive, with or without a portion of the train, can be taken forward, the provisions of train working rule No. 226(2) must be complied with. The driver must contact the train-control officer at the first suitable point from where he can ring, and observe the provisions of subclause 7036.2.2.

- 7036.2.4 If the driver cannot ring from the point where the train is standing and the locomotive is also unable to proceed, the driver must hand a written message in accordance with the following example to the driver's assistant:
- From driver Train No.
- Locomotive(s) No(s)
- My train is unable to proceed owing to.....
-
- (insert reason), and is now standing at kilometre point
- * in the block section/on main line No. between and The services of a(n) * assisting locomotive/breakdown train/breakdown lorry are required. The train will not be moved before the required assistance arrives, unless I am otherwise authorised by the train control officer.
- Time Date
- Signature of driver
- 7036.2.5 Provided the necessary protection is afforded in front and in rear, the driver's assistant must proceed by the quickest means to the nearest point from where he can ring, read out the contents of the written message to the train-control officer in full and request further instructions. The train-control officer must repeat the gist of the message to the driver's assistant and record full particulars in the train register. The driver's assistant must record the train-control officer's name and also the date and time the driver's written request was transmitted to him, at the foot of the message and sign it, and attach it to the train journal. If an assisting locomotive is sent from the direction in which the driver's assistant proceeded, the train-control officer may instruct him to accompany the locomotive.
- 7036.2.6 After having requested or sent for assistance, the driver must under no circumstances move his locomotive or train, or allow it to be moved, before assistance has arrived or the train-control officer has authorised him otherwise.
- 7036.2.7 Should it not be possible for the driver, owing to injury, to call for assistance, the driver's assistant must do so.
- 7036.2.8 The train-control officer must authorise an assisting locomotive or breakdown train that has to enter an obstructed portion of the line in accordance with the example in subclause 7029.8.3 to proceed and, where applicable, to pass the relevant signal(s) at "danger". An authority number must be furnished in respect of each signal that has to be passed at "danger" on the forward and/or return trip. (See subclause 7029.7.)
- 7036.2.9 The authority issued must, inter alia, reflect the following:
- 7036.2.9.1 The actual kilometre point to which the assisting locomotive or breakdown train may proceed;
- 7036.2.9.2 if already known, the name or particulars of the place to which the assisting locomotive or breakdown train must proceed after the task has been completed.
- 7036.2.10 The train-control officer may allow an assisting locomotive or breakdown train to enter the obstructed section of line from each end, provided the driver is authorised to proceed to the nearest half-kilometre point short of the obstruction.
- 7036.2.11 Before authorising the assisting locomotive or breakdown train to render assistance, the train-control officer must satisfy himself that the section of line concerned up to the scene of the obstruction is clear of other trains, and that the authority does not conflict with any other authority already issued.
- 7036.2.12 Before the delayed train (should it be able to proceed under its own power) or the assisting locomotive or breakdown train (if not previously so instructed – see subclause 7036.2.9.2) proceeds or returns from the point of obstruction, authority must be obtained from the train-control officer. (See subclauses 7032.2.3 to 7032.4 for movements in the "wrong" direction on a unidirectional running line.)
- 7036.3 Complete train to clear section**
- 7036.3.1 In the case of CTC or where the train-control officer, owing to the distance or another reason, will not be able to see the train, the driver of the last train to clear the section in each direction after the obstruction has been cleared, must give the train-control officer the assurance that his complete train, has arrived. Thereafter the axle counters, where applicable, must be reset as provided in subclause 7009.4.
- 7036.4 Assistance rendered by locomotive of another train**
- 7036.4.1 A train standing at a signal, may be despatched in accordance with subclause 7036.1 (also see subclause 7006.8) or subclause 7036.2, as the case may be, to render assistance to a train ahead, the locomotive of which has become disabled. If necessary, the load (or a part thereof) of the train proceeding to render assistance, may be detached in the section provided the provisions of clause 7035.0 are strictly complied with in respect of such detached load or part of the load.

- 7036.4.2 If the driver of a disabled train, in a section equipped with T-signals, becomes aware of a following train, he may, after having complied with the provisions of subclause 7036.2.4, send his driver's assistant with the written message to obtain the assistance of the following train to propel his train. If assistance can be rendered, the driver's assistant must accompany the assisting train. If the load is parted, the provisions of subclause 7035.1 must be complied with.
- 7036.4.2.1 The drivers must arrive at a clear understanding before the train is propelled. All signals must be acted upon and, with the exception of an intermediate signal displaying a proceed aspect (see subclause 7030.6.), propelling may not take place beyond the first controlled signal, irrespective of the aspect/position of that signal.
- 7036.4.2.2 At the first controlled signal, the train-control officer must be contacted, and the driver must inform him of the circumstances and act according to his instructions.
- 7036.4.2.3 When the train is propelled into the next station or interlocking area with controlled signals, the driver of the assisting locomotive must, in terms of clause 7036.0, be authorised to return to clear his load from the section.
- 7036.4.2.4 If assistance is not rendered into the next station or interlocking area with controlled signals, the assisting locomotive may, without authority from the train-control officer, return to clear the load from the section. The driver must act strictly in accordance with subclause 7035.5.

7037.0 GENERAL

7037.1 Clearance mark hand signals

- 7037.1.1 Except when the train ran on an SD2 authority (station to station) or on a token over the adjacent section, the clearance mark hand signal or the danger hand signal, as the case may be, as provided in train working rule No. 209(2), need not be exchanged at stations with colour-light signals.
- 7037.1.2 Should there be a suitable telephone, it must be used to advise the train-control officer that the complete train has stopped within the clearance marks, or has not done so, as the case may be, if the hand signal, when required to be displayed, cannot be seen owing to the distance or for another reason.

**TELEPHONIC AUTHORITY TO PASS SIGNAL(S) AT "DANGER"
OR TO PROCEED IN THE "WRONG" DIRECTION**

SD1

AUTHORITY NO(S)

Signals which may be passed at "danger"

<u>Serial Number</u>	<u>Code</u>	<u>No.</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Reason for authority _____

- Instruction:** Proceed "on sight" on the _____
- (1) to DESTINATION SIGNAL, code _____ No. _____
 - (2) to kilometer point _____
to _____
and thereafter return/proceed to _____
DESTINATION SIGNAL, code _____ No. _____
at _____
 - (3) Examine distant points No(s).

 - (4) Proceed in the "wrong" direction from _____
to _____
on the _____ to _____

- and thereafter return/proceed to DESTINATION SIGNAL,
code _____ No. _____
at _____

Date _____ Time _____
Train-control officer _____

**TELEFONIESE MAGTIGING OM BY SINJAAL(ALE) OP "GEVAAR"
VERBY TE GAAN OF OM IN DIE "VERKEERDE" RIGTING TE RY**

SD1

MAGTIGINGS NO(S)

Sinjaal(ale) wat op "gevaar" verbygegaan mag word

<u>Reeksnommer</u>	<u>Kode</u>	<u>No.</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Rede vir magtiging _____

- Opdrag:** Ry "op sig" op die _____
- (1) tot by BESTEMMING SINJAAL, kode _____ no. _____
 - (2) na kilometerpunt _____
om _____
en keer daarna terug/gaan daarna voort tot by _____
BESTEMMING SINJAAL, kode _____ no. _____
op _____
 - (3) Ondersoek afgeleë wissel(s) no(s).

 - (4) Ry in die "verkeerde" rigting van _____
na _____
op die _____ om _____

- en keer daarna terug/gaan voort tot by BESTEMMING SINJAAL,
kode _____ no. _____
op _____
- Datum _____ Tyd _____
Treinbeheerampenaar _____

**MAGTIGING OM BY TRAJEKTOEGANGSINJAAL OP "GEVAAR" VERBY TE GAAN
AUTHORITY TO PASS SECTION ENTRY SIGNAL AT "DANGER"**

SD2

**Magtigingsnommer
Authority number**

**Aan die drywer van treinnommer
To the driver of train number**

1.0	Rede vir uitreik van magtiging Reason for issue of authority	
1.1	Die trajektoegangsinaal, (# kode en nommer) <i>The section entry signal, (# code and number)</i>	is onklaar; <i>has failed;</i>
# 1.1.1	en die sinjale tussen \emptyset <i>and the signals between \emptyset</i>	en \emptyset <i>and \emptyset</i> is onklaar; <i>have failed;</i>
# 1.1.2	en alle kommunikasie tussen \emptyset <i>and all communication between \emptyset</i>	en \emptyset <i>and \emptyset</i> is onklaar. <i>has failed.</i>
‡ 2.0	Magtiging om te ry as vasgestel is dat lyn vry is Authority to proceed if it has been established that line is clear	
2.1	U mag by die trajektoegangsinaal, (# kode en nommer) <i>You may pass the section entry signal, (# code and number)</i>	op "gevaar" verbygaan <i>at "danger" and proceed</i>
	en op die § <i>on the §</i>	voortgaan net tot by: <i>only as far as:</i>
# 2.1.1	die eersvolgende stopsinaal, (# kode en nommer) <i>the following stop signal, (# code and number)</i>	wat u stip in ag moet neem. <i>which you must strictly observe.</i>
	Volgens die verligte aanwysings is die lyn vry tot by daardie sinjaal. <i>According to the illuminated indications, the line is clear up to that signal.</i>	
\$ # 2.1.2	\emptyset \emptyset	waar u al die sinjale stip in ag moet neem. <i>where you must strictly observe all the signals.</i>
	Onderweg daarheen mag u by al die tussengeleë sinjale verby ry. <i>En route thereto you may pass all the intermediate signals.</i>	
	"Lyn vry" is van die treinbeheerampenaar verkry op \emptyset <i>"Line clear" has been obtained from the train-control officer at \emptyset</i>	
\$ ‡ 3.0	Magtiging om "op sig" deur die trajek te ry as daar nie vasgestel kan word dat die trajek vry is nie Authority to proceed "on sight" through the section if it cannot be established that the section is clear	
3.1	U mag by die trajektoegangsinaal, (# kode en nommer) <i>You may pass the section entry signal, (# code and number)</i>	op "gevaar" verbygaan <i>at "danger" and proceed</i>
	en "op sig" op die § <i>"on sight" on the §</i>	voortry na \emptyset <i>to \emptyset</i>
	waar u al die sinjale stip in ag moet neem. Onderweg daarheen mag u by al die tussengeleë sinjale verby ry, <i>where you must strictly observe all the signals. En route thereto you may pass all the intermediate signals,</i>	
	maar u moet voortdurend gereed wees om duskant 'n versperring te stop. <i>but you must continuously be prepared to stop short of an obstruction.</i>	
	Die laaste trein (nommer) <i>The last train (number)</i>	in dieselfde rigting op dieselfde looplyn, <i>in the same direction on the same running line,</i>
	het vertrek om <i>departed at</i>	en is moontlik nog in die trajek. <i>and is possibly still in the section.</i>
† 4.0	Magtiging om tot by trajektoegangsinaal te ry Authority to proceed to section entry signal	
4.1	U mag by sinjaal/sinjale, (#kode en nommer) <i>You may pass signal(s), (# code and number)</i>	onderweg na die trajektoegangsinaal <i>en route to the section entry signal</i>
	op "gevaar" verbygaan en tot by die trajektoegangsinaal ry (kyk subparagraaf 2.1 of 3.1, na gelang van die geval). <i>at "danger" and proceed to the section entry signal (see subparagraph 2.1 or 3.1, as the case may be).</i>	
Datum <i>Date</i>		Tyd <i>Time</i>
Treinbeheerampenaar <i>Train-control officer</i>		by <i>at</i>

Skrap subparagraaf of item wat nie van toepassing is nie en parafeer

Delete subparagraph or item that is not applicable and initial

\emptyset Voeg in naam van plek

\emptyset Insert name of place

‡ Skrap hele paragraaf indien nie van toepassing en parafeer

‡ Delete complete paragraph if not applicable and initial

\$ Moet slegs gebruik word op 'n dubbelyn of 'n lyn waarop die "hou links"-beginsel van toepassing is

\$ Must be used only on a double line or a line to which the "keep left" principle is applicable

§ Voeg in besonderhede van looplyn

§ Insert particulars of running line

† Moet slegs saam met paragraaf 2 of 3 gebruik word

† Must be used together with paragraph 2 or 3 only

This form is printed on yellow paper / Hierdie vorm is op geel papier gedruk

**VERKEERDESPORORDER
WRONG-LINE ORDER**

KLEURLIGSINJAALSTELSEL
CLOUR-LIGHT SIGNALLING SYSTEM

Aan die drywer van treinnommer
To the driver of train number

U word hierby gemagtig om met u trein in die "verkeerde" rigting na
You are hereby authorised to return with your train in the "wrong" direction to

†		terug te keer
†		
Treinbeheeramptenaar <i>Train-control officer</i>	by <i>at</i>	-stasie <i>station</i>
Datum <i>Date</i>	Tyd <i>Time</i>	
Kennis geneem deur drywersassistent <i>Noted by driver's assistant</i>	*	van treinnommer <i>of train number</i>
Kennis geneem deur drywer <i>Noted by driver</i>	*	van treinnommer <i>of train number</i>
Kennis geneem deur drywersassistent <i>Noted by driver's assistant</i>	*	van treinnommer <i>of train number</i>
Kennis geneem deur drywer <i>Noted by driver</i>	*	van treinnommer <i>of train number</i>
Kennis geneem deur drywersassistent <i>Noted by driver's assistant</i>	*	van treinnommer <i>of train number</i>
Kennis geneem deur drywer <i>Noted by driver</i>	*	van treinnommer <i>of train number</i>
Kennis geneem deur drywersassistent <i>Noted by driver's assistant</i>	*	van treinnommer <i>of train number</i>
Kennis geneem deur drywer <i>Noted by driver</i>	*	van treinnommer <i>of train number</i>

† Voeg in naam of besonderhede van plek

† *Insert name or particulars of place*

* Handtekening van betrokke drywersassistent/drywer

* *Signature of driver's assistant/driver concerned*

'n Voorraad van hierdie vorms moet gehou word in elke treinbeheerkantoor waarvandaan die afstuur van treine oor 'n gesinjaleerde eenrigtinglooplyn (nie GVB nie) beheer word

A supply of these forms must be kept in each train-control office from where the despatch of trains over a signalled unidirectional running line (not CTC) is controlled

NOODBEDRYF: GVB-GEBIED
EMERGENCY WORKING: CTC TERRITORY

Treinbeheerkantoor <i>Train-control office</i>	Datum <i>Date</i>	Tyd <i>Time</i>
Aangesien die sinjaalapparaat en die kommunikasie tussen en weier/onderbreek <i>As the signaling apparatus and the communication between and have failed</i>		
is en die weiering/onderbreking na verwagting 'n geruime tyd sal duur, sal treine ooreenkomstig die instruksies in <i>and the failure is expected to continue for a considerable period, trains will be controlled by a pilotman/pilotmen</i>		
sirkulêrenommer X125 (Instruksies insake instel van noodbedryf wanneer sinjaalapparaat weier en alle kommunikasie <i>in accordance with the instructions in circular Number X125 (Instructions regarding introduction of emergency working</i>		
onderbreek is) en klousule 7013.8, afdeling 7 van die Algemene Aanhangsel (deel I) deur 'n loods/loodse beheer word <i>when signalling apparatus and all communication fail) and clause 7013.8 Section 7 of the General Appendix (Part I)</i>		
sal as loods optree: <i>will act as pilotman:</i>		
1. van sinjaal, kode <i>from signal, code</i>	nommer <i>number</i>	, op # die op-/af-/hooflyn/uitwykspoor <i>, on # the up/down main line/loop</i>
nommer † <i>number †</i>	op ø <i>at ø</i>	tot by sinjaal, kode <i>to signal, code</i>
op # die op-/af-/hooflyn/uitwykspoor <i>on # the up/down main line/loop number</i>	†	in die OP-RIGTING en <i>in the UP DIRECTION and</i>
2. van sinjaal, kode <i>from signal, code</i>	nommer <i>number</i>	, op # die op-/af-/hooflyn/uitwykspoor <i>, on # the up/down main line/loop</i>
nommer † <i>number †</i>	op ø <i>at ø</i>	tot by sinjaal, kode <i>to signal, code</i>
op # die op-/af-/hooflyn/uitwykspoor <i>on # the up/down main line/loop number</i>	†	in die AF-RIGTING <i>in the DOWN DIRECTION</i>
Handtekening van werknemer wat as loods optree <i>Signature of employee acting as pilotman</i>		
Handtekening van treinbeheeramptenaar wat noodbedryf instel <i>Signature of train-control officer introducing emergency working</i>		

- † Voeg in 1, 2, 3, ens., na gelang van die geval
Insert 1,2,3 etc., as the case may be
- † Voeg in naam van plek
insert name of place
- ø Skrap wat nie van toepassing is nie sodat dit bv. lui "die hooflyn", "die ophooflyn", "hooflyn no.2",
"die uitwykspoor", "uitwykspoor no. 1", ens.
- # Delete what is not applicable in order that it will, for example, read "the main line", "the up main line", "main line No.2",
"the loop", "loop No.1", etc.

KENNIS GENEEM
NOTED

HANDTEKENING <i>SIGNATURE</i>	DRYWER VAN TREINNOMMER <i>DRIVER OF TRAIN NUMBER</i>
TREINBEHEERAMPTENAAR OP <i>TRAIN-CONTROL OFFICER AT</i>	-STASIE <i>STATION</i>

NOODBEDRYF : GVB-GEBIED
EMERGENCY WORKING : CTC TERRITORY

OPDRAG OM NIE SONDER LOODS TE BEWEEG NIE
INSTRUCTION NOT TO MOVE WITHOUT PILOT

Aan drywer van treinnommer <i>To driver of train number</i>	by # sinjaal, kode <i>at # signal, code</i>	nommer <i>number</i>
Aangesien noodbedryf ingestel is, moet u, ongeag die aspekte van sinjale, nie u trein laat beweeg nie sonder dat <i>As emergency working has been introduced, you must not allow your train to move, irrespective of the aspects of</i> die loods op die lokomotief is en hy u opdrag gegee het tot by watter sinjaal u mag ry, of totdat hy u hieronder <i>signals, without the pilotman being on the locomotive and having instructed you to which signal you may</i> skriftelik verwittig dat noodbedryf gekanselleer is en dat u weer volgens sinjaalaspekte moet voortgaan <i>proceed, or until he has advised you in writing hereunder that emergency working has been cancelled and that</i> <i>you may again proceed on signal aspects</i>		
Handtekening van loods <i>Signature of pilotman</i>	Datum <i>Date</i>	Tyd <i>Time</i>

VERDERE OPDRAG
FURTHER INSTRUCTION

Aan drywer van treinnommer <i>To driver of train number</i>	by # sinjaal, kode <i>at # signal, code</i>	nommer <i>number</i>
Handtekening van loods <i>Signature of pilotman</i>	Datum <i>Date</i>	Tyd <i>Time</i>

- # As trein nie by 'n sinjaal staan nie, moet onnodige woorde geskrap en naam of besonderhede van plek aangedui word
- # *Should train not be standing at a signal, words not necessary must be deleted and name or particulars of place must be shown*

MAGTIGINGSREGISTER: VERBYGAAN BY SINJALE OP "GEVAAR"
AUTHORITY REGISTER: PASSING OF SIGNALS AT "DANGER"

(1)	(2)	(3)	(4)	(5)	(6)		(7)	(8)	(9)	
					Magtigingsnommer Authority number					
					(6.1)	(6.2)				
Datum	Tyd	Trein no.	Naam van drywer	Nommer van sinjaal waarvandaan drywer praat	Reeks nommer	Sinjaal wat op "Gevaar" verbygegaan mag word	Rede verstrek en opdrag uitgereik aan drywer	Naam van treinbeheer-amptenaar	Nagesien deur	
Date	Time	Train No.	Name of driver	Number of signal from which driver is speaking	Serial number	Signal which may be passed at "Danger"				
						Kode Code	Nommer Number			Checked by

SECTION 8

GENERAL SAFETY INSTRUCTIONS

8001.0 INSPECTION OF YARD, ETC., BY STATION OFFICIAL IN CHARGE

8001.1 When a station official in charge takes over operating duties from or hands over such duties to, a train-control officer (see train working rule No. 108), he must make an independent inspection of all points, signals, etc. When, however, a station official in charge is not required to undertake operating duties, this instruction will not apply to him.

8002.0 RESPONSIBILITY FOR SECURITY OF HAND-POINTS, ETC.

8002.1 Where the points are not worked from a lever frame or from a panel, the employee who is responsible for the operation of the points must carefully examine the switch blade of the points to see that it is close against the stock rail before authorising a movement. He must also, after the movements have been completed, ensure that –

8002.1.1 derailleurs are set and locked in the normal position, that is in the position which will derail vehicles and/or prevent them from obstructing an adjacent line(s); and

8002.1.2 points which are to be kept locked in a specific position, are set and locked in that position.

8002.2 Running line points which, except when they must be reversed for a movement, are to be kept locked in a specific position, are distinguishable by the counter weight, or the counter-weight indicator plate where the switch box is parallel to the line, the one half of which is painted white and the other half red. The white and red halves are divided horizontally with the white half uppermost when the points are set for the main line with the counter weight on that side of the switch box to which the lock and chain are provided.

8002.2.1 Non-running line points which, except when they must be reversed for a movement, must be kept locked in a specific position, are distinguishable by the counter weight of which the centre recess on both sides is painted black.

8002.2.2 Where the points lock is locked by means of a special key instead of a right-hand Chubb key, the key must be kept by the station or yard official in charge, or his deputy, who must exercise proper control over it.

8002.3 Locks and keys to be examined

8002.3.1 All points locks and keys must be carefully examined and if any defect is found, prompt action must be taken to effect repairs and replacement (see clause 9033.0 for action to be taken by drivers' assistants at interloops, etc.).

8002.4 Installation, maintenance, testing and replacement of points locks and bridles

8002.4.1 In this instruction the term "signalling gear" embraces one-way and two-way points indicators and detectors as well as derailleurs compounded with points and compounded hand-operated cross-over points.

8002.4.2 Where signalling gear is installed, the maintenance manager (signals) is responsible for the installation, maintenance, testing and replacement of points locks and bridles.

8002.4.3 Where signalling gear is not installed, the track inspector is responsible for the installation, maintenance, testing and replacement of points locks and bridles.

8002.4.4 On sections where signalling gear is installed, any defects on locks, keys, or bridles, noticed by track inspectors or track masters, must be reported immediately to the signalling maintenance official in accordance with the instructions contained in the book Permanent Way Instructions.

8002.5 Every maintenance manager (signals) and track inspector must keep on hand a stock of points locks and keys of the type in use on the section under his control.

8002.5.1 The track inspector must, on receipt of a requisition from an authorised employee for locks to be installed where there is no signalling gear, forward the locks direct to the station or other place where they are required and instruct the track master to fix them in position. Where signalling gear is installed, the maintenance manager (signals) must take such action as may be necessary.

- 8002.6 Testing and maintenance of locks on points**
- 8002.6.1 Locks securing points must be tested in two ways to ensure that –
- 8002.6.1.1 the key works easily in the lock; and
- 8002.6.1.2 when the points are locked the switches remain close against to the stock rail, and that any movement of the tumbler is insufficient to affect the position of the switches.
- 8002.6.2 Points locks must be blacklead and not oiled.
- 8002.7 Replacement of defective points locks**
- 8002.7.1 All defective points locks must be replaced and sent to the nearest stores depot for examination and repair. If a points lock is missing, it must be replaced promptly by the employee who is responsible for this, and he must report the circumstances to the nearest station official in charge, and to the track inspector, or the maintenance manager (signals), as the case may be.
- 8002.8 Painting of counter weights**
- 8002.8.1 Before a supervisory personnel member of infrastructure maintenance paints the counter weights of non-running line points he must obtain clear information from the official concerned in charge of the station or yard as to which points must be locked. Before the official advises the supervisor of the particulars, he must, if necessary, inform all concerned of the work and after the counter weights have been painted, ensure that they have been painted correctly.
- 8003.0 CUSTODY OF LOCKS AND KEYS**
- 8003.1 Officials in charge must see that employees entrusted with keys give them up when going off duty. This arrangement also must be followed in the case of employees who are in possession of keys of locks affixed to lamp rooms and other buildings owned by Spoornet.
- 8004.0 OPERATING AND SECURITY OF POINTS FITTED WITH PATRICK LOCKS (SEE TRAIN WORKING RULES NOS. 212 AND 215)**
- 8004.1 Patrick points-lock**
- 8004.1.1 The Patrick type of points lock is provided at all detector-locked stations on main lines, at detector-locked stations on important branch lines and at interloops on main lines.
- 8004.2 Detector-locked stations**
- 8004.2.1 The outermost up and down facing points at detector-locked stations are fitted with a right-hand and a left-hand lock. A chain and plunger are attached to the tumbler lever for the purpose of securing the points for either the main line or the loop. The lock used for the main line is operated by an ordinary points lock key and the lock used for the loop is opened by a special type key, which is normally retained in the left-hand lock.
- 8004.3 Interloops**
- 8004.3.1 The up and down outermost facing points at interloops are each fitted with a right-hand lock. A bridle without a lock is provided to hold the facing points in the loop position.
- 8004.4 Crossing of trains at telegraph stations equipped with detector locking**
- 8004.4.1 When trains require to cross or pass each other at telegraph stations equipped with detector-locking, the train-control officer must release the plunger from the right-hand lock, place the plunger in the left-hand lock, turn the plunger and withdraw the key from the lock. On completion of the train movement, the train-control officer must release the plunger from the left-hand lock by means of the special type key, place the plunger in the right-hand lock, turn the plunger and withdraw the key. (See clause 9012.0 for the conditions under which drivers' assistants are deputed to operate points at telegraph stations.)
- 8004.5 Crossing of trains at closed stations equipped with detector locking**
- 8004.5.1 When trains require to cross or pass each other at a closed station equipped with detector locking, the driver's assistant must carry out the duties as laid down in subclause 8004.4, except that when admitting a train into the loop, it will not be necessary to withdraw the key from the left-hand lock.
- 8004.6 Crossing of trains at interloops**
- 8004.6.1 When trains require to cross or pass each other at an interloop, the driver's assistant must release the plunger from the right-hand lock and secure the points for the loop by placing the bridle over the tumbler lever. On completion of the train movement, the plunger must be placed in the lock, turned and the key withdrawn.

- 8004.7 Keyhole plates**
- 8004.7.1 The keyhole plates on all hand-points locks must be replaced over the keyhole after use, so as to keep the locks free from dirt.
- 8005.0 BOARDS TO WARN DRIVERS OF THE POSITION OF CATCH OR SAFETY POINTS**
- 8005.1 At certain stations, boards with the terms "catch points" or "safety points" painted thereon are erected to indicate the position of such points. Where such boards are provided on a main line, they must be illuminated by a white light during the night.
- 8005.2 Catch points on the main line, not connected to an interlocking frame, must be operated by, or under the supervision of, a competent employee, who must see that the points are in the correct position before authorising a driver to pass over them. [See train working rules Nos. 85 and 173(4).]
- 8006.0 OBSERVANCE OF CLEARANCE MARK HAND SIGNAL AT STATIONS**
- 8006.1 Train-control officer to acknowledge driver's hand signal**
- 8006.1.1 As soon as the train has come to a standstill at a station, the train-control officer must receive and acknowledge the clearance mark or danger hand signal, as the case may be, exhibited by the driver or the driver's assistant on authority of the driver (see train working rule No. 217). [See train working rules Nos. 69(5) and (6) and 209(2).] Until this acknowledgement is received from the train-control officer, the driver or driver's assistant must repeat the appropriate hand signal in the prescribed manner.
- 8006.2 The train-control officer must be prepared to promptly acknowledge the driver's or driver's assistant's, as the case may be, hand signal, whether or not the train is crossing another train.
- 8006.3 Unless the train-control officer can see the white disc or white light on the rear vehicle after he has received the clearance mark hand signal, and the illuminated diagram, where applicable, indicates that the train has stopped within the clearance mark(s), it can be accepted that the train complete has arrived and is within the clearance mark(s) in the rear.
- 8006.4 Protection of train when foul of clearance mark**
- 8006.4.1 In the event of the rear of the train being brought to a standstill foul of the clearance mark, the train-control officer must take prompt action to ensure that the train is drawn clear of the fouling point with the least possible delay. If the white disc or white light on the rear vehicle cannot be seen, even if a clearance mark hand signal has been received and even if the illuminated diagram (where applicable) indicates that the train is within the clearance mark(s), the train-control officer must establish by personal inspection whether the train complete has arrived and has come to a stop within the clearance mark(s) in the rear. If it is found that the train is not clear within the clearance mark(s) in the rear, the train-control officer must take such steps as may be required to draw the train clear of the fouling point as quickly as possible.
- 8006.5 If there is any doubt whether the train can, owing to its length, be accommodated within the clearance marks, the train-control officer (at a station) or the driver's assistant (at an interloop) must orally advise the driver of the position. Before authorising any other train or shunting movement past the fouling point, the train-control officer or the driver's assistant, as the case may be, must satisfy himself that the line is clear for such movement.
- 8006.6 When, for any reason, a train has not been drawn within the clearance marks, or if a train requires to stand foul of the clearance mark, the train-control officer/driver's assistant, after carrying out the provisions of subclauses 8006.4 and 8006.5, must be on the alert and prepared to stop any train or shunting movement which is likely to foul that part of the line occupied by the rear portion of his train. The train-control officer must take the necessary precautions to safeguard the train whilst it is standing foul.
- 8006.6.1 When shunting operations have to be carried out by a train after the clearance mark hand signal has been given to the train-control officer, the driver's assistant must take care to see that the train is not pushed back foul of an adjoining running line. In such cases, the train-control officer must obtain from the driver's assistant a further assurance that the rear of the train is still clear of the adjoining running line(s) before authorising another train or shunting movement on such running line(s). (See train working rule No. 81.)
- 8006.7 If the driver for some or other reason cannot draw up to the clearance mark or starting signal, or if owing to the length of the train he suspects that the train is not standing within the clearance mark in the rear, he must display a danger hand signal or allow it to be displayed to the train-control officer which the latter must acknowledge. For this purpose the driver or driver's assistant must, if necessary, move to a position from where the train-control officer can see this hand signal.

- 8006.7.1 After the train-control officer has received the danger hand signal from the driver, he must, by looking at the illuminated diagram (where applicable), establish whether the train has come to a stop within the clearance mark(s) in the rear. If the white side disc or white light on the last vehicle on the train can be seen and the illuminated diagram (where applicable) indicates that the train is within the clearance mark(s) in the rear, it can be accepted that the train complete has arrived and is standing within the clearance mark(s).
- 8006.7.2 If there is no illuminated diagram, the train-control officer must, after having received the danger hand signal and irrespective of whether he can see the white side disc or white light on the last vehicle or not, establish by personal inspection whether the train complete has arrived and come to a stop within the clearance mark(s) in the rear.
- 8006.7.3 The instructions in the foregoing subclauses 8006.7.1 and 8006.7.2 are also applicable if, for any reason, the train-control officer cannot see the clearance mark hand signal or the danger hand signal which the locomotive personnel is required to display.
- 8006.7.4 Except when the train ran on an SD2 authority (station to station) or on a token over the adjacent section, the clearance mark hand signal or the danger hand signal, as the case may be, as provided in train working rule No. 209(2), need not be exchanged at stations with colour-light signals. (See clause 7037.0.)
- 8006.8 Hand signals to be exhibited distinctly**
- 8006.8.1 Train-control officers, drivers or drivers' assistants must place themselves so that the best view of their hand signals is obtained. A hand signal must be clear and distinct and must be so exhibited as to prevent its being misinterpreted. (See train working rule No. 65.)
- 8007.0 CLEARANCE MARKS AND SAFETY BAR MARKERS TO BE KEPT WHITE**
- 8007.1 The officials in charge of stations and yards must satisfy themselves in their daily examination that the clearance marks and safety bar markers are in a clean condition, and they must ensure that it is kept constantly white.
- 8008.0 LOCOMOTIVE EXAMINATION PITS: CLEANING OF, ETC.**
- 8008.1 Officials in charge of stations and yards must see that locomotive pits are regularly cleaned and white washed, and also that, where necessary, they are lighted at night time. Any damage or defect must be repaired by the maintenance personnel and precautions must be taken to ensure safety until repairs have been affected.
- 8009.0 VOID**
- 8010.0 EXAMINATION AND MAINTENANCE OF POINTS AND SIGNALS ON MECHANICALLY SIGNALLED SECTIONS**
- 8010.1 When signalling and/or points gear is/are defective, the train-control officer must promptly advise the signalling maintenance official or track master.
- 8010.2 The signalling maintenance official must –
- 8010.2.1 see that no trees, bushes, buildings, etc., obscure the driver's view of the signals from the footplate, or obscure the train-control officers view of the signals from the lever frame or signal cabin. The attention of the track inspector must be drawn to the necessity, whenever it arises, for trimming trees and bushes. When buildings obstruct the view of signals, details must be reported at once to the central operating office; and
- 8010.2.2 see that lamps and lenses are clean and that the lenses are focussed parallel with the line. If the porcelain is not scrupulously clean both inside and outside, the attention of the train-control officer must be called to the matter. (See clauses 8028.0 to 8028.3).
- 8010.3 Examination and testing of points and signal wires after derailment or accident**
- 8010.3.1 The signalling maintenance official must make an examination of all points and signal wires and connections that may in any way be affected as the result of a derailment or in the course of rerailing operations, etc., and he must inform the train-control officer of the result of his examination. This will not relieve the train-control officer from the duty of making the necessary test and examination of points and signals and satisfying himself that all is in order for the safe passage of trains. (See clause 10028.0.)

8011.0 OCCUPATION OF POINTS, SIGNALS, ETC.

- 8011.1 Whenever possible, before occupation of points and/or signals is taken, an occupation notice authorising the work must be issued. When making application for an occupation, the maintenance manager (signals) or his authorised deputy must specify the points and/or signals on which it is required to work, the nature of the work, and, in addition, all the other points and signals which will be affected in carrying out the occupation.
- 8011.1.1 It must be decided, and specifically stated in the occupation notice, whether wedges and/or clamps are to be fitted and removed by signalling or track personnel.
- 8011.2 The attention of all concerned is specially directed to the terms of train working rules Nos. 100 to 104.
- 8011.3 During an occupation of points and/or signals, the train-control officer is responsible for the safe working of all trains entering, leaving or within his station.
- 8011.4 When an occupation is in force and points or signals are left connected to the lever frame, the train-control officer must see that the levers concerned are in the correct position for any train or other movement which may be necessary, and must ensure that these levers are not operated until it is safe to do so.
- 8011.5 Members of the signalling personnel must not operate a lever without first having obtained the permission of the train-control officer. Even when this permission has been obtained, and before a lever is operated, the member concerned of the signalling personnel is expected to exercise reasonable caution so as to ensure, as far as possible, that all is in order, for the safe operation of the lever.
- 8011.6 During the course of a signal and/or points occupation –
- 8011.6.1 train and shunting movements at the station concerned must be reduced to a minimum, and the crossing or passing of trains must be eliminated if at all possible or necessary;
- 8011.6.2 all points over which a train or shunting movement is to be made must be secured either by wedges or clamps, irrespective of whether the points are connected to or disconnected from, the lever frame. After a train or shunting movement has been completed, the wedges or clamps may be removed if the official in charge of the signalling work finds that this is necessary in connection with the occupation, and he must advise the hand-signalman when he requires this to be done. Wedges and clamps which have been removed must be replaced before any further movement is made over the points;
- 8011.6.3 the signalling official in charge must arrange for a sufficient number of clamps and wedges to be provided;
- 8011.6.4 the signalling official in charge of the occupation must decide whether or not points are to be disconnected from the lever frame;
- 8011.6.5 mechanically operated facing points, not provided with an independent facing points lock, operated in conjunction with a locking bar, must be clamped;
- 8011.6.6 if mechanically operated facing points are provided with an independent facing points lock, operated in conjunction with a locking bar, the facing points lock may be used to secure the points, provided that the operating connections are disconnected between the locking bar and the train control office;
- 8011.6.7 mechanically operated trailing points may be either clamped or wedged;
- 8011.6.8 all points operated by electrical points machines may be wedged, provided that the points have been disconnected from the points machine. The points must be clamped if the operating rod has been removed;
- 8011.6.9 train and shunting movements must be controlled by hand-signalman, acting on instructions from the train-control officer. A hand-signalman, before giving an "all-right" or "caution" hand signal for a train or shunting movement over any points, must satisfy himself that the points are correctly set and secured. Disconnected points must not be operated for a train or shunting movement, unless authority has been obtained by the hand-signalman from the train-control officer, as well as from the signalling official in charge or his representative. [See train working rules Nos. 101(4), 102(3), 102(4) and 104(4).]

8012.0 DEFECTS IN INTERLOCKED POINTS AND SIGNALLING GEAR

- 8012.1 Operating officials in charge must report any defects in the working of interlocked points and signalling gear to the signalling maintenance official. If the defect is liable to affect the safe working of, or cause delays to trains, pending the arrival of the signalling maintenance official and with the concurrence of the train-control officer, the track inspector or his authorised deputy must disconnect the points and/or signals affected, in which case arrangements must be made for the provision of hand-signalmen. Any repairs which are necessary to signals and signalling gear connected to interlocked points must be carried out by the signalling maintenance official who, however, must be advised without delay when any of this apparatus is disconnected. (See train working rules Nos. 100 to 104.)

8012.2 Operating of points and signals by train-control officers

8012.2.1 When a signal arm does not respond to the lever movement (see train working rule No. 80), the train-control officer must not pull or interfere with the signal wire outside the lever frame. The correct course to pursue in such circumstances is as follows:

8012.2.2 Failure of signal arm to go to “all-right” position

8012.2.2.1 If a signal arm does not go to the “all-right” position, this may be due to the facing points not being properly closed, or to the detector slide being fouled, and the train-control officer must work the facing points lever smartly. If the signal arm still fails to respond to the lever when again operated, the train-control officer must proceed to the facing points and endeavour, by inspection, to locate the cause of the problem. On no account may an “all-right” hand signal be displayed to the locomotive personnel until the train-control officer has proceeded to the facing points and satisfied himself that they are correctly set.

8012.2.3 Failure of signal arm to return to “danger” or “caution”

8012.2.3.1 When a signal arm fails to return to the “danger” or “caution” position, as the case may be, the train-control officer must trace the wire along the track as far as the points and further, if necessary, in order to locate and remove the cause of the problem.

8012.3 Defects in signals to be promptly reported

8012.3.1 If the train-control officer is unable to rectify the defect, he must immediately take action as prescribed in train working rules Nos. 100, 101 and 102, and subclause 8012.1.

8012.4 Securing of defective points

8012.4.1 If defective interlocked points are liable to affect the safe working of, or cause delays to trains, and a track manager or a track inspector or his authorised deputy or a signalling maintenance official, is not immediately available when called out to secure the defective points, the train-control officer may secure the defective points by means of wedges pending the arrival of the track manager or the track inspector or his authorised deputy or the signalling maintenance official. In such an event hand-signalmen must be arranged. Train-control officers must arrange for sufficient wedges for securing points to be kept in train control offices and, in the case of power-operated train control offices, wedges must be kept in the lockers provided for this specific purpose.

8012.4.2 The time at which points are secured by means of wedges and the time at which the wedges are removed must be entered in the train register.

8012.4.3 Where lockers are provided to keep wedges, the train-control officer must keep the key to the locker in safe custody.

8012.5 Electrical signal repeaters to be tested

8012.5.1 Where the positions of semaphore signals are electrically repeated to the train control office, the working of the signal repeaters must be tested by the train-control officer to ensure that they are in order.

8012.6 Standard electrical signal repeaters show three indications, viz.: On, Off, and Wrong.

8012.7 The signal arm must be practically horizontal before the On indication is given on the signal repeater.

8012.8 The signal arm will have travelled through an angle of 45 degrees from the horizontal position before the signal repeater shows Off.

8012.9 Any intermediate position of the signal arm between the horizontal and 45 degrees indication will be indicated, Wrong, on the signal repeater.

8012.10 The test must be made by placing the lever first in one position and looking at the signal arm to see whether it properly corresponds to the signal repeater indication, then by reversing the lever and seeing whether the signal arm and the signal repeater indication agree. If necessary the train-control officer must leave the train control office or arrange for some other employee to observe the position of the signal arm.

8012.11 The train-control officer must not entertain any doubt in regard to the signal repeater reflecting the true position of the signal arm, and should any irregularity or defect be observed in the working of either, the circumstances must be immediately reported to the maintenance manager (signals) and the signalling maintenance official.

8013.0 PROCEDURE TO BE FOLLOWED TO OBTAIN A RELEASE OF ELECTRIC INTERLOCKING, INCLUDING THE BREAKING OF SEALS ON ELECTRIC LOCKS, ON MECHANICAL AND ELECTRIC LEVER FRAMES

8013.1 Mechanical lever frames

8013.1.1 The electric locks provided on certain levers of a mechanical lever frame are either sealed and locked with a padlock, or fitted with a seal only.

8013.1.2 Where a padlock is provided as well as a seal, or when the lock is installed in the relay room under the train control office, the electric locking can only be released by the signalling maintenance official, after the provisions of subclause 8013.2 have been complied with. (Also see subclause 8013.6.)

8013.1.3 Where the electric lock is equipped only with a seal, the train-control officer may break the seal and manually release the lock, after the provisions of subclause 8013.2 have been complied with.

8013.2 Before breaking the seal of the lever lock, the train-control officer or signalling maintenance official must ensure that –

8013.2.1 the lever is locked on account of the failure of a track circuit and/or that the controlling track circuits are either clear of trains or vehicles, or that a train on the line affected has come to a standstill and the driver has observed the signal at “danger”;

8013.2.2 the release lever or a signal lever has not been operated for an opposing movement;

8013.2.3 where the control of one or more lines is vested in two train-control officers, the concurrence of the train-control officer in the other train control office concerned has first been obtained;

8013.2.4 the relevant signal has returned to “danger”. (The train-control officer or signalling maintenance official, as the case may be, must also replace the signal lever to the normal position or, where it is back-locked, replace it as far as it will go, to ensure that the signal will remain at “danger”.)

8013.3 The train-control officer must immediately notify the signalling maintenance official, and telegraph particulars of the failure to the central operating office and the maintenance manager (signals).

8013.4 The train-control officer must endorse the train register with the time and date the seal is broken and the reason therefor, and also the time and date the signalling maintenance official replaces the seal. In addition, a form showing these particulars must be kept in each train control office concerned. This form must be completed in duplicate, the original being submitted to the central operating office each month. Should no instances of broken seals have occurred during the month, a nil return must be submitted.

8013.5 Reference to broken seals on lever locks must be made in the train register by the train-control officer who is being relieved in terms of train working rule No. 108(2).

8013.6 Where the assistance of the signalling maintenance official is required to obtain a release, the signalling maintenance official must ensure that the requirements of subclause 8013.2 have been complied with, and he must then suitably endorse the train register before attempting to give the release. All entries must be made immediately below the last train entry.

8013.7 When carrying out the requirements of train working rule No. 107(6), the official in charge must establish whether any seals have been broken and if so, satisfy himself that these instructions have been complied with. He must daily compare the particulars on the form referred to in subclause 8013.4 with the corresponding particulars in the train register and also initial the form.

8013.8 Each time the signalling maintenance official or an officer of the signals section visits a train control office, he must examine the seals and, if any are broken, he must endeavour to establish the reason and other details. If a satisfactory explanation is not found, the matter must be reported immediately to the central operating office.

8013.9 Power lever frames (miniature levers)

8013.9.1 In the case of electric power lever frames, a release of any electric interlocking that may become necessary can only be obtained with the assistance of the signalling maintenance official. In obtaining this release the terms of subclause 8013.6 must be observed.

8014.0 REPAIRS BY SIGNALLING MAINTENANCE OFFICIAL IN AREAS EQUIPPED WITH CENTRAL OR REMOTE CONTROL

8014.1 No person other than an authorised member of the signal department may adjust, repair or renew signal equipment.

8014.2 In areas under central control, that is areas under control of a centralised traffic control/train control office, at certain large stations, particulars of which appear in local appendices, the provisions of train working rule No. 104(1) and (5) regarding the signing of the train register by the signalling maintenance official repairing signal equipment do not apply.

- 8014.3 In such cases, the signalling maintenance official must make use of a special register in the form of a suitable notebook which, in the case of CTC areas, remote controlled places and distant interlocking areas, must be kept in relay rooms. Visiting supervisors must periodically sign the register and full registers must be kept for one year.
- 8014.4 All particulars in regard to the places concerned, entered in the train register in accordance with train working rule No. 104(1) and (5), must also be entered and signed by the signalling maintenance official in his register. In addition, the train-control officer and the signalling maintenance official must enter in the train register and special register respectively, the times at which defects or impending faults were detected and the times repairs were effected, as well as the times information in this connection was exchanged telephonically or by radio.
- 8014.5 In train control offices, where a signalling maintenance official is continuously on duty in the building, all information regarding faults in the signalling gear and repair or maintenance work must be furnished to this employee who must immediately enter this information and the time it was received in his register and in turn furnish the information to the signalling maintenance official who has to do the work and to the train-control officer, and then enter in the register the time the information was relayed. The first-mentioned signalling maintenance official must transmit all information regarding repair work once a day to his supervisory officer. At those places where a supervisory officer (signals) has been appointed specially to co-ordinate and control the repair of signal faults, all information regarding signal faults must be transmitted to this officer at least twice a day.
- 8014.5.1 If a signalling maintenance official is not continuously on duty in the building and there is a supervisory officer (signals) for the co-ordination and control of repairs to signal faults, all information regarding faults in the signalling gear and repair or maintenance work must be furnished to him and he must immediately enter this information and the time it was received in his register and in turn furnish the information to the signalling maintenance official who has to do the work and then enter in the register the time the information was relayed. The signalling maintenance officer must arrange with the train-control officer in connection with the work to be performed and the time required therefor. On completion of the work full particulars must be furnished to the train-control officer and the supervising officer (signals).
- 8014.5.2 If a signalling maintenance official is not continuously on duty in the building and there is no supervisory officer (signals), all information regarding faults in the signalling gear and repair or maintenance work must be furnished to the train-control officer who must enter this information and the time it was received in his register and in turn furnish the information to the signalling maintenance official who has to do the work and then enter in the register the time the information was relayed. The signalling maintenance official must arrange with the train-control officer in connection with the work to be performed and the time required therefor. On completion of the work full particulars thereof must be furnished to the train-control officer and once a day to the supervisory officer (signals).
- 8014.6 The train-control officer and supervisory officer (signals)/ signalling maintenance official must each time enter in the train register and register the name of the supervisory officer (signals)/signalling maintenance official or train-control officer, as the case may be, with whom he communicates.

8015.0 DEFECTS DETECTED BY SIGNALLING PERSONNEL TO BE REPORTED

- 8015.1 When a member of the personnel of the signals section becomes aware of a defect in the signalling apparatus (semaphore or colour-light) at or between stations he must immediately report the circumstances to the train-control officer concerned, so that the necessary safety measures may be taken.

8016.0 VOID

8017.0 USE OF LEVER COLLARS ON POINTS AND SIGNAL LEVERS

- 8017.1 Lever or catch-handle collars are provided in train control offices and must be placed on levers as reminders to train-control officers that such levers are not to be operated for the time being.
- 8017.2 The following are a few instances when a lever collar must be used:
- 8017.2.1 When trains are waiting to cross or to be passed at an interlocked station [see train working rule No. 209(4)].
- 8017.2.2 When a train or locomotive is shunted from one running line to another.
- 8017.2.3 When a train or locomotive has been drawn inside the home signal, or is at the starting or advance starting signal waiting "line clear".
- 8017.2.4 When vehicles are left on a running line.
- 8017.2.5 During track maintenance operations.
- 8017.2.6 When a line in a terminal station or a bay siding is occupied.
- 8017.2.7 During pilot working.

8017.3 The use of the lever collar is a simple and effective guard against the train-control officer causing a mishap, should he overlook that the line is occupied or obstructed, and the appliance must be used whenever necessary. The train-control officer must not operate, or attempt to operate, a lever on which a lever collar or reminder has been placed.

8018.0 SAFETY BARS AT INTERLOCKED STATIONS

8018.1 In order to ensure that an train-control officer does not operate a home signal for the admittance of a train to an occupied line, safety bars are installed at certain interlocked stations. When a train, or portion thereof, is standing on a safety bar, the levers for the home signals for the line concerned are locked in the normal position.

8018.2 Safety bars, where provided, are installed on running lines generally opposite the train-control office or as near as possible thereto.

8018.2.1 The position of the safety bar and the running line to which it applies, is indicated by means of a whitewashed or painted white rail or sleepers, the same length as the safety bar and laid in the ground, parallel to the track concerned, and also by a short length of whitewashed or painted white rail or sleeper, at each end and at a right angle to the safety bar.

8018.3 At stations where such safety bars are installed, the instructions contained in subclauses 8018.4 and 8018.5 must be observed.

8018.4 Except as provided in subclauses 8018.4.1 and 8018.4.2, the terms of train working rule No. 217(1) must be strictly complied with by a driver when bringing his train to a standstill in a station.

8018.4.1 When a motor trolley, a light locomotive or a train, as the case may be, is brought to a standstill within the clearance marks of a station, the driver must ensure that a portion thereof has come to a standstill on the safety bar applicable to the line onto which it has been admitted. When, however, a light locomotive(s) has/have to take water, the train-control officer must make use of lever collars on the levers affected, to afford protection to the occupied line.

8018.4.2 Where more than one safety bar is installed on a running line, a driver of a motor trolley, a light locomotive or a train, as the case may be, must ensure that a portion thereof has come to a standstill on one of the safety bars applicable to the line on which he has been admitted.

8018.4.2.1 Before admitting any other train or authorising any shunting movement, the train-control officer must satisfy himself that a train admitted to a line on which a safety bar is installed, has come to a standstill with a portion thereof on the safety bar. Where, on account of the view being restricted, the train-control officer cannot establish whether the train or shunting movement has come to a standstill with a portion thereof on the safety bar, he must give effect to the foregoing provisions by moving to a place from where he can establish the position of the train or shunting movement.

8018.4.2.2 Should a following train be admitted to the same running line as the one on to which a preceding train has already been admitted and it is not possible for the following train to come to a standstill on the safety bar, the train-control officer must, immediately after departure of the first train, and before authorising any other train or shunting movement, ensure that the second train is so moved that at least a portion thereof comes to a standstill on the safety bar.

8018.4.3 During shunting operations, when it becomes necessary to leave a vehicle or vehicles on a running line on which a safety bar is installed, the employee in charge of the shunting operations must ensure that at least one pair of wheels of a vehicle is left standing on the safety bar, and it is the duty of the train-control officer to make sure that this instruction is observed.

8018.5 The foregoing instructions are in addition to and not in lieu of the terms of train working rules Nos. 99(6) and 209, and the instructions contained in clause 8017.0.

8019.0 VOID

8020.0 VOID

8021.0 CABLE MARKERS

8021.1 Electric power, communications and signal cables are frequently buried in the ground and the location of such cables is indicated by means of standard cable markers. Track masters and others concerned must, in order to prevent damage to the cables, exercise extreme care when digging in the vicinity of cable routes. Unauthorised interference with or damage to a cable may prove fatal.

8021.2 These cables are marked with a code to indicate the type of cable, and under no circumstances must track masters or other employees remove cable markers without the authority of the engineer concerned.

8021.3 If, as a result of altered earth works, a cable marker would be buried, the engineer whose section is responsible for the maintenance of such cable must be advised before the cable marker is buried so that arrangements can be made to suitably re-mark the site or cable run affected.

8022.0 VOID

8023.0 EXCHANGE OF DUTIES AT STATIONS AND TRAIN CONTROL OFFICES

8023.1 All employees must insert the actual time of coming on and going off duty in the attendance book.

8023.2 In the case of employees responsible for the running of trains, the actual times at which such employees take over and hand over duty must also be inserted in the train register immediately below the last entry and a line ruled across the page. (See train working rule No. 108.)

8023.3 The authorised hours of duty must not be departed from, except with the knowledge and consent of the official in charge.

8023.4 Train-control officers and hand-signalmen must not leave the signals and points of which they have charge unless they are relieved by other competent employees. (See train working rule No. 91 for action to be taken when the train-control office has to be left temporarily.)

8024.0 VOID

8025.0 EXAMINATION OF WARNING DEVICES AT LEVEL CROSSINGS

8025.1 Track inspectors and track masters must observe whether the warning bells, hooters or flashlights at level crossings are working properly and report any defect or failure. They should, on the approach of a train, stand near enough to the bell or hooter to establish whether it is working properly.

8025.2 Locomotive personnel must, when possible, note whether warning bells, hooters, or flashlights at level crossings are working, and, in case of failure, inform the train-control officer and report the circumstances on their journals.

8025.3 Section Managers (Train Control) and (Train Traffic) must, as opportunity arises, satisfy themselves as to the efficiency of warning appliances at level crossings.

8025.4 All defects in the working of warning devices at level crossings must be reported immediately to the signalling maintenance official and to the maintenance manager (signals).

8025.6 Flashlight signals at level crossings

8025.6.1 At level crossings where flashlight signals are provided and there are no barriers with lights installed in terms of train working rule No. 150, a hand-signalman must be appointed in the event of any of the following conditions arising:

8025.6.1.1 failure of flashlight signals;

8025.6.1.2 when flashlight signals have to be placed out of use; or

8025.6.1.3 on double lines, when single line working is to be introduced, and the flashlight signals must be put out of use as laid down in train working rule No. 235(1)(g).

8026.0 VOID

8027.0 FAILURE OF SPEAKING INSTRUMENTS AT STATIONS: USE OF POSTAL OR PRIVATE TELEPHONES

8027.1 If all means of communication at a station fail and it is possible to establish communication with an adjoining station or stations by postal or private telephone in the vicinity, that course must be followed. Should train messages be exchanged, they must, in acknowledgement, be repeated in full to the sender. Full particulars of all such cases must be reported to the central operating office.

8028.0 CLEANING, LIGHTING, MAINTENANCE AND CUSTODY OF LAMPS AND TRAIN INDICATORS

8028.1 The driver's assistant/train despatcher of a train which commences or completes a portion of the trip or link after sunset, or which has to pass through certain tunnels, particulars of which appear in local appendices, must satisfy himself, before starting, that the electrically lighted side and tail lamps are in order. The driver's assistant/train despatcher of the train is responsible for the switching on of the side and tail lamps.

- 8028.2 The driver's assistant/train despatcher must see that a marker is attached to the rear of the last vehicle on the train, in order to indicate that the train is complete. He must also see that the side and tail lamps are lighted between sunset and sunrise, in foggy weather, or when his train has to pass through certain tunnels, particulars of which appear in local appendices. (See train working rules Nos. 76, 77 and 78.)
- 8029.0 TRAIN INDICATORS: TAIL BOARDS, SIDE AND TAIL LAMPS AND REFLECTORS**
- NOTE:** *Tail boards and tail lamps must be regarded as "markers". (See definition of "marker" in the train working rules.)*
- 8029.1 Trains fitted with permanently fixed electrically lighted indicators**
- 8029.1.1 The last vehicle of a train which is fitted with permanently fixed electric side and tail lamps have additional opal (white) slides fitted to the electric side lamps to reduce the light intensity, and the driver's assistant/train despatcher working/despaching a train on which the last vehicle is provided with electric lamps must, before departure of the train, ensure that the red slides are fitted in the rear slots and the opal slides in the front slots. A supply of these slides must be kept at all depot stations to replace slides damaged or lost.
- 8029.2 Void**
- 8029.3 Train indicators**
- 8029.3.1 In addition to a tail board, a side disc with the white side facing the locomotive (see clause 8029.5) must be attached to the last vehicle. The lights must be switched on before despatch of the train from the starting station. (See clause 8029.4.)
- 8029.3.2 Hauler trains running over certain sections during the day, particulars of which appear in the local appendix, may run without side and tail lamps but with side discs and a tail board, subject to the following additional conditions:
- 8029.3.2.1 The running time between the departure and destination points is not longer than 90 minutes.
- 8029.3.2.2 The hauler train must reach its destination before sundown.
- 8029.3.2.3 The vision must not be obscured by for example foggy weather, dust storms or any other reason.
- 8029.3.2.4 There must be no tunnels through which the hauler train must pass.
- 8029.3.3 If it would appear that the hauler train for some or other reason cannot reach its destination before sundown, the load must either be detached at an appropriate place and made safe or supplied with side and tail lights which must be switched on so that the train can complete the journey.
- 8029.3.4 Locomotive personnel must especially at crossing places and on parallel lines by observing the marker ensure that trains passing in the same or opposing direction is complete.
- 8029.4 Lighting of side and tail lamps**
- 8029.4.1 Electric side and, where applicable, electric tail lamps must be switched on shortly before the departure of a train which starts after sunset. If the train commences its journey during the day, the lights must be switched on. At depot and starting stations, a yard official or other higher graded employee trained in train despatch duties (the train despatcher) must ensure that the train indicators are on the train, and that the side discs mentioned in subclause 8029.3.1 are attached to the last vehicle and that the side and tail lights are switched on.
- 8029.4.2 When a train is running through a station without stopping, the train-control officer must ensure that the train is complete, by looking that the side disc (see subclause 8029.3.1) with the white side towards the front and a tail board are attached on the rear vehicle, and that the side and tail lights are switched on properly. If the train-control officer cannot ensure that the side or tail lamps are switched on properly he must comply with the instructions in clauses 3023.0, 6018.0 or 7019.0, as the case may be, and arrange with the train-control officer or yard official at the following station or depot to replace the side or tail lights or switching it on. (See train working rules Nos. 97 and 110.)
- 8029.4.3 Where local circumstances do not allow the train-control officer or a yard official at a station or depot to perform the duty stipulated in subclause 8029.4.2 themselves or if it is in a CTC area, the driver of the train must arrange for the side or the tail lamps to be switched on or lighted by the driver's assistant.
- 8030.0 VOID**

8031.0 ELECTRIC SIDE AND TAIL LAMPS: CLEANING OF FITTINGS AND LENSES

8031.1 Officials in charge at stations and in yards must see that the outside, and especially the lenses, of all electric side and tail lamps are regularly and thoroughly cleaned by the carriage cleaning personnel.

8031.2 The internal cleaning of electric side and tail lamps involves the removal of certain of the electrical fittings, and this work must be done by the train lighting personnel.

8031.3 Side discs, lamps and special device (lamp brackets)

8031.3.1 The side discs referred to in these instructions are 30 centimetre square metal plates. The one side showing a white disc on a black background. The reverse side is painted red. The side discs are attached to the last vehicle on the train. (See subclause 8029.3.1.)

8031.3.2 At terminal stations/depots a responsible employee must be deputed to remove the tail board and side discs for safe custody and re-issue. It must be seen to that these devices do not lie about in shunting yards where it can create danger for the shunting personnel or could be damaged or get lost.

8031.3.3 When the special apparatus is affixed to, or removed from a vehicle or carried to or from a vehicle, special precautions must be taken to keep it in such a position to avoid contact with the overhead electrical equipment.

8032.0 CLEANING AND LIGHTING OF SIGNAL AND OTHER LAMPS

8032.1 Cleaning and lighting of signal lamps

8032.1.1 Signal lamps when fitted with new wicks or new burners, should be lighted at least 20 minutes before they are put into the signal lamp cases and the flame must be properly regulated during that period, as the flame has a tendency to rise. In all other cases, a period of 10 minutes should generally be ample for regulating of the flame.

8032.1.2 Signal lights should be blown out, not turned out, and must not be allowed to burn until the oil is exhausted, as this necessitates subsequent regulation of the flame for a longer period.

8032.1.3 The official in charge or other employee having signals under his care, must see that all signal lamps, lenses, reflectors, and spectacle glasses are kept clean and in good working order, and that the lenses are focussed parallel with the line. Where porcelain burners are used, the burner must be kept scrupulously clean both inside and out, and if the wick is too short, it must be replaced.

8032.2 Trimming wicks

8032.2.1 The wicks of lamps of fixed signals must not be trimmed at the signal posts. The lamps must be brought to the lamp room or train control office, as the case may be, each morning and cleaned and trimmed there. The lamps must not be replaced on the signal posts until required.

8032.3 Supervision

8032.3.1 The official in charge must see that the duty of cleaning and lighting of signal, station, hand, and other oil lamps is properly carried out. These duties must be properly supervised by a responsible employee, who must satisfy himself that the lamps are burning properly after they are placed in the lamp cases on signal posts or in other receptacles. It should be remembered that –

8032.3.1.1 wicks turned too high cause soot to accumulate in the tops of the lamps and thus impair ventilation;

8032.3.1.2 tops of lamps must be clean to ensure proper ventilation; and

8032.3.1.3 slackness of the wick in a burner causes imperfect combustion.

8032.4 Train-control officer to relight signal lamps

8032.4.1 When a signal lamp is observed to be out (see train working rule No. 80), or if locomotive personnel report that a signal light is not burning, the train-control officer, or other authorised employee, must relight the lamp or replace the defective electric globe without delay.

8033.0 FAILURE OF ELECTRIC LIGHTS IN SIGNALS

8033.1 At stations where the signals are electrically lighted and a failure of the lighting occurs, the procedure set out in subclauses 8033.2 and 8033.3 must be adopted.

- 8033.2 Semaphore signals**
- 8033.2.1 Failure of all lights**
- 8033.2.2 In the case of failure of electric lighting, oil lamps must be substituted for these lights where possible.
- 8033.2.3 Pending the substitution of oil lamps, or the restoration of electric lighting, the train-control officer at the station or train control office concerned must not give authority for a train to be despatched from the station or train control office in the rear until the preceding train has arrived complete at his station or train-control office.
- 8033.2.4 All trains must be stopped at the station or the train control office in the rear, the driver informed of the circumstances and, if authority for the train to be despatched has been received from the station or train control office in advance, they must be instructed to proceed with caution. The driver must, after stopping at the outer home signal, proceed with caution to the home signal, or where provided, the intermediate home signal. (See train working rule No. 31.)
- 8033.2.5 Should the electric lighting in the signals fail at a station or train control office after a train has left the station or train control office in the rear, the train-control officer at the station or train control office concerned must arrange for the necessary hand signal to be exhibited at the home signal, and intermediate home signal where provided. [See train working rule No. 28(4)(b) and (c).]
- 8033.3 Failure of individual lights**
- 8033.3.1 When a signal lamp is observed to be out, or if locomotive personnel report that a signal light is not burning, the train-control officer must take immediate steps to replace the defective lamp with a new one. If the supply is of 220/230 volts, the supply to the lights concerned must be switched off before the defective lamp is removed. At certain signals provision is made for this to be done by the withdrawal of a plug on the signal post. If a plug is not provided, the supply must be switched off. After the defective lamp has been replaced, the current must be switched on.
- 8033.3.2 If the current supply to the signal is of low voltage, the lamp may be replaced without switching off the supply.
- 8033.3.3 The train-control officer must, when proceeding to the defective signal, be in possession of an oil reservoir and if the light does not burn after the new lamp has been fitted, the oil reservoir must be substituted and the signalling maintenance official advised.
- 8033.4 Colour-light signals**
- 8033.4.1 Failure of all lights**
- 8033.4.2 If all controlled colour-light signals at a station or in the vicinity thereof fail, the failure must be reported immediately to the central operating office and Electrical Control as the failure may be due to loss of the main power supply to the signal equipment.
- 8033.4.3 Failure of lights in individual signals**
- 8033.4.3.1 If the light in an individual signal fails, the failure must be reported immediately to the central operating office, who must arrange for the signalling maintenance official to attend.
- 8033.5 Extinguishing of signal lamps**
- 8033.5.1 At stations not closing at night and where signals are illuminated by means of oil lamps, the oil signal lamps must be lighted before sunset on Saturdays and be extinguished after sunrise on Mondays.
- 8033.5.2 This instruction is not applicable at stations or depots where the care of signal lamps is undertaken by appointed employees in the normal execution of their duties. [This is an exception to train working rule No. 87(3).]
- 8033.5.3 Officials in charge must ensure that these lamps are cleaned on Saturdays, strictly in accordance with the provisions laid down.
- 8033.6 Semaphore signal, ground indicator and gate lamps**
- 8033.6.1 In the case of semaphore signal and gate lamps, both exteriors and interiors must be treated as station equipment, whilst in the case of ground indicators, only the interiors must be so regarded and be sent to the nearest repairing depot for repairs when necessary. The lamps must first be examined by the signal maintenance official, from whom other lamps must be obtained.
- 8033.7 Lamps for repairs**
- 8033.7.1 When sending lamps to the repair depot for repairs, all broken parts must accompany them. In all cases when lamps are forwarded for repairs, they must be properly packed. Oil must be removed before lamps are despatched.

- 8033.7.2 Pressure lamps that have to be repaired, must be sent to the nearest repairing depot.
- 8033.7.3 The replacing of glass chimneys, mantles and generators or slight repair-work to lamps can be done by station personnel themselves. Spare parts that may be required, are kept at all Promat depots.
- 8033.8 Correct position of coloured lenses in hand lamps**
- 8033.8.1 When tricolour oil hand lamps are returned after having been repaired, officials in charge of stations and depots must see that the red and green lenses are in the correct position, viz. red on the right-hand and green on the left-hand side of the lamp as it is used by an employee.
- 8033.8.2 The lenses of the electric four-colour hand lamp are permanently fixed to a rotating disc and show from left to right green, white, red and yellow as used by an employee.
- 8033.9 Filling and lighting of oil-burning pressure lamps**
- 8033.9.1 The following instructions are applicable to employees who have to use oil-burning pressure lamps:
- 8033.9.1.1 Fill container with clean paraffin (not petrol), and see that the control knob is "off", that is, as far as it will go in a clockwise direction.
- 8033.9.1.2 Give 10 to 15 strokes of the pump. IT IS IMPORTANT NOT TO PUMP MORE AT THIS STAGE.
- 8033.9.1.3 Pre-heat lamp by means of torch dipped in methylated spirits and clip to vaporiser tube below the lamp glass. The methylated spirits torch should be allowed to burn for 2 to 3 minutes.
- 8033.9.1.4 As soon as the flame is just touching the mantle, turn control knob "on" and commence to pump slowly. Do not overpump.
- 8033.9.1.5 While the lamp is burning, the vaporiser jet may become blocked with carbon. To clean jet, merely turn the control knob "off" and "on" quickly, whilst the lamp is alight.
- 8033.9.1.6 Do not let the lamp operate at a very low pressure. If the pressure is allowed to fall too low, the burner may light back with a roaring noise. If this is allowed to continue it will burn and damage the mixing tube.
- 8033.9.1.7 Do not continue to use a broken mantle, as it will result in the breakage of the lamp glass.
- 8033.10 If the light does not burn properly, the following action must be adopted:
- 8033.10.1 Operate the jet cleaning wire.
- 8033.10.2 There may be water present in the container, and in the circumstances the container should be emptied and refilled with fresh oil.
- 8033.10.3 The washer on the pump-plunger may not fit tightly, tighten and inspect washer to see that it is clean and not twisted.
- 8033.10.4 In the event of major repairs to oil-burning pressure lamps being required, the procedure prescribed in subclause 8033.7 must be followed.
- 8033.11 Lamp rooms**
- 8033.11.1 Lamp rooms must be kept clean and tidy. Oil, soot, waste and rubbish must not be left lying on the floor. The rooms must not be used for the storage of station records and must be kept locked. Officials in charge must see that these instructions are strictly observed. Paraffin for use by lampmen, also lamp spares such as glass chimneys, burners, red slides, wicks, etc., issued to lampmen, must be kept locked in lamp rooms and lampmen must see that unauthorised persons do not have access thereto.
- 8033.11.2 Duties of employees responsible for the care of lamps and lamp rooms**
- 8033.11.2.1 Special instructions for lampmen and other employees who are responsible for the care of lamps and lamp rooms, are issued by the Chief Executive (Spoornet). These instructions must be fixed at a conspicuous place in lamp rooms. Employees must familiarise themselves with the contents of these instructions.
- 8034.0 CONTROL OVER ISSUE OF HAND LAMPS**
- 8034.1 Supervisory officials must see that a proper record is kept of the issue of hand lamps to the personnel.
- 8035.0 VOID**

8036.0 ECONOMY IN USE OF LIGHTS IN STATION BUILDINGS

8036.1 Lamps in station buildings should not be lighted too early, and must be extinguished as soon as possible after daybreak. All concerned must exercise economy in the consumption of oil and electricity.

8037.0 LAMP CHIMNEYS

8037.1 Where oil lamps are in use, a piece of fine wire, bent hairpin-fashion, must be suspended on the top of the glass lamp chimney whenever possible. This acts as a heat conductor and prevents breakage.

8038.0 TRAIN LIGHTING AND AIR-CONDITIONING

8038.1 Train Managers are held responsible for proper attention being given to the electric lighting of trains en route.

8038.2 The Train Manager is responsible for seeing that the main switch is turned to the "On" position before sunset, before entering long tunnels or when dull weather makes the use of lights desirable. Lights must not be switched off before 09:00, except where the train completes its journey before that hour. Where trains pass through a series of tunnels within a short distance of each other, the lights may be left on until the train has passed through the last tunnel.

8038.3 The Train Manager must see that the lights in unoccupied compartments are switched off.

8038.4 The officials in charge at terminal stations must arrange for the lights in passenger vehicles to be switched off after the passengers have detrained and the luggage has been unloaded.

8038.5 Bedding attendants must not operate the switches except when instructed to do so, and under no circumstances are they to operate the emergency couplings.

8038.6 Bedding attendants noticing defects in the lighting of vehicles must report this to the Train Manager.

8038.7 Passengers are not permitted to interfere in any way with the electrical installation and train staff concerned must take the necessary action to prevent this being done.

8038.8 In the event of a lighting failure, the Train Manager must first examine the main switch to ensure that it has not been accidentally switched off, then examine the fuses or circuit breakers and renew or reset them, if necessary. If it is found that the switch and fuses are in order, the Train Manager must turn off the main switch of the vehicle in which the fault occurred and afterwards connect the electric couplings, where provided, of such vehicle with those of the adjacent vehicle and see that the couplings are pressed well home.

NOTE: *The main switch of the coach in which the fault occurred must be switched off before coupling to an adjacent coach.*

8038.8.1 The main switch of the vehicle in which the fault occurred must on no account be turned on again whilst the electric couplings are connected.

8038.8.2 Whenever possible, avoid electrically coupling vehicles with faulty lights to specie vans.

8038.8.3 Not more than two passenger vehicles may be electrically coupled together.

8038.8.4 The nearest maintenance manager (electrification) must arrange to instruct the staff concerned and will supply fuse wire.

8038.8.5 A supply of fuse wire must be carried by Train Managers or other employees in charge of trains.

8038.9 In an emergency, when the service of a train-lighting official is required, the Train Manager must inform the nearest train-control officer who in turn must advise the central operating office accordingly. Any passenger vehicle which has been involved in a fire en route, must be examined by a train-lighting official on reaching the nearest depot, before being allowed to proceed further.

8038.10 Officials in charge of depots must arrange for a train lighting defects book to be kept in a place convenient for a Train Manager to report any electrical defects found on passenger vehicles, en route. Particular note should be made of the following:

Total failure of lights in coach No.
Coach No. electrically coupled to coach No.
Lighting poor.
Lights flicker.
Lights brighten when stopping.

- 8038.11 Chief stewards are responsible for the control of lights on dining cars and for the reporting of defects in the lighting in the manner indicated in subclause 8038.11. They will also be responsible, in terms of instructions extant, for the control of the air-conditioning on air-conditioned twin-unit dining cars and lounge cars.
- 8038.12 The officer responsible for the maintenance of the electrical equipment at the depot concerned, must scrutinise and sign the defects book daily.
- 8038.13 Wagon maintenance personnel, when examining wheels and axle-boxes on passenger trains passing through stations, must examine the dynamo belts. If these are defective or missing, the station official in charge must be informed. This officer must then take action in accordance with subclauses 8038.9 to 8038.11.
- 8038.14 Couplings not in use to be secured**
- 8038.14.1 Couplings not in use must be fixed on the carriers at the end of the passenger vehicles.
- 8038.15 Disconnection of couplings**
- 8038.15.1 Before passenger vehicles are detached, shunters must, where necessary, disconnect the electric couplings. In the absence of shunters, the driver's assistant must disconnect the couplings.
- 8039.0 ELECTRICAL WATER PUMPS: 110 VOLT MAIN LINE COACHING STOCK (STEEL SALOONS)**
- 8039.1 The Train Manager on a train to which 110 volt main line coaches are attached, must ensure that the water pump circuit breakers (switches) in such coaches, which are mounted next to the main lighting switch, are switched to the "On" position. This must be done as the Train Manager works through the train at the commencement of the journey. The "On" and the "Off" positions are clearly indicated on the switches.
- 8039.2 On receipt of a complaint in regard to the lack of water in such coaches, the Train Manager must check the switches referred to in subclause 8039.1, and, if a switch is found in the "Off" position, switch it to the "On" position.
- 8039.3 If after three or four attempts the switch refuses to stay in the ON position, the Train Manager must act in accordance with the terms of subclauses 8038.9 to 8038.11.
- 8040.0 VOID**
- 8041.0 VOID**
- 8042.0 DESTINATION INDICATORS**
- 8042.1 Destination indicators must be used on all coaches attached to trains conveying passengers. If a coach is not provided with fixed indicators, or if the destination station name is not included on the roll, standard destination boards must be used.
- 8042.1.1 When destination stations have an official name in English and in Afrikaans, both names must be displayed thus:
- 8042.1.1.1 When there is more than one coach on a train for the same destination, English and Afrikaans names must be shown on alternate coaches.
- 8042.1.1.2 If there is only one coach for one destination, an English indicator must be exhibited on one side of the vehicle and an Afrikaans one on the other side.
- 8042.1.2 The official in charge of the station where coaches are attached, and the Train Manager working the train, are responsible for seeing that the foregoing instructions are observed.
- 8042.2 On long-distance trains, when passenger coaches destined to intermediate stations, have to be taken on to some place beyond, the destination boards must be removed and handed to the station staff concerned, unless the name of the new destination station appears on the reverse side, in which case the board must be turned round.
- 8042.3 Pasting of luggage labels over destination boards forbidden**
- 8042.3.1 Luggage labels must not be pasted over destination boards. Stations requiring destination boards must apply for them to the controlling office.
- 8042.4 Surplus boards not to be retained**
- 8042.4.1 All surplus destination boards must be forwarded without delay to the other depot stations concerned.

8043.0 CLOSING AND OPENING OF TELEGRAPH STATIONS ON SINGLE LINES

8043.1 Closing of stations

- 8043.1.1 On sections controlled by means of the Van Schoor train token system, the provisions of subclause 3028.1 and, where applicable, subclause 3028.4, must be complied with when a station has to be closed.
- 8043.1.2 Before exchanging the "closing of station" signal or, on sections controlled by the wooden train staff and paper ticket system or the telegraph order system, prior to closing of the station the train-control officer must extinguish all semaphore signal and ground indicator lights, and place all main line signals in the "all-right" position.
- 8043.1.3 During the closed period the semaphore signals must not, under any circumstances, be lighted or interfered with, except as provided in subclause 8043.1.4.
- 8043.1.4 Where authority has been given for the signal lamps to be left burning at stations closed for short periods, on condition that a train will not pass through the station, as provided in train working rules Nos. 88 and 89, the provisions of subclauses 8043.1.2 and 8043.1.3 will not apply to those stations in so far as the extinguishing of the signal lights are concerned.
- 8043.1.5 The train-control officer at the station to be closed must, before going off duty, inform the train-control officer at the telegraph station on each side whether or not the signal lights have been extinguished. The sending and receipt of this advice must be recorded in the train register at each station concerned.
- 8043.1.6 In the event of a station controlling an extended telegraph section subsequently closing, the train-control officer must advise the train-control officers controlling the revised extended telegraph section of the position regarding the signal lights at the intermediate closed stations.
- 8043.1.7 Unless advice is received that all signal lights have been extinguished, the train-control officer on each side of the extended telegraph section must not permit a train to pass the closed station.
- 8043.1.8 Where the work of lighting and the extinguishing of signal lamps is performed by employees other than train-control officers, they must be given to understand clearly that they must, on each occasion, receive definite instructions from the train-control officer on duty before proceeding to carry out either of the foregoing duties.
- 8043.1.9 Prior to closing the station, the train-control officer must advise the train-control officers at the adjoining stations that he is closing the station and in the event of a station controlling an extended telegraph section subsequently closing, the train-control officer must advise the train-control officers controlling the revised extended telegraph section that he is closing the station. Each train-control officer concerned must endorse his train register accordingly and insert the time of closing of the station concerned in his train register. The train-control officer closing the station must also advise the central operating office.
- 8043.1.10 The tokens issued under the telegraph order system on the extended telegraph section must be endorsed – "..... and station(s) closed".

8043.2 When a station may be closed prior to the scheduled hour of closing

- 8043.2.1 When the running of a train would prevent a telegraph station closing at the specified time, it is permissible for the train-control officer to arrange with the adjacent stations that the station be closed for train working in time for such train to be worked over the extended section, but the train-control officer at the telegraph station that is closing must remain on duty to render any necessary assistance, in the despatch of trains, until the appointed time of closing. Once the train-control officers at the adjacent stations have been advised of the closing of his station, he must not operate points or signals. In the event of arrangements being made to cross or pass trains at his station, before he goes off duty, the operation of points and admittance of trains will devolve entirely upon the locomotive personnel. (See train working rule No. 215.)

8043.3 Crossing of trains prohibited at closed stations with semaphore signals

- 8043.3.1 Arrangements must not be made for trains to cross, or for shunting movements to be performed, at stations with semaphore signals while such stations are closed. Shunting may be performed, however, at closed detector-locked stations of which the signal levers are not interlocked in a lever frame, provided provision is made therefor in the local appendix.

8043.4 Protection of trains during closed period

- 8043.4.1 During the period a telegraph station is closed –
- 8043.4.1.1 an interlocked station becomes a token station or halt [see train working rule No. 88 (2) and clause 11007.0];
- 8043.4.1.2 a non-interlocked station with semaphore signals becomes a token station or halt and a non-interlocked station without semaphore signals an interloop or token station [see train working rule No. 89 (2) and clause 11007.0];

- 8043.4.1.3 semaphore signals in the "all-right" position must not be acted upon; and
8043.4.1.4 protection in rear is afforded as provided in train working rules Nos. 88(2) and 89(2).

8043.5 Opening of closed stations

- 8043.5.1 On resuming duty at a closed station, the first duty of the train-control officer is to return all main line signals to the normal position, light signal lamps, etc., if necessary (see subclause 8043.6.3.1) and thereafter carry out the other provisions of train working rule No. 90.
8043.5.2 On sections controlled by means of the Van Schoor train token system, the provisions of subclause 3028.2 and, where applicable, subclauses 3028.4 and 3028.5 must be complied with when a station is opened. (See clauses 3029.0 and 3030.0 for steps to be taken when the Van Schoor train token instruments fail.)

8043.6 Closing and opening of stations equipped with semaphore signals

8043.6.1 Closing of station

- 8043.6.1.1 Prior to closing an interlocked station, or a detector-locked station where the signal levers are interlocked in a lever frame, the train-control officer must ensure that all the levers are in the normal position, unlock the switching-out lever by means of the special key in the lever frame, pull it to the half-way position, place all main line signals in the "all-right" position, pull the switching-out lever right over and turn and withdraw the special key and lock it away. He must then, if the station is to be closed during the night, see that all semaphore signal and ground indicator lights are extinguished.

8043.6.2 Opening of station

- 8043.6.2.1 Prior to opening an interlocked station, or a detector-locked station where the signal levers are interlocked in a lever frame, the train-control officer must insert the special key mentioned in subclause 8043.6.1.1 in the lock and turn it, place the switching-out lever in the half-way position, place all main line signals to the normal position, place the switching-out lever to the normal position and lock it by means of the special key, and thereafter, if necessary, light all the semaphore signal and ground indicator lights.

8043.6.3 Custody of special key

- 8043.6.3.1 The official in charge is responsible for seeing that the special key, when not in use, is placed under lock and key (in the safe, where provided) in the station office. In the case of a train control office which is to be closed after the station office is closed, or opened before the station office is opened, the key must be kept in a safe place in the train control office.
8043.6.3.2 Prior to closing or opening a detector-locked station where the signal levers are not interlocked in a lever frame, the train-control officer must comply with the provisions of subclause 8043.6.1 or 8043.6.2, as the case may be, except that the main line signals are operated without the use of a switching-out lever and special key.

8043.7 Mechanical signal replacers: Method of operation when closing and opening stations

- 8043.7.1 At a station where signal replacers are provided, and it is necessary for such station to be closed during a portion of the day or night, a device is installed which prevents the signal arm from returning to the "danger" position when a train passes.
8043.7.2 The train-control officer must, prior to closing the station, unlock and release the padlock at the device provided on the replacer connecting rod, turn the disc by means of the lever so that the device is in the cut-out position, and relock it by inserting the padlock through the hole provided.
8043.7.3 Before opening the station, where it is not possible to cut out the replacer from the lever frame, the train-control officer must proceed to the replacer, unlock the padlock and return the cut-out device to its normal position and relock it by inserting the padlock through the holes provided.
8043.7.4 Subject to the provisions of train working rule No. 88 being observed, in cases where a station is being closed for a short period of the day or night, during which a train will not pass through the station, it is not necessary to adopt the procedure prescribed in preceding subclauses 8043.7.1 and 8043.7.2.

8043.8 Driver to be on the alert when approaching closed stations

- 8043.8.1 When a train is approaching a closed station and the main line home signal is in the "danger" position or not fully in the "all-right" position, the driver must bring his train to a standstill at the home signal and, except when the closed station is due to open, send the driver's assistant to call out the train-control officer. If the train-control officer is not available, the driver must proceed with caution and ensure that the facing and trailing points are correctly set. The circumstances must be reported to the train-control officer at the telegraph station in advance, and this official must promptly advise the train-control officer at the telegraph station in the rear. Drivers of all trains must thereafter be warned of the position and instructed to stop at the home signal of the closed station and ensure that the facing and trailing points are correctly set.

SECTION 9

DUTIES AND RESPONSIBILITIES OF SHUNTERS, DRIVERS AND DRIVERS' ASSISTANTS. PROTECTION OF EMPLOYEES ENGAGED IN THE EXAMINATION AND REPAIRING OF VEHICLES (SEE TRAIN WORKING RULES NOS. 125 TO 145, INCLUSIVE)

9001.0 BRAKES: CONTROL OF SHUNTING MOVEMENTS

9001.1 All employees must be vigilant and cautious when conducting shunting movements

9001.1.1 The movements of diesel locomotives, when not attached to traffic, must be controlled by means of the straight air brakes and that of electric locomotives, by the proportional application of the locomotive straight air brakes. Hand brakes must be used as a last resort, only in case of emergency. When shunting, either hauling or propelling vehicles, in the case of electric and diesel locomotives, the vacuum brake must, if necessary, also be used. Before shunting is commenced the employee in charge of the shunting movement is responsible for advising the driver of the number of vehicles with vacuum coupled through as well as the total number of their mass and general composition. If, at this stage or later during the shunting movement the driver is not satisfied that he has adequate brake power available, he must advise the employee in charge of the shunting movement of the additional number of vehicles he requires the vacuum to be coupled through. When there are vehicles which may not be loose shunted (see train working rule No. 141) on the load, loose shunting may not be carried out with the load until such time as the vehicle/vehicles concerned has/have been detached from the load. The air brakes on electric and diesel locomotives may be used with discretion to supplement the vacuum brake on the vehicles where circumstances warrant this course. During shunting movements the brakes must always be applied judiciously to avoid damage to vehicles and/or the contents thereof. When gradients steeper than 1 in 400 have to be negotiated, particular care must be exercised to ensure that adequate brake power is available to control the shunting movements.

9001.2 Loose shunting

9001.2.1 Examination of hand brakes

9001.2.1.1 When vehicles are being "loose shunted", they must be controlled by means of hand brakes. Before shunting is commenced, the employee in charge of the shunting movement must ensure that the hand brakes are in proper working order so as to prevent such vehicles from striking other vehicles with undue force or coming in contact with stop blocks, or fouling other lines, or running away when the line is on a down gradient. (See train working rule No. 134.)

9001.3 Damage and defects to be reported

9001.3.1 All damage or defects to vehicles or coupling gear, arising during shunting, must be reported to the official in charge, who must ascertain the actual cause and the names of employees responsible. At depots, the wagon maintenance personnel must also be advised.

9002.0 SHUNTING OF PASSENGER VEHICLES AT STATIONS EN ROUTE: PASSENGERS AND OTHER PERSONS TO BE WARNED

9002.1 Passengers in passenger vehicles that have to be shunted at a station short of destination, must be advised thereof by the Train Manager prior to arrival at the station concerned.

9002.2 Before shunting is commenced, passengers must be requested to keep their seats. Passengers who have alighted, as well as other persons, must be requested to stand clear.

9003.0 EMPLOYEES NOT TO RIDE ON LOCOMOTIVE COWCATCHERS

9003.1 In no circumstances must employees stand or ride on the cowcatcher(s), or on the footplate in front of the smoke-box in the case of a steam locomotive, when the locomotive is in motion.

9004.0 VEHICLES CONTAINING EXPLOSIVES NOT TO REMAIN ATTACHED TO LOCOMOTIVE DURING SHUNTING OPERATIONS

9004.1 When several shunting movements have to be made with a train conveying explosives, the vehicles containing explosives must first be detached and must be placed in a safe position until the shunting is completed. (See train working rules Nos. 141 and 144, and subclause 1013.9 of this appendix.)

9005.0 LENGTH, MASS AND SPEED OF LOAD WHILE SHUNTING

9005.1 Discretion must be used in deciding the number of vehicles to be shunted at one time, and the speed of the movements, with due regard to the class of locomotive employed, the state of the permanent way, and the traffic and physical conditions obtaining at the place where the work has to be undertaken.

9006.0 SHUNTING IN BUSY YARDS OR FROM BOTH ENDS OF A YARD

9006.1 When shunting operations, involving the movement of vehicles from opposite ends of a line at one and the same time, are being carried out, the employee in charge must satisfy himself that a clear understanding is arrived at between the shunters at each end of the yard. In carrying out such shunting movements, precautions must be taken to guard against the vehicles coming into violent contact, and drivers must be vigilant and cautious and be prepared to comply with hand signals or radio instructions.

9006.2 It is the duty of the employee in charge of the movement, to see that precautions are taken to prevent the possibility of vehicles moving on to any running line or fouling the clearance marks of any adjoining line(s) or siding(s).

9007.0 PROTECTION OF LEVEL CROSSINGS NOT PROTECTED BY BOOMS: SOUNDING OF LOCOMOTIVE WHISTLE

9007.1 Shunting over level crossings must be performed with great care and every effort must be made to minimise inconvenience or delay to road traffic.

9007.2 When a train must stop at a station or crossing place where a level crossing is situated within its boundaries, the train-control officer must ensure that the train is stopped as far as possible from the level crossing.

9007.3 Except where otherwise provided in the local appendices, before locomotives or vehicles are shunted over a level crossing, the employee in charge of the shunting movement must ensure that the crossing is clear, that road traffic has been brought to a stop and that two employees, if available, prominently displaying a "danger" hand signal, one on each side of the crossing, is standing in a position so that it can be seen clearly by drivers of road traffic and by pedestrians. The "danger" hand signal exhibited to road traffic must be given by day by means of a red flag and by night by means of a red light.

9007.4 Except where otherwise provided in local appendices the driver must not permit his locomotive or any vehicle attached to his locomotive to foul a level crossing until he has received the prescribed hand signal from the employee in charge of the movement and then only after he has sounded the locomotive whistle in terms of this clause. In the absence of a hand signal he must stop short of the level crossing.

9007.5 Where barriers are provided, they must be closed before moving over the level crossing.

9007.6 The employee in charge of the movement must ride on the locomotive or on the leading vehicle in the case of a propelling movement in the direction of the movement and after he has ensured that road traffic has stopped, he may authorise the driver to proceed.

9007.7 When a train has to shunt over a level crossing on a station, interloop, token or order station, intersiding or other unattended place and no other personnel than the driver and the driver's assistant are available, the driver's assistant must afford protection and the following procedure must be followed:

9007.7.1 Where barriers are not provided, the locomotive or leading vehicle, as the case may be, must be brought to a standstill short of the level crossing.

9007.7.1.1 The driver's assistant must proceed to the level crossing and stop road traffic by means of a "danger" hand-signal (red flag by day – red light by night) before authorising the driver to obstruct the level crossing.

9007.7.1.2 When the leading vehicle or locomotive has passed over the crossing and the movement comes to a stand while the crossing is still obstructed by the vehicles, the driver's assistant must leave the point of protection in order to complete the shunting movement.

9007.7.1.3 If all vehicles are clear of the level crossing, the driver's assistant must again take up the point of protection before authorising the driver to carry out the next movement.

9007.7.1.4 The level crossing must be traversed at slow speed and the driver must be prepared to stop promptly should the necessity arise.

9007.7.1.5 The brake pipe couplings must be coupled up throughout the train.

9007.8 Except where otherwise provided in the local appendices, loose shunting over level crossings is prohibited.

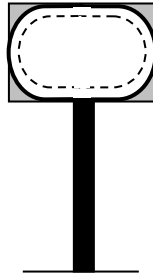
9007.9 Attention is directed to the special instructions in local appendices regarding the shunting over and/or the protection to be provided at certain level crossings including level crossings in workshop areas, in marshalling yards, stores yards, locomotive depots and private sidings/service lines.

9007.10 Sounding of locomotive whistle

- 9007.10.1 The term “whistle” is described in train working rule No. 1 and provides for various warning devices which drivers of locomotives can use.
- 9007.10.2 A locomotive whistle can be a disturbance to the public, especially in residential areas, and should therefor only be used for prescribed and justifiable warning and signalling purposes. Unjustifiable use or use for other purposes is prohibited.
- 9007.10.3 When, owing to the type of warning device it is impossible to sound the “cock crow” signals provided for in the train working rules or other instructions, an equal number long whistles must be given on the siren or device provided.

9007.11 Use and observance of whistle boards

- 9007.11.1 A whistle board is provided to indicate to the driver to sound the locomotive whistle, and is an oval white board with a border of white reflective paint on the front, thus –



9007.11.2 Locomotive whistle, siren or hooter must be given

- 9007.11.2.1 During the hours 05:00 to 23:00 the driver must, by means of the locomotive whistle, siren or hooter of a train, give a warning for at least three seconds at all level crossings.
- 9007.11.2.2 The locomotive whistle must be sounded between the first and second whistle boards or, where such boards are not provided, after the train has passed a point 400 metres from the level crossing and before the train reaches a point 125 metres from the level crossing.
- 9007.11.2.3 Should, due to the view or other reasons, circumstances exist or arise at a particular level crossing which make it necessary for an additional locomotive warning whistle to be given in order to prevent an accident, the driver must give such additional warning.
- 9007.11.3 When a train approaches a level crossing during the hours 23:01 to 04:59, the locomotive whistle warning as described in subclause 9007.11.2.1 hereof is not legally required. The driver should not use the locomotive whistle for this purpose unless, in his judgement, the view or other circumstances at the particular level crossing require such action in order to prevent an accident.

9008.0 VEHICLES TO BE ATTACHED TO LOCOMOTIVE WHEN OUTSIDE THE AREA PROTECTED BY FIXED SIGNALS

- 9008.1 Vehicles must not be taken or placed on the running line outside the area protected by fixed signals unless they are attached to a locomotive, and then only when the provisions of train working rules Nos. 129, 131 and 220 have been complied with.

9009.0 HAND-SHUNTING OVER FACING POINTS: WHEN PERMITTED

- 9009.1 Except where instructions to the contrary are laid down in the local appendices, one wagon at a time may be hand-shunted over the facing points, from one line to another, in order to expedite the disposal of wagons, provided that, in addition to carrying out the provisions of train working rules Nos. 129 and 220, the operating official in charge personally supervises the movement. Before commencing to shunt, he must see that the hand brake is in good order, also that scotches are provided, so that the wagon may be kept under control.

9010.0 VEHICLES LEFT ON RUNNING LINE OUTSIDE HOME SIGNAL

- 9010.1 When it is necessary to leave a vehicle or vehicles on the running line outside a home signal, or outside the facing points where a home signal is not provided, the provisions of train working rules Nos. 129, 131 and 220 must be complied with.

9011.0 USE OF TURNABLES

9011.1 As provided in train working rule No. 145 the speed of a locomotive passing over a turntable must not exceed 5 km/h. The lever of a turntable must not be dropped into the slot until the turntable has been completely stopped.

9012.0 DRIVERS' ASSISTANTS TO ASSIST TRAIN-CONTROL OFFICERS

9012.1 As soon as a goods train comes to a standstill at a non-interlocked station, the driver's assistant must, except where otherwise laid down, immediately approach the train-control officer and ascertain whether his assistance is required. (See clause 1031.0, of this appendix.)

9012.2 Drivers' assistants to operate points when instructed

9012.2.1 The driver's assistant of a train which has either to be crossed or passed at a non-interlocked station, may operate points and admit the opposing or passing train when orally instructed to do so by the train-control officer. (See train working rule No. 190.)

9012.2.2 The operation of the points by a driver's assistant will not relieve the train-control officer of his responsibility as laid down in train working rule No. 218.

9012.3 When driver's assistant to control shunting work

9012.3.1 At stations where a competent employee is not available to conduct shunting operations, the driver's assistant must take charge thereof.

9013.0 VOID

9014.0 STEP IRON AND HAND-GRIP TO BE USED

9014.1 Step irons and handgrips on vehicles must be used by employees employed in shunting, to facilitate the application of the brakes.

9015.0 USE OF TOW ROPES

9015.1 When using a tow rope for shunting, the hook should be put in the towing loop of the wagon nearest the locomotive. When ready to move, the locomotive must start gently. If there should be reason to think that the towing loop is not strong enough, or a towing loop is not provided, the rope may be connected to the coupler shank, but great care must be used to prevent the rope becoming entangled in the wheels. The number of wagons towed must be determined by their mass, the gradient and other circumstances, care being taken not to move more wagons than can be towed safely at one time.

9016.0 VOID

9017.0 COUPLING OF VEHICLES AND LOCOMOTIVES

9017.1 Locomotives and vehicles are equipped with various types of couplers. Employees who perform shunting or must couple locomotives or vehicles must familiarise themselves with the methods of establishing that the gravity locks are fully down in position.

9017.2 When an employee has to move in between two locomotives, a locomotive and a vehicle or two vehicles to adjust the knuckles or centre or adjust the couplers or test the gravity locks to ensure that they are fully down in position, or for any other reason whatever, the movement must be brought to a standstill before he moves in between the locomotives/vehicles concerned.

9017.3 Nobody may be between two locomotives, a locomotive and a vehicle or two vehicles when it is brought together to be coupled.

9017.4 The instruction for coupling the locomotives/vehicles may not be given whilst a person is still between the locomotives/vehicles concerned.

9017.5 After the instruction for coupling the locomotives/vehicles has been given, nobody, for whatever reason, may move in between the vehicles concerned until the movement has been brought to a standstill.

9017.6 After the locomotives/vehicles have been coupled the employee concerned must examine the coupling and ensure that it is secure. If the locomotives/vehicles are coupled in the presence of a member of the wagon maintenance personnel, the latter must also ensure that the coupling is secure.

- 9017.7 Coupling on curves**
- 9017.7.1 Locomotives, i.e. locomotive to locomotive, must, as far as possible, not be coupled on curves.
- 9017.7.2 When locomotives/vehicles must be coupled on a curve, the couplers, where possible, must be pulled over to the best position, with both knuckles half open, and the locomotives/vehicles must be moved slowly together.
- 9017.8 Hard coupling must be avoided**
- 9017.8.1 It is not necessary to use force to couple locomotives/vehicles and hard bumps must be avoided.
- 9017.9 Coupling of brake pipes, jumper cables, etc.**
- 9017.9.1 Brake pipes, jumper cables, etc. must be coupled after the coupling of locomotives/vehicles has been successfully completed and whilst the movement is stationary.
- 9017.9.2 If it is necessary to use a double-ended vacuum hose-pipe between the ordinary vacuum-hose-pipe couplings, both ends must be fastened with wire.
- 9017.10 Position of non-coupled couplers on trains**
- 9017.10.1 Before departing from the starting point, and where the load is shunted en route, the employee responsible for despatching the train must ensure that the knuckle of the rear coupler of the last vehicle on the train is in the closed position and the driver must ensure that the knuckle of the front coupler of the locomotive is in the open position.
- 9018.0 USE OF GANGWAY GATES**
- 9018.1 Except in the case of two adjoining coaches both equipped with Gummi Wulst tubular rubber diaphragm, gangway gates must be provided should it be necessary to provide thoroughfare for passengers and/or train personnel.
- 9018.2 Where thoroughfare is not possible or necessary the end door of the coach must be locked and a gangway gate placed across the doorway on the brackets provided.
- 9018.3 Before and during shunting movements with coaches conveying passengers, the employee in charge of the movements must ensure that gangway gates between vehicles that are to be separated are removed or disconnected, as the case may be, and that the requirements of the preceding subclause 9018.2 are met in respect of the vehicles being moved and those remaining stationary.
- 9018.4 The Train Manager is responsible for ensuring that the end doors of coaches on his train are locked and that the necessary gates are in position in accordance with the preceding subclauses before commencement of the journey and before shunting is undertaken en route. On completion of shunting operations he must unlock the end door(s) that is/are to be opened to provide thoroughfare between vehicles and satisfy himself that the required gangway gates are in position.
- 9019.0 VOID**
- 9020.0 VOID**
- 9021.0 TRAIN LOCOMOTIVES USED FOR SHUNTING PURPOSES**
- 9021.1 Unless written authority to the contrary has been given, T414 vouchers must be issued only by the official in charge, yard master or train-control officer. Where authority is given telephonically, the driver's assistant must fill in the T414 voucher and repeat it in full to the issuing officer and the correctness must be confirmed. The actual reason describing the situation must be stated on the voucher, e.g. "must book off, but is delayed in the yard due to....", "perform shunting to....", "train No. to be taken over at is running minutes late", etc. The words "book through" alone may not be used. T414 vouchers may be issued if –
- 9021.1.1 locomotive personnel are required to undertake shunting work after arrival at a destination station, in which case all time in excess of 15 minutes which is utilised in shunting before departure for the locomotive depot, must be recorded;
- 9021.1.2 trains are arranged earlier or later than the scheduled time (actual number of minutes must be shown);
- 9021.1.3 personnel who otherwise should have booked off are informed to undertake additional duties resulting in the interval at the outstation being reduced to three hours or under and personnel consequently having to be booked through;

- 9021.1.4 shunting duties are performed before or after a trip; and
- 9021.1.5 a train is taken over at an intermediate station, the personnel has been instructed to come on duty at the right time and the train arrives more than 60 minutes late thereat.
- NOTE:** *This subclause must be read in conjunction with paragraphs 9 and 10, clause 3, Chapter III of the Compendium of Instructions on Timekeeping, Payvoucher and Staff Registry Duties.*
- 9021.2 Time engaged in shunting to be recorded**
- 9021.2.1 In the column on the journal headed "Shunting" the driver's assistant must show the actual number of minutes the train locomotive is engaged in shunting en route, and the driver must see that these particulars are correct.
- 9021.3 Locomotives must receive full credit for all work performed by them.
- 9021.4 Shunting locomotives**
- 9021.4.1 In the case of a locomotive set apart for shunting purposes, shunting time must be computed from the time such locomotive passes over the points from the locomotive depot until it returns to the same place, and no deductions are to be made unless the locomotive is used specially to work a train while booked for shunting.
- 9021.5 Shunting in locomotive yards**
- 9021.5.1 When locomotives are employed in shunting vehicles in locomotive yards, such operations must be controlled by a shunter or other competent employee and the driver and the driver's assistant must remain on the locomotive. (See train working rule No. 164.)
- 9022.0 LOCOMOTIVE DETENTION IN PRIVATE SIDINGS**
- 9022.1 When, through no fault of Spoornet's employees, a locomotive belonging to Spoornet is detained in a private siding beyond the time necessary for the delivery and clearance of traffic, a charge must be made against the owners of the siding. A normal shunting period in respect of each private siding (except certain sidings in the dock areas), known as a "free period" will be advised to all concerned by the Operations Manager.
- 9022.2 For each shunt performed in a private siding a works order must be completed by the shunter or driver's assistant and the original must be handed to the private siding owner, or his deputy, or as agreed to by the Operations Manager.
- 9023.0 ISSUE AND CONTROL OF COUPLING EQUIPMENT**
- 9023.1 Supply of equipment kept**
- 9023.1.1 A supply of coupling equipment, gangway gates, vacuum hosepipes and electrical connections is kept at depots and certain stations. The official in charge concerned must regulate the quantity of equipment according to local requirements. Surplus equipment must not be retained at stations except with the consent of the official in charge.
- 9023.2 Collection and distribution**
- 9023.2.1 Officials in charge must arrange to collect, at regular intervals, all spare coupling and other equipment, including damaged or discarded equipment, in his area of responsibility.
- 9023.3. Track masters to collect equipment**
- 9023.3.1 Track masters must collect, as opportunity offers, all coupling equipment including damaged or discarded equipment, at interloops, intersidings, private sidings, quarry sidings, and in section on their lengths and hand it in at the nearest depot.
- 9023.4 Statement of equipment to be obtained**
- 9023.4.1 Officials in charge must obtain regular statements from the employee concerned showing the quantity of equipment on hand at stations on their sections. They must see also that shunting and marshalling yards under their supervision are inspected regularly and that all spare equipment is collected.

9023.5	How coupling equipment must be obtained	
9023.5.1	All coupling equipment required to replenish stocks at stations must be requisitioned for through the Operations Manager.	
9023.6	How damaged coupling gear must be disposed of	
9023.6.1	The official in charge depot must have the sidings in his area of responsibility regularly inspected and all damaged or discarded coupling or other equipment, collected. Such gear, together with the defective equipment collected as prescribed in subclause 9023.2, must be forwarded regularly to the Stores.	
9023.7	Station yards, sidings, etc., must be examined	
9023.7.1	Section Managers (Train Control) are responsible for examining all shunting yards, stations and sidings at frequent intervals and satisfying themselves that the instructions relative to the control of coupling equipment are being observed.	
9023.8	Depots at which coupling equipment is repaired	
9023.8.1	Damaged coupling equipment is repaired at the following centres: Salt River, Uitenhage, East London, Braamfontein, Bloemfontein, Durban, Pietermaritzburg, Koedoespoort and Germiston.	
9024.0	MOVEMENT OF VEHICLES AT INTERLOOPS, CROSSING PLACES AND INTERSIDINGS BY EMPLOYEES WHOSE DUTIES ARE NOT CONNECTED WITH SHUNTING	
9024.1	Employees at interloops, crossing places and intersidings whose duties are not connected with shunting, must not hand-shunt vehicles beyond the clearance marks when placing them in position for loading or unloading, or allow unauthorised persons to do so. In no case must a vehicle be moved foul of the running lines.	
9025.0	WORKING IN MARSHALLING YARDS AND PRIVATE SIDINGS	
9025.1	Introduction	
9025.1.1	These instructions are applicable on the control of train and shunting movements in marshalling yards and private sidings. Where the circumstances in a certain yard or private siding are such that additional instructions are necessary, it will, if necessary, be supplemented by instructions in the Local Appendices.	
9025.2	Definition of "train"	
9025.2.1	Where the word "train" is used in this clause in respect of movements in marshalling yards, it shall mean a train as defined in train working rule No. 1, a shunting movement, a locomotive or locomotives coupled together with or without traffic attached, or a motor trolley.	
9025.3	Boards	
9025.3.1	Where a board, erected alongside a railway line, bears an inscription facing in the direction of approaching or passing trains or shunting movements and which may or may not be quoted in this clause or other written instructions, and the inscription contains an instruction or a warning interpretable as such, the driver and/or, where it can be inferred from the inscription to be the intention, the employee in charge of or other employee(s) involved in the movement, must observe the instruction or warning.	
9025.4	Stop boards	
9025.4.1	Definition – A stop board is a suitably inscribed board fixed on a post alongside the railway line concerned, to indicate the point beyond which a train or shunting movement may not proceed except as provided in this clause. Where the word SAR or SATS locomotive appears on a board it shall mean a Spoornet locomotive.	
9025.4.2	Description – The inscription to be observed is that on the side of the stop board facing in the direction of approaching movements. Where necessary, an arrow is affixed to the post or painted on the board to indicate the line to which the board is applicable. The stop boards most commonly in use in marshalling yards and private sidings are inscribed as follows:	
	<u>Inscription</u>	<u>Applicable to</u>
9025.4.2.1	STOP (letters arranged vertically or horizontally)	All movements
9025.4.2.2	STOP – SPOORNET LOCOMOTIVE MUST NOT PROCEED BEYOND THIS BOARD	Spoornet locomotives only
9025.4.2.3	STOP – PRIVATE LOCOMOTIVE MUST NOT PROCEED BEYOND THIS BOARD	Private locomotives only
9025.4.2.4	STOP – PRIVATE LOCOMOTIVE MUST NOT ENTER WHILE SPOORNET LOCOMOTIVE IS IN EXCHANGE YARD	Private locomotives only

- 9025.4.3 Observance of stop boards**
- 9025.4.3.1 A train or shunting movement must not pass a stop board, unless or until the driver receives from the train-control officer, an employee at the control point or other authorised employee at the board, an "all right" hand signal or oral instruction to proceed.
- 9025.4.3.2 The train-control officer or control shunter or, where movements are not controlled by a train-control officer or control shunter, the employee in charge of the movement or such other employee as may be provided for in these or other instructions, may display an "all right" hand signal or give an oral instruction to a driver to pass the stop board only after he has ensured that –
- 9025.4.3.2.1 the points to be traversed are correctly set;
- 9025.4.3.2.2 a conflicting movement will not take place; and
- 9025.4.3.2.3 the line onto which the movement is to be admitted (except as provided for in subclause 9025.4.3.3), is clear and that all is in order for the safe receipt of the train.
- 9025.4.3.3 If a train has to be admitted onto a line that is occupied or obstructed, the train-control officer, control shunter or other authorised employee must, after the train has been brought to a standstill at the stop board, orally instruct the driver at the board to proceed, advise him how far he may draw forward and thereafter accompany the movement onto the occupied or obstructed line.
- 9025.4.3.4 Unless otherwise laid down in respect of a particular yard or siding, a driver may pass a stop board without stopping if an "all right" hand signal is displayed at the board on the approach of the train thereto.
- 9025.4.3.5 If an "all right" hand signal to be displayed at a stop board is liable to be acted upon by a driver for whom it is not intended, such hand signal must not be displayed, but an oral instruction must be given to the driver after the movement has been brought to a standstill short of the stop board.
- 9025.4.4 *Stop boards applicable to Spoornet locomotive*** – A Spoornet locomotive or, in the case of vehicles being propelled by a Spoornet locomotive, the leading vehicle, may not pass a stop board as described in subclause 9025.4.2.2, except where the board is erected on both sides of a mass-measuring bridge in a private siding, in which case the restrictions applies to the locomotive only.
- 9025.4.5 *Stop boards applicable to private locomotive*** – A private locomotive or, in the case of vehicles being propelled by the private locomotive, the leading vehicle, may not pass a stop board as described in subclause 9025.4.2.3.
- 9025.4.6 *Stop boards applicable to private locomotive whilst Spoornet locomotive is in the exchange yard*** – Except where specially provided, a private locomotive and any vehicle being propelled may not pass a stop board as described in subclause 9025.4.2.4 hereof while a Spoornet locomotive is in that part of the private siding beyond the stop board.
- 9025.4.7 *Stop boards inscribed on both sides*** – Depending on circumstances, stop boards may be inscribed on both sides, each side displaying the appropriate wording.
- 9025.4.8 *Stop boards not to be tampered with*** – A stop board must not, for maintenance purposes, be removed or its inscription obliterated unless the station or yard official in charge has been informed and he has advised all concerned of the work to be undertaken. In the absence of a stop board where one is usually provided, drivers, including drivers of private locomotives, and shunting staff must act as though such board still existed.
- 9025.4.9 *Permanent red lights*** – Where a colour-light signal permanently displaying a "danger" aspect is provided at the entrance to a yard, the instructions contained in subclause 9025.4.3.2 must be observed, except that the driver must be authorised by means of a "caution" hand signal instead of an "all right" hand signal to pass the signal.
- 9025.4.10 Description and observance of shunting limit boards**
- 9025.4.10.1 At certain places shunting limit boards are provided to indicate that shunting past these boards are not allowed.
- 9025.4.10.2 The boards are white, rectangular with the words SHUNTING LIMIT/RANGEERGRENS in black on the front.
- 9025.4.10.3 A driver may pass a shunting limit board only when an oral instruction has been given to him by the train-control officer or on his authority by the employee in charge of the shunting movement.

- 9025.5 Duties of control shunters**
- 9025.5.1 *Control shunter responsible for train arrangements*** – A control shunter on duty at a control point is the only employee who may allow trains to approach or leave that control point. In addition to carrying out the duties defined in the instruction applicable to the particular yard or siding(s), a control shunter must at all times arrive at a clear understanding with the train-control officer concerned, with the yard master or his deputy, the control shunter at the other end of the yard or line concerned, the control shunter of the adjoining yard or area, with the employees in charge of shunting locomotives and/or the employee(s) appointed to assist him in the execution of his duties, as the case may be, to ensure that a conflicting movement will not take place. He must also ensure that the points in the area under his control are correctly set for any movement that he authorises. The employee appointed to assist a control shunter must not interfere with the train arrangements and must strictly carry out any instructions of the control shunter consistent with safety, and he (the assistant) will be responsible for the safe execution of all movements that he authorises.
- 9025.5.2 *Failure of telephones*** – Should telephonic communication fail the employee requiring to contact the control shunter or vice versa must personally come to a clear understanding with the other employee(s) regarding each movement in order that a conflicting movement will not take place. (See subclause 9025.8.)
- 9025.5.3 *Control shunter to keep train register*** – Train registers must be kept at all control points, and the arrival and departure times and particulars of all train movements must be recorded therein. The arrival and departure times must be furnished to the control shunter at the adjacent control point, the train-control officer and/or the yard master or his deputy, according to local requirements.
- 9025.6 Admittance of trains from running lines to goods yards where control shunters are stationed**
- 9025.6.1 *Yard official to be advised*** – The train-control officer must advise the yard master or his deputy, or another authorised employee, in good time of the number and the expected time of arrival of a train that is to be admitted into a yard. The latter, in turn, must advise the control shunter at the entrance to the yard, informing him of the number of the line onto which the train is to be admitted.
- 9025.6.2 Admittance of a train directly into yard by means of a fixed signal**
- 9025.6.2.1 Where a goods or siding signal admits trains directly into the yard, the train-control officer must carry out the provisions of train working rule No. 96(3) before operating the signal.
- 9025.6.2.2 After the train-control officer has operated the signal for the admittance of the train, the control shunter must indicate to the driver the line onto which the train is being admitted. For this purpose the control shunter must take up a position near the hand-points giving entrance to this line and, during the day, wave an arm and at night, a white light from side to side across the body. [See train working rule No. 96(4).]
- 9025.6.2.3 Should the train have to be admitted onto an occupied line, the control shunter must, on authority of the train-control officer, after the train has been brought to a standstill at the signal at "danger", orally advise the driver of the circumstances, inform him how far he may proceed, authorise him to pass the signal at "danger" and thereafter accompany the locomotive onto the occupied line.
- 9025.6.2.4 Before authorising the train-control officer to operate the signal for the admittance of the train, or before the driver is authorised to pass the signal at "danger", as the case may be, the control shunter must ensure that all the hand-points over which the train has to proceed are correctly set, that a conflicting movement will not take place and, except in the circumstances provided for in subclause 9025.6.2.3, that the line onto which the train is to be admitted is clear.
- 9025.6.3 Admittance of a train into yard where a stop board is provided**
- 9025.6.3.1 The train-control officer must not, by operating the relevant fixed signal or otherwise, authorise the driver to proceed to the stop board at the entrance to the yard without consulting the control shunter concerned and ensuring that the line is clear as far as the stop board.
- 9025.6.3.2 The stop board at the entrance to the yard must be observed in terms of subclause 9025.4.3.1.
- 9025.6.4 *Times to be furnished*** – Where applicable, the train-control officer must inform the control shunter of the time of departure of the train from the signal cabin. As soon as the train complete has been brought to a standstill within the clearance marks in the rear, the control shunter must furnish the time of arrival to the train-control officer and, where applicable, to the yard master or his deputy.
- 9025.7 Despatch of trains proceeding onto running lines from goods yards where control shunters are stationed**
- 9025.7.1 *Train-control officer to be advised*** – When a train is ready to depart from a yard, the control shunter concerned must advise the train-control officer and, where required, the yard master or his deputy.

- 9025.7.2** **Authority for train to depart** – After the train-control officer has authorised the train to depart, the control shunter, provided all hand-points over which the train has to proceed are correctly set, all train and shunting movements on adjacent lines have been brought to a standstill and, where provided, the fixed signal controlling the departure of trains from the yard, has been placed at "all-right" or "proceed", must display the "train may depart" hand-signal to the train despatcher or, where necessary, arrange for it to be displayed by an authorised employee. The driver may depart and proceed beyond the clearance mark of the adjoining line only after he has received the "right away" hand-signal from the train despatcher. Where more than one train is waiting to depart, the control shunter, before the "train may depart" signal is displayed to the train despatcher, must orally advise the driver of the train that has to depart first.
- 9025.7.3** **Times to be furnished** – The control shunter, after the "train may depart" signal has been displayed, must take up position at the points over which the train is to proceed, watch the departing train and after ensuring that it is complete with a marker affixed on the rear end of the last vehicle, furnish the departure time to the yard master or his deputy and, where required, to the train-control officer. Where applicable, the train-control officer must inform the control shunter of the time of arrival of the train complete at the signal cabin.
- 9025.8** **Control of movements over service lines and/or between adjacent control points**
- 9025.8.1** **Scope** – The instructions in this subclause are applicable to a non-signalled line, hereinafter referred to as a service line in a yard complex or private siding complex –
- 9025.8.1.1 which is normally used only for the passage of train and shunting movements;
- 9025.8.1.2 which has a train-control officer or a control shunter or other authorised employee stationed at one end and, except where a system of token working is in force which does not require the presence of such an official, a control shunter or other authorised employee (not a train-control officer) at the other end; and
- 9025.8.1.3 the length of which is such that, in the event of suspension of token working and/or failure of communications, the employee(s) controlling the line will not be able, by personal consultation (see subclause 9024.5.2) or otherwise, to establish that the line is clear before authorising a movement over it.
- 9025.8.2** **Absolute working to be maintained** – Only one train at a time may enter upon or occupy a service line.
- 9025.8.3** **Line to be clear** – A movement must not proceed over the service line before the previous movement complete has arrived within the fixed signals, stop board or clearance mark, as the case may be, at the signal cabin, control point, yard or siding at one or the other end of the service line. Where token working is in force, the relevant instructions in this appendix and such other additional instructions that may be issued, must be strictly complied with. Where movements over the service line are not controlled by means of token working, the employees at both ends of the service line must telephonically arrive at a clear understanding with each other before a movement is allowed to proceed onto or over the service line.
- 9025.8.4** **Suspension of normal working** – If the token instruments fail or a token is lost, or where movements are not controlled by means of token working, when the telephones are out of order, or assistance must be rendered in consequence of an obstruction of the line, the station or yard official in charge must arrange for a competent employee, who must wear a pilotman's badge on his left arm, to accompany all movements on the service line.
- 9025.9** **Working of Spoornet and private locomotives in private or departmental sidings with or without exchange yards or exchange sidings**
- 9025.9.1** **General**
- 9025.9.1.1 Except where otherwise laid down in respect of a particular yard or siding, the instructions in this subclause must be complied with in respect of the various private and departmental sidings (hereinafter only referred to as private sidings) with or without exchange yards or exchange sidings, that are worked by locomotives of Spoornet as well as the owners or users of the sidings.
- 9025.9.1.2 In these instructions an exchange yard or siding means that portion of a private siding to which both a Spoornet locomotive and the private locomotive have access and which is used solely for the exchange of traffic between Spoornet and the private siding owner/user.
- 9025.9.1.3 Except where specifically provided for, only one Spoornet locomotive at a time may proceed onto a service line serving a particular private siding and enter or work in that private siding.
- 9025.9.1.4 Where required, stop boards as described in subclause 9025.4 are erected in a private siding.

- 9025.9.2 Movements of a Spoornet locomotive to and from an exchange yard or siding**
- 9025.9.2.1 When a Spoornet locomotive, with or without traffic attached, has to enter an exchange yard or siding, the locomotive or, where applicable, the leading vehicle in the case of a propelling movement, must be brought to a standstill short of the stop board at the entrance to the exchange yard or siding and the driver must remain there until he receives an "all right" hand-signal or oral authority from the employee in charge of the Spoornet shunting operations. Before authorising the driver to enter the exchange yard or siding, the employee in charge of the movement must ensure that the private locomotive is not already in or approaching the exchange yard or siding.
- 9025.9.2.2 Should the private locomotive be in or approaching the exchange yard or siding when a Spoornet locomotive is required to enter, a clear understanding must be arrived at with the employee in charge of the private locomotive, and the private locomotive, if already in the exchange yard or siding, must remain stationary until authorised to move by the employee in charge of the Spoornet locomotive, or until the Spoornet locomotive has departed and is clear of the exchange yard or siding.
- 9025.9.3 Movements of the private locomotive to and from the exchange yard or siding**
- 9025.9.3.1 When the private locomotive has to enter the exchange yard or siding, the locomotive, or the leading vehicle in the case of a propelling movement, must be brought to a standstill short of the stop board at the entrance to the exchange yard or siding. The driver of the private locomotive must not proceed until he has ensured that the Spoornet locomotive is not already in or approaching the exchange yard or siding.
- 9025.9.3.2 Should a Spoornet locomotive be in or approaching the exchange yard or siding when the private locomotive has to enter, the driver of the private locomotive must not proceed beyond the stop board until the Spoornet locomotive has departed and is clear of the exchange yard or siding.
- 9025.9.3.3 Before the private locomotive enters or departs from the exchange yard or siding, the employee in charge thereof must ensure that the points to be traversed are correctly set.
- 9025.9.4 Movements of Spoornet and private locomotive in a private siding without an exchange yard or siding**
- 9025.9.4.1 The Spoornet locomotive or, where applicable, the leading vehicle in the case of a propelling movement, must not enter the private siding or, where provided, pass the relevant stop board, before the employee in charge of the Spoornet shunting operations has ensured that the private locomotive is standing clear in the siding and that a conflicting movement will not take place.
- 9025.9.4.2 Should the private locomotive be working in the private siding when the Spoornet locomotive has to enter, a clear understanding must be arrived at with the employee in charge of the private locomotive, and the private locomotive must stand clear until authorised to move by the employee in charge of the Spoornet locomotive or until the Spoornet locomotive has departed and is clear of the private siding.
- 9025.9.4.3 Where there is no stop board demarcating the area of the private locomotive, the driver of the private locomotive must in no circumstances allow the locomotive or any vehicle to foul the Spoornet lines.
- 9025.9.4.4 The instructions in this subclause also apply to a road/rail private locomotive.
- 9025.9.5 Security gates**
- 9025.9.5.1 Where a gate is provided in a security fence crossing a railway line at the entrance to a private siding, the employee in charge of the Spoornet shunting operations must ensure that the gate is opened and properly secured before authorising the driver to proceed through the gate.
- 9025.9.5.2 If the gate is locked by means of Chubb lock, the employee in charge of the Spoornet shunting operations is responsible for the opening, closing and locking of the gate.
- 9025.9.5.3 If the gate is locked by means of a special lock, the key of which is kept by the siding owner or user, the employee in charge of the Spoornet shunting operations must, before authorising the driver to proceed through the gate, ensure that the gate is opened and properly secured by an employee of the siding owner or user.

- 9025.9.6** **Mass-measuring bridges** – In private sidings provided with mass-measuring bridges over which Spoornet locomotives may not proceed, boards inscribed that Spoornet locomotives may not pass the boards are erected alongside the track on both sides of the private mass-measuring bridges. Drivers must in no circumstances allow their locomotives to proceed past these boards and/or to pass over the mass-measuring bridges.
- 9025.9.7 Traffic must always be hauled to and from and into and out of a private siding, except where –
- 9025.9.7.1 the lay-out of the private siding and/or, where applicable, the electrification thereof is such that at no time can the Spoornet locomotive run round in the siding; or
- 9025.9.7.2 the position of the private siding in relation to the service line is such that the traffic must of necessity be propelled into and/or out of the siding; or
- 9025.9.7.3 otherwise authorised in this appendix.
- 9025.9.8 The normal position of hand-points affording access from a line of Spoornet to a private siding is for them to be set and locked for the Spoornet line. If the points are locked by means of a special lock, the key of which is kept by the siding owner or user, the employee in charge of Spoornet shunting operations must request the siding owner or user to unlock the points.

9026.0 TRAIN JOURNALS

9026.1 How journals to be submitted

- 9026.1.1 Drivers' assistants must prepare train journals in duplicate or triplicate, according to circumstances. The original together with the list of vehicles and other documents, must be handed to the official at the termination of the journey. The copy of the train journal must be retained by the home depot station for record purposes. The station official in charge must forward the original journal and enclosures to the operations manager.

NOTE: *Where there is more than one driver on the train, each driver must be furnished with a copy of the journal.*

9026.2 When journals must be submitted

- 9026.2.1 Journals must be prepared and handed in before drivers' assistants go off duty. Drivers' assistants going off duty at outstations must retain their journals and hand it in at their home depots.

9026.3 Failure must be explained

- 9026.3.1 The station official in charge must enquire immediately into the cause of any failure on the part of a driver's assistant to render his journal at the time laid down. Failure in rendering journals must be fully explained in writing by drivers' assistants.

9026.4 Numbers of all trains crossed or passed, etc., must be shown

- 9026.4.1 When possible, the number of each train crossed, passed or shunted for, also the place at which such movement was made, must be shown on the journal.

9026.5 Driver's assistant to compare watch with station clock

- 9026.5.1 Before the departure of his train the driver's assistant must obtain the correct time from the train-control officer and set his watch accordingly. He must take every opportunity en route of comparing his watch with that of the train-control officer. He must enter the actual time on his journal in accordance with his watch. [See train working rule No. 184(1).]

9026.6 Record of running, shunting, delays, etc.

- 9026.6.1 A driver's assistant must compile his journal and list of vehicles clearly and legible, and must accurately record the following particulars:
- 9026.6.1.1 Time on duty, train number, date, locomotive(s) number(s), names and initials of the driver and driver's assistant, actual time of departure from starting station or depot and actual time of arrival at destination station or depot, as well as the number of minutes late or before time. If the train is delayed en route, the name of the place, the time of arrival and departure and the reason for the delay must be recorded on the journal.

9027.0 TIME OCCUPIED AT STATIONS, ETC. TO BE ACCOUNTED FOR: EACH DELAY TO BE RECORDED SEPARATELY

9027.1 The whole of the time occupied at stations, crossing places, interloops, intersidings and halts must be accounted for, and the actual time occupied in performing each duty must be recorded separately on his journal, by the driver's assistant, for example:

Shunting, 10 minutes (to be shown in the column provided).
Entraining and detraining of passengers, 15 minutes.
Waiting crossing, 3 minutes.
Train examined (opposite place where examination was made).
[See train working rule No. 184(4).]

9027.2 Delays due to loading and unloading traffic

9027.2.1 When a delay occurs in loading and/or unloading traffic, the driver's assistant must record on his journal the following particulars:

9027.2.1.1 Length of delay.

9027.2.1.2. Number of packages.

9027.2.1.3 Mass.

9027.2.1.4 Class of wagon used.

9027.2.1.5 Number of wagons on train into which goods loaded or from which unloaded. This information may be recorded in the manner shown hereunder:

Tranship 15", 9 Packages, 500 kg, 1 FB, 1 GZA, 1 OZ.

9027.3 In the event of an accident or other untoward incident, the driver's assistant must record full particulars on his journal to explain the delay. This, however, does not relieve him of his responsibility of specially reporting the matter as laid down in the train working rules and in this appendix.

9028.0 ACTUAL TIME, AND NUMBER OF MINUTES EARLY OR LATE TO BE SHOWN

9028.1 Drivers' assistants must record in the columns provided on their journals the actual time of departure from the starting station or depot and the actual time of arrival at the destination station or depot as well as the right time or the number of minutes early or late, as the case may be.

9028.2 Running times for special trains must be provided and recorded

9028.2.1 If scheduled times are not provided, as in the case of special or breakdown trains run at short notice, the driver's assistant must request the official in charge to supply running times. If running times are not supplied before departure of the train, these must be advised by telephone to the next convenient station in advance. (See subclause 1054.3.3 of this appendix.)

9029.0 CORRECT DATE TO BE SHOWN

9029.1 Journals must bear correct dates

9029.1.1 In the event of a train, booked to leave the starting station before midnight, being delayed, the date of the day on which the train is booked to leave must be shown in the date space, the date of the day on which the train actually left being inserted immediately above the time of departure.

9029.1.2 In the case of a train starting before, but finishing its journey after midnight, the date concerned must be shown above the first entry after midnight.

9030.0 LIST OF VEHICLES AND WORKS ORDER

9030.1 Number of copies of list of vehicles required and method of disposal

9030.1.1 Except where otherwise provided, the driver's assistant or, where applicable, the personnel responsible for the compilation thereof, must make out the list of vehicles for goods and mixed trains in duplicate. The original must be left at the departure station and the copy must be retained by or handed to the driver's assistant. This copy must accompany the train to the destination, whereafter it must be handed in at the destination station together with the works orders (see subclause 9030.8).

9030.1.2 If a load is detached en route, or the locomotive with load attached is shut down and there is no train-control officer on duty, the driver's assistant must leave the list of vehicles in the clip of the front vehicle or in the locomotive.

9030.1.3 At terminal stations the list of vehicles must be filed locally for record purposes.

9030.2 Vehicle numbers to be recorded in the order which the vehicles are marshalled

9030.2.1 Drivers' assistants or, where applicable, the personnel responsible for the compilation of the list of vehicles, must record accurately and clearly the particulars of each vehicle composing the train. At the original departure point, the vehicles must be recorded in the order in which they are marshalled on the train, indicating whether the list of vehicles commences from the rear of the train or from the locomotive. (In the case of a computer-printed list of vehicles, the driver's assistant or train despatcher must certify on this document that he has compared it with the actual train load.) When particulars are furnished by means of a walkie-talkie to the employee responsible for entering information into the computer, the particulars of the vehicles must be furnished and entered in the order of marshalling.

9030.2.2 If the driver's assistant or train despatcher, as the case may be, find that the particulars on the list of vehicles/computer-printed list does not correspond with the actual particulars of the load, e.g. incorrect vehicle number, destination, etc., he must rule through the incorrect particulars and insert the correct information above the incorrect entry. If the order of marshalling of the vehicles on the list of vehicles or computer-printed list does not correspond, the consecutive number appearing against the vehicle concerned must be swapped.

9030.3 Commuter trains

9030.3.1 Drivers' assistants working certain commuter trains may fill in the required particulars on the back of their journals or on other forms specially provided for this purpose instead of using a list of vehicles for this purpose.

9030.4 Foreign railway's vehicles

9030.4.1 The abbreviation of the name of the owning foreign railway of a foreign vehicle must be inserted in the appropriate column after the number of the foreign vehicle. When use is made of walkie-talkie, this information must be furnished.

9030.5 Through trains: List of vehicles and works orders to be handed over

9030.5.1 In the case of a through passenger train or an authorised goods or through goods train, or in the case of a caboose train, the list of vehicles in possession of the driver's assistant must be handed over to the driver's assistant taking over en route. The driver's assistant who works the train to the final destination station is responsible for handing in the list of vehicles and the works orders (see subclause 9030.8). Each driver's assistant is responsible for updating the list of vehicles for the portion of line over which he works the train. The updated copy of the list of vehicles together with the works orders (see subclause 9030.8), must be handed in at the final destination station for entering into the computer.

9030.5.2 Information regarding vehicles that have been detached and/or attached en route, need only be recorded by the driver's assistant on his copy of list of vehicles, in the applicable column.

9030.6 Void

9030.7. Duties at depots or stations

9030.7.1 On arrival of a train at the destination station, depot or yard, the list of vehicles and works orders must be handed over to the official in charge, or his deputy.

9030.7.1.1 At depots or stations, the official in charge must arrange for the following duties in connection with the lists of vehicles and works orders to be meticulously performed:

9030.7.1.1.1 The written list of vehicles of all outgoing trains and lists of vehicles and works orders of all incoming trains must be made available to the employee responsible for the entering of information into the computer as soon as possible after departure or arrival.

9030.7.2 Outgoing trains

9030.7.2.1 It must be seen to that the written lists of vehicles are accurately and clearly compiled. When lists of vehicles are handed in, they must be compared with the daily train service plan to establish whether a list of vehicles has been handed in for each train. If it is found that there are lists of vehicles missing, the employee responsible for entering information into the computer, must immediately take steps to obtain copies of such missing lists of vehicles and he must enter the information into the computer.

9030.7.3 Incoming trains

9030.7.3.1 When lists of vehicles together with copies of works orders (see subclause 9030.7.1) are handed in, they must first be compared with the train register to ensure that a list of vehicles has been handed in for each train. The employee responsible for entering information into the computer, must obtain lists of vehicles from the computer for the trains involved and compare them with the works orders to ensure that all wagon movements have been entered into the computer.

9030.7.4 The depot or station official in charge must, where practicable, personally supervise the reporting of vehicle movements and must frequently ensure that the work is being performed satisfactorily and accurately and that the instructions contained herein are properly observed.

9030.8 Number of copies of the works orders required and method of disposal

9030.8.1 The works order is a complete record of the actions taking place at a station or public siding and must show full particulars of vehicles that have been detached and/or attached and/or left behind. These forms must always be compiled in duplicate.

9030.8.1.1 When a train arrives at a station where vehicles must be detached, the driver's assistant or other employee in charge of the shunting (hereinafter referred to as "driver's assistant"), must execute the works order. As soon as the vehicles have been placed and the driver's assistant has signed the works order, he must hand over the original to the official in charge, or his deputy.

9030.8.1.2 The driver's assistant must immediately convey the information on the works order telephonically to the order entry official and endorse the works order accordingly. The order entry official receiving such an advice, must ensure that the information is entered into the computer.

9030.8.1.3 The driver's assistant must attach the copy of the works order to the list of vehicles and hand it over to the official in charge, or his deputy, at the destination, who in turn must furnish it to the data clerk and the latter must ensure that the information telephonically received, is correctly entered before the arrival message is entered.

9030.8.2 Vehicles attached or detached at an intersiding or interloop

9030.8.2.1 When a train that is scheduled to shunt at intersidings or interloops, or a train that has to attach and/or detach (a) vehicle(s) at an intersiding or interloop, arrives there, the driver's assistant must execute the works order, compare the particulars of all vehicles that have been attached and/or detached and/or left behind and sign the works order. The driver's assistant must immediately report the information on the works order telephonically to the Client Service Manager concerned in the Client Service Centre and endorse the works order accordingly. The Client Service Manager receiving such an advice, must ensure that the information is entered into the computer.

9030.8.3 CTC/Radio based train control sections

9030.8.3.1 When a train must shunt at a place in a CTC/Radio based train control section where there are station personnel on duty, the action set out in subclause 1051.1 of this appendix and subclause 9030.8.1 hereof, must be followed. When there are no station personnel on duty, the action set out in subclause 9030.8.1.2 hereof must be followed, except that the driver's assistant must at first opportunity telephonically convey the information appearing on the works order to the order entry official. The driver's assistant must endorse the works order with the time and date when he conveyed the information to the order entry official. The order entry official receiving such an advice must ensure that the information telephonically received, is entered into the computer.

9030.8.4 These instructions do not relieve the driver's assistant from his responsibility to personally ensure which vehicles must be attached and/or detached and/or left behind at intersidings or interloops, or at places in CTC/Radio based train control sections, and to complete the necessary works orders.

9031.0 DAMAGED VEHICLES

9031.1 A driver's assistant must report on his journal, full particulars regarding any vehicle on his train which is damaged en route. He must also report such particulars as he can obtain about any vehicle attached in a damaged condition en route.

9031.2 When a vehicle in a damaged condition is attached to a train at a station, the driver's assistant must draw the attention of the station official in charge or a responsible employee to the matter, and this employee must insert particulars in the book kept for this purpose. The driver's assistant must, in addition to the note on his journal, at the end of the journey enter particulars in the depot "Damaged Rolling Stock" book. (See train working rule No. 202.)

NOTE: For instructions regarding the marshalling of damaged vehicles see clause 1021.17 of this appendix.

9031.3 When there is a defect on the brake van of a train, the driver's assistant of the train must fill in form "Defects on brake vans" in triplicate. The original must be attached to the driver's assistant's journal, the first copy must be attached to the brake van by means of the clip on the side of the brake van, for the information of the wagon maintenance personnel, and the second copy must be handed to the official in charge of the yard where the train terminates its journey. The latter official must file it for record purposes.

9031.3.1 In the case of a through train the driver's assistant must write the name of the driver's assistant taking over, in the centre portion of the form and hand the three forms to him. The driver's assistant working the train further must then follow the procedure as set out in the preceding subclause 9031.3. (See clause 9117.0 hereof.)

9032.0 VEHICLES DETACHED AT INTERLOOPS, TOKEN STATIONS OR CROSSING PLACES IN CTC/RADIO BASED TRAIN CONTROL AREAS WITHOUT SIDINGS

9032.1 A vehicle must not be detached at an interloop, token station or crossing places in CTC/Radio based train control areas, where there is no siding, except in cases of absolute necessity, as for instance when a vehicle is running with a hot axle-box or any other defects that are likely to affect the safe running of the train. When this is done, the station on each side or the train-control officer in the train control centre, as the case may be, must be advised so that the necessary precautions may be taken and all concerned promptly advised. A driver's assistant, detaching a vehicle at an interloop, token station or crossing place, must ensure that the vehicle is properly secured by handbrakes and scotches. The locomotive personnel of all opposing trains which are crossed before reaching the next station, and of all trains entering the section, must be informed of the presence of the vehicle(s). Until such time as the vehicle(s) has/have been removed, crossings must not be arranged to take place at the interloop, token station or crossing place.

9033.0 DRIVERS' ASSISTANTS POINTS KEYS: DEFECTIVE POINTS LOCKS AT INTERLOOPS, TOKEN STATIONS, INTERSIDINGS OR CROSSING PLACES IN CTC/RADIO BASED TRAIN CONTROL AREAS

9033.1 When points locks at interloops, token stations, intersidings or crossing places in CTC/Radio based train control areas are missing or damaged, the driver's assistant must, when practicable, report the circumstances to the track master and, in every case, to the train-control officer controlling the section. The driver's assistant must record particulars on his journal, giving the names of the employees to whom the defect was reported. (See train working rule No. 201.)

9033.2 When a driver's assistant fails to report the damage, it will be assumed, in the absence of proof to the contrary, that he is responsible for such damage.

9033.3 Drivers' assistants must satisfy themselves that their points keys are in good order before leaving their depots.

9033.4 Any key which operates locks with difficulty, or which can be withdrawn from locks while the latter are open, must be handed in at the depot for examination and replacement.

NOTE: See clauses 8001.0 to 8004.0 of this appendix.

9034.0 VOID

9035.0 VOID

9036.0 STANDARD EQUIPMENT FOR DRIVERS' ASSISTANTS

9036.1 The following is a list of items with which a driver's assistant must be equipped:

- 1 Equipment box.
Train Working Rules.
General Appendix.
Relevant Local Appendix or Appendices.
Electrical Safety Instructions.
- 1 set flags (red and green), complete with sticks.
- 1 tricolour hand lamp. (One spare battery.)
- 10 detonators in container.
- 1 points key.
- 1 pad "Train journals".
- 1 pad "List of vehicles".
- 1 pad "Train load certificate" forms.
- 1 pad "Defects on brake vans".
- 3 vacuum washers.
- 3 air brake washers.
- 1 hand hammer (1 kg).
- 1 spanner (22 mm).
- 1 tommy bar (300 mm).
- 1 pair of pliers.
- 1 screwdriver.
- 1 padlock and keys.
- 1 pocket note book.
- 1 bucket.
- 1 floor brush.
- 1 clipboard.
- 4 "Train parting"-reports.
- 4 "Not to go" labels.
- 4 "Repair" labels.
- 4 "Inoperative Air-brake" labels.
- 2 wooden plugs for vacuum cylinder branch pipes.

- 9036.1.1 Consumable items per month:
- 1 toilet roll.
 - 2 boxes of matches.
 - 1 non-ravelling cloth (45 cm x 35 cm) (store item number 7/235).
 - 1 bar of soap.
 - 1 Hand cleaner (0,250 kg).
- 9036.2 Deficiencies to be reported**
- 9036.2.1 Before leaving a depot or terminal station with his train, a driver's assistant must see that his personal equipment is complete. Should he experience any difficulty in obtaining any shortage in equipment, he must record particulars on his journal.
- NOTE:** For further instructions relative to the responsibility resting upon a driver's assistant in connection with indicators, see clause 8030.0 of this appendix.
- 9036.3 Full equipment must be supplied**
- 9036.3.1 Officials in charge are responsible for ensuring that driver's assistants are supplied with their full equipment before the departure of trains.
- 9036.3.2 The driver's assistant need only be in possession of the relevant local appendix for the area concerned on which he is employed, unless he is required to work over another area, in which case his equipment must include a copy of the local appendix for that area.
- 9036.4 Custody of equipment not in use**
- 9036.4.1 While a driver's assistant is off duty, his personal equipment may be left in his shed locker, where lockers are provided.
- 9037.0 VOID**
- 9038.0 DUTIES AND RESPONSIBILITIES OF DRIVERS**
- 9038.1 Driver must learn the line**
- 9038.1.1 Before a driver is allowed over any portion of a running line over which, in the capacity of driver, he has not previously driven a locomotive, he must be allowed to learn the line, by night as well as by day. Before being placed in charge of a locomotive proceeding over such portion of the running line, the Section Manager (Train Traffic) must test and certify him as competent to drive a locomotive over that portion of the line, without the assistance of a pilot driver. The driver must thereafter sign the "Knowledge of the Line" book at his home depot. [See train working rule No. 168(1) and (3).]
- 9038.2 Before a driver is allowed to drive a locomotive over sidings over which, in the capacity of driver, he has not previously driven a locomotive, he must be allowed to learn the line. He must thereafter sign the "Knowledge of the Line" book at his home depot, thereby expressing his competence to work a locomotive over the sidings concerned. [See train working rule No. 168(2) and (3).]
- 9038.3 Should it be necessary, owing to an employee graded as driver not being available, to call on a pupil driver to take charge of a locomotive in the capacity of driver, such pupil driver may not take charge unless the provisions of the preceding subclauses 9038.1 and 9038.2 hereof, have been fully observed.
- 9039.0 LOCOMOTIVE HEADLIGHTS**
- 9039.1 Each locomotive must be provided with a headlamp which illuminates the line in the direction of travel. The headlamp must be lighted as soon as it commences to be dusk, during foggy weather and when passing through certain tunnels as laid down in local appendices.
- 9039.2 No locomotive may leave a locomotive depot with a defective headlamp**
- 9039.2.1 If a driver proceeds at night without a headlamp, he must inform the train-control officer at the first opportunity, who must then report the circumstances to the central operating office. The decision whether he may thereafter proceed, must be made in the light of prevailing circumstances, such as traffic intensity on the section, nature of section to be traversed, etc.
- 9039.2.2 A driver proceeding with a failed headlamp under the above circumstances must do so with extreme caution, especially at level crossings.
- 9039.3 When two or more locomotives are working a train, the headlamp of the leading locomotive only must be lighted. In instances where diesel locomotives are operated in multiple, however, it is permissible that the trailing headlight of any of the locomotives be placed temporarily on dim when it becomes necessary for the driver's assistant to proceed from one locomotive to another.

- 9039.4 Headlights must be dimmed but not extinguished when trains are –
- 9039.4.1 standing still;
- 9039.4.2 approaching a platform;
- 9039.4.3 approaching the facing points of a station where train tokens are exchanged and whilst the train is passing through;
- 9039.4.4 approaching the facing points of a place where an opposing train must be crossed; and
- 9039.4.5 approaching a yard or passing through it.

9040.0 SANDING OF RAILS

- 9040.1 Sand must be used sparingly by drivers of all types of locomotives. Not more sand than is necessary to ensure effective adhesive power should be applied, thus avoiding interference with track circuits. In the event of heavy sanding being necessary on running lines within the area protected by fixed signals at a station or crossing place, the driver must report the circumstances to the train-control officer at that station or the first station in advance or in the case of a CTC area to the train control office. The train-control officer must advise the track master or the signal maintenance official and the branch manager (signals).
- 9040.2 In no circumstances must sand be used on points. (See clause 7025.0 of this appendix.)

9041.0 VOID

9042.0 VOID

9043.0 UNAUTHORISED PERSONS NOT ALLOWED TO TRAVEL ON LOCOMOTIVES

9043.1 Members of the public

- 9043.1.1 A person, other than a employee, as provided in subclause 9043.2 hereof, must not be allowed to travel on a locomotive, or in the driving compartment of a motor coach or driving trailer, unless he is in possession of a printed or written permission from an authorised official of Spoornet, and holds, in addition, an available ticket.

9043.2 Spoornet employees

- 9043.2.1 The only employees who may travel on a footplate (locomotives, motor coaches and driving trailers included – see definitions in train working rules), or in the cabs/drivers' compartments of locomotives, motor coaches or driving trailers, not being used to control the locomotives(s)/train, except the driver and driver's assistant responsible for the operation of the locomotive(s)/train, are those required to do so for service purposes and holding permits issued specially for that purpose by the Chief Executive (Spoornet) [see also subclause 9043.2.1.1 hereof], and certain other officials who are from time to time given written permission by the Chief Executive (Spoornet) to travel thereon in the company of a supervisor (locomotive personnel).
- 9043.2.1.1 The Operations Manager with approval of the Chief Executive (Spoornet), may also, by means of the local appendix or other instruction, authorise a maximum of two persons (shunters, spare drivers or driver's assistants, etc.), to travel for service purposes on the locomotive(s) or in a driver's compartment of a motor coach set. It is, however, only permissible to travel in the locomotive/driving compartment if other suitable accommodation is not available on the train, and it is only permissible to travel on the footplate if a cab or driver's compartment not being used as the footplate is not available. Unless specially authorised by the Chief Executive (Spoornet), this provision excludes the Blue Train.
- 9043.2.2 Except as provided in the following subclause 9043.2.3 only two persons at a time in addition to the driver of an electric motor coach train, or the driver and driver's assistant in the case of an electric, diesel or steam locomotive, are permitted to travel on the footplate.
- 9043.2.3 When motor coach, locomotive or traffic tests are being conducted, the engineer conducting the test may, if he considers it necessary for the satisfactory conducting of the test, authorise a third additional person to travel on the footplate. In the case of an electric or diesel locomotive, with the approval of the Chief Executive (Spoornet) a competent employee may be instructed to take over the duties of the driver's assistant and the driver's assistant may be instructed to travel in the trailing driver's compartment pending further instructions.
- 9043.3 Spoornet employees or other persons permitted to travel on the footplate must not in any circumstances, enter into discussion with or otherwise distract the drivers' or drivers' assistants' attention from their duties.

- 9043.4 A Conductor (Commuter Services) may not enter the leading driving compartment of an electric motor coach train, except in the case of emergency and for the purpose of exchanging tokens on behalf of the driver, if this is necessary and is provided for in local appendices.
- 9043.4.1 With the exception of those employees holding permits or written permission issued in accordance with subclause 9043.2.1 hereof, only the Conductor (Commuter Services) working the rear portion of an electric motor coach train, is permitted to travel in the rear driving compartment.
- 9043.4.2 Intermediate driving compartments on electric motor coach trains must be kept locked.
- 9043.4.3 It must be clearly understood that nobody, including conductors, inspectors (passenger services), a Spoornet employee and members of the public, is allowed to travel in the intermediate driving compartment except in the case of:
- 9043.4.3.1 Third-class sets, when the intermediate driving compartment may be used by the conductor who is working the centre portion of the train;
- 9043.4.3.2 Section Managers (Train Traffic) and engineering officers who are in possession of permits or written permission issued in accordance with subclause 9043.2.1 hereof and who are actively employed on work which cannot be performed satisfactorily whilst travelling elsewhere on the motor coach train.
- 9043.5 Locomotive personnel travelling for service purposes on electric locomotives**
- 9043.5.1 Provided only that no suitable accommodation is available within a short space of time on a passenger train, locomotive personnel limited to a maximum of three may travel for service purposes in the rear driving compartment(s) of the electric locomotive(s) of goods trains (air-brake trains excluded). Under no circumstances may they travel in the driving compartment which is used to control the train.
- 9043.5.2 Locomotive personnel travelling for service purposes in the rear driving compartment of an electric locomotive must be in possession of a written authority issued by a designated official.
- 9043.5.3 In all cases where locomotive personnel are authorised to travel for service purposes on an electric locomotive, the driver of the train must be advised orally or in writing of the circumstances.
- 9043.5.4 A special book must be kept by the designated issuing official in which particulars of all authorities issued must be recorded.
- 9044.0 VOID**
- 9045.0 VOID**
- 9046.0 MOVEMENT OF LOCOMOTIVES IN LOCOMOTIVE OR WORKSHOPS YARDS**
- 9046.1 When a locomotive is moved in a locomotive or workshops yard, the driver or other qualified employee in charge of the locomotive must be accompanied on the footplate by a driver's assistant.
- 9046.2 If the driver's assistant, on the instructions of the driver, proceeds ahead to set points, he will be regarded as accompanying the locomotive. All concerned, however, must continue to keep a sharp lookout and, whenever possible, the driver's assistant must remain on the footplate.
- 9046.3 Should it be necessary to make a slight movement of a locomotive for any purpose, the driver must ensure that all is in order before he moves the locomotive.
- 9047.0 VOID**
- 9048.0 VOID**
- 9049.0 UNAUTHORISED PERSONS NOT TO MOVE LOCOMOTIVES**
- 9049.1 The only employees authorised to move locomotives are a driver, driver's assistant under personal supervision of the driver, technical supervisor, shedman, and other employees certified as competent (as far as the duties of such employees require) by a Section Manager (Train Traffic) or other authorised officer. Employees other than those authorised to do so, are strictly prohibited from moving locomotives or any part or parts thereof, or from tampering with any other control equipment or fittings of any type of locomotive.

9050.0 LOCOMOTIVE FAILURES: DRIVERS TO RECORD DEFECTS AND DEFICIENCIES

9050.1 Locomotive failures

9050.1.1 When a locomotive is unable to haul a train, the incident must be regarded as a locomotive failure. A delay caused by a locomotive through any small defect which is remedied by the driver, who ultimately takes the train forward, should not be regarded as a locomotive failure, but treated as a delay.

9050.2 When a locomotive has partially failed and is unable to haul the full load, the driver of such locomotive must carry out the provisions of the relevant train working rules.

9050.3 Serious defects to be reported

9050.3.1 When any serious defect develops in a locomotive en route, the driver must report particulars to the depot to which the train is proceeding and, when not travelling in the direction of his home depot, the message must also be sent to the latter depot.

9050.4 Repair book (T522)

9050.4.1 Before signing off duty between trips, or after completion of duty, the driver must carefully examine his locomotive and enter in the repair book (T522) all defects and deficiencies requiring the attention of shed maintenance personnel. These repairs must have the immediate attention of the shed maintenance personnel concerned, who must record, in the space provided in the book, details of the work actually done, and date, and sign the entry. Drivers must report specially in writing or orally, any defects which constitute a source of danger, in addition to entering particulars thereof in the repair book.

9050.5 Examination of locomotive by shedman

9050.5.1 Where the driver is authorised to hand over a locomotive to the shed personnel before completing his examination, the examination must be carried out by the shedman deputed for the work, and that employee must report all defects in the manner set forth in subclause 9050.4 hereof. The driver, in such cases, must record in the repair book all defects or deficiencies observed by him whilst the locomotive was in his charge.

9051.0 VOID

9052.0 VOID

9053.0 VOID

9054.0 VOID

9055.0 TOOLS AND EQUIPMENT TO BE PROVIDED ON LOCOMOTIVES, AND DRIVERS' PERSONAL KITS

9055.1 Electric locomotives

9055.1.1 Equipment on electric locomotives:

- 1 Marker.
- 1 Set of cables (As necessary).
- 1 Pantograph hook stick (Where applicable).
- 2 Fire extinguishers.
- 2 Scotches.

9055.1.2 Personal kit to be issued to drivers.

9055.1.3 General.

- *Train Working Rules.
- *General Appendix.
- *Electrical Safety Instructions.
- *Relevant Local Appendix or Appendices.
- 1 Leather case.
- 1 Water bottle.
- 1 Points key.
- 10 Detonators in container.
- 1 Green flag fixed to wooden handle.
- 1 Red flag fixed to wooden handle.
- 1 Reverser key.
- "SD1" Authorities.
- 1 Pad T403 forms or Trip Report forms.
- 1 Tricolour hand lamp. (One spare battery.)
- 1 Pocket note book.

NOTE: *May be kept in shed locker at own discretion.

9055.1.4 Additional personal equipment for drivers operating electric locomotives.

- Control switch keys (as necessary).
- 1 Independent air-brake handle.
- 1 Wooden plug for vacuum cylinder branch pipes.
- 1 Brake valve key (as necessary).

9055.1.5 Additional personal equipment for drivers operating motor coach trains.

- 1 Tool pouch.
- 1 Control switch key (as necessary).
- 1 Set fuses (as necessary).
- 1 Carriage door key.

9055.1.5.1 Consumable items per month.

- 1 non-ravelling cloth (45 cm x 35 cm) (stores item number 7/235).
- 1 hand cleaner (0,250 kg).
- 1 toilet roll.
- 1 bar of soap.

9055.2 Diesel locomotives

9055.2.1 Equipment on diesel locomotives.

- 1 Marker.
- 2 Fire extinguishers.
- 2 Scotches.
- 1 Set of cables.

9055.2.2 Personal kit to be issued to drivers.

- *Train Working Rules.
- *General Appendix.
- *Relevant Local Appendix or Appendices.
- *Electrical Safety Instructions.
- Water bottle.
- 1 Points key.
- 1 Green flag fixed to wooden handle.
- 1 Red flag fixed to wooden handle.
- 10 Detonators in container.
- 1 Electric tricolour hand lamp (One spare battery.)
- 1 Reverser key (diesel-electric locomotives).
- 1 driving compartment key (diesel-electric locomotives).
- "SD1" Authorities.
- 1 Pad T403 forms or Trip Report forms.
- 1 Independent air-brake handle.
- 1 Brake valve key (as necessary).
- 1 Pocket note book.
- 1 Leather case.

NOTE: **May be kept in shed locker at own discretion.*

9055.2.3 Consumable items per month:

- 1 non-ravelling cloth (45 cm x 35 cm) (stores item number 7/235).
- 1 hand cleaner (0,250 kg).
- 1 toilet roll.
- 1 bar of soap.

9056.0 TOOLS AND EQUIPMENT TO BE PROVIDED ON DIESEL AND ELECTRIC LOCOMOTIVES, MOTOR COACHES AND DRIVING TRAILERS AND DRIVERS' KIT: GENERAL

9056.1. Emergency tools and equipment

9056.1.1 In addition to the items enumerated in subclauses 9055.1 and 9055.2 hereof, any other equipment which is required for a particular class of locomotive may be included in the emergency tools and equipment locker of a main line locomotive, provided such additions are covered by suitable local instructions. Shunting locomotives working at outstations may be equipped with emergency tools and equipment at the discretion of the technical supervisor concerned.

9056.1.2 A complete list of the tools and equipment, contained in the locker, must be secured to the inside of the door or lid of the locker.

9056.1.3 The seal of the locker must be examined whenever the locomotive returns from a trip, or undergoes a daily or trip inspection, by a shedman, examiner (electric locomotives) or other employee deputed for this purpose.

- 9056.1.4 The emergency tools and equipment of every locomotive must be examined regularly, at least once per month, to ensure that all items are available and are in good condition. The examination may be arranged to coincide with shed inspection or washout, etc., as the case may be, and a suitable record thereof must be kept.
- 9056.1.5 When assuming control of a locomotive, a driver must ensure that the seal of the locker is intact. Should the seal be found broken, the driver must endorse his Trip Report form, or Fault Report form, accordingly. If the broken seal is detected at a locomotive depot, it must also be reported orally to a Section Manager (Train Traffic).
- 9056.1.6 When a driver breaks the seal of the locker in order to use the emergency tools or equipment, or for any other reason, he must endorse the full circumstances on the Trip Report form, or Fault Report form in the case of diesel and electric locomotives, and also enter full details in the Repair or Defect Book on his return to his depot. If he hands over control of the locomotive during a journey, he must advise the relieving driver of the circumstances to enable him to make a suitable endorsement in the Repair or Defect Book when the locomotive is finally stabled at a repair depot.
- 9056.1.7 Whenever a case of a broken seal is reported, the technical supervisor (production control) must arrange for the contents of the locker to be examined and for any missing items to be replaced, and for the locker to be resealed.
- 9056.1.8 Diesel locomotives**
- 9056.1.8.1. When a locomotive is transferred to another depot, or is sent to workshops or to another depot for repairs, the emergency tools and equipment must accompany the locomotive, and a clear understanding must be reached between all concerned regarding the safe custody of the emergency tools and equipment. The despatching depot must compile a list of the emergency tools and equipment contained in the locker of the locomotive, for transmission to the receiving depot or to the workshop or depot responsible for the safe custody of the tools and equipment during repairs. At all intermediate depots the seals must be examined and, if found broken, full details of the circumstances must be reported to the despatching depot.
- 9056.1.9 Electric locomotives**
- 9056.1.9.1 When a locomotive is transferred to another depot, the emergency tools and equipment contained in the locker of the locomotive and the eye bolts with permanent links fitted on each end of the locomotive must accompany the locomotive. A clear understanding must be reached between all concerned regarding the safe custody of the emergency tools and equipment and the eye bolts with permanent links. The despatching depot must compile a list of the emergency tools and equipment contained in the locker of the locomotive, as well as the eye bolts with permanent links fitted at each end of the locomotive.
- 9056.1.10 When a locomotive is sent to workshops or another depot for repairs, the emergency tools and equipment contained in the locker of the locomotive must be removed and placed in safe custody at the home depot. A complete list must be compiled of the emergency tools and equipment removed from the locomotive.
- 9056.1.11 When a locomotive is sent to workshops or another depot for repairs, the eye bolts with permanent links at each end of the locomotive must not be removed, and it must be ascertained that these accessories are still on the locomotive when it is returned to the home depot.
- 9056.1.12 Diesel locomotives**
- 9056.1.12.1 When a locomotive is transferred from one depot to another, or is sent to the mechanical workshops or to another depot for repairs, the line of action is the same as that for emergency tools and equipment, as set out in subclause 9056.1.8.1 hereof. The additional equipment must accompany the locomotive, and a physical check must be carried out at every intermediate depot where the locomotive is stabled or handed over to another driver.
- 9056.1.13 Electric locomotives, motor coaches or driving trailers**
- 9056.1.13.1 When a locomotive, motor coach or driving trailer is transferred to another depot, the additional equipment which is stored in or on the locomotive, motor coach or driving trailer must accompany the locomotive, motor coach or driving trailer. A clear understanding must be reached between all concerned regarding the safe custody of the additional equipment. The despatching depot must compile a list of the additional equipment stored in or on the locomotive, motor coach or driving trailer.
- 9056.1.13.2 When a locomotive, motor coach or driving trailer is sent to workshops or another depot for repairs, the additional equipment stored in or on the locomotive, motor coach or driving trailer must be removed and placed in safe custody at the home depot. A complete list must be compiled of all the additional equipment removed from the locomotive, motor coach or driving trailer.
- 9056.2 Additional equipment**
- 9056.2.1 In addition to the items enumerated in subclauses 9055.1 and 9055.2 hereof, any other equipment which is required for a particular class of locomotive, may be included as additional equipment, provided such additions are covered by suitable local instructions.

- 9056.2.2 Technical supervisors must arrange regular inspections to ensure that the additional equipment is available and in good condition.
- 9056.2.3 When assuming control of a locomotive, the driver must ensure that the additional equipment is available. Should shortages be found, he must endorse the Trip Report form, or Fault Report form, or endorse the Repair Book, as the case may be, at the end of the trip.
- 9056.3 Drivers' personal kit**
- 9056.3.1 In addition to the items enumerated in subclauses 9055.1 and 9055.2 hereof, any other equipment which is required for a particular class of locomotive, may also be issued as personal kit, provided such additions are covered by suitable local instructions.
- 9056.3.2 Drivers and drivers' assistants must sign receipts for personal kit issued to them, and suitable records of all issues and correspondence in this regard must be kept by issuing depots.
- 9056.3.3 Drivers and drivers' assistants are responsible for ensuring that their personal kit is kept in good condition and complete. This kit must be kept in facilities provided for this purpose, when the personnel concerned are not on duty. Personal kit is subject to periodical inspection by the Section Manager (Train Traffic).
- 9056.3.4 Personal kit belongs to the depot which issued it and must be returned to that depot when the personnel concerned is transferred.
- 9057.0 VOID**
- 9058.0 VOID**
- 9059.0 VOID**
- 9060.0 LOCOMOTIVES UNDER REPAIR IN LOCOMOTIVE SHEDS OR YARDS: PROTECTION OF EMPLOYEES**
- 9060.1 Every locomotive under examination or repair in a locomotive shed or yard must be protected by red discs or red flags during daylight, and by hurricane lamps with red shades during darkness or during any period of the day when visibility is poor or lighting is bad. These protective devices must be exhibited in such manner as to be clearly visible from each end and either side. A special clamp is provided for placing over the ledge of the cab window of a locomotive. This clamp has a red disc fixed thereto, and is also provided with a hook for suspending a hurricane lamp during darkness or at other times, when necessary. (When a clamp and discs are not available during the day, a red flag must be used for protection.)
- 9060.2 Sufficient discs or flags must be available for each employee whose duties include pit examination and repairs. Each of these employees must be supplied with two discs or two flags for his personal use.
- 9060.3 Discs and flags must be indelibly marked with the name of the employee to whom they are issued.
- 9060.4 Discs and lamps must be kept in a clean condition, and flags renewed when necessary.
- 9060.5 Sufficient hurricane lamps of the approved type must be kept in depot stores or supervisors' offices to suit the number of employees affected, i.e. those employed on night shift or who are required to use lamps owing to bad lighting or poor visibility.
- 9060.6 Discs, flags and lamps must conform to the design and size indicated on the approved drawings.
- 9060.7 When discs, flags or lamps are displayed on a locomotive, such locomotive must not be moved until the employee carrying out repairs has removed the flags, discs or lamps, and he has withdrawn, and the locomotive is in a condition to be safely moved. No other work on, or the servicing of a locomotive is allowed unless a clear understanding is arrived at with the employee using the discs, flags or lamps, as the case may be.
- 9061.0 VOID**
- 9062.0 VOID**
- 9063.0 VOID**
- 9064.0 VOID**

9065.0 VOID

9066.0 FLUSHING AND WASHING OF DOMESTIC WATER TANK-WAGONS

- 9066.1 Tank-wagons used for the conveyance of water for domestic use must be washed out at intervals not exceeding six months. The employees responsible for the wash out must wear overalls and rubber boots when domestic water tank-wagons are cleaned out.
- 9066.2 At depots where carriage cleaners and/or watering personnel are employed, the foreman carriage cleaner and/or leading hand (train watering) must clean and fill the tanks when necessary, under the supervision of the official in charge of the depot.
- 9066.3 At wagon maintenance depots where there are facilities for the descaling of tank-wagons for the conveyance of domestic water, the wagon maintenance personnel is responsible for the descaling and flushing of the tank-wagons. In all other cases the tank-wagons for descaling must be forwarded to one of the following workshops, whichever is nearest: Salt River, Germiston, Uitenhage, East London or Durban.
- 9066.4 Descaling must, unless otherwise laid down, be done by means of steel brushes. Where the internal surface of the tank has not yet been painted steel brooms must be used to sweep up the scale and dirt. Where the internal surface of the tank has been painted, scrubbing brushes must be used to remove any deposit of dirt on the internal surface. These brooms and brushes must be used exclusively for the cleaning of watertanks and not for any other purpose.
- 9066.5 The date on which a tank-wagon, allocated specifically for the conveyance of domestic water, is descaled and flushed, together with the depot code must be recorded on a stencilled ladder on the tank.
- 9066.6 After being filled with domestic water, all tank-wagons must be chlorinated by the consumer. The correct quantity HTH for each tank-wagon for domestic water for a specific area is calculated and prescribed by the risk professional.
- 9066.7 Before a tank-wagon is filled, the point of the hose and nozzle must be sterilised in a solution of HTH chlorine and water.
- 9066.8 The official in charge supervising the refilling of tank-wagons must see that tank-wagons are filled hygienic. He must, by inspection, ascertain whether descaling or flushing is necessary.
- 9066.9 Risk professionals must make regular inspections on all tank-wagons for domestic water, as well as refilling points, refilling facilities and procedures and he must report any defect at the refilling points to the official in charge.
- 9066.10 The risk professional must immediately be advised of any anomalies in respect of health matters regarding tank-wagons for domestic water, refilling points and procedures.

9067.0 REWARD FOR DETECTION OF FLAWS IN LOCOMOTIVES AND ROLLING STOCK

9067.1 Locomotives

- 9067.1.1 A reward will be paid to any employee of the locomotive shed personnel, who is exclusively engaged on locomotive shed work, and who detects, a bona fide flaw – such as a flawed axle or defective crank pin – in a locomotive. The reward must be recommended by the technical supervisor or other official in charge of the shed and will be paid, if approved by the Chief Executive (Spoornet).

9067.2 Rolling stock

- 9067.2.1 A reward will be paid to the wagon maintenance personnel, wheel turner or other employee who detects a defective axle or fractured tyre belonging to any rolling stock, when it is not the duty of such employee to examine wheels and tyres for defects unless the circumstances are exceptional.
- 9067.2.2 The Senior Manager (Transwerk) of the nearest workshop must decide as to the genuineness of the defect, his decision in all cases will be final and he only may issue a voucher for payment.

9068.0 EXAMINATION, UPKEEP, ETC., OF LOCOMOTIVE BRAKES

9068.1 Examination of locomotive brake gear by shedmen

- 9068.1.1 The shedman, or other employee appointed by the technical zone manager (traction) or supervisor in charge, must test the vacuum, air and hand brakes, as the case may be, on all locomotives after each trip, see that the brakes are in good working order, and the brake blocks fit against the wheels when the brake is applied. [The vacuum or air brake must be tested by means of the testing discs (to drawing No. S.8430/2).]
- 9068.1.2 All defects must be booked at once by the shedman and attention must immediately be given thereto by the technical supervisor. The shedman must also report, in writing, to the technical zone manager (traction) or supervisor in charge, as the case may be, the nature of any defects located.

9068.2 Oiling and upkeep of brakes on locomotives by the shed personnel

- 9068.2.1 All vacuum, air and hand brakes, as the case may be, on locomotives must be examined at least once each month by the technical supervisor in charge. The date when the locomotive was examined, and the condition of the brakes, must be recorded in a special book kept for the purpose and duly signed by the aforementioned official against each entry.
- 9068.2.2 The oiling of all brake gear must be done at least once a week, the oil holes and screws being cleaned at the same time.
- 9068.2.3 Vacuum exhausters and ejectors must be kept in good working condition, set for 64 kPa, and with the testing disc should register 44 kPa.

9068.3 Locomotives not to leave shed with defective break gear

- 9068.3.1 The technical zone manager (traction) or technical supervisor in charge is held responsible for seeing that locomotives do not leave the shed with defective brake gear. A driver must also test the brakes on his locomotive before leaving the shed.

9068.4 Section Manager (Train Traffic) must render a statement

- 9068.4.1 The Section Manager (Train Traffic) must test the air, steam, hand and vacuum brakes of every locomotive inspected by him and, at the end of each month, must render a return to the Operations Manager, giving the numbers of the locomotives inspected.

9069.0 EXAMINATION OF LOCOMOTIVE AND TENDER WHEELS AND AXLES

- 9069.1 Locomotive, and tender wheels in the case of steam locomotives, must be examined by drivers at least once per trip, either at some convenient stopping place or on conclusion of the run. Each tyre must be tapped with a hand hammer for the purpose of detecting defects.
- 9069.2 Locomotive wheels and axles must be examined in the shed by the technical supervisor at least once a month, and a record of each locomotive must be kept in a special book, giving the following information:

Locomotive No. Date of examination.....
Signature of technical supervisor making the examination.....

9070.0 – 9109.0 VOID

9110.0 VEHICLES DAMAGED DURING TRAIN OR SHUNTING MOVEMENTS

- 9110.1 If any defect is observed or damage is incurred during shunting operations, the official in charge must be advised promptly so that action may be taken to ascertain the actual cause and on whom responsibility rests. Wagon maintenance personnel must also be notified of such defect or damage.

9111.0 DISPOSAL OF DEFECTIVE COUPLERS, ETC.

- 9111.1 If couplers or other coupling gear, or other parts of a vehicle broken during shunting operations or during train movements, the defective or damaged parts must be handed to the driver concerned who, in turn, must hand them over to the locomotive official in charge. In the event of a train parting load in section, or at a station, the driver must comply with the provisions of clause 9123.0 hereof.

9112.0 ACTION TO BE TAKEN IF VEHICLE IS UNFIT TO RUN

- 9112.1 A wagon or other vehicle unfit to run must not be loaded. If a defect is discovered after loading has commenced, the vehicle must be unloaded immediately, and if the defective vehicle cannot be repaired on the spot by a technical official or wagon maintenance personnel, it must be sent to the workshops.

9113.0 LOCOMOTIVES OR VEHICLES IN NEED OF WORKSHOP REPAIRS TO BE LABELLED AND CENTRAL OPERATING OFFICE ADVISED

- 9113.1 When damaged vehicles and locomotives are labelled to the workshops for repairs, the labels must be endorsed, if possible, showing when and where the damage occurred. A report of the circumstances must in each case be submitted immediately to the central operating office concerned. Label T51 must be affixed to all vehicles sent to the workshops for repairs.

9114.0 FULL DESCRIPTION OF SPARE PARTS TO BE GIVEN WHEN ORDERING THEM

9114.1 Station officials in charge, when advising the technical zone manager (traction), or wagon maintenance personnel, as the case may be, of couplers or draw-gear requiring repairs or renewals, must state the number of the vehicle so that a suitable spare part may be supplied. A full description of the type and size of the coupler must be given in the case of a broken coupler and any other spare parts that may be required.

9114.2 Automatic couplers are marked with a raised letter on top of the coupler heads to indicate their type, and this index letter must be quoted when ordering couplers for replacement. Where no index letter appears, the cross-sectional dimensions of the shank must be given.

9115.0 OPERATIONS MANAGER TO BE INFORMED WHEN REPAIRS EFFECTED

9115.1 Station officials in charge, technical zone managers (traction), and other employees concerned, must promptly notify the central operating office of all repairs carried out to passenger vehicles, wagons, etc., at their stations or depots.

9116.0 WHEN DAMAGED VEHICLES MAY BE LOADED

9116.1 Vehicles bearing "Permissive" repair labels may only be loaded with traffic to a station short of a wagon maintenance depot.

9117.0 DRIVERS' ASSISTANTS TO ADVISE STATION PERSONNEL WHEN VEHICLES ARE IN DAMAGED CONDITION

9117.1 In order to ensure safe working, drivers' assistants of trains by which damaged vehicles are hauled, must notify the station personnel thereof at any point en route where they are assisted in shunting operations, and also at depot stations before handing over their trains.

9117.2 When damaged vehicles arrive at a depot or other centre where trains are divided or re-marshalled, the personnel must not allow them to stand unprotected on a shunting road, but must, as soon as possible, place such vehicles in a position where they will not require to be moved until they have received the necessary attention. (See clause 9031.0 hereof.)

9118.0 VOID

9119.0 DAMAGE TO ROLLING STOCK IN PRIVATE SIDINGS

9119.1 A close examination must be made of rolling stock and equipment received from private sidings, and should any damage or deficiency be discovered, the driver's assistant or shunter, as the case may be, must promptly direct the siding owner's or his representative's attention to the matter and obtain a written acknowledgement of responsibility thereof. The employee discovering the defect or damage must submit details thereof in writing. The official in charge must thereafter report the circumstances to the Operations Manager.

9119.2 Drivers' assistants or shunters must satisfy themselves that vehicles are in good order when placing them in private sidings. Any defect or damage must be recorded and a written report made to the official in charge, who must take prompt action to have any defects repaired.

9120.0 VEHICLES DETACHED AT STATIONS, CROSSING PLACES AND INTERSIDINGS FOR REPAIRS

9120.1 Particulars of vehicles detached from trains for attention at stations, crossing places and intersidings must be promptly reported to the train-control officer controlling the section, and such advice must include the nature of the defect, the number of the vehicle and from which train it was detached. In the case of loaded vehicles the nature of the contents must be stated.

9120.2 Where vehicles conveying urgent or perishable traffic are delayed, particulars must also be reported to the central operating office, so that special action may be taken to ensure expeditious transit.

9120.3 In event of loaded wagons in transit being detached with hot axle-boxes or other defects, the destination station must be promptly advised.

9120.4 The destination station must also be notified when repairs have been effected and the wagon is despatched to its destination.

9121.0 AXLE-BOXES OF VEHICLES RUNNING HOT, OR VEHICLES OTHERWISE RENDERED DEFECTIVE

- 9121.1 Locomotive personnel must keep careful watch en route with a view to detecting the first sign of a heated axle-box or other defects on their trains, and special examinations must be made by drivers' assistants as opportunity presents itself. [See train working rule No. 184(4).]
- 9121.2 Drivers can minimise damage to hot axle-boxes by giving attention to them before the heating becomes serious. [See train working rule No. 115(2).]
- 9121.3 When a driver's assistant finds that an axle-box of any vehicle on his train is heating or hot, he must at once advise the driver so that the latter may oil it, except in the case of roller-bearing axle-boxes, and at the same time decide whether the vehicle is fit to run to the next wagon maintenance depot.

9122.0 VEHICLES FITTED WITH ROLLER-BEARING AXLE-BOXES

- 9122.1 The roller-bearing axle-boxes are easily distinguished as the trade name "Timken", "SKF", etc., as the case may be, is casted on the end caps of the package unit roller-bearings and on the lids of roller-bearing axle-boxes. In addition, goods vehicles have the distinctive marking of three yellow circles on the four corners of such vehicles. On light coloured vehicles the yellow circles are painted on a black background whilst on dark coloured vehicles only the yellow circles are painted.
- 9122.2 The hand brakes (wheel operating handles), on main line coaches are fitted to the sole bar on each side, and approximately in the centre of the coaches.
- 9122.3 The hand brakes of motor coaches are situated inside the coaches, in the driver's compartment, on the end framing.
- 9122.4 For the application of the brakes, the hand-brake wheel must be operated in a clockwise direction.
- 9122.5 The hand brakes of vehicles fitted with roller-bearing axle-boxes must be applied when a vehicle is standing loose from another vehicle, as, if the vacuum or air brake is not in operation roller-bearing vehicles are liable to be set in motion on a gradient by wind or other extraneous influence.
- 9122.6 When two or more vehicles fitted with roller bearings are left standing coupled together, the hand brake must be applied on at least one vehicle. Before moving a vehicle(s) away from such vehicle(s), the personnel concerned must satisfy themselves that the hand brake is applied on at least one of the vehicles remaining.
- 9122.7 Great care must be taken to ensure that hand brakes are released before vehicles are set in motion, otherwise skidded wheels will result. The brakes of all coaches on a train must be checked before departure of the train.
- 9122.8 All foreign vehicles fitted with roller bearings, which are permitted to work over Spoornet lines, will have distinctive markings. Goods vehicles will have the distinctive marking of three yellow circles on a black background on the four lower corners of such vehicles.
- 9122.9 These foreign roller-bearing vehicles are fitted with hand brakes similar to Spoornet type, and such vehicles must have the hand brakes applied when they are standing uncoupled from any other vehicle, as, if the vacuum or air brake is not in operation, the roller-bearing vehicles are liable to be set in motion, even on a level, by wind or other extraneous influences.
- 9122.10 When two or more vehicles fitted with roller-bearings are left standing coupled together, the hand brakes must be applied on at least half the number of vehicles, irrespective of whether the vacuum or air brake is in operation or not. Before moving one or more of such vehicles, the personnel concerned must satisfy themselves that sufficient hand brakes, as laid down above, are applied on the remaining vehicle or vehicles.
- 9122.10.1 When a train, consisting either in part or wholly of vehicles fitted with roller-bearings, is required to have the vacuum or air brake released at any depot en route for the purpose of examination or adjusting the brakes, or for any reason, it is the responsibility of the wagon maintenance personnel to ensure that sufficient number of hand-brakes is applied, if necessary, to keep the vehicle(s) stationary.
- 9122.11 Great care must be taken to ensure that hand brakes are released before the vehicles are set in motion, otherwise skidded wheels will result.
- 9122.12 Vehicles with roller-bearings must not be detached from the locomotive or other vehicle unless the hand brakes of the roller bearing vehicles have been applied.

9123.0 DRIVER' AND DRIVERS' ASSISTANTS DUTIES IN CONNECTION WITH DEFECTIVE VEHICLES OR TRAINS PARTING LOAD

9123.1 Driver must have necessary labels and train parting reports

9123.1.1 Drivers working trains must be supplied with T49 labels ("For repairs"), T50 ("Not to go") and T498 train parting reports.

9123.2 Defects on vehicles

9123.2.1 When defects are noticed on a passenger vehicle or wagon and such vehicle is considered safe to travel, the driver must complete and attach T49 labels thereto. In the event of the automatic couplers on any vehicle parting, the driver must comply with the provisions of subclause 9123.3 hereof. The locomotive personnel must report full particulars to the train-control officer controlling the section, who must advise the central operating office accordingly. The nature of the defects must in all cases be shown on the labels for the information of the wagon maintenance personnel.

9123.2.2 If any doubt exists whether the vehicle is servicerworthy, the driver must complete T50 labels ("Not to go") and attach them thereto. The nature of the defects must in all cases be shown on the labels for the information of the wagon maintenance personnel.

9123.2.2.1 The driver's assistant must draw the attention of the official in charge to the defects and the latter must arrange to detain the vehicle(s) and advise the train-control officer. The official in charge must advise the central operating office when the vehicle has been repaired and cleared.

9123.3 Train parting load

9123.3.1 When a train becomes divided accidentally and the driver's assistant is sent to couple up the load, he must go back the full length of the train and ensure that the train is complete by making sure that a marker is attached to the last vehicle.

9123.3.2 Besides ensuring that a marker is attached to the last vehicle, the driver's assistant must compare the number of the last vehicle with the number on the list of vehicles (see clause 9030.2 hereof).

9123.3.3 If it is found that there is no marker on the last vehicle, but the number corresponds with the number on the list of vehicles, the driver's assistant may return to the locomotive and the train may proceed to the next place where a marker can be attached.

9123.3.4 If it is found that there is no marker attached to the last vehicle and the number of the last vehicle does not correspond with the number on the list of vehicles, the driver's assistant must go back further and ensure that there is no vehicles left in the section.

9123.3.5 In any instance of uncoupling of couplers of a passenger, mixed or goods train, either at a station or in the section, the driver's assistant must personally inspect the uncoupled couplers before they are again coupled, to determine whether there are any defects which could possibly have caused the uncoupling, and the nature of the defects. In the event of the automatic couplers on any vehicle parting, the driver's assistant must complete a train parting report (T498) and attach it to the defective vehicle, or to either of the two vehicles involved in the parting, where no definite cause can be established. The driver's assistant must also attach a repair label (T49), endorsed "train parting", to the vehicle(s) involved.

9123.4 The wagon maintenance personnel, after having been advised of vehicles having been involved in a train parting, must look for and complete the reverse side of the T498 train parting report. The completed T498 train parting report must be submitted to the Operations Manager.

9124.0 DRIVER TO DECIDE WHEN DEFECTIVE VEHICLE IS TO BE DETACHED

9124.1 The driver must in all cases decide whether it is necessary to detach a defective vehicle at a station, interloop, crossing places or intersiding.

9125.0 USE OF EMERGENCY COUPLING SETS

9125.1 Emergency coupling sets may be used for the following purposes:

9125.1.1 As an additional coupling between vehicles which have the regular couplers in good order to ensure additional safety as provided for in this appendix or other relevant instructions;

9125.1.2 as an additional coupling between vehicles where, after a parting, the regular couplers are suspect but apparently still able to function. The emergency coupling set may become the only coupling between the relevant vehicles in the event of the suspect regular couplers again parting en route; and

9125.1.3 as the only coupling between vehicles where a regular coupler is defective or missing.

9125.2 Trains on which an emergency coupling is used as an additional coupling as indicated in subclause 9125.1.1 above, may travel at the maximum permissible speed for the type of train concerned, unless otherwise indicated.

- 9125.2.1 The speed of trains on which an emergency coupling set is used as indicated in subclause 9125.1.2 and 9125.1.3 above, must not exceed 40 km/h unless the driver is satisfied that it is safe to do so, bearing in mind the position in which the vehicle with the defective coupler is marshalled in the train and the nature of the line.
- 9125.3 If the portion of the load behind the emergency coupling does not exceed 850 tons, and the defective coupler is in position, the load complete may be cleared with the emergency coupling set as the only coupling.
- 9125.3.1 If the portion of the load behind the emergency coupling exceeds 850 tons, or if the regular coupler is missing, the first portion, including the vehicle with the defective or missing coupler, must be cleared first, and arrangements made to clear the remaining portion of the load thereafter.
- 9125.4 As emergency coupling sets and the brackets to which they are secured are not capable of withstanding high forces, it is essential that the jerking of trains be avoided.
- 9125.5 Disposal of defective vehicle(s)**
- 9125.5.1 Should the nature of the coupler or the circumstances be such that the driver considers it necessary or desirable to detach the defective vehicle before reaching the next wagon maintenance depot, he must advise the train-control officer of his intention before doing so.
- 9126.0 VOID**
- 9127.0 SKIDDED WHEELS**
- 9127.1 Drivers, drivers' assistants, shunters and other employees concerned must exercise care in the application of brakes so as to prevent the skidding of wheels. It should be understood that by allowing the wheel to revolve, a far more effective brake is obtained. [See train working rule No. 134(1)(b).]
- 9127.2 All instances of skidded wheels coming to notice, must be immediately reported if the damage is not already marked for attention and the fullest information must, in every instance, be submitted so that responsibility for the damage may be quickly and clearly defined.
- 9127.3 When the wheels of any locomotive, or tender, or any other vehicle, have been skidding, fitters or wagon maintenance personnel, or any other employee to whom has been delegated the duty of the examination of the wheels, must take a special note thereof and submit a report to his official in charge informing him:
- 9127.3.1 in the case of a locomotive:**
- 9127.3.1.1 Locomotive number;
- 9127.3.1.2 wheel or wheels found skidded;
- 9127.3.1.3 extent of skid; and
- 9127.3.1.4 reason for skid;
- 9127.3.2 In the case of a vehicle other than a locomotive:**
- 9127.3.2.1 The action to be taken is set out in clause 905.0 of the Carriage and Wagon Handbook (Volume 1) (carriage and wagon) and other employees employed on the examination, maintenance and supervision of vehicles.
- 9127.4 Wheels are considered skidded and must be removed for attention when the length of the skid i.e. the flat on the circumference measures or exceeds the following dimensions:
- 9127.4.1 Passenger vehicles (including electric motor coaches and driving trailers) 32 mm.
- 9127.4.2 Wagons 57 mm.
- 9127.4.3 Electric and diesel locomotives:
- 9127.4.3.1 Driving wheels..... 57 mm.
- 9127.4.3.2 Bogie wheels..... At first sign of a skid, wheels must be removed for attention to bearings.
- 9127.4.4 The measurement of a skid must be made circumferentially and not across the tread.
- 9127.5 Wheels having shorter skids than the dimensions given above must remain in service, but in the case of locomotives, whenever the wheels are examined, all skids must be measured by the responsible employee, and entered into the repair book, indicating the length of each skid.

9127.6 After each trip, drivers must enter in the repair book, all skids existing on locomotives driven by them, irrespective of whether the skids have been previously booked or not.

9127.7 Slack tyres

9127.7.1 When a tyre is found to be slack the vehicle must be sent to the nearest wagon maintenance depot for repairs. If the vehicle is loaded, the load must be transhipped.

9127.7.2 An empty vehicle detached with a loose tyre must be examined by the technical zone manager (traction) (locomotive depot) or other responsible official. If it is then decided that the vehicle is fit to travel to an examining depot, it must be conveyed during daylight only. The brake must be rendered inoperative by isolating the cylinder, and this is done by disconnecting the cylinder hose pipe, at the junction of the train pipe, and plugging the latter. Wooden plugs only must be used for this purpose. A "Not to be loaded" label must be affixed to the vehicle.

9128.0 VOID

9129.0 BROKEN AXLES AND TYRES

9129.1 In all instances of breakage, or of the discovery of a flaw on an axle or tyre of a vehicle, the broken or defective parts must be immediately sent to the nearest workshop for inspection. Particulars of despatch must be notified to the Senior Manager (Transwerk) concerned as well as to the central operating office.

9129.2 The number of the vehicle from which the parts have been removed, must be painted or stencilled on the defective parts. Labels (tin if possible) must be securely affixed to the defective parts. The consignment note or waybill for the broken or defective parts must contain a full description of the parts, as well as the number of the vehicle from which they were removed.

9129.3 Wheels sent to workshops from transportation depots and out-stations must have the name of the forwarding station or depot stencilled in white lettering on the axles.

9130.0 PERIODICAL EXAMINATION OF MATERIAL WAGONS AND OTHER VEHICLES

9130.1 Where wagons are used for long periods on material work and other maintenance or construction work, it must be arranged with the official in charge of the nearest wagon maintenance depot for the vehicles to be thoroughly examined at regular intervals. The official in charge concerned must keep a complete record of the numbers of the vehicles and the date of each examination.

9131.0 EXAMINATION OF WATER TANK-WAGONS

9131.1 Where water tank-wagons are kept for any length of time, officials in charge must ensure that the vehicles are thoroughly examined at intervals during the period they are not actually in service.

9132.0 DAMAGED OR DEFECTIVE PARTS OF VEHICLES

9132.1 Except as provided in clauses 9111.0, 9135.0 and 9136.0 hereof, fractured, damaged or defective parts of vehicles must be examined either by the zone manager (traction) or wagon maintenance official in charge, or any other employee deputed by them. Where it is obvious that the defect is due to normal wear and tear or to an accident, or in isolated cases to faulty material, such part must be treated as scrap and must not be forwarded to the nearest workshop for further examination.

9132.2 Where repetitions of certain types of fractures or defects occur, which may indicate inherent weaknesses of design or workmanship, where material is consistently faulty, or where the defect is something out of the ordinary and an investigation seems desirable, the defective or damaged parts must be collected and forwarded to the nearest workshop and the Senior Manager (Transwerk) advised, in writing, of full details of the facts concerning the parts. The Senior Manager (Transwerk) must then decide whether the case merits further attention and, if so, the action to be taken.

9133.0 VOID

9134.0 VOID

9135.0 DETENTION OF FOREIGN VEHICLES THROUGH DEFECTS OR OTHER CAUSES

- 9135.1 When any foreign vehicles are detached at a station on Spoornet's lines through defect or other cause, particulars of the delay and reason thereof must be submitted to the central operating office. Unusual delay to foreign ropes, tarpaulins or chains, whether used on foreign or Spoornet's rolling stock, must also be reported.
- 9135.2 When foreign vehicles have been repaired by Spoornet, such vehicles must receive preferential despatch.
- 9135.3 When a foreign vehicle is unfit to travel on its own wheels and has in consequence to be loaded into another vehicle, or if the damage renders the vehicle unsafe for carrying traffic, the following details should be included in the return submitted to the central operating office:
- 9135.3.1 Date and time when damage took place.
- 9135.3.2 Particulars of despatch to owing foreign railways.
- 9135.3.3 Station to which consigned.
- 9135.4 Spoornet's and foreign rolling stock may be included on the same return.

9136.0 SUPPLY OF SPARE PARTS TO FOREIGN VEHICLES

- 9136.1 In cases where foreign vehicles, are fitted with Spoornet couplers, wheels or other spare parts, the Senior Manager (Transwerk) or zone manager (traction) supplying the material must take steps to have the parts belonging to Spoornet returned by reporting the matter to the central operating office.
- 9136.2 A repair label (T.49), on which particulars of Spoornet's parts affixed to the vehicle must be endorsed, must be attached to the foreign vehicle fitted with Spoornet's material.
- 9136.3 All damaged couplers and other parts removed from foreign rolling stock, must be consigned to the nearest workshop for examination by the Senior Manager (Transwerk) before return to the line of the owning foreign railway. The material must be clearly labelled, and the number of the wagon from which it has been removed and the cause of breakage or damage must be shown on the label. All damaged material, irrespective of whether it is Spoornet's or foreign, must, in addition to the label, be clearly marked – i.e. the number of the vehicle from which it has been removed must be painted on the material.
- 9136.4 Spoornet vehicles damaged on foreign lines will be similarly treated, and the Senior Manager (Transwerk) or technical zone manager (traction)(locomotive depot) to whom the vehicles are returned, must arrange for the prompt removal and despatch to the owning foreign railway of the couplers, wheels, etc., temporarily supplied.

9137.0 VOID

9138.0 PARTS OF ROLLING STOCK FOUND ON LINE

- 9138.1 Should any parts of vehicles or locomotive gear be found on the line by the track personnel or other employees, such articles must be conveyed or despatched to the nearest depot.

9139.0 EXAMINATION OF VEHICLE ARRIVING AT OR DEPARTING FROM A STATION

- 9139.1 Except where otherwise provided for by the Chief Executive (Spoornet), all vehicles arriving at a station or in a marshalling yard where wagon maintenance personnel are stationed, must undergo the prescribed examination.
- 9139.2 The train-control officer or senior yard official, or his representative, as the case may be, must timeously advise the wagon maintenance personnel of a train which is being admitted to or arranged to depart from a line which is not considered part of the station or marshalling yard, or which is not normally used for the admittance and/or departure of trains, as the case may be. [See train working rule No. 115(1).]

9140.0 VOID

9141.0 VOID

9142.0 VOID

9143.0 OFFICIAL IN CHARGE TO BE ADVISED OF COMPLETION OF EXAMINATION

9143.1 Wagon maintenance personnel must inform the responsible official of the completion of the examination of vehicles, and such examination, in the case of passenger vehicles, should be completed before the vehicles are placed at the platform, and in the case of goods vehicles before they are shunted into position for loading.

9144.0 PROTECTION OF WAGON MAINTENANCE PERSONNEL AT OUT-STATIONS AND YARDS

9144.1 Wagon maintenance personnel or other employees proceeding to out-stations and yards to effect repairs to vehicles must, before commencing work, report to the train-control officer controlling the section or official in charge of the yard, and obtain permission to effect the necessary repairs. The wagon maintenance personnel must then carry out the instructions contained in subclause 11003.5 hereof. On completion of the work the relevant official must be informed accordingly.

9145.0 SUPERVISORY PERSONNEL MUST SEE THAT PROPER EQUIPMENT IS PROVIDED

9145.1 Supervisory personnel must see that wagon maintenance personnel or other employees sent to out-stations to effect repairs to vehicles are provided with the required number of discs (lamps if necessary) and detonators.

9146.0 LOADING AND OFF-LOADING OF WAGONS AT SIDINGS AND LOADING PLATFORMS: OPERATING OF ISOLATING AND EARTHING SWITCHES

9146.1 Loading points where loading and off-loading of wagons may take place in safety on electrified sections are demarcated by means of warning notices (see clause 202.0 of the Electrical Safety Instructions). These places are either not wired or are provided with isolating and earthing switches and employees in charge of shunting movements must ensure that wagons are placed within the boundaries of the place where loading and off-loading is permitted.

9146.2 The normal position of the isolating and earthing switch is in the "power off" position, i.e. with the overhead wires "dead" and the switch locked in that position by means of a special lock. Except at places where the isolating and earthing switch keys are locked electrically in accordance with subclause 7011.2, the keys must be kept in safe custody by the train-control officer, yard master or other designated official, hereinafter referred to as the issuing official.

9146.2.1 Except at places where the isolating and earthing switch key is locked in terms of clause 7011.0, a special book with columns for the date, key No., time and signature of recipient when the key was issued, as well as the date, key No., time and signature of issuing official when the same key is returned, must be kept at each place.

9146.2.2 Each time the key is issued or returned, the employee receiving the key must sign the book.

9146.2.3 In addition to the special lock mentioned in subclause 9146.2 some siding users also use a private lock to lock the isolating and earthing switch in the "power off" position.

9146.3 When it is necessary to perform shunting movements with an electric locomotive at a loading area equipped with an isolating and earthing switch, or when the power supply must, for whatever reason, be switched on, the driver's assistant, yard official or other person in charge of the work, hereinafter referred to as the responsible person must, before unlocking the isolating and earthing switch, first warn all persons in charge of loading and off-loading operations in writing of his intention to turn on the power by completing paragraph A of the "Notice to siding users in connection with the switching of the electric traction power supply" (see specimen at the end of this section) and obtaining their signatures in paragraph B. He must also, by personal observation ensure that no persons are on or in open wagons or on vehicle roofs and that loading or off-loading operations or any other work involving the handling of long lengths of material with which it is possible to make contact with the overhead wires are stopped and that everything is in order for making the overhead wires in the siding "live". Where the isolating and earthing switch is also locked with a private lock, he must request the siding user to remove his private lock.


9146.3.1 Should an isolating and earthing switch have to be placed in the "power on" position and no siding user whatsoever is present, the notice must none the less be completed with an entry that no siding user was present. In these circumstances the responsible person must nevertheless be on the look out and should a siding user arrive, his signature must be obtained.

9146.4 Whilst the power is "on" the responsible person must see to it that loading or off-loading operations are not resumed.

9146.5 Immediately after completion of the work, the responsible person must ensure that the switch is placed and locked in the "power off" position.

- 9146.5.1 After locking the isolating and earthing switch in the “power off” position and ensuring by visual inspection that the switch blade has operated correctly (withdrawn from the live contacts and connected to the earthed contacts), all persons in charge of loading and off-loading operations must be notified in writing that the power supply is switched off and they must acknowledge it by giving their signatures in paragraph C of the *“Notice to siding users in connection with the switching of the electric traction power supply”*. Thereafter loading and off-loading operations may resume. Where a siding user also provides his own private lock to lock the switch, he must be requested to reapply his lock.
- 9146.6 The notice together with the key must be handed to the issuing official who must keep the notice in safe custody for a period of 12 months.
- 9146.7 Should a train hauled by an electric locomotive have to shunt at an interloop, intersiding or unattended place in the section equipped with an isolating and earthing switch or when, for whatever reason, the isolating and earthing switch at that place must be placed in the “power on” position, the responsible person must obtain the key at the controlling station in accordance with subclause 9146.2. The issuing official must, except where otherwise stipulated in the Local Appendix, notify the responsible person at which station the key must be handed in. In such cases the responsible person must hand in the notice at his home depot where it must be kept for 12 months.
- 9146.7.1 As soon as the shunting operations or other work is completed and the isolating and earthing switch has been locked in the “power off” position, the responsible person must, if possible, notify the issuing official accordingly. On arrival at the place as instructed by the issuing official, the key must be handed to the official concerned. If the receiver is not the issuing official at the controlling station, the receiver must send the key along with the driver of the first suitable train to the controlling station and notify the controlling station accordingly. The receiver must, even if it is not a key controlled by him, record the receipt of the key in his book according to subclause 9146.2.1.
- 9146.7.2 To obtain the siding key at places where it is locked electrically, the provisions set out in subclause 7011.2 must be complied with. In such cases the responsible person must hand in the notice at his home depot where it must be kept for 12 months.
- 9146.8 Should the method whereby keys for operating isolating and earthing switches are issued, controlled and kept at specified loading areas, vary from the abovementioned procedure, the additional instructions with regard to the operating of such switches or separate instructions for the sections concerned depicted in the Local Appendix, must also be complied with.

NOTICE TO SIDING USERS IN CONNECTION WITH THE SWITCHING OF THE ELECTRIC TRACTION POWER SUPPLY

A SWITCHING OF THE ELECTRIC TRACTION POWER SUPPLY			
(1)	Please note that the electrical power supply to the under mentioned siding(s) will be switched on.		
	Name(s) of siding(s)	Number of siding(s)	
(2)	Instruct all your employees to stop all loading and unloading operations and handling of long lengths of material near the overhead wires, to withdraw and stand clear of all rail vehicles. None of your employees may be permitted onto any rail vehicle or to handle long lengths of material near these siding(s) after the time and date as agreed to by you in B(1) below. You will be notified by the Spoornet Official when the traction power to the siding(s) has been switched off.		
			
(3)	AFTER THIS TIME ALL OVERHEAD TRACK EQUIPMENT OVER THE ABOVE MENTIONED SIDING(S) MUST BE TREATED AS "LIVE" AND DANGEROUS		
B ACKNOWLEDGEMENT OF RECEIPT OF NOTICE			
(1)	I (person in control of loading and unloading operations) hereby declare that I have read section A of this notice and it has been explained to me. I fully understand the contents thereof and I take full responsibility to withdraw the employees under my control and warn them accordingly before the time and date agreed to by me below.		
	Name and surname (in print)	Signature	Time as agreed
C SWITCHING OFF OF THE ELECTRIC TRACTION POWER SUPPLY			
(1)	I (Spoornet Official in control of the work) certify that the traction power supply to the siding(s) mentioned in section A has been switched off at the time and date noted directly below. Work on rail vehicles in the siding(s) and the handling of long lengths of material near the siding(s) may be resumed.		
	OVERHEAD TRACK EQUIPMENT OVER ADJACENT TRACKS MUST BE TREATED AS "LIVE" AND DANGEROUS		
	Signature	Employee No. and capacity	Time
(2)	NOTED (Person in charge of loading and unloading operations)		
	Name and surname (in print)	Signature	Time

SECTION 9

REVISE	CRS REF.	AMENDMENT	CLAUSE NO.	DATE AMENDED
00-01	X3/339	Change wording	9135.0	14/03/2007
00-01	X3/339	Change wording	9135.3	14/03/2007
00-01	X3/339	Change wording	9135.4	14/03/2007
00-01	X3/339	Change wording	9136.0	14/03/2007
00-01	X3/339	Change names	9136.1	14/03/2007
00-01	X3/339	Insert warehouse numbers and change names	9136.3	14/03/2007
00-01	X3/339	Remove clause and rewrite it for 9137.1	9136.4	14/03/2007
00-01	X3/339	Insert new clause	9137.0	14/03/2007
00-01	X3/339	Insert new clause	9137.1	14/03/2007
00-01	X3/339	Insert new clause	9137.2	14/03/2007
00-01	X3/339	Insert new clause	9137.3	14/03/2007
00-01	X3/339	Change wording	9138.1	14/03/2007
00-01	X3/339	Change names and wording	9139.1	14/03/2007

SECTION 9

DUTIES AND RESPONSIBILITIES OF SHUNTERS, DRIVERS AND DRIVERS' ASSISTANTS. PROTECTION OF EMPLOYEES ENGAGED IN THE EXAMINATION AND REPAIRING OF VEHICLES (SEE TRAIN WORKING RULES NOS. 125 TO 145, INCLUSIVE)

9001.0 BRAKES: CONTROL OF SHUNTING MOVEMENTS

9001.1 All employees must be vigilant and cautious when conducting shunting movements

9001.1.1 The movements of diesel locomotives, when not attached to traffic, must be controlled by means of the straight air brakes and that of electric locomotives, by the proportional application of the locomotive straight air brakes. Hand brakes must be used as a last resort, only in case of emergency. When shunting, either hauling or propelling vehicles, in the case of electric and diesel locomotives, the vacuum brake must, if necessary, also be used. Before shunting is commenced the employee in charge of the shunting movement is responsible for advising the driver of the number of vehicles with vacuum coupled through as well as the total number of their mass and general composition. If, at this stage or later during the shunting movement the driver is not satisfied that he has adequate brake power available, he must advise the employee in charge of the shunting movement of the additional number of vehicles he requires the vacuum to be coupled through. When there are vehicles which may not be loose shunted (see train working rule No. 141) on the load, loose shunting may not be carried out with the load until such time as the vehicle/vehicles concerned has/have been detached from the load. The air brakes on electric and diesel locomotives may be used with discretion to supplement the vacuum brake on the vehicles where circumstances warrant this course. During shunting movements the brakes must always be applied judiciously to avoid damage to vehicles and/or the contents thereof. When gradients steeper than 1 in 400 have to be negotiated, particular care must be exercised to ensure that adequate brake power is available to control the shunting movements.

9001.2 Loose shunting

9001.2.1 Examination of hand brakes

9001.2.1.1 When vehicles are being "loose shunted", they must be controlled by means of hand brakes. Before shunting is commenced, the employee in charge of the shunting movement must ensure that the hand brakes are in proper working order so as to prevent such vehicles from striking other vehicles with undue force or coming in contact with stop blocks, or fouling other lines, or running away when the line is on a down gradient. (See train working rule No. 134.)

9001.3 Damage and defects to be reported

9001.3.1 All damage or defects to vehicles or coupling gear, arising during shunting, must be reported to the official in charge, who must ascertain the actual cause and the names of employees responsible. At depots, the wagon maintenance personnel must also be advised.

9002.0 SHUNTING OF PASSENGER VEHICLES AT STATIONS EN ROUTE: PASSENGERS AND OTHER PERSONS TO BE WARNED

9002.1 Passengers in passenger vehicles that have to be shunted at a station short of destination, must be advised thereof by the Train Manager prior to arrival at the station concerned.

9002.2 Before shunting is commenced, passengers must be requested to keep their seats. Passengers who have alighted, as well as other persons, must be requested to stand clear.

9003.0 EMPLOYEES NOT TO RIDE ON LOCOMOTIVE COWCATCHERS

9003.1 In no circumstances must employees stand or ride on the cowcatcher(s), or on the footplate in front of the smoke-box in the case of a steam locomotive, when the locomotive is in motion.

9004.0 VEHICLES CONTAINING EXPLOSIVES NOT TO REMAIN ATTACHED TO LOCOMOTIVE DURING SHUNTING OPERATIONS

9004.1 When several shunting movements have to be made with a train conveying explosives, the vehicles containing explosives must first be detached and must be placed in a safe position until the shunting is completed. (See train working rules Nos. 141 and 144, and subclause 1013.9 of this appendix.)

9005.0 LENGTH, MASS AND SPEED OF LOAD WHILE SHUNTING

9005.1 Discretion must be used in deciding the number of vehicles to be shunted at one time, and the speed of the movements, with due regard to the class of locomotive employed, the state of the permanent way, and the traffic and physical conditions obtaining at the place where the work has to be undertaken.

9006.0 SHUNTING IN BUSY YARDS OR FROM BOTH ENDS OF A YARD

9006.1 When shunting operations, involving the movement of vehicles from opposite ends of a line at one and the same time, are being carried out, the employee in charge must satisfy himself that a clear understanding is arrived at between the shunters at each end of the yard. In carrying out such shunting movements, precautions must be taken to guard against the vehicles coming into violent contact, and drivers must be vigilant and cautious and be prepared to comply with hand signals or radio instructions.

9006.2 It is the duty of the employee in charge of the movement, to see that precautions are taken to prevent the possibility of vehicles moving on to any running line or fouling the clearance marks of any adjoining line(s) or siding(s).

9007.0 PROTECTION OF LEVEL CROSSINGS NOT PROTECTED BY BOOMS: SOUNDING OF LOCOMOTIVE WHISTLE

9007.1 Shunting over level crossings must be performed with great care and every effort must be made to minimise inconvenience or delay to road traffic.

9007.2 When a train must stop at a station or crossing place where a level crossing is situated within its boundaries, the train-control officer must ensure that the train is stopped as far as possible from the level crossing.

9007.3 Except where otherwise provided in the local appendices, before locomotives or vehicles are shunted over a level crossing, the employee in charge of the shunting movement must ensure that the crossing is clear, that road traffic has been brought to a stop and that two employees, if available, prominently displaying a "danger" hand signal, one on each side of the crossing, is standing in a position so that it can be seen clearly by drivers of road traffic and by pedestrians. The "danger" hand signal exhibited to road traffic must be given by day by means of a red flag and by night by means of a red light.

9007.4 Except where otherwise provided in local appendices the driver must not permit his locomotive or any vehicle attached to his locomotive to foul a level crossing until he has received the prescribed hand signal from the employee in charge of the movement and then only after he has sounded the locomotive whistle in terms of this clause. In the absence of a hand signal he must stop short of the level crossing.

9007.5 Where barriers are provided, they must be closed before moving over the level crossing.

9007.6 The employee in charge of the movement must ride on the locomotive or on the leading vehicle in the case of a propelling movement in the direction of the movement and after he has ensured that road traffic has stopped, he may authorise the driver to proceed.

9007.7 When a train has to shunt over a level crossing on a station, interloop, token or order station, intersiding or other unattended place and no other personnel than the driver and the driver's assistant are available, the driver's assistant must afford protection and the following procedure must be followed:

9007.7.1 Where barriers are not provided, the locomotive or leading vehicle, as the case may be, must be brought to a standstill short of the level crossing.

9007.7.1.1 The driver's assistant must proceed to the level crossing and stop road traffic by means of a "danger" hand-signal (red flag by day – red light by night) before authorising the driver to obstruct the level crossing.

9007.7.1.2 When the leading vehicle or locomotive has passed over the crossing and the movement comes to a stand while the crossing is still obstructed by the vehicles, the driver's assistant must leave the point of protection in order to complete the shunting movement.

9007.7.1.3 If all vehicles are clear of the level crossing, the driver's assistant must again take up the point of protection before authorising the driver to carry out the next movement.

9007.7.1.4 The level crossing must be traversed at slow speed and the driver must be prepared to stop promptly should the necessity arise.

9007.7.1.5 The brake pipe couplings must be coupled up throughout the train.

9007.8 Except where otherwise provided in the local appendices, loose shunting over level crossings is prohibited.

9007.9 Attention is directed to the special instructions in local appendices regarding the shunting over and/or the protection to be provided at certain level crossings including level crossings in workshop areas, in marshalling yards, stores yards, locomotive depots and private sidings/service lines.

9007.10 Sounding of locomotive whistle

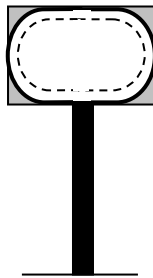
9007.10.1 The term “whistle” is described in train working rule No. 1 and provides for various warning devices which drivers of locomotives can use.

9007.10.2 A locomotive whistle can be a disturbance to the public, especially in residential areas, and should therefor only be used for prescribed and justifiable warning and signalling purposes. Unjustifiable use or use for other purposes is prohibited.

9007.10.3 When, owing to the type of warning device it is impossible to sound the “cock crow” signals provided for in the train working rules or other instructions, an equal number long whistles must be given on the siren or device provided.

9007.11 Use and observance of whistle boards

9007.11.1 A whistle board is provided to indicate to the driver to sound the locomotive whistle, and is an oval white board with a border of white reflective paint on the front, thus –



9007.11.2 Locomotive whistle, siren or hooter must be given

9007.11.2.1 During the hours 05:00 to 23:00 the driver must, by means of the locomotive whistle, siren or hooter of a train, give a warning for at least three seconds at all level crossings.

9007.11.2.2 The locomotive whistle must be sounded between the first and second whistle boards or, where such boards are not provided, after the train has passed a point 400 metres from the level crossing and before the train reaches a point 125 metres from the level crossing.

9007.11.2.3 Should, due to the view or other reasons, circumstances exist or arise at a particular level crossing which make it necessary for an additional locomotive warning whistle to be given in order to prevent an accident, the driver must give such additional warning.

9007.11.3 When a train approaches a level crossing during the hours 23:01 to 04:59, the locomotive whistle warning as described in subclause 9007.11.2.1 hereof is not legally required. The driver should not use the locomotive whistle for this purpose unless, in his judgement, the view or other circumstances at the particular level crossing require such action in order to prevent an accident.

9008.0 VEHICLES TO BE ATTACHED TO LOCOMOTIVE WHEN OUTSIDE THE AREA PROTECTED BY FIXED SIGNALS

9008.1 Vehicles must not be taken or placed on the running line outside the area protected by fixed signals unless they are attached to a locomotive, and then only when the provisions of train working rules Nos. 129, 131 and 220 have been complied with.

9009.0 HAND-SHUNTING OVER FACING POINTS: WHEN PERMITTED

9009.1 Except where instructions to the contrary are laid down in the local appendices, one wagon at a time may be hand-shunted over the facing points, from one line to another, in order to expedite the disposal of wagons, provided that, in addition to carrying out the provisions of train working rules Nos. 129 and 220, the operating official in charge personally supervises the movement. Before commencing to shunt, he must see that the hand brake is in good order, also that scotches are provided, so that the wagon may be kept under control.

9010.0 VEHICLES LEFT ON RUNNING LINE OUTSIDE HOME SIGNAL

9010.1 When it is necessary to leave a vehicle or vehicles on the running line outside a home signal, or outside the facing points where a home signal is not provided, the provisions of train working rules Nos. 129, 131 and 220 must be complied with.

9011.0 USE OF TURNTABLES

9011.1 As provided in train working rule No. 145 the speed of a locomotive passing over a turntable must not exceed 5 km/h. The lever of a turntable must not be dropped into the slot until the turntable has been completely stopped.

9012.0 DRIVERS' ASSISTANTS TO ASSIST TRAIN-CONTROL OFFICERS

9012.1 As soon as a goods train comes to a standstill at a non-interlocked station, the driver's assistant must, except where otherwise laid down, immediately approach the train-control officer and ascertain whether his assistance is required. (See clause 1031.0, of this appendix.)

9012.2 Drivers' assistants to operate points when instructed

9012.2.1 The driver's assistant of a train which has either to be crossed or passed at a non-interlocked station, may operate points and admit the opposing or passing train when orally instructed to do so by the train-control officer. (See train working rule No. 190.)

9012.2.2 The operation of the points by a driver's assistant will not relieve the train-control officer of his responsibility as laid down in train working rule No. 218.

9012.3 When driver's assistant to control shunting work

9012.3.1 At stations where a competent employee is not available to conduct shunting operations, the driver's assistant must take charge thereof.

9013.0 VOID

9014.0 STEP IRON AND HAND-GRIP TO BE USED

9014.1 Step irons and handgrips on vehicles must be used by employees employed in shunting, to facilitate the application of the brakes.

9015.0 USE OF TOW ROPES

9015.1 When using a tow rope for shunting, the hook should be put in the towing loop of the wagon nearest the locomotive. When ready to move, the locomotive must start gently. If there should be reason to think that the towing loop is not strong enough, or a towing loop is not provided, the rope may be connected to the coupler shank, but great care must be used to prevent the rope becoming entangled in the wheels. The number of wagons towed must be determined by their mass, the gradient and other circumstances, care being taken not to move more wagons than can be towed safely at one time.

9016.0 VOID

9017.0 COUPLING OF VEHICLES AND LOCOMOTIVES

9017.1 Locomotives and vehicles are equipped with various types of couplers. Employees who perform shunting or must couple locomotives or vehicles must familiarise themselves with the methods of establishing that the gravity locks are fully down in position.

9017.2 When an employee has to move in between two locomotives, a locomotive and a vehicle or two vehicles to adjust the knuckles or centre or adjust the couplers or test the gravity locks to ensure that they are fully down in position, or for any other reason whatever, the movement must be brought to a standstill before he moves in between the locomotives/vehicles concerned.

9017.3 Nobody may be between two locomotives, a locomotive and a vehicle or two vehicles when it is brought together to be coupled.

9017.4 The instruction for coupling the locomotives/vehicles may not be given whilst a person is still between the locomotives/vehicles concerned.

9017.5 After the instruction for coupling the locomotives/vehicles has been given, nobody, for whatever reason, may move in between the vehicles concerned until the movement has been brought to a standstill.

9017.6 After the locomotives/vehicles have been coupled the employee concerned must examine the coupling and ensure that it is secure. If the locomotives/vehicles are coupled in the presence of a member of the wagon maintenance personnel, the latter must also ensure that the coupling is secure.

9017.7 Coupling on curves

9017.7.1 Locomotives, i.e. locomotive to locomotive, must, as far as possible, not be coupled on curves.

9017.7.2 When locomotives/vehicles must be coupled on a curve, the couplers, where possible, must be pulled over to the best position, with both knuckles half open, and the locomotives/vehicles must be moved slowly together.

9017.8 Hard coupling must be avoided

9017.8.1 It is not necessary to use force to couple locomotives/vehicles and hard bumps must be avoided.

9017.9 Coupling of brake pipes, jumper cables, etc.

9017.9.1 Brake pipes, jumper cables, etc. must be coupled after the coupling of locomotives/vehicles has been successfully completed and whilst the movement is stationary.

9017.9.2 If it is necessary to use a double-ended vacuum hose-pipe between the ordinary vacuum-hose-pipe couplings, both ends must be fastened with wire.

9017.10 Position of non-coupled couplers on trains

9017.10.1 Before departing from the starting point, and where the load is shunted en route, the employee responsible for despatching the train must ensure that the knuckle of the rear coupler of the last vehicle on the train is in the closed position and the driver must ensure that the knuckle of the front coupler of the locomotive is in the open position.

9018.0 USE OF GANGWAY GATES

9018.1 Except in the case of two adjoining coaches both equipped with Gummi Wulst tubular rubber diaphragm, gangway gates must be provided should it be necessary to provide thoroughfare for passengers and/or train personnel.

9018.2 Where thoroughfare is not possible or necessary the end door of the coach must be locked and a gangway gate placed across the doorway on the brackets provided.

9018.3 Before and during shunting movements with coaches conveying passengers, the employee in charge of the movements must ensure that gangway gates between vehicles that are to be separated are removed or disconnected, as the case may be, and that the requirements of the preceding subclause 9018.2 are met in respect of the vehicles being moved and those remaining stationary.

9018.4 The Train Manager is responsible for ensuring that the end doors of coaches on his train are locked and that the necessary gates are in position in accordance with the preceding subclauses before commencement of the journey and before shunting is undertaken en route. On completion of shunting operations he must unlock the end door(s) that is/are to be opened to provide thoroughfare between vehicles and satisfy himself that the required gangway gates are in position.

9019.0 VOID

9020.0 VOID

9021.0 TRAIN LOCOMOTIVES USED FOR SHUNTING PURPOSES

9021.1 Unless written authority to the contrary has been given, T414 vouchers must be issued only by the official in charge, yard master or train-control officer. Where authority is given telephonically, the driver's assistant must fill in the T414 voucher and repeat it in full to the issuing officer and the correctness must be confirmed. The actual reason describing the situation must be stated on the voucher, e.g. "must book off, but is delayed in the yard due to....", "perform shunting to....", "train No. to be taken over at is running minutes late", etc. The words "book through" alone may not be used. T414 vouchers may be issued if –

9021.1.1 locomotive personnel are required to undertake shunting work after arrival at a destination station, in which case all time in excess of 15 minutes which is utilised in shunting before departure for the locomotive depot, must be recorded;

9021.1.2 trains are arranged earlier or later than the scheduled time (actual number of minutes must be shown);

9021.1.3 personnel who otherwise should have booked off are informed to undertake additional duties resulting in the interval at the outstation being reduced to three hours or under and personnel consequently having to be booked through;

- 9021.1.4 shunting duties are performed before or after a trip; and
- 9021.1.5 a train is taken over at an intermediate station, the personnel has been instructed to come on duty at the right time and the train arrives more than 60 minutes late thereat.
- NOTE:** *This subclause must be read in conjunction with paragraphs 9 and 10, clause 3, Chapter III of the Compendium of Instructions on Timekeeping, Payvoucher and Staff Registry Duties.*
- 9021.2 Time engaged in shunting to be recorded**
- 9021.2.1 In the column on the journal headed "Shunting" the driver's assistant must show the actual number of minutes the train locomotive is engaged in shunting en route, and the driver must see that these particulars are correct.
- 9021.3 Locomotives must receive full credit for all work performed by them.
- 9021.4 Shunting locomotives**
- 9021.4.1 In the case of a locomotive set apart for shunting purposes, shunting time must be computed from the time such locomotive passes over the points from the locomotive depot until it returns to the same place, and no deductions are to be made unless the locomotive is used specially to work a train while booked for shunting.
- 9021.5 Shunting in locomotive yards**
- 9021.5.1 When locomotives are employed in shunting vehicles in locomotive yards, such operations must be controlled by a shunter or other competent employee and the driver and the driver's assistant must remain on the locomotive. (See train working rule No. 164.)
- 9022.0 LOCOMOTIVE DETENTION IN PRIVATE SIDINGS**
- 9022.1 When, through no fault of Spoornet's employees, a locomotive belonging to Spoornet is detained in a private siding beyond the time necessary for the delivery and clearance of traffic, a charge must be made against the owners of the siding. A normal shunting period in respect of each private siding (except certain sidings in the dock areas), known as a "free period" will be advised to all concerned by the Operations Manager.
- 9022.2 For each shunt performed in a private siding a works order must be completed by the shunter or driver's assistant and the original must be handed to the private siding owner, or his deputy, or as agreed to by the Operations Manager.
- 9023.0 ISSUE AND CONTROL OF COUPLING EQUIPMENT**
- 9023.1 Supply of equipment kept**
- 9023.1.1 A supply of coupling equipment, gangway gates, vacuum hosepipes and electrical connections is kept at depots and certain stations. The official in charge concerned must regulate the quantity of equipment according to local requirements. Surplus equipment must not be retained at stations except with the consent of the official in charge.
- 9023.2 Collection and distribution**
- 9023.2.1 Officials in charge must arrange to collect, at regular intervals, all spare coupling and other equipment, including damaged or discarded equipment, in his area of responsibility.
- 9023.3. Track masters to collect equipment**
- 9023.3.1 Track masters must collect, as opportunity offers, all coupling equipment including damaged or discarded equipment, at interloops, intersidings, private sidings, quarry sidings, and in section on their lengths and hand it in at the nearest depot.
- 9023.4 Statement of equipment to be obtained**
- 9023.4.1 Officials in charge must obtain regular statements from the employee concerned showing the quantity of equipment on hand at stations on their sections. They must see also that shunting and marshalling yards under their supervision are inspected regularly and that all spare equipment is collected.

9023.5	How coupling equipment must be obtained	
9023.5.1	All coupling equipment required to replenish stocks at stations must be requisitioned for through the Operations Manager.	
9023.6	How damaged coupling gear must be disposed of	
9023.6.1	The official in charge depot must have the sidings in his area of responsibility regularly inspected and all damaged or discarded coupling or other equipment, collected. Such gear, together with the defective equipment collected as prescribed in subclause 9023.2, must be forwarded regularly to the Stores.	
9023.7	Station yards, sidings, etc., must be examined	
9023.7.1	Section Managers (Train Control) are responsible for examining all shunting yards, stations and sidings at frequent intervals and satisfying themselves that the instructions relative to the control of coupling equipment are being observed.	
9023.8	Depots at which coupling equipment is repaired	
9023.8.1	Damaged coupling equipment is repaired at the following centres: Salt River, Uitenhage, East London, Braamfontein, Bloemfontein, Durban, Pietermaritzburg, Koedoespoort and Germiston.	
9024.0	MOVEMENT OF VEHICLES AT INTERLOOPS, CROSSING PLACES AND INTERSIDINGS BY EMPLOYEES WHOSE DUTIES ARE NOT CONNECTED WITH SHUNTING	
9024.1	Employees at interloops, crossing places and intersidings whose duties are not connected with shunting, must not hand-shunt vehicles beyond the clearance marks when placing them in position for loading or unloading, or allow unauthorised persons to do so. In no case must a vehicle be moved foul of the running lines.	
9025.0	WORKING IN MARSHALLING YARDS AND PRIVATE SIDINGS	
9025.1	Introduction	
9025.1.1	These instructions are applicable on the control of train and shunting movements in marshalling yards and private sidings. Where the circumstances in a certain yard or private siding are such that additional instructions are necessary, it will, if necessary, be supplemented by instructions in the Local Appendices.	
9025.2	Definition of "train"	
9025.2.1	Where the word "train" is used in this clause in respect of movements in marshalling yards, it shall mean a train as defined in train working rule No. 1, a shunting movement, a locomotive or locomotives coupled together with or without traffic attached, or a motor trolley.	
9025.3	Boards	
9025.3.1	Where a board, erected alongside a railway line, bears an inscription facing in the direction of approaching or passing trains or shunting movements and which may or may not be quoted in this clause or other written instructions, and the inscription contains an instruction or a warning interpretable as such, the driver and/or, where it can be inferred from the inscription to be the intention, the employee in charge of or other employee(s) involved in the movement, must observe the instruction or warning.	
9025.4	Stop boards	
9025.4.1	Definition – A stop board is a suitably inscribed board fixed on a post alongside the railway line concerned, to indicate the point beyond which a train or shunting movement may not proceed except as provided in this clause. Where the word SAR or SATS locomotive appears on a board it shall mean a Spoornet locomotive.	
9025.4.2	Description – The inscription to be observed is that on the side of the stop board facing in the direction of approaching movements. Where necessary, an arrow is affixed to the post or painted on the board to indicate the line to which the board is applicable. The stop boards most commonly in use in marshalling yards and private sidings are inscribed as follows:	
	<u>Inscription</u>	<u>Applicable to</u>
9025.4.2.1	STOP (letters arranged vertically or horizontally)	All movements
9025.4.2.2	STOP – SPOORNET LOCOMOTIVE MUST NOT PROCEED BEYOND THIS BOARD	Spoornet locomotives only
9025.4.2.3	STOP – PRIVATE LOCOMOTIVE MUST NOT PROCEED BEYOND THIS BOARD	Private locomotives only
9025.4.2.4	STOP – PRIVATE LOCOMOTIVE MUST NOT ENTER WHILE SPOORNET LOCOMOTIVE IS IN EXCHANGE YARD	Private locomotives only

9025.4.3 Observance of stop boards

- 9025.4.3.1 A train or shunting movement must not pass a stop board, unless or until the driver receives from the train-control officer, an employee at the control point or other authorised employee at the board, an "all right" hand signal or oral instruction to proceed.
- 9025.4.3.2 The train-control officer or control shunter or, where movements are not controlled by a train-control officer or control shunter, the employee in charge of the movement or such other employee as may be provided for in these or other instructions, may display an "all right" hand signal or give an oral instruction to a driver to pass the stop board only after he has ensured that –
- 9025.4.3.2.1 the points to be traversed are correctly set;
- 9025.4.3.2.2 a conflicting movement will not take place; and
- 9025.4.3.2.3 the line onto which the movement is to be admitted (except as provided for in subclause 9025.4.3.3), is clear and that all is in order for the safe receipt of the train.
- 9025.4.3.3 If a train has to be admitted onto a line that is occupied or obstructed, the train-control officer, control shunter or other authorised employee must, after the train has been brought to a standstill at the stop board, orally instruct the driver at the board to proceed, advise him how far he may draw forward and thereafter accompany the movement onto the occupied or obstructed line.
- 9025.4.3.4 Unless otherwise laid down in respect of a particular yard or siding, a driver may pass a stop board without stopping if an "all right" hand signal is displayed at the board on the approach of the train thereto.
- 9025.4.3.5 If an "all right" hand signal to be displayed at a stop board is liable to be acted upon by a driver for whom it is not intended, such hand signal must not be displayed, but an oral instruction must be given to the driver after the movement has been brought to a standstill short of the stop board.
- 9025.4.4 *Stop boards applicable to Spoornet locomotive*** – A Spoornet locomotive or, in the case of vehicles being propelled by a Spoornet locomotive, the leading vehicle, may not pass a stop board as described in subclause 9025.4.2.2, except where the board is erected on both sides of a mass-measuring bridge in a private siding, in which case the restrictions applies to the locomotive only.
- 9025.4.5 *Stop boards applicable to private locomotive*** – A private locomotive or, in the case of vehicles being propelled by the private locomotive, the leading vehicle, may not pass a stop board as described in subclause 9025.4.2.3.
- 9025.4.6 *Stop boards applicable to private locomotive whilst Spoornet locomotive is in the exchange yard*** – Except where specially provided, a private locomotive and any vehicle being propelled may not pass a stop board as described in subclause 9025.4.2.4 hereof while a Spoornet locomotive is in that part of the private siding beyond the stop board.
- 9025.4.7 *Stop boards inscribed on both sides*** – Depending on circumstances, stop boards may be inscribed on both sides, each side displaying the appropriate wording.
- 9025.4.8 *Stop boards not to be tampered with*** – A stop board must not, for maintenance purposes, be removed or its inscription obliterated unless the station or yard official in charge has been informed and he has advised all concerned of the work to be undertaken. In the absence of a stop board where one is usually provided, drivers, including drivers of private locomotives, and shunting staff must act as though such board still existed.
- 9025.4.9 *Permanent red lights*** – Where a colour-light signal permanently displaying a "danger" aspect is provided at the entrance to a yard, the instructions contained in subclause 9025.4.3.2 must be observed, except that the driver must be authorised by means of a "caution" hand signal instead of an "all right" hand signal to pass the signal.
- 9025.4.10 Description and observance of shunting limit boards**
- 9025.4.10.1 At certain places shunting limit boards are provided to indicate that shunting past these boards are not allowed.
- 9025.4.10.2 The boards are white, rectangular with the words SHUNTING LIMIT/RANGEERGREN in black on the front.
- 9025.4.10.3 A driver may pass a shunting limit board only when an oral instruction has been given to him by the train-control officer or on his authority by the employee in charge of the shunting movement.

- 9025.5 Duties of control shunters**
- 9025.5.1 *Control shunter responsible for train arrangements*** – A control shunter on duty at a control point is the only employee who may allow trains to approach or leave that control point. In addition to carrying out the duties defined in the instruction applicable to the particular yard or siding(s), a control shunter must at all times arrive at a clear understanding with the train-control officer concerned, with the yard master or his deputy, the control shunter at the other end of the yard or line concerned, the control shunter of the adjoining yard or area, with the employees in charge of shunting locomotives and/or the employee(s) appointed to assist him in the execution of his duties, as the case may be, to ensure that a conflicting movement will not take place. He must also ensure that the points in the area under his control are correctly set for any movement that he authorises. The employee appointed to assist a control shunter must not interfere with the train arrangements and must strictly carry out any instructions of the control shunter consistent with safety, and he (the assistant) will be responsible for the safe execution of all movements that he authorises.
- 9025.5.2 *Failure of telephones*** – Should telephonic communication fail the employee requiring to contact the control shunter or vice versa must personally come to a clear understanding with the other employee(s) regarding each movement in order that a conflicting movement will not take place. (See subclause 9025.8.)
- 9025.5.3 *Control shunter to keep train register*** – Train registers must be kept at all control points, and the arrival and departure times and particulars of all train movements must be recorded therein. The arrival and departure times must be furnished to the control shunter at the adjacent control point, the train-control officer and/or the yard master or his deputy, according to local requirements.
- 9025.6 Admittance of trains from running lines to goods yards where control shunters are stationed**
- 9025.6.1 *Yard official to be advised*** – The train-control officer must advise the yard master or his deputy, or another authorised employee, in good time of the number and the expected time of arrival of a train that is to be admitted into a yard. The latter, in turn, must advise the control shunter at the entrance to the yard, informing him of the number of the line onto which the train is to be admitted.
- 9025.6.2 Admittance of a train directly into yard by means of a fixed signal**
- 9025.6.2.1 Where a goods or siding signal admits trains directly into the yard, the train-control officer must carry out the provisions of train working rule No. 96(3) before operating the signal.
- 9025.6.2.2 After the train-control officer has operated the signal for the admittance of the train, the control shunter must indicate to the driver the line onto which the train is being admitted. For this purpose the control shunter must take up a position near the hand-points giving entrance to this line and, during the day, wave an arm and at night, a white light from side to side across the body. [See train working rule No. 96(4).]
- 9025.6.2.3 Should the train have to be admitted onto an occupied line, the control shunter must, on authority of the train-control officer, after the train has been brought to a standstill at the signal at "danger", orally advise the driver of the circumstances, inform him how far he may proceed, authorise him to pass the signal at "danger" and thereafter accompany the locomotive onto the occupied line.
- 9025.6.2.4 Before authorising the train-control officer to operate the signal for the admittance of the train, or before the driver is authorised to pass the signal at "danger", as the case may be, the control shunter must ensure that all the hand-points over which the train has to proceed are correctly set, that a conflicting movement will not take place and, except in the circumstances provided for in subclause 9025.6.2.3, that the line onto which the train is to be admitted is clear.
- 9025.6.3 Admittance of a train into yard where a stop board is provided**
- 9025.6.3.1 The train-control officer must not, by operating the relevant fixed signal or otherwise, authorise the driver to proceed to the stop board at the entrance to the yard without consulting the control shunter concerned and ensuring that the line is clear as far as the stop board.
- 9025.6.3.2 The stop board at the entrance to the yard must be observed in terms of subclause 9025.4.3.1.
- 9025.6.4 *Times to be furnished*** – Where applicable, the train-control officer must inform the control shunter of the time of departure of the train from the signal cabin. As soon as the train complete has been brought to a standstill within the clearance marks in the rear, the control shunter must furnish the time of arrival to the train-control officer and, where applicable, to the yard master or his deputy.
- 9025.7 Despatch of trains proceeding onto running lines from goods yards where control shunters are stationed**
- 9025.7.1 *Train-control officer to be advised*** – When a train is ready to depart from a yard, the control shunter concerned must advise the train-control officer and, where required, the yard master or his deputy.

- 9025.7.2** **Authority for train to depart** – After the train-control officer has authorised the train to depart, the control shunter, provided all hand-points over which the train has to proceed are correctly set, all train and shunting movements on adjacent lines have been brought to a standstill and, where provided, the fixed signal controlling the departure of trains from the yard, has been placed at "all-right" or "proceed", must display the "train may depart" hand-signal to the train despatcher or, where necessary, arrange for it to be displayed by an authorised employee. The driver may depart and proceed beyond the clearance mark of the adjoining line only after he has received the "right away" hand-signal from the train despatcher. Where more than one train is waiting to depart, the control shunter, before the "train may depart" signal is displayed to the train despatcher, must orally advise the driver of the train that has to depart first.
- 9025.7.3** **Times to be furnished** – The control shunter, after the "train may depart" signal has been displayed, must take up position at the points over which the train is to proceed, watch the departing train and after ensuring that it is complete with a marker affixed on the rear end of the last vehicle, furnish the departure time to the yard master or his deputy and, where required, to the train-control officer. Where applicable, the train-control officer must inform the control shunter of the time of arrival of the train complete at the signal cabin.
- 9025.8** **Control of movements over service lines and/or between adjacent control points**
- 9025.8.1** **Scope** – The instructions in this subclause are applicable to a non-signalled line, hereinafter referred to as a service line in a yard complex or private siding complex –
- 9025.8.1.1 which is normally used only for the passage of train and shunting movements;
- 9025.8.1.2 which has a train-control officer or a control shunter or other authorised employee stationed at one end and, except where a system of token working is in force which does not require the presence of such an official, a control shunter or other authorised employee (not a train-control officer) at the other end; and
- 9025.8.1.3 the length of which is such that, in the event of suspension of token working and/or failure of communications, the employee(s) controlling the line will not be able, by personal consultation (see subclause 9024.5.2) or otherwise, to establish that the line is clear before authorising a movement over it.
- 9025.8.2** **Absolute working to be maintained** – Only one train at a time may enter upon or occupy a service line.
- 9025.8.3** **Line to be clear** – A movement must not proceed over the service line before the previous movement complete has arrived within the fixed signals, stop board or clearance mark, as the case may be, at the signal cabin, control point, yard or siding at one or the other end of the service line. Where token working is in force, the relevant instructions in this appendix and such other additional instructions that may be issued, must be strictly complied with. Where movements over the service line are not controlled by means of token working, the employees at both ends of the service line must telephonically arrive at a clear understanding with each other before a movement is allowed to proceed onto or over the service line.
- 9025.8.4** **Suspension of normal working** – If the token instruments fail or a token is lost, or where movements are not controlled by means of token working, when the telephones are out of order, or assistance must be rendered in consequence of an obstruction of the line, the station or yard official in charge must arrange for a competent employee, who must wear a pilotman's badge on his left arm, to accompany all movements on the service line.
- 9025.9** **Working of Spoornet and private locomotives in private or departmental sidings with or without exchange yards or exchange sidings**
- 9025.9.1** **General**
- 9025.9.1.1 Except where otherwise laid down in respect of a particular yard or siding, the instructions in this subclause must be complied with in respect of the various private and departmental sidings (hereinafter only referred to as private sidings) with or without exchange yards or exchange sidings, that are worked by locomotives of Spoornet as well as the owners or users of the sidings.
- 9025.9.1.2 In these instructions an exchange yard or siding means that portion of a private siding to which both a Spoornet locomotive and the private locomotive have access and which is used solely for the exchange of traffic between Spoornet and the private siding owner/user.
- 9025.9.1.3 Except where specifically provided for, only one Spoornet locomotive at a time may proceed onto a service line serving a particular private siding and enter or work in that private siding.
- 9025.9.1.4 Where required, stop boards as described in subclause 9025.4 are erected in a private siding.

9025.9.2 Movements of a Spoornet locomotive to and from an exchange yard or siding

9025.9.2.1 When a Spoornet locomotive, with or without traffic attached, has to enter an exchange yard or siding, the locomotive or, where applicable, the leading vehicle in the case of a propelling movement, must be brought to a standstill short of the stop board at the entrance to the exchange yard or siding and the driver must remain there until he receives an "all right" hand-signal or oral authority from the employee in charge of the Spoornet shunting operations. Before authorising the driver to enter the exchange yard or siding, the employee in charge of the movement must ensure that the private locomotive is not already in or approaching the exchange yard or siding.

9025.9.2.2 Should the private locomotive be in or approaching the exchange yard or siding when a Spoornet locomotive is required to enter, a clear understanding must be arrived at with the employee in charge of the private locomotive, and the private locomotive, if already in the exchange yard or siding, must remain stationary until authorised to move by the employee in charge of the Spoornet locomotive, or until the Spoornet locomotive has departed and is clear of the exchange yard or siding.

9025.9.3 Movements of the private locomotive to and from the exchange yard or siding

9025.9.3.1 When the private locomotive has to enter the exchange yard or siding, the locomotive, or the leading vehicle in the case of a propelling movement, must be brought to a standstill short of the stop board at the entrance to the exchange yard or siding. The driver of the private locomotive must not proceed until he has ensured that the Spoornet locomotive is not already in or approaching the exchange yard or siding.

9025.9.3.2 Should a Spoornet locomotive be in or approaching the exchange yard or siding when the private locomotive has to enter, the driver of the private locomotive must not proceed beyond the stop board until the Spoornet locomotive has departed and is clear of the exchange yard or siding.

9025.9.3.3 Before the private locomotive enters or departs from the exchange yard or siding, the employee in charge thereof must ensure that the points to be traversed are correctly set.

9025.9.4 Movements of Spoornet and private locomotive in a private siding without an exchange yard or siding

9025.9.4.1 The Spoornet locomotive or, where applicable, the leading vehicle in the case of a propelling movement, must not enter the private siding or, where provided, pass the relevant stop board, before the employee in charge of the Spoornet shunting operations has ensured that the private locomotive is standing clear in the siding and that a conflicting movement will not take place.

9025.9.4.2 Should the private locomotive be working in the private siding when the Spoornet locomotive has to enter, a clear understanding must be arrived at with the employee in charge of the private locomotive, and the private locomotive must stand clear until authorised to move by the employee in charge of the Spoornet locomotive or until the Spoornet locomotive has departed and is clear of the private siding.

9025.9.4.3 Where there is no stop board demarcating the area of the private locomotive, the driver of the private locomotive must in no circumstances allow the locomotive or any vehicle to foul the Spoornet lines.

9025.9.4.4 The instructions in this subclause also apply to a road/rail private locomotive.

9025.9.5 Security gates

9025.9.5.1 Where a gate is provided in a security fence crossing a railway line at the entrance to a private siding, the employee in charge of the Spoornet shunting operations must ensure that the gate is opened and properly secured before authorising the driver to proceed through the gate.

9025.9.5.2 If the gate is locked by means of Chubb lock, the employee in charge of the Spoornet shunting operations is responsible for the opening, closing and locking of the gate.

9025.9.5.3 If the gate is locked by means of a special lock, the key of which is kept by the siding owner or user, the employee in charge of the Spoornet shunting operations must, before authorising the driver to proceed through the gate, ensure that the gate is opened and properly secured by an employee of the siding owner or user.

- 9025.9.6** **Mass-measuring bridges** – In private sidings provided with mass-measuring bridges over which Spoornet locomotives may not proceed, boards inscribed that Spoornet locomotives may not pass the boards are erected alongside the track on both sides of the private mass-measuring bridges. Drivers must in no circumstances allow their locomotives to proceed past these boards and/or to pass over the mass-measuring bridges.
- 9025.9.7 Traffic must always be hauled to and from and into and out of a private siding, except where –
- 9025.9.7.1 the lay-out of the private siding and/or, where applicable, the electrification thereof is such that at no time can the Spoornet locomotive run round in the siding; or
- 9025.9.7.2 the position of the private siding in relation to the service line is such that the traffic must of necessity be propelled into and/or out of the siding; or
- 9025.9.7.3 otherwise authorised in this appendix.
- 9025.9.8 The normal position of hand-points affording access from a line of Spoornet to a private siding is for them to be set and locked for the Spoornet line. If the points are locked by means of a special lock, the key of which is kept by the siding owner or user, the employee in charge of Spoornet shunting operations must request the siding owner or user to unlock the points.
- 9026.0 TRAIN JOURNALS**
- 9026.1 How journals to be submitted**
- 9026.1.1 Drivers' assistants must prepare train journals in duplicate or triplicate, according to circumstances. The original together with the list of vehicles and other documents, must be handed to the official at the termination of the journey. The copy of the train journal must be retained by the home depot station for record purposes. The station official in charge must forward the original journal and enclosures to the operations manager.
- NOTE:** *Where there is more than one driver on the train, each driver must be furnished with a copy of the journal.*
- 9026.2 When journals must be submitted**
- 9026.2.1 Journals must be prepared and handed in before drivers' assistants go off duty. Drivers' assistants going off duty at outstations must retain their journals and hand it in at their home depots.
- 9026.3 Failure must be explained**
- 9026.3.1 The station official in charge must enquire immediately into the cause of any failure on the part of a driver's assistant to render his journal at the time laid down. Failure in rendering journals must be fully explained in writing by drivers' assistants.
- 9026.4 Numbers of all trains crossed or passed, etc., must be shown**
- 9026.4.1 When possible, the number of each train crossed, passed or shunted for, also the place at which such movement was made, must be shown on the journal.
- 9026.5 Driver's assistant to compare watch with station clock**
- 9026.5.1 Before the departure of his train the driver's assistant must obtain the correct time from the train-control officer and set his watch accordingly. He must take every opportunity en route of comparing his watch with that of the train-control officer. He must enter the actual time on his journal in accordance with his watch. [See train working rule No. 184(1).]
- 9026.6 Record of running, shunting, delays, etc.**
- 9026.6.1 A driver's assistant must compile his journal and list of vehicles clearly and legible, and must accurately record the following particulars:
- 9026.6.1.1 Time on duty, train number, date, locomotive(s) number(s), names and initials of the driver and driver's assistant, actual time of departure from starting station or depot and actual time of arrival at destination station or depot, as well as the number of minutes late or before time. If the train is delayed en route, the name of the place, the time of arrival and departure and the reason for the delay must be recorded on the journal.

9027.0 TIME OCCUPIED AT STATIONS, ETC. TO BE ACCOUNTED FOR: EACH DELAY TO BE RECORDED SEPARATELY

9027.1 The whole of the time occupied at stations, crossing places, interloops, intersidings and halts must be accounted for, and the actual time occupied in performing each duty must be recorded separately on his journal, by the driver's assistant, for example:

Shunting, 10 minutes (to be shown in the column provided).
Entraining and detraining of passengers, 15 minutes.
Waiting crossing, 3 minutes.
Train examined (opposite place where examination was made).
[See train working rule No. 184(4).]

9027.2 Delays due to loading and unloading traffic

9027.2.1 When a delay occurs in loading and/or unloading traffic, the driver's assistant must record on his journal the following particulars:

9027.2.1.1 Length of delay.

9027.2.1.2 Number of packages.

9027.2.1.3 Mass.

9027.2.1.4 Class of wagon used.

9027.2.1.5 Number of wagons on train into which goods loaded or from which unloaded. This information may be recorded in the manner shown hereunder:

Tranship 15", 9 Packages, 500 kg, 1 FB, 1 GZA, 1 OZ.

9027.3 In the event of an accident or other untoward incident, the driver's assistant must record full particulars on his journal to explain the delay. This, however, does not relieve him of his responsibility of specially reporting the matter as laid down in the train working rules and in this appendix.

9028.0 ACTUAL TIME, AND NUMBER OF MINUTES EARLY OR LATE TO BE SHOWN

9028.1 Drivers' assistants must record in the columns provided on their journals the actual time of departure from the starting station or depot and the actual time of arrival at the destination station or depot as well as the right time or the number of minutes early or late, as the case may be.

9028.2 Running times for special trains must be provided and recorded

9028.2.1 If scheduled times are not provided, as in the case of special or breakdown trains run at short notice, the driver's assistant must request the official in charge to supply running times. If running times are not supplied before departure of the train, these must be advised by telephone to the next convenient station in advance. (See subclause 1054.3.3 of this appendix.)

9029.0 CORRECT DATE TO BE SHOWN

9029.1 Journals must bear correct dates

9029.1.1 In the event of a train, booked to leave the starting station before midnight, being delayed, the date of the day on which the train is booked to leave must be shown in the date space, the date of the day on which the train actually left being inserted immediately above the time of departure.

9029.1.2 In the case of a train starting before, but finishing its journey after midnight, the date concerned must be shown above the first entry after midnight.

9030.0 LIST OF VEHICLES AND WORKS ORDER

9030.1 Number of copies of list of vehicles required and method of disposal

9030.1.1 Except where otherwise provided, the driver's assistant or, where applicable, the personnel responsible for the compilation thereof, must make out the list of vehicles for goods and mixed trains in duplicate. The original must be left at the departure station and the copy must be retained by or handed to the driver's assistant. This copy must accompany the train to the destination, whereafter it must be handed in at the destination station together with the works orders (see subclause 9030.8).

9030.1.2 If a load is detached en route, or the locomotive with load attached is shut down and there is no train-control officer on duty, the driver's assistant must leave the list of vehicles in the clip of the front vehicle or in the locomotive.

9030.1.3 At terminal stations the list of vehicles must be filed locally for record purposes.

9030.2 Vehicle numbers to be recorded in the order which the vehicles are marshalled

9030.2.1 Drivers' assistants or, where applicable, the personnel responsible for the compilation of the list of vehicles, must record accurately and clearly the particulars of each vehicle composing the train. At the original departure point, the vehicles must be recorded in the order in which they are marshalled on the train, indicating whether the list of vehicles commences from the rear of the train or from the locomotive. (In the case of a computer-printed list of vehicles, the driver's assistant or train despatcher must certify on this document that he has compared it with the actual train load.) When particulars are furnished by means of a walkie-talkie to the employee responsible for entering information into the computer, the particulars of the vehicles must be furnished and entered in the order of marshalling.

9030.2.2 If the driver's assistant or train despatcher, as the case may be, find that the particulars on the list of vehicles/computer-printed list does not correspond with the actual particulars of the load, e.g. incorrect vehicle number, destination, etc., he must rule through the incorrect particulars and insert the correct information above the incorrect entry. If the order of marshalling of the vehicles on the list of vehicles or computer-printed list does not correspond, the consecutive number appearing against the vehicle concerned must be swapped.

9030.3 Commuter trains

9030.3.1 Drivers' assistants working certain commuter trains may fill in the required particulars on the back of their journals or on other forms specially provided for this purpose instead of using a list of vehicles for this purpose.

9030.4 Foreign railway's vehicles

9030.4.1 The abbreviation of the name of the owning foreign railway of a foreign vehicle must be inserted in the appropriate column after the number of the foreign vehicle. When use is made of walkie-talkie, this information must be furnished.

9030.5 Through trains: List of vehicles and works orders to be handed over

9030.5.1 In the case of a through passenger train or an authorised goods or through goods train, or in the case of a caboose train, the list of vehicles in possession of the driver's assistant must be handed over to the driver's assistant taking over en route. The driver's assistant who works the train to the final destination station is responsible for handing in the list of vehicles and the works orders (see subclause 9030.8). Each driver's assistant is responsible for updating the list of vehicles for the portion of line over which he works the train. The updated copy of the list of vehicles together with the works orders (see subclause 9030.8), must be handed in at the final destination station for entering into the computer.

9030.5.2 Information regarding vehicles that have been detached and/or attached en route, need only be recorded by the driver's assistant on his copy of list of vehicles, in the applicable column.

9030.6 Void

9030.7. Duties at depots or stations

9030.7.1 On arrival of a train at the destination station, depot or yard, the list of vehicles and works orders must be handed over to the official in charge, or his deputy.

9030.7.1.1 At depots or stations, the official in charge must arrange for the following duties in connection with the lists of vehicles and works orders to be meticulously performed:

9030.7.1.1.1 The written list of vehicles of all outgoing trains and lists of vehicles and works orders of all incoming trains must be made available to the employee responsible for the entering of information into the computer as soon as possible after departure or arrival.

9030.7.2 Outgoing trains

9030.7.2.1 It must be seen to that the written lists of vehicles are accurately and clearly compiled. When lists of vehicles are handed in, they must be compared with the daily train service plan to establish whether a list of vehicles has been handed in for each train. If it is found that there are lists of vehicles missing, the employee responsible for entering information into the computer, must immediately take steps to obtain copies of such missing lists of vehicles and he must enter the information into the computer.

9030.7.3 Incoming trains

9030.7.3.1 When lists of vehicles together with copies of works orders (see subclause 9030.7.1) are handed in, they must first be compared with the train register to ensure that a list of vehicles has been handed in for each train. The employee responsible for entering information into the computer, must obtain lists of vehicles from the computer for the trains involved and compare them with the works orders to ensure that all wagon movements have been entered into the computer.

9030.7.4 The depot or station official in charge must, where practicable, personally supervise the reporting of vehicle movements and must frequently ensure that the work is being performed satisfactorily and accurately and that the instructions contained herein are properly observed.

9030.8 Number of copies of the works orders required and method of disposal

9030.8.1 The works order is a complete record of the actions taking place at a station or public siding and must show full particulars of vehicles that have been detached and/or attached and/or left behind. These forms must always be compiled in duplicate.

9030.8.1.1 When a train arrives at a station where vehicles must be detached, the driver's assistant or other employee in charge of the shunting (hereinafter referred to as "driver's assistant"), must execute the works order. As soon as the vehicles have been placed and the driver's assistant has signed the works order, he must hand over the original to the official in charge, or his deputy.

9030.8.1.2 The driver's assistant must immediately convey the information on the works order telephonically to the order entry official and endorse the works order accordingly. The order entry official receiving such an advice, must ensure that the information is entered into the computer.

9030.8.1.3 The driver's assistant must attach the copy of the works order to the list of vehicles and hand it over to the official in charge, or his deputy, at the destination, who in turn must furnish it to the data clerk and the latter must ensure that the information telephonically received, is correctly entered before the arrival message is entered.

9030.8.2 Vehicles attached or detached at an intersiding or interloop

9030.8.2.1 When a train that is scheduled to shunt at intersidings or interloops, or a train that has to attach and/or detach (a) vehicle(s) at an intersiding or interloop, arrives there, the driver's assistant must execute the works order, compare the particulars of all vehicles that have been attached and/or detached and/or left behind and sign the works order. The driver's assistant must immediately report the information on the works order telephonically to the Client Service Manager concerned in the Client Service Centre and endorse the works order accordingly. The Client Service Manager receiving such an advice, must ensure that the information is entered into the computer.

9030.8.3 CTC/Radio based train control sections

9030.8.3.1 When a train must shunt at a place in a CTC/Radio based train control section where there are station personnel on duty, the action set out in subclause 1051.1 of this appendix and subclause 9030.8.1 hereof, must be followed. When there are no station personnel on duty, the action set out in subclause 9030.8.1.2 hereof must be followed, except that the driver's assistant must at first opportunity telephonically convey the information appearing on the works order to the order entry official. The driver's assistant must endorse the works order with the time and date when he conveyed the information to the order entry official. The order entry official receiving such an advice must ensure that the information telephonically received, is entered into the computer.

9030.8.4 These instructions do not relieve the driver's assistant from his responsibility to personally ensure which vehicles must be attached and/or detached and/or left behind at intersidings or interloops, or at places in CTC/Radio based train control sections, and to complete the necessary works orders.

9031.0 DAMAGED VEHICLES

9031.1 A driver's assistant must report on his journal, full particulars regarding any vehicle on his train which is damaged en route. He must also report such particulars as he can obtain about any vehicle attached in a damaged condition en route.

9031.2 When a vehicle in a damaged condition is attached to a train at a station, the driver's assistant must draw the attention of the station official in charge or a responsible employee to the matter, and this employee must insert particulars in the book kept for this purpose. The driver's assistant must, in addition to the note on his journal, at the end of the journey enter particulars in the depot "Damaged Rolling Stock" book. (See train working rule No. 202.)

NOTE: For instructions regarding the marshalling of damaged vehicles see clause 1021.17 of this appendix.

9031.3 When there is a defect on the brake van of a train, the driver's assistant of the train must fill in form "Defects on brake vans" in triplicate. The original must be attached to the driver's assistant's journal, the first copy must be attached to the brake van by means of the clip on the side of the brake van, for the information of the wagon maintenance personnel, and the second copy must be handed to the official in charge of the yard where the train terminates its journey. The latter official must file it for record purposes.

9031.3.1 In the case of a through train the driver's assistant must write the name of the driver's assistant taking over, in the centre portion of the form and hand the three forms to him. The driver's assistant working the train further must then follow the procedure as set out in the preceding subclause 9031.3. (See clause 9117.0 hereof.)

9032.0 VEHICLES DETACHED AT INTERLOOPS, TOKEN STATIONS OR CROSSING PLACES IN CTC/RADIO BASED TRAIN CONTROL AREAS WITHOUT SIDINGS

9032.1 A vehicle must not be detached at an interloop, token station or crossing places in CTC/Radio based train control areas, where there is no siding, except in cases of absolute necessity, as for instance when a vehicle is running with a hot axle-box or any other defects that are likely to affect the safe running of the train. When this is done, the station on each side or the train-control officer in the train control centre, as the case may be, must be advised so that the necessary precautions may be taken and all concerned promptly advised. A driver's assistant, detaching a vehicle at an interloop, token station or crossing place, must ensure that the vehicle is properly secured by handbrakes and scotches. The locomotive personnel of all opposing trains which are crossed before reaching the next station, and of all trains entering the section, must be informed of the presence of the vehicle(s). Until such time as the vehicle(s) has/have been removed, crossings must not be arranged to take place at the interloop, token station or crossing place.

9033.0 DRIVERS' ASSISTANTS POINTS KEYS: DEFECTIVE POINTS LOCKS AT INTERLOOPS, TOKEN STATIONS, INTERSIDINGS OR CROSSING PLACES IN CTC/RADIO BASED TRAIN CONTROL AREAS

9033.1 When points locks at interloops, token stations, intersidings or crossing places in CTC/Radio based train control areas are missing or damaged, the driver's assistant must, when practicable, report the circumstances to the track master and, in every case, to the train-control officer controlling the section. The driver's assistant must record particulars on his journal, giving the names of the employees to whom the defect was reported. (See train working rule No. 201.)

9033.2 When a driver's assistant fails to report the damage, it will be assumed, in the absence of proof to the contrary, that he is responsible for such damage.

9033.3 Drivers' assistants must satisfy themselves that their points keys are in good order before leaving their depots.

9033.4 Any key which operates locks with difficulty, or which can be withdrawn from locks while the latter are open, must be handed in at the depot for examination and replacement.

NOTE: See clauses 8001.0 to 8004.0 of this appendix.

9034.0 VOID

9035.0 VOID

9036.0 STANDARD EQUIPMENT FOR DRIVERS' ASSISTANTS

9036.1 The following is a list of items with which a driver's assistant must be equipped:

- 1 Equipment box.
Train Working Rules.
General Appendix.
Relevant Local Appendix or Appendices.
Electrical Safety Instructions.
- 1 set flags (red and green), complete with sticks.
- 1 tricolour hand lamp. (One spare battery.)
- 10 detonators in container.
- 1 points key.
- 1 pad "Train journals".
- 1 pad "List of vehicles".
- 1 pad "Train load certificate" forms.
- 1 pad "Defects on brake vans".
- 3 vacuum washers.
- 3 air brake washers.
- 1 hand hammer (1 kg).
- 1 spanner (22 mm).
- 1 tommy bar (300 mm).
- 1 pair of pliers.
- 1 screwdriver.
- 1 padlock and keys.
- 1 pocket note book.
- 1 bucket.
- 1 floor brush.
- 1 clipboard.
- 4 "Train parting"-reports.
- 4 "Not to go" labels.
- 4 "Repair" labels.
- 4 "Inoperative Air-brake" labels.
- 2 wooden plugs for vacuum cylinder branch pipes.

9036.1.1 Consumable items per month:

- 1 toilet roll.
- 2 boxes of matches.
- 1 non-ravelling cloth (45 cm x 35 cm) (store item number 7/235).
- 1 bar of soap.
- 1 Hand cleaner (0,250 kg).

9036.2 Deficiencies to be reported

9036.2.1 Before leaving a depot or terminal station with his train, a driver's assistant must see that his personal equipment is complete. Should he experience any difficulty in obtaining any shortage in equipment, he must record particulars on his journal.

NOTE: For further instructions relative to the responsibility resting upon a driver's assistant in connection with indicators, see clause 8030.0 of this appendix.

9036.3 Full equipment must be supplied

9036.3.1 Officials in charge are responsible for ensuring that driver's assistants are supplied with their full equipment before the departure of trains.

9036.3.2 The driver's assistant need only be in possession of the relevant local appendix for the area concerned on which he is employed, unless he is required to work over another area, in which case his equipment must include a copy of the local appendix for that area.

9036.4 Custody of equipment not in use

9036.4.1 While a driver's assistant is off duty, his personal equipment may be left in his shed locker, where lockers are provided.

9037.0 VOID

9038.0 DUTIES AND RESPONSIBILITIES OF DRIVERS

9038.1 Driver must learn the line

9038.1.1 Before a driver is allowed over any portion of a running line over which, in the capacity of driver, he has not previously driven a locomotive, he must be allowed to learn the line, by night as well as by day. Before being placed in charge of a locomotive proceeding over such portion of the running line, the Section Manager (Train Traffic) must test and certify him as competent to drive a locomotive over that portion of the line, without the assistance of a pilot driver. The driver must thereafter sign the "Knowledge of the Line" book at his home depot. [See train working rule No. 168(1) and (3).]

9038.2 Before a driver is allowed to drive a locomotive over sidings over which, in the capacity of driver, he has not previously driven a locomotive, he must be allowed to learn the line. He must thereafter sign the "Knowledge of the Line" book at his home depot, thereby expressing his competence to work a locomotive over the sidings concerned. [See train working rule No. 168(2) and (3).]

9038.3 Should it be necessary, owing to an employee graded as driver not being available, to call on a pupil driver to take charge of a locomotive in the capacity of driver, such pupil driver may not take charge unless the provisions of the preceding subclauses 9038.1 and 9038.2 hereof, have been fully observed.

9039.0 LOCOMOTIVE HEADLIGHTS

9039.1 Each locomotive must be provided with a headlamp which illuminates the line in the direction of travel. The headlamp must be lighted as soon as it commences to be dusk, during foggy weather and when passing through certain tunnels as laid down in local appendices.

9039.2 No locomotive may leave a locomotive depot with a defective headlamp

9039.2.1 If a driver proceeds at night without a headlamp, he must inform the train-control officer at the first opportunity, who must then report the circumstances to the central operating office. The decision whether he may thereafter proceed, must be made in the light of prevailing circumstances, such as traffic intensity on the section, nature of section to be traversed, etc.

9039.2.2 A driver proceeding with a failed headlamp under the above circumstances must do so with extreme caution, especially at level crossings.

9039.3 When two or more locomotives are working a train, the headlamp of the leading locomotive only must be lighted. In instances where diesel locomotives are operated in multiple, however, it is permissible that the trailing headlight of any of the locomotives be placed temporarily on dim when it becomes necessary for the driver's assistant to proceed from one locomotive to another.

- 9039.4 Headlights must be dimmed but not extinguished when trains are –
- 9039.4.1 standing still;
- 9039.4.2 approaching a platform;
- 9039.4.3 approaching the facing points of a station where train tokens are exchanged and whilst the train is passing through;
- 9039.4.4 approaching the facing points of a place where an opposing train must be crossed; and
- 9039.4.5 approaching a yard or passing through it.

9040.0 SANDING OF RAILS

- 9040.1 Sand must be used sparingly by drivers of all types of locomotives. Not more sand than is necessary to ensure effective adhesive power should be applied, thus avoiding interference with track circuits. In the event of heavy sanding being necessary on running lines within the area protected by fixed signals at a station or crossing place, the driver must report the circumstances to the train-control officer at that station or the first station in advance or in the case of a CTC area to the train control office. The train-control officer must advise the track master or the signal maintenance official and the branch manager (signals).
- 9040.2 In no circumstances must sand be used on points. (See clause 7025.0 of this appendix.)

9041.0 VOID

9042.0 VOID

9043.0 UNAUTHORISED PERSONS NOT ALLOWED TO TRAVEL ON LOCOMOTIVES

9043.1 Members of the public

- 9043.1.1 A person, other than an employee, as provided in subclause 9043.2 hereof, must not be allowed to travel on a locomotive, or in the driving compartment of a motor coach or driving trailer, unless he is in possession of a printed or written permission from an authorised official of SpoorNet, and holds, in addition, an available ticket.

9043.2 SpoorNet employees

- 9043.2.1 The only employees who may travel on a footplate (locomotives, motor coaches and driving trailers included – see definitions in train working rules), or in the cabs/drivers' compartments of locomotives, motor coaches or driving trailers, not being used to control the locomotive(s)/train, except the driver and driver's assistant responsible for the operation of the locomotive(s)/train, are those required to do so for service purposes and holding permits issued specially for that purpose by the Chief Executive (SpoorNet) [see also subclause 9043.2.1.1 hereof], and certain other officials who are from time to time given written permission by the Chief Executive (SpoorNet) to travel thereon in the company of a supervisor (locomotive personnel).
- 9043.2.1.1 The Operations Manager with approval of the Chief Executive (SpoorNet), may also, by means of the local appendix or other instruction, authorise a maximum of two persons (shunters, spare drivers or driver's assistants, etc.), to travel for service purposes on the locomotive(s) or in a driver's compartment of a motor coach set. It is, however, only permissible to travel in the locomotive/driving compartment if other suitable accommodation is not available on the train, and it is only permissible to travel on the footplate if a cab or driver's compartment not being used as the footplate is not available. Unless specially authorised by the Chief Executive (SpoorNet), this provision excludes the Blue Train.
- 9043.2.2 Except as provided in the following subclause 9043.2.3 only two persons at a time in addition to the driver of an electric motor coach train, or the driver and driver's assistant in the case of an electric, diesel or steam locomotive, are permitted to travel on the footplate.
- 9043.2.3 When motor coach, locomotive or traffic tests are being conducted, the engineer conducting the test may, if he considers it necessary for the satisfactory conducting of the test, authorise a third additional person to travel on the footplate. In the case of an electric or diesel locomotive, with the approval of the Chief Executive (SpoorNet) a competent employee may be instructed to take over the duties of the driver's assistant and the driver's assistant may be instructed to travel in the trailing driver's compartment pending further instructions.
- 9043.3 SpoorNet employees or other persons permitted to travel on the footplate must not in any circumstances, enter into discussion with or otherwise distract the drivers' or drivers' assistants' attention from their duties.

- 9043.4 A Conductor (Commuter Services) may not enter the leading driving compartment of an electric motor coach train, except in the case of emergency and for the purpose of exchanging tokens on behalf of the driver, if this is necessary and is provided for in local appendices.
- 9043.4.1 With the exception of those employees holding permits or written permission issued in accordance with subclause 9043.2.1 hereof, only the Conductor (Commuter Services) working the rear portion of an electric motor coach train, is permitted to travel in the rear driving compartment.
- 9043.4.2 Intermediate driving compartments on electric motor coach trains must be kept locked.
- 9043.4.3 It must be clearly understood that nobody, including conductors, inspectors (passenger services), a Spoornet employee and members of the public, is allowed to travel in the intermediate driving compartment except in the case of:
- 9043.4.3.1 Third-class sets, when the intermediate driving compartment may be used by the conductor who is working the centre portion of the train;
- 9043.4.3.2 Section Managers (Train Traffic) and engineering officers who are in possession of permits or written permission issued in accordance with subclause 9043.2.1 hereof and who are actively employed on work which cannot be performed satisfactorily whilst travelling elsewhere on the motor coach train.
- 9043.5 Locomotive personnel travelling for service purposes on electric locomotives**
- 9043.5.1 Provided only that no suitable accommodation is available within a short space of time on a passenger train, locomotive personnel limited to a maximum of three may travel for service purposes in the rear driving compartment(s) of the electric locomotive(s) of goods trains (air-brake trains excluded). Under no circumstances may they travel in the driving compartment which is used to control the train.
- 9043.5.2 Locomotive personnel travelling for service purposes in the rear driving compartment of an electric locomotive must be in possession of a written authority issued by a designated official.
- 9043.5.3 In all cases where locomotive personnel are authorised to travel for service purposes on an electric locomotive, the driver of the train must be advised orally or in writing of the circumstances.
- 9043.5.4 A special book must be kept by the designated issuing official in which particulars of all authorities issued must be recorded.
- 9044.0 VOID**
- 9045.0 VOID**
- 9046.0 MOVEMENT OF LOCOMOTIVES IN LOCOMOTIVE OR WORKSHOPS YARDS**
- 9046.1 When a locomotive is moved in a locomotive or workshops yard, the driver or other qualified employee in charge of the locomotive must be accompanied on the footplate by a driver's assistant.
- 9046.2 If the driver's assistant, on the instructions of the driver, proceeds ahead to set points, he will be regarded as accompanying the locomotive. All concerned, however, must continue to keep a sharp lookout and, whenever possible, the driver's assistant must remain on the footplate.
- 9046.3 Should it be necessary to make a slight movement of a locomotive for any purpose, the driver must ensure that all is in order before he moves the locomotive.
- 9047.0 VOID**
- 9048.0 VOID**
- 9049.0 UNAUTHORISED PERSONS NOT TO MOVE LOCOMOTIVES**
- 9049.1 The only employees authorised to move locomotives are a driver, driver's assistant under personal supervision of the driver, technical supervisor, shedman, and other employees certified as competent (as far as the duties of such employees require) by a Section Manager (Train Traffic) or other authorised officer. Employees other than those authorised to do so, are strictly prohibited from moving locomotives or any part or parts thereof, or from tampering with any other control equipment or fittings of any type of locomotive.

9050.0 LOCOMOTIVE FAILURES: DRIVERS TO RECORD DEFECTS AND DEFICIENCIES

9050.1 Locomotive failures

9050.1.1 When a locomotive is unable to haul a train, the incident must be regarded as a locomotive failure. A delay caused by a locomotive through any small defect which is remedied by the driver, who ultimately takes the train forward, should not be regarded as a locomotive failure, but treated as a delay.

9050.2 When a locomotive has partially failed and is unable to haul the full load, the driver of such locomotive must carry out the provisions of the relevant train working rules.

9050.3 Serious defects to be reported

9050.3.1 When any serious defect develops in a locomotive en route, the driver must report particulars to the depot to which the train is proceeding and, when not travelling in the direction of his home depot, the message must also be sent to the latter depot.

9050.4 Repair book (T522)

9050.4.1 Before signing off duty between trips, or after completion of duty, the driver must carefully examine his locomotive and enter in the repair book (T522) all defects and deficiencies requiring the attention of shed maintenance personnel. These repairs must have the immediate attention of the shed maintenance personnel concerned, who must record, in the space provided in the book, details of the work actually done, and date, and sign the entry. Drivers must report specially in writing or orally, any defects which constitute a source of danger, in addition to entering particulars thereof in the repair book.

9050.5 Examination of locomotive by shedman

9050.5.1 Where the driver is authorised to hand over a locomotive to the shed personnel before completing his examination, the examination must be carried out by the shedman deputed for the work, and that employee must report all defects in the manner set forth in subclause 9050.4 hereof. The driver, in such cases, must record in the repair book all defects or deficiencies observed by him whilst the locomotive was in his charge.

9051.0 VOID

9052.0 VOID

9053.0 VOID

9054.0 VOID

9055.0 TOOLS AND EQUIPMENT TO BE PROVIDED ON LOCOMOTIVES, AND DRIVERS' PERSONAL KITS

9055.1 Electric locomotives

9055.1.1 Equipment on electric locomotives:

- 1 Marker.
- 1 Set of cables (As necessary).
- 1 Pantograph hook stick (Where applicable).
- 2 Fire extinguishers.
- 2 Scotches.

9055.1.2 Personal kit to be issued to drivers.

9055.1.3 General.

- *Train Working Rules.
- *General Appendix.
- *Electrical Safety Instructions.
- *Relevant Local Appendix or Appendices.
- 1 Leather case.
- 1 Water bottle.
- 1 Points key.
- 10 Detonators in container.
- 1 Green flag fixed to wooden handle.
- 1 Red flag fixed to wooden handle.
- 1 Reverser key.
- "SD1" Authorities.
- 1 Pad T403 forms or Trip Report forms.
- 1 Tricolour hand lamp. (One spare battery.)
- 1 Pocket note book.

NOTE: *May be kept in shed locker at own discretion.

9055.1.4 Additional personal equipment for drivers operating electric locomotives.

- Control switch keys (as necessary).
- 1 Independent air-brake handle.
- 1 Wooden plug for vacuum cylinder branch pipes.
- 1 Brake valve key (as necessary).

9055.1.5 Additional personal equipment for drivers operating motor coach trains.

- 1 Tool pouch.
- 1 Control switch key (as necessary).
- 1 Set fuses (as necessary).
- 1 Carriage door key.

9055.1.5.1 Consumable items per month.

- 1 non-ravelling cloth (45 cm x 35 cm) (stores item number 7/235).
- 1 hand cleaner (0,250 kg).
- 1 toilet roll.
- 1 bar of soap.

9055.2 Diesel locomotives

9055.2.1 Equipment on diesel locomotives.

- 1 Marker.
- 2 Fire extinguishers.
- 2 Scotches.
- 1 Set of cables.

9055.2.2 Personal kit to be issued to drivers.

- *Train Working Rules.
- *General Appendix.
- *Relevant Local Appendix or Appendices.
- *Electrical Safety Instructions.
- Water bottle.
- 1 Points key.
- 1 Green flag fixed to wooden handle.
- 1 Red flag fixed to wooden handle.
- 10 Detonators in container.
- 1 Electric tricolour hand lamp (One spare battery.)
- 1 Reverser key (diesel-electric locomotives).
- 1 driving compartment key (diesel-electric locomotives).
- "SD1" Authorities.
- 1 Pad T403 forms or Trip Report forms.
- 1 Independent air-brake handle.
- 1 Brake valve key (as necessary).
- 1 Pocket note book.
- 1 Leather case.

NOTE: **May be kept in shed locker at own discretion.*

9055.2.3 Consumable items per month:

- 1 non-ravelling cloth (45 cm x 35 cm) (stores item number 7/235).
- 1 hand cleaner (0,250 kg).
- 1 toilet roll.
- 1 bar of soap.

9056.0 TOOLS AND EQUIPMENT TO BE PROVIDED ON DIESEL AND ELECTRIC LOCOMOTIVES, MOTOR COACHES AND DRIVING TRAILERS AND DRIVERS' KIT: GENERAL

9056.1. Emergency tools and equipment

9056.1.1 In addition to the items enumerated in subclauses 9055.1 and 9055.2 hereof, any other equipment which is required for a particular class of locomotive may be included in the emergency tools and equipment locker of a main line locomotive, provided such additions are covered by suitable local instructions. Shunting locomotives working at outstations may be equipped with emergency tools and equipment at the discretion of the technical supervisor concerned.

9056.1.2 A complete list of the tools and equipment, contained in the locker, must be secured to the inside of the door or lid of the locker.

9056 1.3 The seal of the locker must be examined whenever the locomotive returns from a trip, or undergoes a daily or trip inspection, by a shedman, examiner (electric locomotives) or other employee deputed for this purpose.

- 9056.1.4 The emergency tools and equipment of every locomotive must be examined regularly, at least once per month, to ensure that all items are available and are in good condition. The examination may be arranged to coincide with shed inspection or washout, etc., as the case may be, and a suitable record thereof must be kept.
- 9056.1.5 When assuming control of a locomotive, a driver must ensure that the seal of the locker is intact. Should the seal be found broken, the driver must endorse his Trip Report form, or Fault Report form, accordingly. If the broken seal is detected at a locomotive depot, it must also be reported orally to a Section Manager (Train Traffic).
- 9056.1.6 When a driver breaks the seal of the locker in order to use the emergency tools or equipment, or for any other reason, he must endorse the full circumstances on the Trip Report form, or Fault Report form in the case of diesel and electric locomotives, and also enter full details in the Repair or Defect Book on his return to his depot. If he hands over control of the locomotive during a journey, he must advise the relieving driver of the circumstances to enable him to make a suitable endorsement in the Repair or Defect Book when the locomotive is finally stabled at a repair depot.
- 9056.1.7 Whenever a case of a broken seal is reported, the technical supervisor (production control) must arrange for the contents of the locker to be examined and for any missing items to be replaced, and for the locker to be resealed.
- 9056.1.8 Diesel locomotives**
- 9056.1.8.1. When a locomotive is transferred to another depot, or is sent to workshops or to another depot for repairs, the emergency tools and equipment must accompany the locomotive, and a clear understanding must be reached between all concerned regarding the safe custody of the emergency tools and equipment. The despatching depot must compile a list of the emergency tools and equipment contained in the locker of the locomotive, for transmission to the receiving depot or to the workshop or depot responsible for the safe custody of the tools and equipment during repairs. At all intermediate depots the seals must be examined and, if found broken, full details of the circumstances must be reported to the despatching depot.
- 9056.1.9 Electric locomotives**
- 9056.1.9.1 When a locomotive is transferred to another depot, the emergency tools and equipment contained in the locker of the locomotive and the eye bolts with permanent links fitted on each end of the locomotive must accompany the locomotive. A clear understanding must be reached between all concerned regarding the safe custody of the emergency tools and equipment and the eye bolts with permanent links. The despatching depot must compile a list of the emergency tools and equipment contained in the locker of the locomotive, as well as the eye bolts with permanent links fitted at each end of the locomotive.
- 9056.1.10 When a locomotive is sent to workshops or another depot for repairs, the emergency tools and equipment contained in the locker of the locomotive must be removed and placed in safe custody at the home depot. A complete list must be compiled of the emergency tools and equipment removed from the locomotive.
- 9056.1.11 When a locomotive is sent to workshops or another depot for repairs, the eye bolts with permanent links at each end of the locomotive must not be removed, and it must be ascertained that these accessories are still on the locomotive when it is returned to the home depot.
- 9056.1.12 Diesel locomotives**
- 9056.1.12.1 When a locomotive is transferred from one depot to another, or is sent to the mechanical workshops or to another depot for repairs, the line of action is the same as that for emergency tools and equipment, as set out in subclause 9056.1.8.1 hereof. The additional equipment must accompany the locomotive, and a physical check must be carried out at every intermediate depot where the locomotive is stabled or handed over to another driver.
- 9056.1.13 Electric locomotives, motor coaches or driving trailers**
- 9056.1.13.1 When a locomotive, motor coach or driving trailer is transferred to another depot, the additional equipment which is stored in or on the locomotive, motor coach or driving trailer must accompany the locomotive, motor coach or driving trailer. A clear understanding must be reached between all concerned regarding the safe custody of the additional equipment. The despatching depot must compile a list of the additional equipment stored in or on the locomotive, motor coach or driving trailer.
- 9056.1.13.2 When a locomotive, motor coach or driving trailer is sent to workshops or another depot for repairs, the additional equipment stored in or on the locomotive, motor coach or driving trailer must be removed and placed in safe custody at the home depot. A complete list must be compiled of all the additional equipment removed from the locomotive, motor coach or driving trailer.
- 9056.2 Additional equipment**
- 9056.2.1 In addition to the items enumerated in subclauses 9055.1 and 9055.2 hereof, any other equipment which is required for a particular class of locomotive, may be included as additional equipment, provided such additions are covered by suitable local instructions.

9056.2.2 Technical supervisors must arrange regular inspections to ensure that the additional equipment is available and in good condition.

9056.2.3 When assuming control of a locomotive, the driver must ensure that the additional equipment is available. Should shortages be found, he must endorse the Trip Report form, or Fault Report form, or endorse the Repair Book, as the case may be, at the end of the trip.

9056.3 Drivers' personal kit

9056.3.1 In addition to the items enumerated in subclauses 9055.1 and 9055.2 hereof, any other equipment which is required for a particular class of locomotive, may also be issued as personal kit, provided such additions are covered by suitable local instructions.

9056.3.2 Drivers and drivers' assistants must sign receipts for personal kit issued to them, and suitable records of all issues and correspondence in this regard must be kept by issuing depots.

9056.3.3 Drivers and drivers' assistants are responsible for ensuring that their personal kit is kept in good condition and complete. This kit must be kept in facilities provided for this purpose, when the personnel concerned are not on duty. Personal kit is subject to periodical inspection by the Section Manager (Train Traffic).

9056.3.4 Personal kit belongs to the depot which issued it and must be returned to that depot when the personnel concerned is transferred.

9057.0 VOID

9058.0 VOID

9059.0 VOID

9060.0 LOCOMOTIVES UNDER REPAIR IN LOCOMOTIVE SHEDS OR YARDS: PROTECTION OF EMPLOYEES

9060.1 Every locomotive under examination or repair in a locomotive shed or yard must be protected by red discs or red flags during daylight, and by hurricane lamps with red shades during darkness or during any period of the day when visibility is poor or lighting is bad. These protective devices must be exhibited in such manner as to be clearly visible from each end and either side. A special clamp is provided for placing over the ledge of the cab window of a locomotive. This clamp has a red disc fixed thereto, and is also provided with a hook for suspending a hurricane lamp during darkness or at other times, when necessary. (When a clamp and discs are not available during the day, a red flag must be used for protection.)

9060.2 Sufficient discs or flags must be available for each employee whose duties include pit examination and repairs. Each of these employees must be supplied with two discs or two flags for his personal use.

9060.3 Discs and flags must be indelibly marked with the name of the employee to whom they are issued.

9060.4 Discs and lamps must be kept in a clean condition, and flags renewed when necessary.

9060.5 Sufficient hurricane lamps of the approved type must be kept in depot stores or supervisors' offices to suit the number of employees affected, i.e. those employed on night shift or who are required to use lamps owing to bad lighting or poor visibility.

9060.6 Discs, flags and lamps must conform to the design and size indicated on the approved drawings.

9060.7 When discs, flags or lamps are displayed on a locomotive, such locomotive must not be moved until the employee carrying out repairs has removed the flags, discs or lamps, and he has withdrawn, and the locomotive is in a condition to be safely moved. No other work on, or the servicing of a locomotive is allowed unless a clear understanding is arrived at with the employee using the discs, flags or lamps, as the case may be.

9061.0 VOID

9062.0 VOID

9063.0 VOID

9064.0 VOID

9065.0 VOID

9066.0 FLUSHING AND WASHING OF DOMESTIC WATER TANK-WAGONS

- 9066.1 Tank-wagons used for the conveyance of water for domestic use must be washed out at intervals not exceeding six months. The employees responsible for the wash out must wear overalls and rubber boots when domestic water tank-wagons are cleaned out.
- 9066.2 At depots where carriage cleaners and/or watering personnel are employed, the foreman carriage cleaner and/or leading hand (train watering) must clean and fill the tanks when necessary, under the supervision of the official in charge of the depot.
- 9066.3 At wagon maintenance depots where there are facilities for the descaling of tank-wagons for the conveyance of domestic water, the wagon maintenance personnel is responsible for the descaling and flushing of the tank-wagons. In all other cases the tank-wagons for descaling must be forwarded to one of the following workshops, whichever is nearest: Salt River, Germiston, Uitenhage, East London or Durban.
- 9066.4 Descaling must, unless otherwise laid down, be done by means of steel brushes. Where the internal surface of the tank has not yet been painted steel brooms must be used to sweep up the scale and dirt. Where the internal surface of the tank has been painted, scrubbing brushes must be used to remove any deposit of dirt on the internal surface. These brooms and brushes must be used exclusively for the cleaning of watertanks and not for any other purpose.
- 9066.5 The date on which a tank-wagon, allocated specifically for the conveyance of domestic water, is descaled and flushed, together with the depot code must be recorded on a stencilled ladder on the tank.
- 9066.6 After being filled with domestic water, all tank-wagons must be chlorinated by the consumer. The correct quantity HTH for each tank-wagon for domestic water for a specific area is calculated and prescribed by the risk professional.
- 9066.7 Before a tank-wagon is filled, the point of the hose and nozzle must be sterilised in a solution of HTH chlorine and water.
- 9066.8 The official in charge supervising the refilling of tank-wagons must see that tank-wagons are filled hygienic. He must, by inspection, ascertain whether descaling or flushing is necessary.
- 9066.9 Risk professionals must make regular inspections on all tank-wagons for domestic water, as well as refilling points, refilling facilities and procedures and he must report any defect at the refilling points to the official in charge.
- 9066.10 The risk professional must immediately be advised of any anomalies in respect of health matters regarding tank-wagons for domestic water, refilling points and procedures.

9067.0 REWARD FOR DETECTION OF FLAWS IN LOCOMOTIVES AND ROLLING STOCK

9067.1 Locomotives

- 9067.1.1 A reward will be paid to any employee of the locomotive shed personnel, who is exclusively engaged on locomotive shed work, and who detects, a bona fide flaw – such as a flawed axle or defective crank pin – in a locomotive. The reward must be recommended by the technical supervisor or other official in charge of the shed and will be paid, if approved by the Chief Executive (Spoornet).

9067.2 Rolling stock

- 9067.2.1 A reward will be paid to the wagon maintenance personnel, wheel turner or other employee who detects a defective axle or fractured tyre belonging to any rolling stock, when it is not the duty of such employee to examine wheels and tyres for defects unless the circumstances are exceptional.
- 9067.2.2 The Senior Manager (Transwerk) of the nearest workshop must decide as to the genuineness of the defect, his decision in all cases will be final and he only may issue a voucher for payment.

9068.0 EXAMINATION, UPKEEP, ETC., OF LOCOMOTIVE BRAKES

9068.1 Examination of locomotive brake gear by shedmen

- 9068.1.1 The shedman, or other employee appointed by the technical zone manager (traction) or supervisor in charge, must test the vacuum, air and hand brakes, as the case may be, on all locomotives after each trip, see that the brakes are in good working order, and the brake blocks fit against the wheels when the brake is applied. [The vacuum or air brake must be tested by means of the testing discs (to drawing No. S.8430/2).]
- 9068.1.2 All defects must be booked at once by the shedman and attention must immediately be given thereto by the technical supervisor. The shedman must also report, in writing, to the technical zone manager (traction) or supervisor in charge, as the case may be, the nature of any defects located.

9068.2 Oiling and upkeep of brakes on locomotives by the shed personnel

- 9068.2.1 All vacuum, air and hand brakes, as the case may be, on locomotives must be examined at least once each month by the technical supervisor in charge. The date when the locomotive was examined, and the condition of the brakes, must be recorded in a special book kept for the purpose and duly signed by the aforementioned official against each entry.
- 9068.2.2 The oiling of all brake gear must be done at least once a week, the oil holes and screws being cleaned at the same time.
- 9068.2.3 Vacuum exhausters and ejectors must be kept in good working condition, set for 64 kPa, and with the testing disc should register 44 kPa.

9068.3 Locomotives not to leave shed with defective break gear

- 9068.3.1 The technical zone manager (traction) or technical supervisor in charge is held responsible for seeing that locomotives do not leave the shed with defective brake gear. A driver must also test the brakes on his locomotive before leaving the shed.

9068.4 Section Manager (Train Traffic) must render a statement

- 9068.4.1 The Section Manager (Train Traffic) must test the air, steam, hand and vacuum brakes of every locomotive inspected by him and, at the end of each month, must render a return to the Operations Manager, giving the numbers of the locomotives inspected.

9069.0 EXAMINATION OF LOCOMOTIVE AND TENDER WHEELS AND AXLES

- 9069.1 Locomotive, and tender wheels in the case of steam locomotives, must be examined by drivers at least once per trip, either at some convenient stopping place or on conclusion of the run. Each tyre must be tapped with a hand hammer for the purpose of detecting defects.
- 9069.2 Locomotive wheels and axles must be examined in the shed by the technical supervisor at least once a month, and a record of each locomotive must be kept in a special book, giving the following information:

Locomotive No. Date of examination.....
Signature of technical supervisor making the examination.....

9070.0 – 9109.0 VOID

9110.0 VEHICLES DAMAGED DURING TRAIN OR SHUNTING MOVEMENTS

- 9110.1 If any defect is observed or damage is incurred during shunting operations, the official in charge must be advised promptly so that action may be taken to ascertain the actual cause and on whom responsibility rests. Wagon maintenance personnel must also be notified of such defect or damage.

9111.0 DISPOSAL OF DEFECTIVE COUPLERS, ETC.

- 9111.1 If couplers or other coupling gear, or other parts of a vehicle broken during shunting operations or during train movements, the defective or damaged parts must be handed to the driver concerned who, in turn, must hand them over to the locomotive official in charge. In the event of a train parting load in section, or at a station, the driver must comply with the provisions of clause 9123.0 hereof.

9112.0 ACTION TO BE TAKEN IF VEHICLE IS UNFIT TO RUN

- 9112.1 A wagon or other vehicle unfit to run must not be loaded. If a defect is discovered after loading has commenced, the vehicle must be unloaded immediately, and if the defective vehicle cannot be repaired on the spot by a technical official or wagon maintenance personnel, it must be sent to the workshops.

9113.0 LOCOMOTIVES OR VEHICLES IN NEED OF WORKSHOP REPAIRS TO BE LABELLED AND CENTRAL OPERATING OFFICE ADVISED

- 9113.1 When damaged vehicles and locomotives are labelled to the workshops for repairs, the labels must be endorsed, if possible, showing when and where the damage occurred. A report of the circumstances must in each case be submitted immediately to the central operating office concerned. Label T51 must be affixed to all vehicles sent to the workshops for repairs.

9114.0 FULL DESCRIPTION OF SPARE PARTS TO BE GIVEN WHEN ORDERING THEM

9114.1 Station officials in charge, when advising the technical zone manager (traction), or wagon maintenance personnel, as the case may be, of couplers or draw-gear requiring repairs or renewals, must state the number of the vehicle so that a suitable spare part may be supplied. A full description of the type and size of the coupler must be given in the case of a broken coupler and any other spare parts that may be required.

9114.2 Automatic couplers are marked with a raised letter on top of the coupler heads to indicate their type, and this index letter must be quoted when ordering couplers for replacement. Where no index letter appears, the cross-sectional dimensions of the shank must be given.

9115.0 OPERATIONS MANAGER TO BE INFORMED WHEN REPAIRS EFFECTED

9115.1 Station officials in charge, technical zone managers (traction), and other employees concerned, must promptly notify the central operating office of all repairs carried out to passenger vehicles, wagons, etc., at their stations or depots.

9116.0 WHEN DAMAGED VEHICLES MAY BE LOADED

9116.1 Vehicles bearing "Permissive" repair labels may only be loaded with traffic to a station short of a wagon maintenance depot.

9117.0 DRIVERS' ASSISTANTS TO ADVISE STATION PERSONNEL WHEN VEHICLES ARE IN DAMAGED CONDITION

9117.1 In order to ensure safe working, drivers' assistants of trains by which damaged vehicles are hauled, must notify the station personnel thereof at any point en route where they are assisted in shunting operations, and also at depot stations before handing over their trains.

9117.2 When damaged vehicles arrive at a depot or other centre where trains are divided or re-marshalled, the personnel must not allow them to stand unprotected on a shunting road, but must, as soon as possible, place such vehicles in a position where they will not require to be moved until they have received the necessary attention. (See clause 9031.0 hereof.)

9118.0 VOID

9119.0 DAMAGE TO ROLLING STOCK IN PRIVATE SIDINGS

9119.1 A close examination must be made of rolling stock and equipment received from private sidings, and should any damage or deficiency be discovered, the driver's assistant or shunter, as the case may be, must promptly direct the siding owner's or his representative's attention to the matter and obtain a written acknowledgement of responsibility thereof. The employee discovering the defect or damage must submit details thereof in writing. The official in charge must thereafter report the circumstances to the Operations Manager.

9119.2 Drivers' assistants or shunters must satisfy themselves that vehicles are in good order when placing them in private sidings. Any defect or damage must be recorded and a written report made to the official in charge, who must take prompt action to have any defects repaired.

9120.0 VEHICLES DETACHED AT STATIONS, CROSSING PLACES AND INTERSIDINGS FOR REPAIRS

9120.1 Particulars of vehicles detached from trains for attention at stations, crossing places and intersidings must be promptly reported to the train-control officer controlling the section, and such advice must include the nature of the defect, the number of the vehicle and from which train it was detached. In the case of loaded vehicles the nature of the contents must be stated.

9120.2 Where vehicles conveying urgent or perishable traffic are delayed, particulars must also be reported to the central operating office, so that special action may be taken to ensure expeditious transit.

9120.3 In event of loaded wagons in transit being detached with hot axle-boxes or other defects, the destination station must be promptly advised.

9120.4 The destination station must also be notified when repairs have been effected and the wagon is despatched to its destination.

9121.0 AXLE-BOXES OF VEHICLES RUNNING HOT, OR VEHICLES OTHERWISE RENDERED DEFECTIVE

- 9121.1 Locomotive personnel must keep careful watch en route with a view to detecting the first sign of a heated axle-box or other defects on their trains, and special examinations must be made by drivers' assistants as opportunity presents itself. [See train working rule No. 184(4).]
- 9121.2 Drivers can minimise damage to hot axle-boxes by giving attention to them before the heating becomes serious. [See train working rule No. 115(2).]
- 9121.3 When a driver's assistant finds that an axle-box of any vehicle on his train is heating or hot, he must at once advise the driver so that the latter may oil it, except in the case of roller-bearing axle-boxes, and at the same time decide whether the vehicle is fit to run to the next wagon maintenance depot.

9122.0 VEHICLES FITTED WITH ROLLER-BEARING AXLE-BOXES

- 9122.1 The roller-bearing axle-boxes are easily distinguished as the trade name "Timken", "SKF", etc., as the case may be, is casted on the end caps of the package unit roller-bearings and on the lids of roller-bearing axle-boxes. In addition, goods vehicles have the distinctive marking of three yellow circles on the four corners of such vehicles. On light coloured vehicles the yellow circles are painted on a black background whilst on dark coloured vehicles only the yellow circles are painted.
- 9122.2 The hand brakes (wheel operating handles), on main line coaches are fitted to the sole bar on each side, and approximately in the centre of the coaches.
- 9122.3 The hand brakes of motor coaches are situated inside the coaches, in the driver's compartment, on the end framing.
- 9122.4 For the application of the brakes, the hand-brake wheel must be operated in a clockwise direction.
- 9122.5 The hand brakes of vehicles fitted with roller-bearing axle-boxes must be applied when a vehicle is standing loose from another vehicle, as, if the vacuum or air brake is not in operation roller-bearing vehicles are liable to be set in motion on a gradient by wind or other extraneous influence.
- 9122.6 When two or more vehicles fitted with roller bearings are left standing coupled together, the hand brake must be applied on at least one vehicle. Before moving a vehicle(s) away from such vehicle(s), the personnel concerned must satisfy themselves that the hand brake is applied on at least one of the vehicles remaining.
- 9122.7 Great care must be taken to ensure that hand brakes are released before vehicles are set in motion, otherwise skidded wheels will result. The brakes of all coaches on a train must be checked before departure of the train.
- 9122.8 All foreign vehicles fitted with roller bearings, which are permitted to work over Spoornet lines, will have distinctive markings. Goods vehicles will have the distinctive marking of three yellow circles on a black background on the four lower corners of such vehicles.
- 9122.9 These foreign roller-bearing vehicles are fitted with hand brakes similar to Spoornet type, and such vehicles must have the hand brakes applied when they are standing uncoupled from any other vehicle, as, if the vacuum or air brake is not in operation, the roller-bearing vehicles are liable to be set in motion, even on a level, by wind or other extraneous influences.
- 9122.10 When two or more vehicles fitted with roller-bearings are left standing coupled together, the hand brakes must be applied on at least half the number of vehicles, irrespective of whether the vacuum or air brake is in operation or not. Before moving one or more of such vehicles, the personnel concerned must satisfy themselves that sufficient hand brakes, as laid down above, are applied on the remaining vehicle or vehicles.
- 9122.10.1 When a train, consisting either in part or wholly of vehicles fitted with roller-bearings, is required to have the vacuum or air brake released at any depot en route for the purpose of examination or adjusting the brakes, or for any reason, it is the responsibility of the wagon maintenance personnel to ensure that sufficient number of hand-brakes is applied, if necessary, to keep the vehicle(s) stationary.
- 9122.11 Great care must be taken to ensure that hand brakes are released before the vehicles are set in motion, otherwise skidded wheels will result.
- 9122.12 Vehicles with roller-bearings must not be detached from the locomotive or other vehicle unless the hand brakes of the roller bearing vehicles have been applied.

9123.0 DRIVER' AND DRIVERS' ASSISTANTS DUTIES IN CONNECTION WITH DEFECTIVE VEHICLES OR TRAINS PARTING LOAD

9123.1 Driver must have necessary labels and train parting reports

9123.1.1 Drivers working trains must be supplied with T49 labels ("For repairs"), T50 ("Not to go") and T498 train parting reports.

9123.2 Defects on vehicles

9123.2.1 When defects are noticed on a passenger vehicle or wagon and such vehicle is considered safe to travel, the driver must complete and attach T49 labels thereto. In the event of the automatic couplers on any vehicle parting, the driver must comply with the provisions of subclause 9123.3 hereof. The locomotive personnel must report full particulars to the train-control officer controlling the section, who must advise the central operating office accordingly. The nature of the defects must in all cases be shown on the labels for the information of the wagon maintenance personnel.

9123.2.2 If any doubt exists whether the vehicle is serviceworthy, the driver must complete T50 labels ("Not to go") and attach them thereto. The nature of the defects must in all cases be shown on the labels for the information of the wagon maintenance personnel.

9123.2.2.1 The driver's assistant must draw the attention of the official in charge to the defects and the latter must arrange to detain the vehicle(s) and advise the train-control officer. The official in charge must advise the central operating office when the vehicle has been repaired and cleared.

9123.3 Train parting load

9123.3.1 When a train becomes divided accidentally and the driver's assistant is sent to couple up the load, he must go back the full length of the train and ensure that the train is complete by making sure that a marker is attached to the last vehicle.

9123.3.2 Besides ensuring that a marker is attached to the last vehicle, the driver's assistant must compare the number of the last vehicle with the number on the list of vehicles (see clause 9030.2 hereof).

9123.3.3 If it is found that there is no marker on the last vehicle, but the number corresponds with the number on the list of vehicles, the driver's assistant may return to the locomotive and the train may proceed to the next place where a marker can be attached.

9123.3.4 If it is found that there is no marker attached to the last vehicle and the number of the last vehicle does not correspond with the number on the list of vehicles, the driver's assistant must go back further and ensure that there is no vehicles left in the section.

9123.3.5 In any instance of uncoupling of couplers of a passenger, mixed or goods train, either at a station or in the section, the driver's assistant must personally inspect the uncoupled couplers before they are again coupled, to determine whether there are any defects which could possibly have caused the uncoupling, and the nature of the defects. In the event of the automatic couplers on any vehicle parting, the driver's assistant must complete a train parting report (T498) and attach it to the defective vehicle, or to either of the two vehicles involved in the parting, where no definite cause can be established. The driver's assistant must also attach a repair label (T49), endorsed "train parting", to the vehicle(s) involved.

9123.4 The wagon maintenance personnel, after having been advised of vehicles having been involved in a train parting, must look for and complete the reverse side of the T498 train parting report. The completed T498 train parting report must be submitted to the Operations Manager.

9124.0 DRIVER TO DECIDE WHEN DEFECTIVE VEHICLE IS TO BE DETACHED

9124.1 The driver must in all cases decide whether it is necessary to detach a defective vehicle at a station, interloop, crossing places or intersiding.

9125.0 USE OF EMERGENCY COUPLING SETS

9125.1 Emergency coupling sets may be used for the following purposes:

9125.1.1 As an additional coupling between vehicles which have the regular couplers in good order to ensure additional safety as provided for in this appendix or other relevant instructions;

9125.1.2 as an additional coupling between vehicles where, after a parting, the regular couplers are suspect but apparently still able to function. The emergency coupling set may become the only coupling between the relevant vehicles in the event of the suspect regular couplers again parting en route; and

9125.1.3 as the only coupling between vehicles where a regular coupler is defective or missing.

9125.2 Trains on which an emergency coupling is used as an additional coupling as indicated in subclause 9125.1.1 above, may travel at the maximum permissible speed for the type of train concerned, unless otherwise indicated.

- 9125.2.1 The speed of trains on which an emergency coupling set is used as indicated in subclause 9125.1.2 and 9125.1.3 above, must not exceed 40 km/h unless the driver is satisfied that it is safe to do so, bearing in mind the position in which the vehicle with the defective coupler is marshalled in the train and the nature of the line.
- 9125.3 If the portion of the load behind the emergency coupling does not exceed 850 tons, and the defective coupler is in position, the load complete may be cleared with the emergency coupling set as the only coupling.
- 9125.3.1 If the portion of the load behind the emergency coupling exceeds 850 tons, or if the regular coupler is missing, the first portion, including the vehicle with the defective or missing coupler, must be cleared first, and arrangements made to clear the remaining portion of the load thereafter.
- 9125.4 As emergency coupling sets and the brackets to which they are secured are not capable of withstanding high forces, it is essential that the jerking of trains be avoided.
- 9125.5 Disposal of defective vehicle(s)**
- 9125.5.1 Should the nature of the coupler or the circumstances be such that the driver considers it necessary or desirable to detach the defective vehicle before reaching the next wagon maintenance depot, he must advise the train-control officer of his intention before doing so.
- 9126.0 VOID**
- 9127.0 SKIDDED WHEELS**
- 9127.1 Drivers, drivers' assistants, shunters and other employees concerned must exercise care in the application of brakes so as to prevent the skidding of wheels. It should be understood that by allowing the wheel to revolve, a far more effective brake is obtained. [See train working rule No. 134(1)(b).]
- 9127.2 All instances of skidded wheels coming to notice, must be immediately reported if the damage is not already marked for attention and the fullest information must, in every instance, be submitted so that responsibility for the damage may be quickly and clearly defined.
- 9127.3 When the wheels of any locomotive, or tender, or any other vehicle, have been skidding, fitters or wagon maintenance personnel, or any other employee to whom has been delegated the duty of the examination of the wheels, must take a special note thereof and submit a report to his official in charge informing him:
- 9127.3.1 in the case of a locomotive:**
- 9127.3.1.1 Locomotive number;
- 9127.3.1.2 wheel or wheels found skidded;
- 9127.3.1.3 extent of skid; and
- 9127.3.1.4 reason for skid;
- 9127.3.2 In the case of a vehicle other than a locomotive:**
- 9127.3.2.1 The action to be taken is set out in clause 905.0 of the Carriage and Wagon Handbook (Volume 1) (carriage and wagon) and other employees employed on the examination, maintenance and supervision of vehicles.
- 9127.4 Wheels are considered skidded and must be removed for attention when the length of the skid i.e. the flat on the circumference measures or exceeds the following dimensions:
- 9127.4.1 Passenger vehicles (including electric motor coaches and driving trailers) 32 mm.
- 9127.4.2 Wagons 57 mm.
- 9127.4.3 Electric and diesel locomotives:
- 9127.4.3.1 Driving wheels 57 mm.
- 9127.4.3.2 Bogie wheels At first sign of a skid, wheels must be removed for attention to bearings.
- 9127.4.4 The measurement of a skid must be made circumferentially and not across the tread.
- 9127.5 Wheels having shorter skids than the dimensions given above must remain in service, but in the case of locomotives, whenever the wheels are examined, all skids must be measured by the responsible employee, and entered into the repair book, indicating the length of each skid.

9127.6 After each trip, drivers must enter in the repair book, all skids existing on locomotives driven by them, irrespective of whether the skids have been previously booked or not.

9127.7 Slack tyres

9127.7.1 When a tyre is found to be slack the vehicle must be sent to the nearest wagon maintenance depot for repairs. If the vehicle is loaded, the load must be transhipped.

9127.7.2 An empty vehicle detached with a loose tyre must be examined by the technical zone manager (traction) (locomotive depot) or other responsible official. If it is then decided that the vehicle is fit to travel to an examining depot, it must be conveyed during daylight only. The brake must be rendered inoperative by isolating the cylinder, and this is done by disconnecting the cylinder hose pipe, at the junction of the train pipe, and plugging the latter. Wooden plugs only must be used for this purpose. A "Not to be loaded" label must be affixed to the vehicle.

9128.0 VOID

9129.0 BROKEN AXLES AND TYRES

9129.1 In all instances of breakage, or of the discovery of a flaw on an axle or tyre of a vehicle, the broken or defective parts must be immediately sent to the nearest workshop for inspection. Particulars of despatch must be notified to the Senior Manager (Transwerk) concerned as well as to the central operating office.

9129.2 The number of the vehicle from which the parts have been removed, must be painted or stencilled on the defective parts. Labels (tin if possible) must be securely affixed to the defective parts. The consignment note or waybill for the broken or defective parts must contain a full description of the parts, as well as the number of the vehicle from which they were removed.

9129.3 Wheels sent to workshops from transportation depots and out-stations must have the name of the forwarding station or depot stencilled in white lettering on the axles.

9130.0 PERIODICAL EXAMINATION OF MATERIAL WAGONS AND OTHER VEHICLES

9130.1 Where wagons are used for long periods on material work and other maintenance or construction work, it must be arranged with the official in charge of the nearest wagon maintenance depot for the vehicles to be thoroughly examined at regular intervals. The official in charge concerned must keep a complete record of the numbers of the vehicles and the date of each examination.

9131.0 EXAMINATION OF WATER TANK-WAGONS

9131.1 Where water tank-wagons are kept for any length of time, officials in charge must ensure that the vehicles are thoroughly examined at intervals during the period they are not actually in service.

9132.0 DAMAGED OR DEFECTIVE PARTS OF VEHICLES

9132.1 Except as provided in clauses 9111.0, 9135.0 and 9136.0 hereof, fractured, damaged or defective parts of vehicles must be examined either by the zone manager (traction) or wagon maintenance official in charge, or any other employee deputed by them. Where it is obvious that the defect is due to normal wear and tear or to an accident, or in isolated cases to faulty material, such part must be treated as scrap and must not be forwarded to the nearest workshop for further examination.

9132.2 Where repetitions of certain types of fractures or defects occur, which may indicate inherent weaknesses of design or workmanship, where material is consistently faulty, or where the defect is something out of the ordinary and an investigation seems desirable, the defective or damaged parts must be collected and forwarded to the nearest workshop and the Senior Manager (Transwerk) advised, in writing, of full details of the facts concerning the parts. The Senior Manager (Transwerk) must then decide whether the case merits further attention and, if so, the action to be taken.

9133.0 VOID

9134.0 VOID

9135.0 DETENTION OF FOREIGN VEHICLES THROUGH DEFECTS OR OTHER CAUSES AND DELAY OF FOREIGN EQUIPMENT

9135.1 When a foreign vehicle is detached at a station on a Spoornet line due to a defect or other cause, particulars of the delay and reason thereof must be submitted to the National Operations Centre (NOC). Unusual delay to foreign ropes, tarpaulins or chains, whether used on foreign or Spoornet vehicles, must also be reported.

9135.2 When foreign vehicles have been repaired, such vehicles must receive preferential despatch.

9135.3 When a foreign vehicle is unfit to travel on its own wheels and has in consequence to be loaded onto another vehicle, or if the damage renders the vehicle unsafe for carrying traffic, the following details must be included in the return submitted to the National Operations Centre (NOC):

9135.3.1 Date and time when damage took place.

9135.3.2 Particulars of despatch to the foreign railway concerned.

9135.3.3 Station to which consigned.

9135.4 Vehicles of foreign railways and of Spoornet may be included on the same return.

9136.0 SUPPLY OF SPARE PARTS TO FOREIGN VEHICLES

9136.1 In cases where foreign vehicles are fitted with Spoornet couplers, wheels or other spare parts, the Regional Operations Manager (ROM), Transwerk, supplying the material must take steps to have the parts belonging to Spoornet returned by reporting the matter to the National Operations Centre (NOC).

9136.2 A repair label, on which particulars of Spoornet parts affixed to the vehicle must be endorsed, must be attached to the foreign vehicle fitted with Spoornet material.

9136.3 Spoornet vehicles damaged on foreign lines will be similarly treated, and the Regional Operations Manager (ROM), Transwerk, to whom the vehicles are returned, must arrange for the prompt removal and despatch to the owning foreign railway of the couplers, wheels. etc., temporarily supplied.

9137.0 DISPOSAL OF DAMAGED COUPLERS, WHEELS AND OTHER PARTS

9137.1 All damaged couplers, wheels and other parts removed from foreign and Spoornet rolling stock, must be consigned to the dedicated store holding-area for failed components/parts in the Koedoespoort Workshop (Warehouse 138A/Steelroom), Pretoria, for examination by the Materials Very Important Technology Owner (VIT), Transwerk.

9137.2 All damaged couplers, wheels and other parts, irrespective of whether it is foreign or Spoornet material, must, before despatch to the Koedoespoort Workshop, be labelled, and in addition to the label, be clearly marked, i.e. the number of the vehicle from which it has been removed must be painted on the parts.

9137.3 Before returning the damaged couplers, wheels and other parts to the foreign railways concerned, it must be clearly labelled, the number of the wagon from which it has been removed and the cause of breakage or damage must be shown on the label.

9138.0 PARTS OF ROLLING STOCK FOUND ON OR NEAR THE LINE

9138.1 Parts of vehicles or locomotives found by track personnel or other employees on or near the line must be conveyed or despatched to the nearest depot.

9139.0 EXAMINATION OF VEHICLE ARRIVING AT OR DEPARTING FROM A STATION

9139.1 Except where otherwise provided for by the Chief Executive (Spoornet), all vehicles arriving at or departing from a station or in a marshalling yard where wagon maintenance personnel are stationed, must undergo the prescribed examination.

9139.2 The train-control officer or senior yard official, or his/her representative, as the case may be, must timeously advise the wagon maintenance personnel of a train which is being admitted to or arranged to depart from a line which is not considered part of the station or marshalling yard, or which is not normally used for the admittance and/or departure of trains, as the case may be. [See train working rule No. 115(1).]

9140.0 VOID

9141.0 VOID

9142.0 VOID

LEFT OPEN FOR FUTURE USE.

9143.0 OFFICIAL IN CHARGE TO BE ADVISED OF COMPLETION OF EXAMINATION

9143.1 Wagon maintenance personnel must inform the responsible official of the completion of the examination of vehicles, and such examination, in the case of passenger vehicles, should be completed before the vehicles are placed at the platform, and in the case of goods vehicles before they are shunted into position for loading.

9144.0 PROTECTION OF WAGON MAINTENANCE PERSONNEL AT OUT-STATIONS AND YARDS

9144.1 Wagon maintenance personnel or other employees proceeding to out-stations and yards to effect repairs to vehicles must, before commencing work, report to the train-control officer controlling the section or official in charge of the yard, and obtain permission to effect the necessary repairs. The wagon maintenance personnel must then carry out the instructions contained in subclause 11003.5 hereof. On completion of the work the relevant official must be informed accordingly.

9145.0 SUPERVISORY PERSONNEL MUST SEE THAT PROPER EQUIPMENT IS PROVIDED

9145.1 Supervisory personnel must see that wagon maintenance personnel or other employees sent to out-stations to effect repairs to vehicles are provided with the required number of discs (lamps if necessary) and detonators.

9146.0 LOADING AND OFF-LOADING OF WAGONS AT SIDINGS AND LOADING PLATFORMS: OPERATING OF ISOLATING AND EARTHING SWITCHES

9146.1 Loading points where loading and off-loading of wagons may take place in safety on electrified sections are demarcated by means of warning notices (see clause 202.0 of the Electrical Safety Instructions). These places are either not wired or are provided with isolating and earthing switches and employees in charge of shunting movements must ensure that wagons are placed within the boundaries of the place where loading and off-loading is permitted.

9146.2 The normal position of the isolating and earthing switch is in the "power off" position, i.e. with the overhead wires "dead" and the switch locked in that position by means of a special lock. Except at places where the isolating and earthing switch keys are locked electrically in accordance with subclause 7011.2, the keys must be kept in safe custody by the train-control officer, yard master or other designated official, hereinafter referred to as the issuing official.

9146.2.1 Except at places where the isolating and earthing switch key is locked in terms of clause 7011.0, a special book with columns for the date, key No., time and signature of recipient when the key was issued, as well as the date, key No., time and signature of issuing official when the same key is returned, must be kept at each place.

9146.2.2 Each time the key is issued or returned, the employee receiving the key must sign the book.

9146.2.3 In addition to the special lock mentioned in subclause 9146.2 some siding users also use a private lock to lock the isolating and earthing switch in the "power off" position.

9146.3 When it is necessary to perform shunting movements with an electric locomotive at a loading area equipped with an isolating and earthing switch, or when the power supply must, for whatever reason, be switched on, the driver's assistant, yard official or other person in charge of the work, hereinafter referred to as the responsible person must, before unlocking the isolating and earthing switch, first warn all persons in charge of loading and off-loading operations in writing of his intention to turn on the power by completing paragraph A of the "Notice to siding users in connection with the switching of the electric traction power supply" (see specimen at the end of this section) and obtaining their signatures in paragraph B. He must also, by personal observation ensure that no persons are on or in open wagons or on vehicle roofs and that loading or off-loading operations or any other work involving the handling of long lengths of material with which it is possible to make contact with the overhead wires are stopped and that everything is in order for making the overhead wires in the siding "live". Where the isolating and earthing switch is also locked with a private lock, he must request the siding user to remove his private lock.

9146.3.1 Should an isolating and earthing switch have to be placed in the "power on" position and no siding user whatsoever is present, the notice must none the less be completed with an entry that no siding user was present. In these circumstances the responsible person must nevertheless be on the look out and should a siding user arrive, his signature must be obtained.

9146.4 Whilst the power is "on" the responsible person must see to it that loading or off-loading operations are not resumed.

9146.5 Immediately after completion of the work, the responsible person must ensure that the switch is placed and locked in the "power off" position.

- 9146.5.1 After locking the isolating and earthing switch in the "power off" position and ensuring by visual inspection that the switch blade has operated correctly (withdrawn from the live contacts and connected to the earthed contacts), all persons in charge of loading and off-loading operations must be notified in writing that the power supply is switched off and they must acknowledge it by giving their signatures in paragraph C of the *"Notice to siding users in connection with the switching of the electric traction power supply"*. Thereafter loading and off-loading operations may resume. Where a siding user also provides his own private lock to lock the switch, he must be requested to reapply his lock.
- 9146.6 The notice together with the key must be handed to the issuing official who must keep the notice in safe custody for a period of 12 months.
- 9146.7 Should a train hauled by an electric locomotive have to shunt at an interloop, intersiding or unattended place in the section equipped with an isolating and earthing switch or when, for whatever reason, the isolating and earthing switch at that place must be placed in the "power on" position, the responsible person must obtain the key at the controlling station in accordance with subclause 9146.2. The issuing official must, except where otherwise stipulated in the Local Appendix, notify the responsible person at which station the key must be handed in. In such cases the responsible person must hand in the notice at his home depot where it must be kept for 12 months.
- 9146.7.1 As soon as the shunting operations or other work is completed and the isolating and earthing switch has been locked in the "power off" position, the responsible person must, if possible, notify the issuing official accordingly. On arrival at the place as instructed by the issuing official, the key must be handed to the official concerned. If the receiver is not the issuing official at the controlling station, the receiver must send the key along with the driver of the first suitable train to the controlling station and notify the controlling station accordingly. The receiver must, even if it is not a key controlled by him, record the receipt of the key in his book according to subclause 9146.2.1.
- 9146.7.2 To obtain the siding key at places where it is locked electrically, the provisions set out in subclause 7011.2 must be complied with. In such cases the responsible person must hand in the notice at his home depot where it must be kept for 12 months.
- 9146.8 Should the method whereby keys for operating isolating and earthing switches are issued, controlled and kept at specified loading areas, vary from the abovementioned procedure, the additional instructions with regard to the operating of such switches or separate instructions for the sections concerned depicted in the Local Appendix, must also be complied with.

NOTICE TO SIDING USERS IN CONNECTION WITH THE SWITCHING OF THE ELECTRIC TRACTION POWER SUPPLY

A SWITCHING OF THE ELECTRIC TRACTION POWER SUPPLY			
(1)	Please note that the electrical power supply to the under mentioned siding(s) will be switched on.		
	Name(s) of siding(s)	Number of siding(s)	
(2)	Instruct all your employees to stop all loading and unloading operations and handling of long lengths of material near the overhead wires, to withdraw and stand clear of all rail vehicles. None of your employees may be permitted onto any rail vehicle or to handle long lengths of material near these siding(s) after the time and date as agreed to by you in B(1) below. You will be notified by the Spoornet Official when the traction power to the siding(s) has been switched off.		
(3)	AFTER THIS TIME ALL OVERHEAD TRACK EQUIPMENT OVER THE ABOVE MENTIONED SIDING(S) MUST BE TREATED AS "LIVE" AND DANGEROUS		
B ACKNOWLEDGEMENT OF RECEIPT OF NOTICE			
(1)	I (person in control of loading and unloading operations) hereby declare that I have read section A of this notice and it has been explained to me. I fully understand the contents thereof and I take full responsibility to withdraw the employees under my control and warn them accordingly before the time and date agreed to by me below.		
	Name and surname (in print)	Signature	Time as agreed
C SWITCHING OFF OF THE ELECTRIC TRACTION POWER SUPPLY			
(1)	I (Spoornet Official in control of the work) certify that the traction power supply to the siding(s) mentioned in section A has been switched off at the time and date noted directly below. Work on rail vehicles in the siding(s) and the handling of long lengths of material near the siding(s) may be resumed.		
	OVERHEAD TRACK EQUIPMENT OVER ADJACENT TRACKS MUST BE TREATED AS "LIVE" AND DANGEROUS		
	Signature	Employee No. and capacity	Time
(2)	NOTED (Person in charge of loading and unloading operations)		
	Name and surname (in print)	Signature	Time



SECTION 9

DUTIES AND RESPONSIBILITIES OF SHUNTERS, DRIVERS AND DRIVERS' ASSISTANTS. PROTECTION OF EMPLOYEES ENGAGED IN THE EXAMINATION AND REPAIRING OF VEHICLES (SEE TRAIN WORKING RULES NOS. 125 TO 145, INCLUSIVE)

9001.0 BRAKES: CONTROL OF SHUNTING MOVEMENTS

9001.1 All employees must be vigilant and cautious when conducting shunting movements

9001.1.1 The movements of diesel locomotives, when not attached to traffic, must be controlled by means of the straight air brakes and that of electric locomotives, by the proportional application of the locomotive straight air brakes. Hand brakes must be used as a last resort, only in case of emergency. When shunting, either hauling or propelling vehicles, in the case of electric and diesel locomotives, the vacuum brake must, if necessary, also be used. Before shunting is commenced the employee in charge of the shunting movement is responsible for advising the driver of the number of vehicles with vacuum coupled through as well as the total number of their mass and general composition. If, at this stage or later during the shunting movement the driver is not satisfied that he has adequate brake power available, he must advise the employee in charge of the shunting movement of the additional number of vehicles he requires the vacuum to be coupled through. When there are vehicles which may not be loose shunted (see train working rule No. 141) on the load, loose shunting may not be carried out with the load until such time as the vehicle/vehicles concerned has/have been detached from the load. The air brakes on electric and diesel locomotives may be used with discretion to supplement the vacuum brake on the vehicles where circumstances warrant this course. During shunting movements the brakes must always be applied judiciously to avoid damage to vehicles and/or the contents thereof. When gradients steeper than 1 in 400 have to be negotiated, particular care must be exercised to ensure that adequate brake power is available to control the shunting movements.

9001.2 Loose shunting

9001.2.1 Examination of hand brakes

9001.2.1.1 When vehicles are being "loose shunted", they must be controlled by means of hand brakes. Before shunting is commenced, the employee in charge of the shunting movement must ensure that the hand brakes are in proper working order so as to prevent such vehicles from striking other vehicles with undue force or coming in contact with stop blocks, or fouling other lines, or running away when the line is on a down gradient. (See train working rule No. 134.)

9001.3 Damage and defects to be reported

9001.3.1 All damage or defects to vehicles or coupling gear, arising during shunting, must be reported to the official in charge, who must ascertain the actual cause and the names of employees responsible. At depots, the wagon maintenance personnel must also be advised.

9002.0 SHUNTING OF PASSENGER VEHICLES AT STATIONS EN ROUTE: PASSENGERS AND OTHER PERSONS TO BE WARNED

9002.1 Passengers in passenger vehicles that have to be shunted at a station short of destination, must be advised thereof by the Train Manager prior to arrival at the station concerned.

9002.2 Before shunting is commenced, passengers must be requested to keep their seats. Passengers who have alighted, as well as other persons, must be requested to stand clear.

9003.0 EMPLOYEES NOT TO RIDE ON LOCOMOTIVE COWCATCHERS

9003.1 In no circumstances must employees stand or ride on the cowcatcher(s), or on the footplate in front of the smoke-box in the case of a steam locomotive, when the locomotive is in motion.

9004.0 VEHICLES CONTAINING EXPLOSIVES NOT TO REMAIN ATTACHED TO LOCOMOTIVE DURING SHUNTING OPERATIONS

9004.1 When several shunting movements have to be made with a train conveying explosives, the vehicles containing explosives must first be detached and must be placed in a safe position until the shunting is completed. (See train working rules Nos. 141 and 144, and subclause 1013.9 of this appendix.)

9005.0 LENGTH, MASS AND SPEED OF LOAD WHILE SHUNTING

9005.1 Discretion must be used in deciding the number of vehicles to be shunted at one time, and the speed of the movements, with due regard to the class of locomotive employed, the state of the permanent way, and the traffic and physical conditions obtaining at the place where the work has to be undertaken.

9006.0 SHUNTING IN BUSY YARDS OR FROM BOTH ENDS OF A YARD

9006.1 When shunting operations, involving the movement of vehicles from opposite ends of a line at one and the same time, are being carried out, the employee in charge must satisfy himself that a clear understanding is arrived at between the shunters at each end of the yard. In carrying out such shunting movements, precautions must be taken to guard against the vehicles coming into violent contact, and drivers must be vigilant and cautious and be prepared to comply with hand signals or radio instructions.

9006.2 It is the duty of the employee in charge of the movement, to see that precautions are taken to prevent the possibility of vehicles moving on to any running line or fouling the clearance marks of any adjoining line(s) or siding(s).

9007.0 PROTECTION OF LEVEL CROSSINGS NOT PROTECTED BY BOOMS: SOUNDING OF LOCOMOTIVE WHISTLE

9007.1 Shunting over level crossings must be performed with great care and every effort must be made to minimise inconvenience or delay to road traffic.

9007.2 When a train must stop at a station or crossing place where a level crossing is situated within its boundaries, the train-control officer must ensure that the train is stopped as far as possible from the level crossing.

9007.3 Except where otherwise provided in the local appendices, before locomotives or vehicles are shunted over a level crossing, the employee in charge of the shunting movement must ensure that the crossing is clear, that road traffic has been brought to a stop and that two employees, if available, prominently displaying a "danger" hand signal, one on each side of the crossing, is standing in a position so that it can be seen clearly by drivers of road traffic and by pedestrians. The "danger" hand signal exhibited to road traffic must be given by day by means of a red flag and by night by means of a red light.

9007.4 Except where otherwise provided in local appendices the driver must not permit his locomotive or any vehicle attached to his locomotive to foul a level crossing until he has received the prescribed hand signal from the employee in charge of the movement and then only after he has sounded the locomotive whistle in terms of this clause. In the absence of a hand signal he must stop short of the level crossing.

9007.5 Where barriers are provided, they must be closed before moving over the level crossing.

9007.6 The employee in charge of the movement must ride on the locomotive or on the leading vehicle in the case of a propelling movement in the direction of the movement and after he has ensured that road traffic has stopped, he may authorise the driver to proceed.

9007.7 When a train has to shunt over a level crossing on a station, interloop, token or order station, intersiding or other unattended place and no other personnel than the driver and the driver's assistant are available, the driver's assistant must afford protection and the following procedure must be followed:

9007.7.1 Where barriers are not provided, the locomotive or leading vehicle, as the case may be, must be brought to a standstill short of the level crossing.

9007.7.1.1 The driver's assistant must proceed to the level crossing and stop road traffic by means of a "danger" hand-signal (red flag by day – red light by night) before authorising the driver to obstruct the level crossing.

9007.7.1.2 When the leading vehicle or locomotive has passed over the crossing and the movement comes to a stand while the crossing is still obstructed by the vehicles, the driver's assistant must leave the point of protection in order to complete the shunting movement.

9007.7.1.3 If all vehicles are clear of the level crossing, the driver's assistant must again take up the point of protection before authorising the driver to carry out the next movement.

9007.7.1.4 The level crossing must be traversed at slow speed and the driver must be prepared to stop promptly should the necessity arise.

9007.7.1.5 The brake pipe couplings must be coupled up throughout the train.

9007.8 Except where otherwise provided in the local appendices, loose shunting over level crossings is prohibited.

9007.9 Attention is directed to the special instructions in local appendices regarding the shunting over and/or the protection to be provided at certain level crossings including level crossings in workshop areas, in marshalling yards, stores yards, locomotive depots and private sidings/service lines.

9007.10 Sounding of locomotive whistle

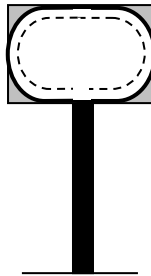
9007.10.1 The term "whistle" is described in train working rule No. 1 and provides for various warning devices which drivers of locomotives can use.

9007.10.2 A locomotive whistle can be a disturbance to the public, especially in residential areas, and should therefor only be used for prescribed and justifiable warning and signalling purposes. Unjustifiable use or use for other purposes is prohibited.

9007.10.3 When, owing to the type of warning device it is impossible to sound the "cock crow" signals provided for in the train working rules or other instructions, an equal number long whistles must be given on the siren or device provided.

9007.11 Use and observance of whistle boards

9007.11.1 A whistle board is provided to indicate to the driver to sound the locomotive whistle, and is an oval white board with a border of white reflective paint on the front, thus –

**9007.11.2 Locomotive whistle, siren or hooter to be sounded when train approaches level crossing**

9007.11.2.1 The driver of a train that approaches level crossings between the hours 05:00 to 23:00 must give a warning by sounding the locomotive whistle, siren or hooter of the train.

9007.11.2.2 When the train reaches the first whistle board as it is approaching a level crossing, or, in the absence of such a board, at a point 400 metres before reaching the level crossing, the driver must sound the locomotive's whistle, siren or hooter for at least 3 seconds. On reaching the second whistle board, or, in the absence of such a board, at a point 125 metres before reaching the level crossing, the driver must sound the locomotive whistle, siren or hooter continuously until the leading locomotive has passed the level crossing.

9007.11.2.3 Should, due to the view or other reasons, circumstances exist or arise at a particular level crossing which make it necessary for an additional locomotive warning whistle to be given in order to prevent an accident, the driver must give such additional warning.

9007.11.3 When a train approaches a level crossing during the hours 23:01 to 04:59, the locomotive whistle warning as described in subclause 9007.11.2.1 hereof is not legally required. The driver should not use the locomotive whistle for this purpose unless, in his judgement, the view or other circumstances at the particular level crossing require such action in order to prevent an accident.

9008.0 VEHICLES TO BE ATTACHED TO LOCOMOTIVE WHEN OUTSIDE THE AREA PROTECTED BY FIXED SIGNALS

9008.1 Vehicles must not be taken or placed on the running line outside the area protected by fixed signals unless they are attached to a locomotive, and then only when the provisions of train working rules Nos. 129, 131 and 220 have been complied with.

9009.0 HAND-SHUNTING OVER FACING POINTS: WHEN PERMITTED

9009.1 Except where instructions to the contrary are laid down in the local appendices, one wagon at a time may be hand-shunted over the facing points, from one line to another, in order to expedite the disposal of wagons, provided that, in addition to carrying out the provisions of train working rules Nos. 129 and 220, the operating official in charge personally supervises the movement. Before commencing to shunt, he must see that the hand brake is in good order, also that scotches are provided, so that the wagon may be kept under control.

9010.0 VEHICLES LEFT ON RUNNING LINE OUTSIDE HOME SIGNAL

9010.1 When it is necessary to leave a vehicle or vehicles on the running line outside a home signal, or outside the facing points where a home signal is not provided, the provisions of train working rules Nos. 129, 131 and 220 must be complied with.

9011.0 USE OF TURNTABLES

9011.1 As provided in train working rule No. 145 the speed of a locomotive passing over a turntable must not exceed 5 km/h. The lever of a turntable must not be dropped into the slot until the turntable has been completely stopped.

9012.0 DRIVERS' ASSISTANTS TO ASSIST TRAIN-CONTROL OFFICERS

9012.1 As soon as a goods train comes to a standstill at a non-interlocked station, the driver's assistant must, except where otherwise laid down, immediately approach the train-control officer and ascertain whether his assistance is required. (See clause 1031.0, of this appendix.)

9012.2 Drivers' assistants to operate points when instructed

9012.2.1 The driver's assistant of a train which has either to be crossed or passed at a non-interlocked station, may operate points and admit the opposing or passing train when orally instructed to do so by the train-control officer. (See train working rule No. 190.)

9012.2.2 The operation of the points by a driver's assistant will not relieve the train-control officer of his responsibility as laid down in train working rule No. 218.

9012.3 When driver's assistant to control shunting work

9012.3.1 At stations where a competent employee is not available to conduct shunting operations, the driver's assistant must take charge thereof.

9013.0 VOID**9014.0 STEP IRON AND HAND-GRIP TO BE USED**

9014.1 Step irons and handgrips on vehicles must be used by employees employed in shunting, to facilitate the application of the brakes.

9015.0 USE OF TOW ROPES

9015.1 When using a tow rope for shunting, the hook should be put in the towing loop of the wagon nearest the locomotive. When ready to move, the locomotive must start gently. If there should be reason to think that the towing loop is not strong enough, or a towing loop is not provided, the rope may be connected to the coupler shank, but great care must be used to prevent the rope becoming entangled in the wheels. The number of wagons towed must be determined by their mass, the gradient and other circumstances, care being taken not to move more wagons than can be towed safely at one time.

9016.0 VOID**9017.0 COUPLING OF VEHICLES AND LOCOMOTIVES**

9017.1 Locomotives and vehicles are equipped with various types of couplers. Employees who perform shunting or must couple locomotives or vehicles must familiarise themselves with the methods of establishing that the gravity locks are fully down in position.

9017.2 When an employee has to move in between two locomotives, a locomotive and a vehicle or two vehicles to adjust the knuckles or centre or adjust the couplers or test the gravity locks to ensure that they are fully down in position, or for any other reason whatever, the movement must be brought to a standstill before he moves in between the locomotives/vehicles concerned.

9017.3 Nobody may be between two locomotives, a locomotive and a vehicle or two vehicles when it is brought together to be coupled.

9017.4 The instruction for coupling the locomotives/vehicles may not be given whilst a person is still between the locomotives/vehicles concerned.

9017.5 After the instruction for coupling the locomotives/vehicles has been given, nobody, for whatever reason, may move in between the vehicles concerned until the movement has been brought to a standstill.

9017.6 After the locomotives/vehicles have been coupled the employee concerned must examine the coupling and ensure that it is secure. If the locomotives/vehicles are coupled in the presence of a member of the wagon maintenance personnel, the latter must also ensure that the coupling is secure.

9017.7 Coupling on curves

9017.7.1 Locomotives, i.e. locomotive to locomotive, must, as far as possible, not be coupled on curves.

9017.7.2 When locomotives/vehicles must be coupled on a curve, the couplers, where possible, must be pulled over to the best position, with both knuckles half open, and the locomotives/vehicles must be moved slowly together.

9017.8 Hard coupling must be avoided

9017.8.1 It is not necessary to use force to couple locomotives/vehicles and hard bumps must be avoided.

9017.9 Coupling of brake pipes, jumper cables, etc.

9017.9.1 Brake pipes, jumper cables, etc. must be coupled after the coupling of locomotives/vehicles has been successfully completed and whilst the movement is stationary.

9017.9.2 If it is necessary to use a double-ended vacuum hose-pipe between the ordinary vacuum-hose-pipe couplings, both ends must be fastened with wire.

9017.10 Position of non-coupled couplers on trains

9017.10.1 Before departing from the starting point, and where the load is shunted en route, the employee responsible for despatching the train must ensure that the knuckle of the rear coupler of the last vehicle on the train is in the closed position and the driver must ensure that the knuckle of the front coupler of the locomotive is in the open position.

9018.0 USE OF GANGWAY GATES

9018.1 Except in the case of two adjoining coaches both equipped with Gummi Wulst tubular rubber diaphragm, gangway gates must be provided should it be necessary to provide thoroughfare for passengers and/or train personnel.

9018.2 Where thoroughfare is not possible or necessary the end door of the coach must be locked and a gangway gate placed across the doorway on the brackets provided.

9018.3 Before and during shunting movements with coaches conveying passengers, the employee in charge of the movements must ensure that gangway gates between vehicles that are to be separated are removed or disconnected, as the case may be, and that the requirements of the preceding subclause 9018.2 are met in respect of the vehicles being moved and those remaining stationary.

9018.4 The Train Manager is responsible for ensuring that the end doors of coaches on his train are locked and that the necessary gates are in position in accordance with the preceding subclauses before commencement of the journey and before shunting is undertaken en route. On completion of shunting operations he must unlock the end door(s) that is/are to be opened to provide thoroughfare between vehicles and satisfy himself that the required gangway gates are in position.

9019.0 VOID

9020.0 VOID

9021.0 TRAIN LOCOMOTIVES USED FOR SHUNTING PURPOSES

9021.1 Unless written authority to the contrary has been given, T414 vouchers must be issued only by the official in charge, yard master or train-control officer. Where authority is given telephonically, the driver's assistant must fill in the T414 voucher and repeat it in full to the issuing officer and the correctness must be confirmed. The actual reason describing the situation must be stated on the voucher, e.g. "must book off, but is delayed in the yard due to....", "perform shunting to....", "train No. to be taken over at is running minutes late", etc. The words "book through" alone may not be used. T414 vouchers may be issued if –

9021.1.1 locomotive personnel are required to undertake shunting work after arrival at a destination station, in which case all time in excess of 15 minutes which is utilised in shunting before departure for the locomotive depot, must be recorded;

9021.1.2 trains are arranged earlier or later than the scheduled time (actual number of minutes must be shown);

9021.1.3 personnel who otherwise should have booked off are informed to undertake additional duties resulting in the interval at the outstation being reduced to three hours or under and personnel consequently having to be booked through;

- 9021.1.4 shunting duties are performed before or after a trip; and
- 9021.1.5 a train is taken over at an intermediate station, the personnel has been instructed to come on duty at the right time and the train arrives more than 60 minutes late thereat.
- NOTE:** *This subclause must be read in conjunction with paragraphs 9 and 10, clause 3, Chapter III of the Compendium of Instructions on Timekeeping, Payvoucher and Staff Registry Duties.*
- 9021.2 Time engaged in shunting to be recorded**
- 9021.2.1 In the column on the journal headed "Shunting" the driver's assistant must show the actual number of minutes the train locomotive is engaged in shunting en route, and the driver must see that these particulars are correct.
- 9021.3 Locomotives must receive full credit for all work performed by them.
- 9021.4 Shunting locomotives**
- 9021.4.1 In the case of a locomotive set apart for shunting purposes, shunting time must be computed from the time such locomotive passes over the points from the locomotive depot until it returns to the same place, and no deductions are to be made unless the locomotive is used specially to work a train while booked for shunting.
- 9021.5 Shunting in locomotive yards**
- 9021.5.1 When locomotives are employed in shunting vehicles in locomotive yards, such operations must be controlled by a shunter or other competent employee and the driver and the driver's assistant must remain on the locomotive. (See train working rule No. 164.)
- 9022.0 LOCOMOTIVE DETENTION IN PRIVATE SIDINGS**
- 9022.1 When, through no fault of Spoornet's employees, a locomotive belonging to Spoornet is detained in a private siding beyond the time necessary for the delivery and clearance of traffic, a charge must be made against the owners of the siding. A normal shunting period in respect of each private siding (except certain sidings in the dock areas), known as a "free period" will be advised to all concerned by the Operations Manager.
- 9022.2 For each shunt performed in a private siding a works order must be completed by the shunter or driver's assistant and the original must be handed to the private siding owner, or his deputy, or as agreed to by the Operations Manager.
- 9023.0 ISSUE AND CONTROL OF COUPLING EQUIPMENT**
- 9023.1 Supply of equipment kept**
- 9023.1.1 A supply of coupling equipment, gangway gates, vacuum hosepipes and electrical connections is kept at depots and certain stations. The official in charge concerned must regulate the quantity of equipment according to local requirements. Surplus equipment must not be retained at stations except with the consent of the official in charge.
- 9023.2 Collection and distribution**
- 9023.2.1 Officials in charge must arrange to collect, at regular intervals, all spare coupling and other equipment, including damaged or discarded equipment, in his area of responsibility.
- 9023.3. Track masters to collect equipment**
- 9023.3.1 Track masters must collect, as opportunity offers, all coupling equipment including damaged or discarded equipment, at interloops, intersidings, private sidings, quarry sidings, and in section on their lengths and hand it in at the nearest depot.
- 9023.4 Statement of equipment to be obtained**
- 9023.4.1 Officials in charge must obtain regular statements from the employee concerned showing the quantity of equipment on hand at stations on their sections. They must see also that shunting and marshalling yards under their supervision are inspected regularly and that all spare equipment is collected.

9023.5	How coupling equipment must be obtained	
9023.5.1	All coupling equipment required to replenish stocks at stations must be requisitioned for through the Operations Manager.	
9023.6	How damaged coupling gear must be disposed of	
9023.6.1	The official in charge depot must have the sidings in his area of responsibility regularly inspected and all damaged or discarded coupling or other equipment, collected. Such gear, together with the defective equipment collected as prescribed in subclause 9023.2, must be forwarded regularly to the Stores.	
9023.7	Station yards, sidings, etc., must be examined	
9023.7.1	Section Managers (Train Control) are responsible for examining all shunting yards, stations and sidings at frequent intervals and satisfying themselves that the instructions relative to the control of coupling equipment are being observed.	
9023.8	Depots at which coupling equipment is repaired	
9023.8.1	Damaged coupling equipment is repaired at the following centres: Salt River, Uitenhage, East London, Braamfontein, Bloemfontein, Durban, Pietermaritzburg, Koedoespoort and Germiston.	
9024.0	MOVEMENT OF VEHICLES AT INTERLOOPS, CROSSING PLACES AND INTERSIDINGS BY EMPLOYEES WHOSE DUTIES ARE NOT CONNECTED WITH SHUNTING	
9024.1	Employees at interloops, crossing places and intersidings whose duties are not connected with shunting, must not hand-shunt vehicles beyond the clearance marks when placing them in position for loading or unloading, or allow unauthorised persons to do so. In no case must a vehicle be moved foul of the running lines.	
9025.0	WORKING IN MARSHALLING YARDS AND PRIVATE SIDINGS	
9025.1	Introduction	
9025.1.1	These instructions are applicable on the control of train and shunting movements in marshalling yards and private sidings. Where the circumstances in a certain yard or private siding are such that additional instructions are necessary, it will, if necessary, be supplemented by instructions in the Local Appendices.	
9025.2	Definition of "train"	
9025.2.1	Where the word "train" is used in this clause in respect of movements in marshalling yards, it shall mean a train as defined in train working rule No. 1, a shunting movement, a locomotive or locomotives coupled together with or without traffic attached, or a motor trolley.	
9025.3	Boards	
9025.3.1	Where a board, erected alongside a railway line, bears an inscription facing in the direction of approaching or passing trains or shunting movements and which may or may not be quoted in this clause or other written instructions, and the inscription contains an instruction or a warning interpretable as such, the driver and/or, where it can be inferred from the inscription to be the intention, the employee in charge of or other employee(s) involved in the movement, must observe the instruction or warning.	
9025.4	Stop boards	
9025.4.1	Definition – A stop board is a suitably inscribed board fixed on a post alongside the railway line concerned, to indicate the point beyond which a train or shunting movement may not proceed except as provided in this clause. Where the word SAR or SATS locomotive appears on a board it shall mean a Spoornet locomotive.	
9025.4.2	Description – The inscription to be observed is that on the side of the stop board facing in the direction of approaching movements. Where necessary, an arrow is affixed to the post or painted on the board to indicate the line to which the board is applicable. The stop boards most commonly in use in marshalling yards and private sidings are inscribed as follows:	
	<u>Inscription</u>	<u>Applicable to</u>
9025.4.2.1	STOP (letters arranged vertically or horizontally)	All movements
9025.4.2.2	STOP – SPOORNET LOCOMOTIVE MUST NOT PROCEED BEYOND THIS BOARD	Spoornet locomotives only
9025.4.2.3	STOP – PRIVATE LOCOMOTIVE MUST NOT PROCEED BEYOND THIS BOARD	Private locomotives only
9025.4.2.4	STOP – PRIVATE LOCOMOTIVE MUST NOT ENTER WHILE SPOORNET LOCOMOTIVE IS IN EXCHANGE YARD	Private locomotives only

9025.4.3 Observance of stop boards

- 9025.4.3.1 A train or shunting movement must not pass a stop board, unless or until the driver receives from the train-control officer, an employee at the control point or other authorised employee at the board, an "all right" hand signal or oral instruction to proceed.
- 9025.4.3.2 The train-control officer or control shunter or, where movements are not controlled by a train-control officer or control shunter, the employee in charge of the movement or such other employee as may be provided for in these or other instructions, may display an "all right" hand signal or give an oral instruction to a driver to pass the stop board only after he has ensured that –
- 9025.4.3.2.1 the points to be traversed are correctly set;
- 9025.4.3.2.2 a conflicting movement will not take place; and
- 9025.4.3.2.3 the line onto which the movement is to be admitted (except as provided for in subclause 9025.4.3.3), is clear and that all is in order for the safe receipt of the train.
- 9025.4.3.3 If a train has to be admitted onto a line that is occupied or obstructed, the train-control officer, control shunter or other authorised employee must, after the train has been brought to a standstill at the stop board, orally instruct the driver at the board to proceed, advise him how far he may draw forward and thereafter accompany the movement onto the occupied or obstructed line.
- 9025.4.3.4 Unless otherwise laid down in respect of a particular yard or siding, a driver may pass a stop board without stopping if an "all right" hand signal is displayed at the board on the approach of the train thereto.
- 9025.4.3.5 If an "all right" hand signal to be displayed at a stop board is liable to be acted upon by a driver for whom it is not intended, such hand signal must not be displayed, but an oral instruction must be given to the driver after the movement has been brought to a standstill short of the stop board.
- 9025.4.4 *Stop boards applicable to Spoornet locomotive*** – A Spoornet locomotive or, in the case of vehicles being propelled by a Spoornet locomotive, the leading vehicle, may not pass a stop board as described in subclause 9025.4.2.2, except where the board is erected on both sides of a mass-measuring bridge in a private siding, in which case the restrictions applies to the locomotive only.
- 9025.4.5 *Stop boards applicable to private locomotive*** – A private locomotive or, in the case of vehicles being propelled by the private locomotive, the leading vehicle, may not pass a stop board as described in subclause 9025.4.2.3.
- 9025.4.6 *Stop boards applicable to private locomotive whilst Spoornet locomotive is in the exchange yard*** – Except where specially provided, a private locomotive and any vehicle being propelled may not pass a stop board as described in subclause 9025.4.2.4 hereof while a Spoornet locomotive is in that part of the private siding beyond the stop board.
- 9025.4.7 *Stop boards inscribed on both sides*** – Depending on circumstances, stop boards may be inscribed on both sides, each side displaying the appropriate wording.
- 9025.4.8 *Stop boards not to be tampered with*** – A stop board must not, for maintenance purposes, be removed or its inscription obliterated unless the station or yard official in charge has been informed and he has advised all concerned of the work to be undertaken. In the absence of a stop board where one is usually provided, drivers, including drivers of private locomotives, and shunting staff must act as though such board still existed.
- 9025.4.9 *Permanent red lights*** – Where a colour-light signal permanently displaying a "danger" aspect is provided at the entrance to a yard, the instructions contained in subclause 9025.4.3.2 must be observed, except that the driver must be authorised by means of a "caution" hand signal instead of an "all right" hand signal to pass the signal.
- 9025.4.10 Description and observance of shunting limit boards**
- 9025.4.10.1 At certain places shunting limit boards are provided to indicate that shunting past these boards are not allowed.
- 9025.4.10.2 The boards are white, rectangular with the words SHUNTING LIMIT/RANGEERGRENS in black on the front.
- 9025.4.10.3 A driver may pass a shunting limit board only when an oral instruction has been given to him by the train-control officer or on his authority by the employee in charge of the shunting movement.

- 9025.5 Duties of control shunters**
- 9025.5.1 *Control shunter responsible for train arrangements*** – A control shunter on duty at a control point is the only employee who may allow trains to approach or leave that control point. In addition to carrying out the duties defined in the instruction applicable to the particular yard or siding(s), a control shunter must at all times arrive at a clear understanding with the train-control officer concerned, with the yard master or his deputy, the control shunter at the other end of the yard or line concerned, the control shunter of the adjoining yard or area, with the employees in charge of shunting locomotives and/or the employee(s) appointed to assist him in the execution of his duties, as the case may be, to ensure that a conflicting movement will not take place. He must also ensure that the points in the area under his control are correctly set for any movement that he authorises. The employee appointed to assist a control shunter must not interfere with the train arrangements and must strictly carry out any instructions of the control shunter consistent with safety, and he (the assistant) will be responsible for the safe execution of all movements that he authorises.
- 9025.5.2 *Failure of telephones*** – Should telephonic communication fail the employee requiring to contact the control shunter or vice versa must personally come to a clear understanding with the other employee(s) regarding each movement in order that a conflicting movement will not take place. (See subclause 9025.8.)
- 9025.5.3 *Control shunter to keep train register*** – Train registers must be kept at all control points, and the arrival and departure times and particulars of all train movements must be recorded therein. The arrival and departure times must be furnished to the control shunter at the adjacent control point, the train-control officer and/or the yard master or his deputy, according to local requirements.
- 9025.6 Admittance of trains from running lines to goods yards where control shunters are stationed**
- 9025.6.1 *Yard official to be advised*** – The train-control officer must advise the yard master or his deputy, or another authorised employee, in good time of the number and the expected time of arrival of a train that is to be admitted into a yard. The latter, in turn, must advise the control shunter at the entrance to the yard, informing him of the number of the line onto which the train is to be admitted.
- 9025.6.2 Admittance of a train directly into yard by means of a fixed signal**
- 9025.6.2.1 Where a goods or siding signal admits trains directly into the yard, the train-control officer must carry out the provisions of train working rule No. 96(3) before operating the signal.
- 9025.6.2.2 After the train-control officer has operated the signal for the admittance of the train, the control shunter must indicate to the driver the line onto which the train is being admitted. For this purpose the control shunter must take up a position near the hand-points giving entrance to this line and, during the day, wave an arm and at night, a white light from side to side across the body. [See train working rule No. 96(4).]
- 9025.6.2.3 Should the train have to be admitted onto an occupied line, the control shunter must, on authority of the train-control officer, after the train has been brought to a standstill at the signal at "danger", orally advise the driver of the circumstances, inform him how far he may proceed, authorise him to pass the signal at "danger" and thereafter accompany the locomotive onto the occupied line.
- 9025.6.2.4 Before authorising the train-control officer to operate the signal for the admittance of the train, or before the driver is authorised to pass the signal at "danger", as the case may be, the control shunter must ensure that all the hand-points over which the train has to proceed are correctly set, that a conflicting movement will not take place and, except in the circumstances provided for in subclause 9025.6.2.3, that the line onto which the train is to be admitted is clear.
- 9025.6.3 Admittance of a train into yard where a stop board is provided**
- 9025.6.3.1 The train-control officer must not, by operating the relevant fixed signal or otherwise, authorise the driver to proceed to the stop board at the entrance to the yard without consulting the control shunter concerned and ensuring that the line is clear as far as the stop board.
- 9025.6.3.2 The stop board at the entrance to the yard must be observed in terms of subclause 9025.4.3.1.
- 9025.6.4 *Times to be furnished*** – Where applicable, the train-control officer must inform the control shunter of the time of departure of the train from the signal cabin. As soon as the train complete has been brought to a standstill within the clearance marks in the rear, the control shunter must furnish the time of arrival to the train-control officer and, where applicable, to the yard master or his deputy.
- 9025.7 Despatch of trains proceeding onto running lines from goods yards where control shunters are stationed**
- 9025.7.1 *Train-control officer to be advised*** – When a train is ready to depart from a yard, the control shunter concerned must advise the train-control officer and, where required, the yard master or his deputy.

- 9025.7.2** **Authority for train to depart** – After the train-control officer has authorised the train to depart, the control shunter, provided all hand-points over which the train has to proceed are correctly set, all train and shunting movements on adjacent lines have been brought to a standstill and, where provided, the fixed signal controlling the departure of trains from the yard, has been placed at "all-right" or "proceed", must display the "train may depart" hand-signal to the train despatcher or, where necessary, arrange for it to be displayed by an authorised employee. The driver may depart and proceed beyond the clearance mark of the adjoining line only after he has received the "right away" hand-signal from the train despatcher. Where more than one train is waiting to depart, the control shunter, before the "train may depart" signal is displayed to the train despatcher, must orally advise the driver of the train that has to depart first.
- 9025.7.3** **Times to be furnished** – The control shunter, after the "train may depart" signal has been displayed, must take up position at the points over which the train is to proceed, watch the departing train and after ensuring that it is complete with a marker affixed on the rear end of the last vehicle, furnish the departure time to the yard master or his deputy and, where required, to the train-control officer. Where applicable, the train-control officer must inform the control shunter of the time of arrival of the train complete at the signal cabin.
- 9025.8** **Control of movements over service lines and/or between adjacent control points**
- 9025.8.1** **Scope** – The instructions in this subclause are applicable to a non-signalled line, hereinafter referred to as a service line in a yard complex or private siding complex –
- 9025.8.1.1 which is normally used only for the passage of train and shunting movements;
- 9025.8.1.2 which has a train-control officer or a control shunter or other authorised employee stationed at one end and, except where a system of token working is in force which does not require the presence of such an official, a control shunter or other authorised employee (not a train-control officer) at the other end; and
- 9025.8.1.3 the length of which is such that, in the event of suspension of token working and/or failure of communications, the employee(s) controlling the line will not be able, by personal consultation (see subclause 9024.5.2) or otherwise, to establish that the line is clear before authorising a movement over it.
- 9025.8.2** **Absolute working to be maintained** – Only one train at a time may enter upon or occupy a service line.
- 9025.8.3** **Line to be clear** – A movement must not proceed over the service line before the previous movement complete has arrived within the fixed signals, stop board or clearance mark, as the case may be, at the signal cabin, control point, yard or siding at one or the other end of the service line. Where token working is in force, the relevant instructions in this appendix and such other additional instructions that may be issued, must be strictly complied with. Where movements over the service line are not controlled by means of token working, the employees at both ends of the service line must telephonically arrive at a clear understanding with each other before a movement is allowed to proceed onto or over the service line.
- 9025.8.4** **Suspension of normal working** – If the token instruments fail or a token is lost, or where movements are not controlled by means of token working, when the telephones are out of order, or assistance must be rendered in consequence of an obstruction of the line, the station or yard official in charge must arrange for a competent employee, who must wear a pilotman's badge on his left arm, to accompany all movements on the service line.
- 9025.9** **Working of Spoornet and private locomotives in private or departmental sidings with or without exchange yards or exchange sidings**
- 9025.9.1** **General**
- 9025.9.1.1 Except where otherwise laid down in respect of a particular yard or siding, the instructions in this subclause must be complied with in respect of the various private and departmental sidings (hereinafter only referred to as private sidings) with or without exchange yards or exchange sidings, that are worked by locomotives of Spoornet as well as the owners or users of the sidings.
- 9025.9.1.2 In these instructions an exchange yard or siding means that portion of a private siding to which both a Spoornet locomotive and the private locomotive have access and which is used solely for the exchange of traffic between Spoornet and the private siding owner/user.
- 9025.9.1.3 Except where specifically provided for, only one Spoornet locomotive at a time may proceed onto a service line serving a particular private siding and enter or work in that private siding.
- 9025.9.1.4 Where required, stop boards as described in subclause 9025.4 are erected in a private siding.

9025.9.2 Movements of a Spoornet locomotive to and from an exchange yard or siding

9025.9.2.1 When a Spoornet locomotive, with or without traffic attached, has to enter an exchange yard or siding, the locomotive or, where applicable, the leading vehicle in the case of a propelling movement, must be brought to a standstill short of the stop board at the entrance to the exchange yard or siding and the driver must remain there until he receives an "all right" hand-signal or oral authority from the employee in charge of the Spoornet shunting operations. Before authorising the driver to enter the exchange yard or siding, the employee in charge of the movement must ensure that the private locomotive is not already in or approaching the exchange yard or siding.

9025.9.2.2 Should the private locomotive be in or approaching the exchange yard or siding when a Spoornet locomotive is required to enter, a clear understanding must be arrived at with the employee in charge of the private locomotive, and the private locomotive, if already in the exchange yard or siding, must remain stationary until authorised to move by the employee in charge of the Spoornet locomotive, or until the Spoornet locomotive has departed and is clear of the exchange yard or siding.

9025.9.3 Movements of the private locomotive to and from the exchange yard or siding

9025.9.3.1 When the private locomotive has to enter the exchange yard or siding, the locomotive, or the leading vehicle in the case of a propelling movement, must be brought to a standstill short of the stop board at the entrance to the exchange yard or siding. The driver of the private locomotive must not proceed until he has ensured that the Spoornet locomotive is not already in or approaching the exchange yard or siding.

9025.9.3.2 Should a Spoornet locomotive be in or approaching the exchange yard or siding when the private locomotive has to enter, the driver of the private locomotive must not proceed beyond the stop board until the Spoornet locomotive has departed and is clear of the exchange yard or siding.

9025.9.3.3 Before the private locomotive enters or departs from the exchange yard or siding, the employee in charge thereof must ensure that the points to be traversed are correctly set.

9025.9.4 Movements of Spoornet and private locomotive in a private siding without an exchange yard or siding

9025.9.4.1 The Spoornet locomotive or, where applicable, the leading vehicle in the case of a propelling movement, must not enter the private siding or, where provided, pass the relevant stop board, before the employee in charge of the Spoornet shunting operations has ensured that the private locomotive is standing clear in the siding and that a conflicting movement will not take place.

9025.9.4.2 Should the private locomotive be working in the private siding when the Spoornet locomotive has to enter, a clear understanding must be arrived at with the employee in charge of the private locomotive, and the private locomotive must stand clear until authorised to move by the employee in charge of the Spoornet locomotive or until the Spoornet locomotive has departed and is clear of the private siding.

9025.9.4.3 Where there is no stop board demarcating the area of the private locomotive, the driver of the private locomotive must in no circumstances allow the locomotive or any vehicle to foul the Spoornet lines.

9025.9.4.4 The instructions in this subclause also apply to a road/rail private locomotive.

9025.9.5 Security gates

9025.9.5.1 Where a gate is provided in a security fence crossing a railway line at the entrance to a private siding, the employee in charge of the Spoornet shunting operations must ensure that the gate is opened and properly secured before authorising the driver to proceed through the gate.

9025.9.5.2 If the gate is locked by means of Chubb lock, the employee in charge of the Spoornet shunting operations is responsible for the opening, closing and locking of the gate.

9025.9.5.3 If the gate is locked by means of a special lock, the key of which is kept by the siding owner or user, the employee in charge of the Spoornet shunting operations must, before authorising the driver to proceed through the gate, ensure that the gate is opened and properly secured by an employee of the siding owner or user.

- 9025.9.6** **Mass-measuring bridges** – In private sidings provided with mass-measuring bridges over which Spoornet locomotives may not proceed, boards inscribed that Spoornet locomotives may not pass the boards are erected alongside the track on both sides of the private mass-measuring bridges. Drivers must in no circumstances allow their locomotives to proceed past these boards and/or to pass over the mass-measuring bridges.
- 9025.9.7 Traffic must always be hauled to and from and into and out of a private siding, except where –
- 9025.9.7.1 the lay-out of the private siding and/or, where applicable, the electrification thereof is such that at no time can the Spoornet locomotive run round in the siding; or
- 9025.9.7.2 the position of the private siding in relation to the service line is such that the traffic must of necessity be propelled into and/or out of the siding; or
- 9025.9.7.3 otherwise authorised in this appendix.
- 9025.9.8 The normal position of hand-points affording access from a line of Spoornet to a private siding is for them to be set and locked for the Spoornet line. If the points are locked by means of a special lock, the key of which is kept by the siding owner or user, the employee in charge of Spoornet shunting operations must request the siding owner or user to unlock the points.
- 9026.0 TRAIN JOURNALS**
- 9026.1 How journals to be submitted**
- 9026.1.1 Drivers' assistants must prepare train journals in duplicate or triplicate, according to circumstances. The original together with the list of vehicles and other documents, must be handed to the official at the termination of the journey. The copy of the train journal must be retained by the home depot station for record purposes. The station official in charge must forward the original journal and enclosures to the operations manager.
- NOTE:** *Where there is more than one driver on the train, each driver must be furnished with a copy of the journal.*
- 9026.2 When journals must be submitted**
- 9026.2.1 Journals must be prepared and handed in before drivers' assistants go off duty. Drivers' assistants going off duty at outstations must retain their journals and hand it in at their home depots.
- 9026.3 Failure must be explained**
- 9026.3.1 The station official in charge must enquire immediately into the cause of any failure on the part of a driver's assistant to render his journal at the time laid down. Failure in rendering journals must be fully explained in writing by drivers' assistants.
- 9026.4 Numbers of all trains crossed or passed, etc., must be shown**
- 9026.4.1 When possible, the number of each train crossed, passed or shunted for, also the place at which such movement was made, must be shown on the journal.
- 9026.5 Driver's assistant to compare watch with station clock**
- 9026.5.1 Before the departure of his train the driver's assistant must obtain the correct time from the train-control officer and set his watch accordingly. He must take every opportunity en route of comparing his watch with that of the train-control officer. He must enter the actual time on his journal in accordance with his watch. [See train working rule No. 184(1).]
- 9026.6 Record of running, shunting, delays, etc.**
- 9026.6.1 A driver's assistant must compile his journal and list of vehicles clearly and legible, and must accurately record the following particulars:
- 9026.6.1.1 Time on duty, train number, date, locomotive(s) number(s), names and initials of the driver and driver's assistant, actual time of departure from starting station or depot and actual time of arrival at destination station or depot, as well as the number of minutes late or before time. If the train is delayed en route, the name of the place, the time of arrival and departure and the reason for the delay must be recorded on the journal.

9027.0 TIME OCCUPIED AT STATIONS, ETC. TO BE ACCOUNTED FOR: EACH DELAY TO BE RECORDED SEPARATELY

9027.1 The whole of the time occupied at stations, crossing places, interloops, intersidings and halts must be accounted for, and the actual time occupied in performing each duty must be recorded separately on his journal, by the driver's assistant, for example:

Shunting, 10 minutes (to be shown in the column provided).
Entraining and detraining of passengers, 15 minutes.
Waiting crossing, 3 minutes.
Train examined (opposite place where examination was made).
[See train working rule No. 184(4).]

9027.2 Delays due to loading and unloading traffic

9027.2.1 When a delay occurs in loading and/or unloading traffic, the driver's assistant must record on his journal the following particulars:

9027.2.1.1 Length of delay.

9027.2.1.2 Number of packages.

9027.2.1.3 Mass.

9027.2.1.4 Class of wagon used.

9027.2.1.5 Number of wagons on train into which goods loaded or from which unloaded. This information may be recorded in the manner shown hereunder:

Tranship 15", 9 Packages, 500 kg, 1 FB, 1 GZA, 1 OZ.

9027.3 In the event of an accident or other untoward incident, the driver's assistant must record full particulars on his journal to explain the delay. This, however, does not relieve him of his responsibility of specially reporting the matter as laid down in the train working rules and in this appendix.

9028.0 ACTUAL TIME, AND NUMBER OF MINUTES EARLY OR LATE TO BE SHOWN

9028.1 Drivers' assistants must record in the columns provided on their journals the actual time of departure from the starting station or depot and the actual time of arrival at the destination station or depot as well as the right time or the number of minutes early or late, as the case may be.

9028.2 Running times for special trains must be provided and recorded

9028.2.1 If scheduled times are not provided, as in the case of special or breakdown trains run at short notice, the driver's assistant must request the official in charge to supply running times. If running times are not supplied before departure of the train, these must be advised by telephone to the next convenient station in advance. (See subclause 1054.3.3 of this appendix.)

9029.0 CORRECT DATE TO BE SHOWN

9029.1 Journals must bear correct dates

9029.1.1 In the event of a train, booked to leave the starting station before midnight, being delayed, the date of the day on which the train is booked to leave must be shown in the date space, the date of the day on which the train actually left being inserted immediately above the time of departure.

9029.1.2 In the case of a train starting before, but finishing its journey after midnight, the date concerned must be shown above the first entry after midnight.

9030.0 LIST OF VEHICLES AND WORKS ORDER

9030.1 Number of copies of list of vehicles required and method of disposal

9030.1.1 Except where otherwise provided, the driver's assistant or, where applicable, the personnel responsible for the compilation thereof, must make out the list of vehicles for goods and mixed trains in duplicate. The original must be left at the departure station and the copy must be retained by or handed to the driver's assistant. This copy must accompany the train to the destination, whereafter it must be handed in at the destination station together with the works orders (see subclause 9030.8).

9030.1.2 If a load is detached en route, or the locomotive with load attached is shut down and there is no train-control officer on duty, the driver's assistant must leave the list of vehicles in the clip of the front vehicle or in the locomotive.

9030.1.3 At terminal stations the list of vehicles must be filed locally for record purposes.

9030.2 Vehicle numbers to be recorded in the order which the vehicles are marshalled

9030.2.1 Drivers' assistants or, where applicable, the personnel responsible for the compilation of the list of vehicles, must record accurately and clearly the particulars of each vehicle composing the train. At the original departure point, the vehicles must be recorded in the order in which they are marshalled on the train, indicating whether the list of vehicles commences from the rear of the train or from the locomotive. (In the case of a computer-printed list of vehicles, the driver's assistant or train despatcher must certify on this document that he has compared it with the actual train load.) When particulars are furnished by means of a walkie-talkie to the employee responsible for entering information into the computer, the particulars of the vehicles must be furnished and entered in the order of marshalling.

9030.2.2 If the driver's assistant or train despatcher, as the case may be, find that the particulars on the list of vehicles/computer-printed list does not correspond with the actual particulars of the load, e.g. incorrect vehicle number, destination, etc., he must rule through the incorrect particulars and insert the correct information above the incorrect entry. If the order of marshalling of the vehicles on the list of vehicles or computer-printed list does not correspond, the consecutive number appearing against the vehicle concerned must be swapped.

9030.3 Commuter trains

9030.3.1 Drivers' assistants working certain commuter trains may fill in the required particulars on the back of their journals or on other forms specially provided for this purpose instead of using a list of vehicles for this purpose.

9030.4 Foreign railway's vehicles

9030.4.1 The abbreviation of the name of the owning foreign railway of a foreign vehicle must be inserted in the appropriate column after the number of the foreign vehicle. When use is made of walkie-talkie, this information must be furnished.

9030.5 Through trains: List of vehicles and works orders to be handed over

9030.5.1 In the case of a through passenger train or an authorised goods or through goods train, or in the case of a caboose train, the list of vehicles in possession of the driver's assistant must be handed over to the driver's assistant taking over en route. The driver's assistant who works the train to the final destination station is responsible for handing in the list of vehicles and the works orders (see subclause 9030.8). Each driver's assistant is responsible for updating the list of vehicles for the portion of line over which he works the train. The updated copy of the list of vehicles together with the works orders (see subclause 9030.8), must be handed in at the final destination station for entering into the computer.

9030.5.2 Information regarding vehicles that have been detached and/or attached en route, need only be recorded by the driver's assistant on his copy of list of vehicles, in the applicable column.

9030.6 Void

9030.7. Duties at depots or stations

9030.7.1 On arrival of a train at the destination station, depot or yard, the list of vehicles and works orders must be handed over to the official in charge, or his deputy.

9030.7.1.1 At depots or stations, the official in charge must arrange for the following duties in connection with the lists of vehicles and works orders to be meticulously performed:

9030.7.1.1.1 The written list of vehicles of all outgoing trains and lists of vehicles and works orders of all incoming trains must be made available to the employee responsible for the entering of information into the computer as soon as possible after departure or arrival.

9030.7.2 Outgoing trains

9030.7.2.1 It must be seen to that the written lists of vehicles are accurately and clearly compiled. When lists of vehicles are handed in, they must be compared with the daily train service plan to establish whether a list of vehicles has been handed in for each train. If it is found that there are lists of vehicles missing, the employee responsible for entering information into the computer, must immediately take steps to obtain copies of such missing lists of vehicles and he must enter the information into the computer.

9030.7.3 Incoming trains

9030.7.3.1 When lists of vehicles together with copies of works orders (see subclause 9030.7.1) are handed in, they must first be compared with the train register to ensure that a list of vehicles has been handed in for each train. The employee responsible for entering information into the computer, must obtain lists of vehicles from the computer for the trains involved and compare them with the works orders to ensure that all wagon movements have been entered into the computer.

9030.7.4 The depot or station official in charge must, where practicable, personally supervise the reporting of vehicle movements and must frequently ensure that the work is being performed satisfactorily and accurately and that the instructions contained herein are properly observed.

9030.8 Number of copies of the works orders required and method of disposal

9030.8.1 The works order is a complete record of the actions taking place at a station or public siding and must show full particulars of vehicles that have been detached and/or attached and/or left behind. These forms must always be compiled in duplicate.

9030.8.1.1 When a train arrives at a station where vehicles must be detached, the driver's assistant or other employee in charge of the shunting (hereinafter referred to as "driver's assistant"), must execute the works order. As soon as the vehicles have been placed and the driver's assistant has signed the works order, he must hand over the original to the official in charge, or his deputy.

9030.8.1.2 The driver's assistant must immediately convey the information on the works order telephonically to the order entry official and endorse the works order accordingly. The order entry official receiving such an advice, must ensure that the information is entered into the computer.

9030.8.1.3 The driver's assistant must attach the copy of the works order to the list of vehicles and hand it over to the official in charge, or his deputy, at the destination, who in turn must furnish it to the data clerk and the latter must ensure that the information telephonically received, is correctly entered before the arrival message is entered.

9030.8.2 Vehicles attached or detached at an intersiding or interloop

9030.8.2.1 When a train that is scheduled to shunt at intersidings or interloops, or a train that has to attach and/or detach (a) vehicle(s) at an intersiding or interloop, arrives there, the driver's assistant must execute the works order, compare the particulars of all vehicles that have been attached and/or detached and/or left behind and sign the works order. The driver's assistant must immediately report the information on the works order telephonically to the Client Service Manager concerned in the Client Service Centre and endorse the works order accordingly. The Client Service Manager receiving such an advice, must ensure that the information is entered into the computer.

9030.8.3 CTC/Radio based train control sections

9030.8.3.1 When a train must shunt at a place in a CTC/Radio based train control section where there are station personnel on duty, the action set out in subclause 1051.1 of this appendix and subclause 9030.8.1 hereof, must be followed. When there are no station personnel on duty, the action set out in subclause 9030.8.1.2 hereof must be followed, except that the driver's assistant must at first opportunity telephonically convey the information appearing on the works order to the order entry official. The driver's assistant must endorse the works order with the time and date when he conveyed the information to the order entry official. The order entry official receiving such an advice must ensure that the information telephonically received, is entered into the computer.

9030.8.4 These instructions do not relieve the driver's assistant from his responsibility to personally ensure which vehicles must be attached and/or detached and/or left behind at intersidings or interloops, or at places in CTC/Radio based train control sections, and to complete the necessary works orders.

9031.0 DAMAGED VEHICLES

9031.1 A driver's assistant must report on his journal, full particulars regarding any vehicle on his train which is damaged en route. He must also report such particulars as he can obtain about any vehicle attached in a damaged condition en route.

9031.2 When a vehicle in a damaged condition is attached to a train at a station, the driver's assistant must draw the attention of the station official in charge or a responsible employee to the matter, and this employee must insert particulars in the book kept for this purpose. The driver's assistant must, in addition to the note on his journal, at the end of the journey enter particulars in the depot "Damaged Rolling Stock" book. (See train working rule No. 202.)

NOTE: For instructions regarding the marshalling of damaged vehicles see clause 1021.17 of this appendix.

9031.3 When there is a defect on the brake van of a train, the driver's assistant of the train must fill in form "Defects on brake vans" in triplicate. The original must be attached to the driver's assistant's journal, the first copy must be attached to the brake van by means of the clip on the side of the brake van, for the information of the wagon maintenance personnel, and the second copy must be handed to the official in charge of the yard where the train terminates its journey. The latter official must file it for record purposes.

9031.3.1 In the case of a through train the driver's assistant must write the name of the driver's assistant taking over, in the centre portion of the form and hand the three forms to him. The driver's assistant working the train further must then follow the procedure as set out in the preceding subclause 9031.3. (See clause 9117.0 hereof.)

9032.0 VEHICLES DETACHED AT INTERLOOPS, TOKEN STATIONS OR CROSSING PLACES IN CTC/RADIO BASED TRAIN CONTROL AREAS WITHOUT SIDINGS

9032.1 A vehicle must not be detached at an interloop, token station or crossing places in CTC/Radio based train control areas, where there is no siding, except in cases of absolute necessity, as for instance when a vehicle is running with a hot axle-box or any other defects that are likely to affect the safe running of the train. When this is done, the station on each side or the train-control officer in the train control centre, as the case may be, must be advised so that the necessary precautions may be taken and all concerned promptly advised. A driver's assistant, detaching a vehicle at an interloop, token station or crossing place, must ensure that the vehicle is properly secured by handbrakes and scotches. The locomotive personnel of all opposing trains which are crossed before reaching the next station, and of all trains entering the section, must be informed of the presence of the vehicle(s). Until such time as the vehicle(s) has/have been removed, crossings must not be arranged to take place at the interloop, token station or crossing place.

9033.0 DRIVERS' ASSISTANTS POINTS KEYS: DEFECTIVE POINTS LOCKS AT INTERLOOPS, TOKEN STATIONS, INTERSIDINGS OR CROSSING PLACES IN CTC/RADIO BASED TRAIN CONTROL AREAS

9033.1 When points locks at interloops, token stations, intersidings or crossing places in CTC/Radio based train control areas are missing or damaged, the driver's assistant must, when practicable, report the circumstances to the track master and, in every case, to the train-control officer controlling the section. The driver's assistant must record particulars on his journal, giving the names of the employees to whom the defect was reported. (See train working rule No. 201.)

9033.2 When a driver's assistant fails to report the damage, it will be assumed, in the absence of proof to the contrary, that he is responsible for such damage.

9033.3 Drivers' assistants must satisfy themselves that their points keys are in good order before leaving their depots.

9033.4 Any key which operates locks with difficulty, or which can be withdrawn from locks while the latter are open, must be handed in at the depot for examination and replacement.

NOTE: See clauses 8001.0 to 8004.0 of this appendix.

9034.0 VOID

9035.0 VOID

9036.0 STANDARD EQUIPMENT FOR DRIVERS' ASSISTANTS

9036.1 The following is a list of items with which a driver's assistant must be equipped:

- 1 Equipment box.
Train Working Rules.
General Appendix.
Relevant Local Appendix or Appendices.
Electrical Safety Instructions.
- 1 set flags (red and green), complete with sticks.
- 1 tricolour hand lamp. (One spare battery.)
- 10 detonators in container.
- 1 points key.
- 1 pad "Train journals".
- 1 pad "List of vehicles".
- 1 pad "Train load certificate" forms.
- 1 pad "Defects on brake vans".
- 3 vacuum washers.
- 3 air brake washers.
- 1 hand hammer (1 kg).
- 1 spanner (22 mm).
- 1 tommy bar (300 mm).
- 1 pair of pliers.
- 1 screwdriver.
- 1 padlock and keys.
- 1 pocket note book.
- 1 bucket.
- 1 floor brush.
- 1 clipboard.
- 4 "Train parting"-reports.
- 4 "Not to go" labels.
- 4 "Repair" labels.
- 4 "Inoperative Air-brake" labels.
- 2 wooden plugs for vacuum cylinder branch pipes.

9036.1.1 Consumable items per month:

- 1 toilet roll.
- 2 boxes of matches.
- 1 non-ravelling cloth (45 cm x 35 cm) (store item number 7/235).
- 1 bar of soap.
- 1 Hand cleaner (0,250 kg).

9036.2 Deficiencies to be reported

9036.2.1 Before leaving a depot or terminal station with his train, a driver's assistant must see that his personal equipment is complete. Should he experience any difficulty in obtaining any shortage in equipment, he must record particulars on his journal.

NOTE: For further instructions relative to the responsibility resting upon a driver's assistant in connection with indicators, see clause 8030.0 of this appendix.

9036.3 Full equipment must be supplied

9036.3.1 Officials in charge are responsible for ensuring that driver's assistants are supplied with their full equipment before the departure of trains.

9036.3.2 The driver's assistant need only be in possession of the relevant local appendix for the area concerned on which he is employed, unless he is required to work over another area, in which case his equipment must include a copy of the local appendix for that area.

9036.4 Custody of equipment not in use

9036.4.1 While a driver's assistant is off duty, his personal equipment may be left in his shed locker, where lockers are provided.

9037.0 VOID

9038.0 DUTIES AND RESPONSIBILITIES OF DRIVERS

9038.1 Driver must learn the line

9038.1.1 Before a driver is allowed over any portion of a running line over which, in the capacity of driver, he has not previously driven a locomotive, he must be allowed to learn the line, by night as well as by day. Before being placed in charge of a locomotive proceeding over such portion of the running line, the Section Manager (Train Traffic) must test and certify him as competent to drive a locomotive over that portion of the line, without the assistance of a pilot driver. The driver must thereafter sign the "Knowledge of the Line" book at his home depot. [See train working rule No. 168(1) and (3).]

9038.2 Before a driver is allowed to drive a locomotive over sidings over which, in the capacity of driver, he has not previously driven a locomotive, he must be allowed to learn the line. He must thereafter sign the "Knowledge of the Line" book at his home depot, thereby expressing his competence to work a locomotive over the sidings concerned. [See train working rule No. 168(2) and (3).]

9038.3 Should it be necessary, owing to an employee graded as driver not being available, to call on a pupil driver to take charge of a locomotive in the capacity of driver, such pupil driver may not take charge unless the provisions of the preceding subclauses 9038.1 and 9038.2 hereof, have been fully observed.

9039.0 LOCOMOTIVE HEADLIGHTS

9039.1 Each locomotive must be provided with a headlamp which illuminates the line in the direction of travel. The headlamp must be lighted as soon as it commences to be dusk, during foggy weather and when passing through certain tunnels as laid down in local appendices.

9039.2 No locomotive may leave a locomotive depot with a defective headlamp

9039.2.1 If a driver proceeds at night without a headlamp, he must inform the train-control officer at the first opportunity, who must then report the circumstances to the central operating office. The decision whether he may thereafter proceed, must be made in the light of prevailing circumstances, such as traffic intensity on the section, nature of section to be traversed, etc.

9039.2.2 A driver proceeding with a failed headlamp under the above circumstances must do so with extreme caution, especially at level crossings.

9039.3 When two or more locomotives are working a train, the headlamp of the leading locomotive only must be lighted. In instances where diesel locomotives are operated in multiple, however, it is permissible that the trailing headlight of any of the locomotives be placed temporarily on dim when it becomes necessary for the driver's assistant to proceed from one locomotive to another.

- 9039.4 Headlights must be dimmed but not extinguished when trains are –
- 9039.4.1 standing still;
- 9039.4.2 approaching a platform;
- 9039.4.3 approaching the facing points of a station where train tokens are exchanged and whilst the train is passing through;
- 9039.4.4 approaching the facing points of a place where an opposing train must be crossed; and
- 9039.4.5 approaching a yard or passing through it.

9040.0 SANDING OF RAILS

- 9040.1 Sand must be used sparingly by drivers of all types of locomotives. Not more sand than is necessary to ensure effective adhesive power should be applied, thus avoiding interference with track circuits. In the event of heavy sanding being necessary on running lines within the area protected by fixed signals at a station or crossing place, the driver must report the circumstances to the train-control officer at that station or the first station in advance or in the case of a CTC area to the train control office. The train-control officer must advise the track master or the signal maintenance official and the branch manager (signals).
- 9040.2 In no circumstances must sand be used on points. (See clause 7025.0 of this appendix.)

9041.0 VOID

9042.0 VOID

9043.0 UNAUTHORISED PERSONS NOT ALLOWED TO TRAVEL ON LOCOMOTIVES

9043.1 Members of the public

- 9043.1.1 A person, other than an employee, as provided in subclause 9043.2 hereof, must not be allowed to travel on a locomotive, or in the driving compartment of a motor coach or driving trailer, unless he is in possession of a printed or written permission from an authorised official of SpoorNet, and holds, in addition, an available ticket.

9043.2 SpoorNet employees

- 9043.2.1 The only employees who may travel on a footplate (locomotives, motor coaches and driving trailers included – see definitions in train working rules), or in the cabs/drivers' compartments of locomotives, motor coaches or driving trailers, not being used to control the locomotive(s)/train, except the driver and driver's assistant responsible for the operation of the locomotive(s)/train, are those required to do so for service purposes and holding permits issued specially for that purpose by the Chief Executive (SpoorNet) [see also subclause 9043.2.1.1 hereof], and certain other officials who are from time to time given written permission by the Chief Executive (SpoorNet) to travel thereon in the company of a supervisor (locomotive personnel).
- 9043.2.1.1 The Operations Manager with approval of the Chief Executive (SpoorNet), may also, by means of the local appendix or other instruction, authorise a maximum of two persons (shunters, spare drivers or driver's assistants, etc.), to travel for service purposes on the locomotive(s) or in a driver's compartment of a motor coach set. It is, however, only permissible to travel in the locomotive/driving compartment if other suitable accommodation is not available on the train, and it is only permissible to travel on the footplate if a cab or driver's compartment not being used as the footplate is not available. Unless specially authorised by the Chief Executive (SpoorNet), this provision excludes the Blue Train.
- 9043.2.2 Except as provided in the following subclause 9043.2.3 only two persons at a time in addition to the driver of an electric motor coach train, or the driver and driver's assistant in the case of an electric, diesel or steam locomotive, are permitted to travel on the footplate.
- 9043.2.3 When motor coach, locomotive or traffic tests are being conducted, the engineer conducting the test may, if he considers it necessary for the satisfactory conducting of the test, authorise a third additional person to travel on the footplate. In the case of an electric or diesel locomotive, with the approval of the Chief Executive (SpoorNet) a competent employee may be instructed to take over the duties of the driver's assistant and the driver's assistant may be instructed to travel in the trailing driver's compartment pending further instructions.
- 9043.3 SpoorNet employees or other persons permitted to travel on the footplate must not in any circumstances, enter into discussion with or otherwise distract the drivers' or drivers' assistants' attention from their duties.

- 9043.4 A Conductor (Commuter Services) may not enter the leading driving compartment of an electric motor coach train, except in the case of emergency and for the purpose of exchanging tokens on behalf of the driver, if this is necessary and is provided for in local appendices.
- 9043.4.1 With the exception of those employees holding permits or written permission issued in accordance with subclause 9043.2.1 hereof, only the Conductor (Commuter Services) working the rear portion of an electric motor coach train, is permitted to travel in the rear driving compartment.
- 9043.4.2 Intermediate driving compartments on electric motor coach trains must be kept locked.
- 9043.4.3 It must be clearly understood that nobody, including conductors, inspectors (passenger services), a Spoornet employee and members of the public, is allowed to travel in the intermediate driving compartment except in the case of:
- 9043.4.3.1 Third-class sets, when the intermediate driving compartment may be used by the conductor who is working the centre portion of the train;
- 9043.4.3.2 Section Managers (Train Traffic) and engineering officers who are in possession of permits or written permission issued in accordance with subclause 9043.2.1 hereof and who are actively employed on work which cannot be performed satisfactorily whilst travelling elsewhere on the motor coach train.
- 9043.5 Locomotive personnel travelling for service purposes on electric locomotives**
- 9043.5.1 Provided only that no suitable accommodation is available within a short space of time on a passenger train, locomotive personnel limited to a maximum of three may travel for service purposes in the rear driving compartment(s) of the electric locomotive(s) of goods trains (air-brake trains excluded). Under no circumstances may they travel in the driving compartment which is used to control the train.
- 9043.5.2 Locomotive personnel travelling for service purposes in the rear driving compartment of an electric locomotive must be in possession of a written authority issued by a designated official.
- 9043.5.3 In all cases where locomotive personnel are authorised to travel for service purposes on an electric locomotive, the driver of the train must be advised orally or in writing of the circumstances.
- 9043.5.4 A special book must be kept by the designated issuing official in which particulars of all authorities issued must be recorded.
- 9044.0 VOID**
- 9045.0 VOID**
- 9046.0 MOVEMENT OF LOCOMOTIVES IN LOCOMOTIVE OR WORKSHOPS YARDS**
- 9046.1 When a locomotive is moved in a locomotive or workshops yard, the driver or other qualified employee in charge of the locomotive must be accompanied on the footplate by a driver's assistant.
- 9046.2 If the driver's assistant, on the instructions of the driver, proceeds ahead to set points, he will be regarded as accompanying the locomotive. All concerned, however, must continue to keep a sharp lookout and, whenever possible, the driver's assistant must remain on the footplate.
- 9046.3 Should it be necessary to make a slight movement of a locomotive for any purpose, the driver must ensure that all is in order before he moves the locomotive.
- 9047.0 VOID**
- 9048.0 VOID**
- 9049.0 UNAUTHORISED PERSONS NOT TO MOVE LOCOMOTIVES**
- 9049.1 The only employees authorised to move locomotives are a driver, driver's assistant under personal supervision of the driver, technical supervisor, shedman, and other employees certified as competent (as far as the duties of such employees require) by a Section Manager (Train Traffic) or other authorised officer. Employees other than those authorised to do so, are strictly prohibited from moving locomotives or any part or parts thereof, or from tampering with any other control equipment or fittings of any type of locomotive.

9050.0 LOCOMOTIVE FAILURES: DRIVERS TO RECORD DEFECTS AND DEFICIENCIES

9050.1 Locomotive failures

9050.1.1 When a locomotive is unable to haul a train, the incident must be regarded as a locomotive failure. A delay caused by a locomotive through any small defect which is remedied by the driver, who ultimately takes the train forward, should not be regarded as a locomotive failure, but treated as a delay.

9050.2 When a locomotive has partially failed and is unable to haul the full load, the driver of such locomotive must carry out the provisions of the relevant train working rules.

9050.3 Serious defects to be reported

9050.3.1 When any serious defect develops in a locomotive en route, the driver must report particulars to the depot to which the train is proceeding and, when not travelling in the direction of his home depot, the message must also be sent to the latter depot.

9050.4 Repair book (T522)

9050.4.1 Before signing off duty between trips, or after completion of duty, the driver must carefully examine his locomotive and enter in the repair book (T522) all defects and deficiencies requiring the attention of shed maintenance personnel. These repairs must have the immediate attention of the shed maintenance personnel concerned, who must record, in the space provided in the book, details of the work actually done, and date, and sign the entry. Drivers must report specially in writing or orally, any defects which constitute a source of danger, in addition to entering particulars thereof in the repair book.

9050.5 Examination of locomotive by shedman

9050.5.1 Where the driver is authorised to hand over a locomotive to the shed personnel before completing his examination, the examination must be carried out by the shedman deputed for the work, and that employee must report all defects in the manner set forth in subclause 9050.4 hereof. The driver, in such cases, must record in the repair book all defects or deficiencies observed by him whilst the locomotive was in his charge.

9051.0 VOID

9052.0 VOID

9053.0 VOID

9054.0 VOID

9055.0 TOOLS AND EQUIPMENT TO BE PROVIDED ON LOCOMOTIVES, AND DRIVERS' PERSONAL KITS

9055.1 Electric locomotives

9055.1.1 Equipment on electric locomotives:

- 1 Marker.
- 1 Set of cables (As necessary).
- 1 Pantograph hook stick (Where applicable).
- 2 Fire extinguishers.
- 2 Scotches.

9055.1.2 Personal kit to be issued to drivers.

9055.1.3 General.

- *Train Working Rules.
- *General Appendix.
- *Electrical Safety Instructions.
- *Relevant Local Appendix or Appendices.
- 1 Leather case.
- 1 Water bottle.
- 1 Points key.
- 10 Detonators in container.
- 1 Green flag fixed to wooden handle.
- 1 Red flag fixed to wooden handle.
- 1 Reverser key.
- "SD1" Authorities.
- 1 Pad T403 forms or Trip Report forms.
- 1 Tricolour hand lamp. (One spare battery.)
- 1 Pocket note book.

NOTE: *May be kept in shed locker at own discretion.

9055.1.4 Additional personal equipment for drivers operating electric locomotives.

- Control switch keys (as necessary).
- 1 Independent air-brake handle.
- 1 Wooden plug for vacuum cylinder branch pipes.
- 1 Brake valve key (as necessary).

9055.1.5 Additional personal equipment for drivers operating motor coach trains.

- 1 Tool pouch.
- 1 Control switch key (as necessary).
- 1 Set fuses (as necessary).
- 1 Carriage door key.

9055.1.5.1 Consumable items per month.

- 1 non-ravelling cloth (45 cm x 35 cm) (stores item number 7/235).
- 1 hand cleaner (0,250 kg).
- 1 toilet roll.
- 1 bar of soap.

9055.2 Diesel locomotives

9055.2.1 Equipment on diesel locomotives.

- 1 Marker.
- 2 Fire extinguishers.
- 2 Scotches.
- 1 Set of cables.

9055.2.2 Personal kit to be issued to drivers.

- *Train Working Rules.
- *General Appendix.
- *Relevant Local Appendix or Appendices.
- *Electrical Safety Instructions.
- Water bottle.
- 1 Points key.
- 1 Green flag fixed to wooden handle.
- 1 Red flag fixed to wooden handle.
- 10 Detonators in container.
- 1 Electric tricolour hand lamp (One spare battery.)
- 1 Reverser key (diesel-electric locomotives).
- 1 driving compartment key (diesel-electric locomotives).
- "SD1" Authorities.
- 1 Pad T403 forms or Trip Report forms.
- 1 Independent air-brake handle.
- 1 Brake valve key (as necessary).
- 1 Pocket note book.
- 1 Leather case.

NOTE: **May be kept in shed locker at own discretion.*

9055.2.3 Consumable items per month:

- 1 non-ravelling cloth (45 cm x 35 cm) (stores item number 7/235).
- 1 hand cleaner (0,250 kg).
- 1 toilet roll.
- 1 bar of soap.

9056.0 TOOLS AND EQUIPMENT TO BE PROVIDED ON DIESEL AND ELECTRIC LOCOMOTIVES, MOTOR COACHES AND DRIVING TRAILERS AND DRIVERS' KIT: GENERAL

9056.1. Emergency tools and equipment

9056.1.1 In addition to the items enumerated in subclauses 9055.1 and 9055.2 hereof, any other equipment which is required for a particular class of locomotive may be included in the emergency tools and equipment locker of a main line locomotive, provided such additions are covered by suitable local instructions. Shunting locomotives working at outstations may be equipped with emergency tools and equipment at the discretion of the technical supervisor concerned.

9056.1.2 A complete list of the tools and equipment, contained in the locker, must be secured to the inside of the door or lid of the locker.

9056 1.3 The seal of the locker must be examined whenever the locomotive returns from a trip, or undergoes a daily or trip inspection, by a shedman, examiner (electric locomotives) or other employee deputed for this purpose.

- 9056.1.4 The emergency tools and equipment of every locomotive must be examined regularly, at least once per month, to ensure that all items are available and are in good condition. The examination may be arranged to coincide with shed inspection or washout, etc., as the case may be, and a suitable record thereof must be kept.
- 9056.1.5 When assuming control of a locomotive, a driver must ensure that the seal of the locker is intact. Should the seal be found broken, the driver must endorse his Trip Report form, or Fault Report form, accordingly. If the broken seal is detected at a locomotive depot, it must also be reported orally to a Section Manager (Train Traffic).
- 9056.1.6 When a driver breaks the seal of the locker in order to use the emergency tools or equipment, or for any other reason, he must endorse the full circumstances on the Trip Report form, or Fault Report form in the case of diesel and electric locomotives, and also enter full details in the Repair or Defect Book on his return to his depot. If he hands over control of the locomotive during a journey, he must advise the relieving driver of the circumstances to enable him to make a suitable endorsement in the Repair or Defect Book when the locomotive is finally stabled at a repair depot.
- 9056.1.7 Whenever a case of a broken seal is reported, the technical supervisor (production control) must arrange for the contents of the locker to be examined and for any missing items to be replaced, and for the locker to be resealed.
- 9056.1.8 Diesel locomotives**
- 9056.1.8.1. When a locomotive is transferred to another depot, or is sent to workshops or to another depot for repairs, the emergency tools and equipment must accompany the locomotive, and a clear understanding must be reached between all concerned regarding the safe custody of the emergency tools and equipment. The despatching depot must compile a list of the emergency tools and equipment contained in the locker of the locomotive, for transmission to the receiving depot or to the workshop or depot responsible for the safe custody of the tools and equipment during repairs. At all intermediate depots the seals must be examined and, if found broken, full details of the circumstances must be reported to the despatching depot.
- 9056.1.9 Electric locomotives**
- 9056.1.9.1 When a locomotive is transferred to another depot, the emergency tools and equipment contained in the locker of the locomotive and the eye bolts with permanent links fitted on each end of the locomotive must accompany the locomotive. A clear understanding must be reached between all concerned regarding the safe custody of the emergency tools and equipment and the eye bolts with permanent links. The despatching depot must compile a list of the emergency tools and equipment contained in the locker of the locomotive, as well as the eye bolts with permanent links fitted at each end of the locomotive.
- 9056.1.10 When a locomotive is sent to workshops or another depot for repairs, the emergency tools and equipment contained in the locker of the locomotive must be removed and placed in safe custody at the home depot. A complete list must be compiled of the emergency tools and equipment removed from the locomotive.
- 9056.1.11 When a locomotive is sent to workshops or another depot for repairs, the eye bolts with permanent links at each end of the locomotive must not be removed, and it must be ascertained that these accessories are still on the locomotive when it is returned to the home depot.
- 9056.1.12 Diesel locomotives**
- 9056.1.12.1 When a locomotive is transferred from one depot to another, or is sent to the mechanical workshops or to another depot for repairs, the line of action is the same as that for emergency tools and equipment, as set out in subclause 9056.1.8.1 hereof. The additional equipment must accompany the locomotive, and a physical check must be carried out at every intermediate depot where the locomotive is stabled or handed over to another driver.
- 9056.1.13 Electric locomotives, motor coaches or driving trailers**
- 9056.1.13.1 When a locomotive, motor coach or driving trailer is transferred to another depot, the additional equipment which is stored in or on the locomotive, motor coach or driving trailer must accompany the locomotive, motor coach or driving trailer. A clear understanding must be reached between all concerned regarding the safe custody of the additional equipment. The despatching depot must compile a list of the additional equipment stored in or on the locomotive, motor coach or driving trailer.
- 9056.1.13.2 When a locomotive, motor coach or driving trailer is sent to workshops or another depot for repairs, the additional equipment stored in or on the locomotive, motor coach or driving trailer must be removed and placed in safe custody at the home depot. A complete list must be compiled of all the additional equipment removed from the locomotive, motor coach or driving trailer.
- 9056.2 Additional equipment**
- 9056.2.1 In addition to the items enumerated in subclauses 9055.1 and 9055.2 hereof, any other equipment which is required for a particular class of locomotive, may be included as additional equipment, provided such additions are covered by suitable local instructions.

9056.2.2 Technical supervisors must arrange regular inspections to ensure that the additional equipment is available and in good condition.

9056.2.3 When assuming control of a locomotive, the driver must ensure that the additional equipment is available. Should shortages be found, he must endorse the Trip Report form, or Fault Report form, or endorse the Repair Book, as the case may be, at the end of the trip.

9056.3 Drivers' personal kit

9056.3.1 In addition to the items enumerated in subclauses 9055.1 and 9055.2 hereof, any other equipment which is required for a particular class of locomotive, may also be issued as personal kit, provided such additions are covered by suitable local instructions.

9056.3.2 Drivers and drivers' assistants must sign receipts for personal kit issued to them, and suitable records of all issues and correspondence in this regard must be kept by issuing depots.

9056.3.3 Drivers and drivers' assistants are responsible for ensuring that their personal kit is kept in good condition and complete. This kit must be kept in facilities provided for this purpose, when the personnel concerned are not on duty. Personal kit is subject to periodical inspection by the Section Manager (Train Traffic).

9056.3.4 Personal kit belongs to the depot which issued it and must be returned to that depot when the personnel concerned is transferred.

9057.0 VOID

9058.0 VOID

9059.0 VOID

9060.0 LOCOMOTIVES UNDER REPAIR IN LOCOMOTIVE SHEDS OR YARDS: PROTECTION OF EMPLOYEES

9060.1 Every locomotive under examination or repair in a locomotive shed or yard must be protected by red discs or red flags during daylight, and by hurricane lamps with red shades during darkness or during any period of the day when visibility is poor or lighting is bad. These protective devices must be exhibited in such manner as to be clearly visible from each end and either side. A special clamp is provided for placing over the ledge of the cab window of a locomotive. This clamp has a red disc fixed thereto, and is also provided with a hook for suspending a hurricane lamp during darkness or at other times, when necessary. (When a clamp and discs are not available during the day, a red flag must be used for protection.)

9060.2 Sufficient discs or flags must be available for each employee whose duties include pit examination and repairs. Each of these employees must be supplied with two discs or two flags for his personal use.

9060.3 Discs and flags must be indelibly marked with the name of the employee to whom they are issued.

9060.4 Discs and lamps must be kept in a clean condition, and flags renewed when necessary.

9060.5 Sufficient hurricane lamps of the approved type must be kept in depot stores or supervisors' offices to suit the number of employees affected, i.e. those employed on night shift or who are required to use lamps owing to bad lighting or poor visibility.

9060.6 Discs, flags and lamps must conform to the design and size indicated on the approved drawings.

9060.7 When discs, flags or lamps are displayed on a locomotive, such locomotive must not be moved until the employee carrying out repairs has removed the flags, discs or lamps, and he has withdrawn, and the locomotive is in a condition to be safely moved. No other work on, or the servicing of a locomotive is allowed unless a clear understanding is arrived at with the employee using the discs, flags or lamps, as the case may be.

9061.0 VOID

9062.0 VOID

9063.0 VOID

9064.0 VOID

9065.0 VOID

9066.0 FLUSHING AND WASHING OF DOMESTIC WATER TANK-WAGONS

- 9066.1 Tank-wagons used for the conveyance of water for domestic use must be washed out at intervals not exceeding six months. The employees responsible for the wash out must wear overalls and rubber boots when domestic water tank-wagons are cleaned out.
- 9066.2 At depots where carriage cleaners and/or watering personnel are employed, the foreman carriage cleaner and/or leading hand (train watering) must clean and fill the tanks when necessary, under the supervision of the official in charge of the depot.
- 9066.3 At wagon maintenance depots where there are facilities for the descaling of tank-wagons for the conveyance of domestic water, the wagon maintenance personnel is responsible for the descaling and flushing of the tank-wagons. In all other cases the tank-wagons for descaling must be forwarded to one of the following workshops, whichever is nearest: Salt River, Germiston, Uitenhage, East London or Durban.
- 9066.4 Descaling must, unless otherwise laid down, be done by means of steel brushes. Where the internal surface of the tank has not yet been painted steel brooms must be used to sweep up the scale and dirt. Where the internal surface of the tank has been painted, scrubbing brushes must be used to remove any deposit of dirt on the internal surface. These brooms and brushes must be used exclusively for the cleaning of watertanks and not for any other purpose.
- 9066.5 The date on which a tank-wagon, allocated specifically for the conveyance of domestic water, is descaled and flushed, together with the depot code must be recorded on a stencilled ladder on the tank.
- 9066.6 After being filled with domestic water, all tank-wagons must be chlorinated by the consumer. The correct quantity HTH for each tank-wagon for domestic water for a specific area is calculated and prescribed by the risk professional.
- 9066.7 Before a tank-wagon is filled, the point of the hose and nozzle must be sterilised in a solution of HTH chlorine and water.
- 9066.8 The official in charge supervising the refilling of tank-wagons must see that tank-wagons are filled hygienic. He must, by inspection, ascertain whether descaling or flushing is necessary.
- 9066.9 Risk professionals must make regular inspections on all tank-wagons for domestic water, as well as refilling points, refilling facilities and procedures and he must report any defect at the refilling points to the official in charge.
- 9066.10 The risk professional must immediately be advised of any anomalies in respect of health matters regarding tank-wagons for domestic water, refilling points and procedures.

9067.0 REWARD FOR DETECTION OF FLAWS IN LOCOMOTIVES AND ROLLING STOCK

9067.1 Locomotives

- 9067.1.1 A reward will be paid to any employee of the locomotive shed personnel, who is exclusively engaged on locomotive shed work, and who detects, a bona fide flaw – such as a flawed axle or defective crank pin – in a locomotive. The reward must be recommended by the technical supervisor or other official in charge of the shed and will be paid, if approved by the Chief Executive (Spoornet).

9067.2 Rolling stock

- 9067.2.1 A reward will be paid to the wagon maintenance personnel, wheel turner or other employee who detects a defective axle or fractured tyre belonging to any rolling stock, when it is not the duty of such employee to examine wheels and tyres for defects unless the circumstances are exceptional.
- 9067.2.2 The Senior Manager (Transwerk) of the nearest workshop must decide as to the genuineness of the defect, his decision in all cases will be final and he only may issue a voucher for payment.

9068.0 EXAMINATION, UPKEEP, ETC., OF LOCOMOTIVE BRAKES

9068.1 Examination of locomotive brake gear by shedmen

- 9068.1.1 The shedman, or other employee appointed by the technical zone manager (traction) or supervisor in charge, must test the vacuum, air and hand brakes, as the case may be, on all locomotives after each trip, see that the brakes are in good working order, and the brake blocks fit against the wheels when the brake is applied. [The vacuum or air brake must be tested by means of the testing discs (to drawing No. S.8430/2).]
- 9068.1.2 All defects must be booked at once by the shedman and attention must immediately be given thereto by the technical supervisor. The shedman must also report, in writing, to the technical zone manager (traction) or supervisor in charge, as the case may be, the nature of any defects located.

9068.2 Oiling and upkeep of brakes on locomotives by the shed personnel

- 9068.2.1 All vacuum, air and hand brakes, as the case may be, on locomotives must be examined at least once each month by the technical supervisor in charge. The date when the locomotive was examined, and the condition of the brakes, must be recorded in a special book kept for the purpose and duly signed by the aforementioned official against each entry.
- 9068.2.2 The oiling of all brake gear must be done at least once a week, the oil holes and screws being cleaned at the same time.
- 9068.2.3 Vacuum exhausters and ejectors must be kept in good working condition, set for 64 kPa, and with the testing disc should register 44 kPa.

9068.3 Locomotives not to leave shed with defective break gear

- 9068.3.1 The technical zone manager (traction) or technical supervisor in charge is held responsible for seeing that locomotives do not leave the shed with defective brake gear. A driver must also test the brakes on his locomotive before leaving the shed.

9068.4 Section Manager (Train Traffic) must render a statement

- 9068.4.1 The Section Manager (Train Traffic) must test the air, steam, hand and vacuum brakes of every locomotive inspected by him and, at the end of each month, must render a return to the Operations Manager, giving the numbers of the locomotives inspected.

9069.0 EXAMINATION OF LOCOMOTIVE AND TENDER WHEELS AND AXLES

- 9069.1 Locomotive, and tender wheels in the case of steam locomotives, must be examined by drivers at least once per trip, either at some convenient stopping place or on conclusion of the run. Each tyre must be tapped with a hand hammer for the purpose of detecting defects.
- 9069.2 Locomotive wheels and axles must be examined in the shed by the technical supervisor at least once a month, and a record of each locomotive must be kept in a special book, giving the following information:

Locomotive No. Date of examination.....
Signature of technical supervisor making the examination.....

9070.0 – 9109.0 VOID

9110.0 VEHICLES DAMAGED DURING TRAIN OR SHUNTING MOVEMENTS

- 9110.1 If any defect is observed or damage is incurred during shunting operations, the official in charge must be advised promptly so that action may be taken to ascertain the actual cause and on whom responsibility rests. Wagon maintenance personnel must also be notified of such defect or damage.

9111.0 DISPOSAL OF DEFECTIVE COUPLERS, ETC.

- 9111.1 If couplers or other coupling gear, or other parts of a vehicle broken during shunting operations or during train movements, the defective or damaged parts must be handed to the driver concerned who, in turn, must hand them over to the locomotive official in charge. In the event of a train parting load in section, or at a station, the driver must comply with the provisions of clause 9123.0 hereof.

9112.0 ACTION TO BE TAKEN IF VEHICLE IS UNFIT TO RUN

- 9112.1 A wagon or other vehicle unfit to run must not be loaded. If a defect is discovered after loading has commenced, the vehicle must be unloaded immediately, and if the defective vehicle cannot be repaired on the spot by a technical official or wagon maintenance personnel, it must be sent to the workshops.

9113.0 LOCOMOTIVES OR VEHICLES IN NEED OF WORKSHOP REPAIRS TO BE LABELLED AND CENTRAL OPERATING OFFICE ADVISED

- 9113.1 When damaged vehicles and locomotives are labelled to the workshops for repairs, the labels must be endorsed, if possible, showing when and where the damage occurred. A report of the circumstances must in each case be submitted immediately to the central operating office concerned. Label T51 must be affixed to all vehicles sent to the workshops for repairs.

9114.0 FULL DESCRIPTION OF SPARE PARTS TO BE GIVEN WHEN ORDERING THEM

9114.1 Station officials in charge, when advising the technical zone manager (traction), or wagon maintenance personnel, as the case may be, of couplers or draw-gear requiring repairs or renewals, must state the number of the vehicle so that a suitable spare part may be supplied. A full description of the type and size of the coupler must be given in the case of a broken coupler and any other spare parts that may be required.

9114.2 Automatic couplers are marked with a raised letter on top of the coupler heads to indicate their type, and this index letter must be quoted when ordering couplers for replacement. Where no index letter appears, the cross-sectional dimensions of the shank must be given.

9115.0 OPERATIONS MANAGER TO BE INFORMED WHEN REPAIRS EFFECTED

9115.1 Station officials in charge, technical zone managers (traction), and other employees concerned, must promptly notify the central operating office of all repairs carried out to passenger vehicles, wagons, etc., at their stations or depots.

9116.0 WHEN DAMAGED VEHICLES MAY BE LOADED

9116.1 Vehicles bearing "Permissive" repair labels may only be loaded with traffic to a station short of a wagon maintenance depot.

9117.0 DRIVERS' ASSISTANTS TO ADVISE STATION PERSONNEL WHEN VEHICLES ARE IN DAMAGED CONDITION

9117.1 In order to ensure safe working, drivers' assistants of trains by which damaged vehicles are hauled, must notify the station personnel thereof at any point en route where they are assisted in shunting operations, and also at depot stations before handing over their trains.

9117.2 When damaged vehicles arrive at a depot or other centre where trains are divided or re-marshalled, the personnel must not allow them to stand unprotected on a shunting road, but must, as soon as possible, place such vehicles in a position where they will not require to be moved until they have received the necessary attention. (See clause 9031.0 hereof.)

9118.0 VOID

9119.0 DAMAGE TO ROLLING STOCK IN PRIVATE SIDINGS

9119.1 A close examination must be made of rolling stock and equipment received from private sidings, and should any damage or deficiency be discovered, the driver's assistant or shunter, as the case may be, must promptly direct the siding owner's or his representative's attention to the matter and obtain a written acknowledgement of responsibility thereof. The employee discovering the defect or damage must submit details thereof in writing. The official in charge must thereafter report the circumstances to the Operations Manager.

9119.2 Drivers' assistants or shunters must satisfy themselves that vehicles are in good order when placing them in private sidings. Any defect or damage must be recorded and a written report made to the official in charge, who must take prompt action to have any defects repaired.

9120.0 VEHICLES DETACHED AT STATIONS, CROSSING PLACES AND INTERSIDINGS FOR REPAIRS

9120.1 Particulars of vehicles detached from trains for attention at stations, crossing places and intersidings must be promptly reported to the train-control officer controlling the section, and such advice must include the nature of the defect, the number of the vehicle and from which train it was detached. In the case of loaded vehicles the nature of the contents must be stated.

9120.2 Where vehicles conveying urgent or perishable traffic are delayed, particulars must also be reported to the central operating office, so that special action may be taken to ensure expeditious transit.

9120.3 In event of loaded wagons in transit being detached with hot axle-boxes or other defects, the destination station must be promptly advised.

9120.4 The destination station must also be notified when repairs have been effected and the wagon is despatched to its destination.

9121.0 AXLE-BOXES OF VEHICLES RUNNING HOT, OR VEHICLES OTHERWISE RENDERED DEFECTIVE

- 9121.1 Locomotive personnel must keep careful watch en route with a view to detecting the first sign of a heated axle-box or other defects on their trains, and special examinations must be made by drivers' assistants as opportunity presents itself. [See train working rule No. 184(4).]
- 9121.2 Drivers can minimise damage to hot axle-boxes by giving attention to them before the heating becomes serious. [See train working rule No. 115(2).]
- 9121.3 When a driver's assistant finds that an axle-box of any vehicle on his train is heating or hot, he must at once advise the driver so that the latter may oil it, except in the case of roller-bearing axle-boxes, and at the same time decide whether the vehicle is fit to run to the next wagon maintenance depot.

9122.0 VEHICLES FITTED WITH ROLLER-BEARING AXLE-BOXES

- 9122.1 The roller-bearing axle-boxes are easily distinguished as the trade name "Timken", "SKF", etc., as the case may be, is casted on the end caps of the package unit roller-bearings and on the lids of roller-bearing axle-boxes. In addition, goods vehicles have the distinctive marking of three yellow circles on the four corners of such vehicles. On light coloured vehicles the yellow circles are painted on a black background whilst on dark coloured vehicles only the yellow circles are painted.
- 9122.2 The hand brakes (wheel operating handles), on main line coaches are fitted to the sole bar on each side, and approximately in the centre of the coaches.
- 9122.3 The hand brakes of motor coaches are situated inside the coaches, in the driver's compartment, on the end framing.
- 9122.4 For the application of the brakes, the hand-brake wheel must be operated in a clockwise direction.
- 9122.5 The hand brakes of vehicles fitted with roller-bearing axle-boxes must be applied when a vehicle is standing loose from another vehicle, as, if the vacuum or air brake is not in operation roller-bearing vehicles are liable to be set in motion on a gradient by wind or other extraneous influence.
- 9122.6 When two or more vehicles fitted with roller bearings are left standing coupled together, the hand brake must be applied on at least one vehicle. Before moving a vehicle(s) away from such vehicle(s), the personnel concerned must satisfy themselves that the hand brake is applied on at least one of the vehicles remaining.
- 9122.7 Great care must be taken to ensure that hand brakes are released before vehicles are set in motion, otherwise skidded wheels will result. The brakes of all coaches on a train must be checked before departure of the train.
- 9122.8 All foreign vehicles fitted with roller bearings, which are permitted to work over Spoornet lines, will have distinctive markings. Goods vehicles will have the distinctive marking of three yellow circles on a black background on the four lower corners of such vehicles.
- 9122.9 These foreign roller-bearing vehicles are fitted with hand brakes similar to Spoornet type, and such vehicles must have the hand brakes applied when they are standing uncoupled from any other vehicle, as, if the vacuum or air brake is not in operation, the roller-bearing vehicles are liable to be set in motion, even on a level, by wind or other extraneous influences.
- 9122.10 When two or more vehicles fitted with roller-bearings are left standing coupled together, the hand brakes must be applied on at least half the number of vehicles, irrespective of whether the vacuum or air brake is in operation or not. Before moving one or more of such vehicles, the personnel concerned must satisfy themselves that sufficient hand brakes, as laid down above, are applied on the remaining vehicle or vehicles.
- 9122.10.1 When a train, consisting either in part or wholly of vehicles fitted with roller-bearings, is required to have the vacuum or air brake released at any depot en route for the purpose of examination or adjusting the brakes, or for any reason, it is the responsibility of the wagon maintenance personnel to ensure that sufficient number of hand-brakes is applied, if necessary, to keep the vehicle(s) stationary.
- 9122.11 Great care must be taken to ensure that hand brakes are released before the vehicles are set in motion, otherwise skidded wheels will result.
- 9122.12 Vehicles with roller-bearings must not be detached from the locomotive or other vehicle unless the hand brakes of the roller bearing vehicles have been applied.

9123.0 DRIVER' AND DRIVERS' ASSISTANTS DUTIES IN CONNECTION WITH DEFECTIVE VEHICLES OR TRAINS PARTING LOAD

9123.1 Driver must have necessary labels and train parting reports

9123.1.1 Drivers working trains must be supplied with T49 labels ("For repairs"), T50 ("Not to go") and T498 train parting reports.

9123.2 Defects on vehicles

9123.2.1 When defects are noticed on a passenger vehicle or wagon and such vehicle is considered safe to travel, the driver must complete and attach T49 labels thereto. In the event of the automatic couplers on any vehicle parting, the driver must comply with the provisions of subclause 9123.3 hereof. The locomotive personnel must report full particulars to the train-control officer controlling the section, who must advise the central operating office accordingly. The nature of the defects must in all cases be shown on the labels for the information of the wagon maintenance personnel.

9123.2.2 If any doubt exists whether the vehicle is servicerworthy, the driver must complete T50 labels ("Not to go") and attach them thereto. The nature of the defects must in all cases be shown on the labels for the information of the wagon maintenance personnel.

9123.2.2.1 The driver's assistant must draw the attention of the official in charge to the defects and the latter must arrange to detain the vehicle(s) and advise the train-control officer. The official in charge must advise the central operating office when the vehicle has been repaired and cleared.

9123.3 Train parting load

9123.3.1 When a train becomes divided accidentally and the driver's assistant is sent to couple up the load, he must go back the full length of the train and ensure that the train is complete by making sure that a marker is attached to the last vehicle.

9123.3.2 Besides ensuring that a marker is attached to the last vehicle, the driver's assistant must compare the number of the last vehicle with the number on the list of vehicles (see clause 9030.2 hereof).

9123.3.3 If it is found that there is no marker on the last vehicle, but the number corresponds with the number on the list of vehicles, the driver's assistant may return to the locomotive and the train may proceed to the next place where a marker can be attached.

9123.3.4 If it is found that there is no marker attached to the last vehicle and the number of the last vehicle does not correspond with the number on the list of vehicles, the driver's assistant must go back further and ensure that there is no vehicles left in the section.

9123.3.5 In any instance of uncoupling of couplers of a passenger, mixed or goods train, either at a station or in the section, the driver's assistant must personally inspect the uncoupled couplers before they are again coupled, to determine whether there are any defects which could possibly have caused the uncoupling, and the nature of the defects. In the event of the automatic couplers on any vehicle parting, the driver's assistant must complete a train parting report (T498) and attach it to the defective vehicle, or to either of the two vehicles involved in the parting, where no definite cause can be established. The driver's assistant must also attach a repair label (T49), endorsed "train parting", to the vehicle(s) involved.

9123.4 The wagon maintenance personnel, after having been advised of vehicles having been involved in a train parting, must look for and complete the reverse side of the T498 train parting report. The completed T498 train parting report must be submitted to the Operations Manager.

9124.0 DRIVER TO DECIDE WHEN DEFECTIVE VEHICLE IS TO BE DETACHED

9124.1 The driver must in all cases decide whether it is necessary to detach a defective vehicle at a station, interloop, crossing places or intersiding.

9125.0 USE OF EMERGENCY COUPLING SETS

9125.1 Emergency coupling sets may be used for the following purposes:

9125.1.1 As an additional coupling between vehicles which have the regular couplers in good order to ensure additional safety as provided for in this appendix or other relevant instructions;

9125.1.2 as an additional coupling between vehicles where, after a parting, the regular couplers are suspect but apparently still able to function. The emergency coupling set may become the only coupling between the relevant vehicles in the event of the suspect regular couplers again parting en route; and

9125.1.3 as the only coupling between vehicles where a regular coupler is defective or missing.

9125.2 Trains on which an emergency coupling is used as an additional coupling as indicated in subclause 9125.1.1 above, may travel at the maximum permissible speed for the type of train concerned, unless otherwise indicated.

- 9125.2.1 The speed of trains on which an emergency coupling set is used as indicated in subclause 9125.1.2 and 9125.1.3 above, must not exceed 40 km/h unless the driver is satisfied that it is safe to do so, bearing in mind the position in which the vehicle with the defective coupler is marshalled in the train and the nature of the line.
- 9125.3 If the portion of the load behind the emergency coupling does not exceed 850 tons, and the defective coupler is in position, the load complete may be cleared with the emergency coupling set as the only coupling.
- 9125.3.1 If the portion of the load behind the emergency coupling exceeds 850 tons, or if the regular coupler is missing, the first portion, including the vehicle with the defective or missing coupler, must be cleared first, and arrangements made to clear the remaining portion of the load thereafter.
- 9125.4 As emergency coupling sets and the brackets to which they are secured are not capable of withstanding high forces, it is essential that the jerking of trains be avoided.
- 9125.5 Disposal of defective vehicle(s)**
- 9125.5.1 Should the nature of the coupler or the circumstances be such that the driver considers it necessary or desirable to detach the defective vehicle before reaching the next wagon maintenance depot, he must advise the train-control officer of his intention before doing so.
- 9126.0 VOID**
- 9127.0 SKIDDED WHEELS**
- 9127.1 Drivers, drivers' assistants, shunters and other employees concerned must exercise care in the application of brakes so as to prevent the skidding of wheels. It should be understood that by allowing the wheel to revolve, a far more effective brake is obtained. [See train working rule No. 134(1)(b).]
- 9127.2 All instances of skidded wheels coming to notice, must be immediately reported if the damage is not already marked for attention and the fullest information must, in every instance, be submitted so that responsibility for the damage may be quickly and clearly defined.
- 9127.3 When the wheels of any locomotive, or tender, or any other vehicle, have been skidding, fitters or wagon maintenance personnel, or any other employee to whom has been delegated the duty of the examination of the wheels, must take a special note thereof and submit a report to his official in charge informing him:
- 9127.3.1 in the case of a locomotive:**
- 9127.3.1.1 Locomotive number;
- 9127.3.1.2 wheel or wheels found skidded;
- 9127.3.1.3 extent of skid; and
- 9127.3.1.4 reason for skid;
- 9127.3.2 In the case of a vehicle other than a locomotive:**
- 9127.3.2.1 The action to be taken is set out in clause 905.0 of the Carriage and Wagon Handbook (Volume 1) (carriage and wagon) and other employees employed on the examination, maintenance and supervision of vehicles.
- 9127.4 Wheels are considered skidded and must be removed for attention when the length of the skid i.e. the flat on the circumference measures or exceeds the following dimensions:
- 9127.4.1 Passenger vehicles (including electric motor coaches and driving trailers) 32 mm.
- 9127.4.2 Wagons 57 mm.
- 9127.4.3 Electric and diesel locomotives:
- 9127.4.3.1 Driving wheels 57 mm.
- 9127.4.3.2 Bogie wheels At first sign of a skid, wheels must be removed for attention to bearings.
- 9127.4.4 The measurement of a skid must be made circumferentially and not across the tread.
- 9127.5 Wheels having shorter skids than the dimensions given above must remain in service, but in the case of locomotives, whenever the wheels are examined, all skids must be measured by the responsible employee, and entered into the repair book, indicating the length of each skid.

9127.6 After each trip, drivers must enter in the repair book, all skids existing on locomotives driven by them, irrespective of whether the skids have been previously booked or not.

9127.7 Slack tyres

9127.7.1 When a tyre is found to be slack the vehicle must be sent to the nearest wagon maintenance depot for repairs. If the vehicle is loaded, the load must be transhipped.

9127.7.2 An empty vehicle detached with a loose tyre must be examined by the technical zone manager (traction) (locomotive depot) or other responsible official. If it is then decided that the vehicle is fit to travel to an examining depot, it must be conveyed during daylight only. The brake must be rendered inoperative by isolating the cylinder, and this is done by disconnecting the cylinder hose pipe, at the junction of the train pipe, and plugging the latter. Wooden plugs only must be used for this purpose. A "Not to be loaded" label must be affixed to the vehicle.

9128.0 VOID

9129.0 BROKEN AXLES AND TYRES

9129.1 In all instances of breakage, or of the discovery of a flaw on an axle or tyre of a vehicle, the broken or defective parts must be immediately sent to the nearest workshop for inspection. Particulars of despatch must be notified to the Senior Manager (Transwerk) concerned as well as to the central operating office.

9129.2 The number of the vehicle from which the parts have been removed, must be painted or stencilled on the defective parts. Labels (tin if possible) must be securely affixed to the defective parts. The consignment note or waybill for the broken or defective parts must contain a full description of the parts, as well as the number of the vehicle from which they were removed.

9129.3 Wheels sent to workshops from transportation depots and out-stations must have the name of the forwarding station or depot stencilled in white lettering on the axles.

9130.0 PERIODICAL EXAMINATION OF MATERIAL WAGONS AND OTHER VEHICLES

9130.1 Where wagons are used for long periods on material work and other maintenance or construction work, it must be arranged with the official in charge of the nearest wagon maintenance depot for the vehicles to be thoroughly examined at regular intervals. The official in charge concerned must keep a complete record of the numbers of the vehicles and the date of each examination.

9131.0 EXAMINATION OF WATER TANK-WAGONS

9131.1 Where water tank-wagons are kept for any length of time, officials in charge must ensure that the vehicles are thoroughly examined at intervals during the period they are not actually in service.

9132.0 DAMAGED OR DEFECTIVE PARTS OF VEHICLES

9132.1 Except as provided in clauses 9111.0, 9135.0 and 9136.0 hereof, fractured, damaged or defective parts of vehicles must be examined either by the zone manager (traction) or wagon maintenance official in charge, or any other employee deputed by them. Where it is obvious that the defect is due to normal wear and tear or to an accident, or in isolated cases to faulty material, such part must be treated as scrap and must not be forwarded to the nearest workshop for further examination.

9132.2 Where repetitions of certain types of fractures or defects occur, which may indicate inherent weaknesses of design or workmanship, where material is consistently faulty, or where the defect is something out of the ordinary and an investigation seems desirable, the defective or damaged parts must be collected and forwarded to the nearest workshop and the Senior Manager (Transwerk) advised, in writing, of full details of the facts concerning the parts. The Senior Manager (Transwerk) must then decide whether the case merits further attention and, if so, the action to be taken.

9133.0 VOID

9134.0 VOID

9135.0 DETENTION OF FOREIGN VEHICLES THROUGH DEFECTS OR OTHER CAUSES AND DELAY OF FOREIGN EQUIPMENT

9135.1 When a foreign vehicle is detached at a station on a Spoornet line due to a defect or other cause, particulars of the delay and reason thereof must be submitted to the National Operations Centre (NOC). Unusual delay to foreign ropes, tarpaulins or chains, whether used on foreign or Spoornet vehicles, must also be reported.

9135.2 When foreign vehicles have been repaired, such vehicles must receive preferential despatch.

9135.3 When a foreign vehicle is unfit to travel on its own wheels and has in consequence to be loaded onto another vehicle, or if the damage renders the vehicle unsafe for carrying traffic, the following details must be included in the return submitted to the National Operations Centre (NOC):

9135.3.1 Date and time when damage took place.

9135.3.2 Particulars of despatch to the foreign railway concerned.

9135.3.3 Station to which consigned.

9135.4 Vehicles of foreign railways and of Spoornet may be included on the same return.

9136.0 SUPPLY OF SPARE PARTS TO FOREIGN VEHICLES

9136.1 In cases where foreign vehicles are fitted with Spoornet couplers, wheels or other spare parts, the Regional Operations Manager (ROM), Transwerk, supplying the material must take steps to have the parts belonging to Spoornet returned by reporting the matter to the National Operations Centre (NOC).

9136.2 A repair label, on which particulars of Spoornet parts affixed to the vehicle must be endorsed, must be attached to the foreign vehicle fitted with Spoornet material.

9136.3 Spoornet vehicles damaged on foreign lines will be similarly treated, and the Regional Operations Manager (ROM), Transwerk, to whom the vehicles are returned, must arrange for the prompt removal and despatch to the owning foreign railway of the couplers, wheels. etc., temporarily supplied.

9137.0 DISPOSAL OF DAMAGED COUPLERS, WHEELS AND OTHER PARTS

9137.1 All damaged couplers, wheels and other parts removed from foreign and Spoornet rolling stock, must be consigned to the dedicated store holding-area for failed components/parts in the Koedoespoort Workshop (Warehouse 138A/Steelroom), Pretoria, for examination by the Materials Very Important Technology Owner (VIT), Transwerk.

9137.2 All damaged couplers, wheels and other parts, irrespective of whether it is foreign or Spoornet material, must, before despatch to the Koedoespoort Workshop, be labelled, and in addition to the label, be clearly marked, i.e. the number of the vehicle from which it has been removed must be painted on the parts.

9137.3 Before returning the damaged couplers, wheels and other parts to the foreign railways concerned, it must be clearly labelled, the number of the wagon from which it has been removed and the cause of breakage or damage must be shown on the label.

9138.0 PARTS OF ROLLING STOCK FOUND ON OR NEAR THE LINE

9138.1 Parts of vehicles or locomotives found by track personnel or other employees on or near the line must be conveyed or despatched to the nearest depot.

9139.0 EXAMINATION OF VEHICLE ARRIVING AT OR DEPARTING FROM A STATION

9139.1 Except where otherwise provided for by the Chief Executive (Spoornet), all vehicles arriving at or departing from a station or in a marshalling yard where wagon maintenance personnel are stationed, must undergo the prescribed examination.

9139.2 The train-control officer or senior yard official, or his/her representative, as the case may be, must timeously advise the wagon maintenance personnel of a train which is being admitted to or arranged to depart from a line which is not considered part of the station or marshalling yard, or which is not normally used for the admittance and/or departure of trains, as the case may be. [See train working rule No. 115(1).]

9140.0 VOID

9141.0 VOID

9142.0 VOID

LEFT OPEN FOR FUTURE USE.

9143.0 OFFICIAL IN CHARGE TO BE ADVISED OF COMPLETION OF EXAMINATION

9143.1 Wagon maintenance personnel must inform the responsible official of the completion of the examination of vehicles, and such examination, in the case of passenger vehicles, should be completed before the vehicles are placed at the platform, and in the case of goods vehicles before they are shunted into position for loading.

9144.0 PROTECTION OF WAGON MAINTENANCE PERSONNEL AT OUT-STATIONS AND YARDS

9144.1 Wagon maintenance personnel or other employees proceeding to out-stations and yards to effect repairs to vehicles must, before commencing work, report to the train-control officer controlling the section or official in charge of the yard, and obtain permission to effect the necessary repairs. The wagon maintenance personnel must then carry out the instructions contained in subclause 11003.5 hereof. On completion of the work the relevant official must be informed accordingly.

9145.0 SUPERVISORY PERSONNEL MUST SEE THAT PROPER EQUIPMENT IS PROVIDED

9145.1 Supervisory personnel must see that wagon maintenance personnel or other employees sent to out-stations to effect repairs to vehicles are provided with the required number of discs (lamps if necessary) and detonators.

9146.0 LOADING AND OFF-LOADING OF WAGONS AT SIDINGS AND LOADING PLATFORMS: OPERATING OF ISOLATING AND EARTHING SWITCHES

9146.1 Loading points where loading and off-loading of wagons may take place in safety on electrified sections are demarcated by means of warning notices (see clause 202.0 of the Electrical Safety Instructions). These places are either not wired or are provided with isolating and earthing switches and employees in charge of shunting movements must ensure that wagons are placed within the boundaries of the place where loading and off-loading is permitted.

9146.2 The normal position of the isolating and earthing switch is in the "power off" position, i.e. with the overhead wires "dead" and the switch locked in that position by means of a special lock. Except at places where the isolating and earthing switch keys are locked electrically in accordance with subclause 7011.2, the keys must be kept in safe custody by the train-control officer, yard master or other designated official, hereinafter referred to as the issuing official.

9146.2.1 Except at places where the isolating and earthing switch key is locked in terms of clause 7011.0, a special book with columns for the date, key No., time and signature of recipient when the key was issued, as well as the date, key No., time and signature of issuing official when the same key is returned, must be kept at each place.

9146.2.2 Each time the key is issued or returned, the employee receiving the key must sign the book.

9146.2.3 In addition to the special lock mentioned in subclause 9146.2 some siding users also use a private lock to lock the isolating and earthing switch in the "power off" position.

9146.3 When it is necessary to perform shunting movements with an electric locomotive at a loading area equipped with an isolating and earthing switch, or when the power supply must, for whatever reason, be switched on, the driver's assistant, yard official or other person in charge of the work, hereinafter referred to as the responsible person must, before unlocking the isolating and earthing switch, first warn all persons in charge of loading and off-loading operations in writing of his intention to turn on the power by completing paragraph A of the "Notice to siding users in connection with the switching of the electric traction power supply" (see specimen at the end of this section) and obtaining their signatures in paragraph B. He must also, by personal observation ensure that no persons are on or in open wagons or on vehicle roofs and that loading or off-loading operations or any other work involving the handling of long lengths of material with which it is possible to make contact with the overhead wires are stopped and that everything is in order for making the overhead wires in the siding "live". Where the isolating and earthing switch is also locked with a private lock, he must request the siding user to remove his private lock.

9146.3.1 Should an isolating and earthing switch have to be placed in the "power on" position and no siding user whatsoever is present, the notice must none the less be completed with an entry that no siding user was present. In these circumstances the responsible person must nevertheless be on the look out and should a siding user arrive, his signature must be obtained.

9146.4 Whilst the power is "on" the responsible person must see to it that loading or off-loading operations are not resumed.

9146.5 Immediately after completion of the work, the responsible person must ensure that the switch is placed and locked in the "power off" position.

- 9146.5.1 After locking the isolating and earthing switch in the "power off" position and ensuring by visual inspection that the switch blade has operated correctly (withdrawn from the live contacts and connected to the earthed contacts), all persons in charge of loading and off-loading operations must be notified in writing that the power supply is switched off and they must acknowledge it by giving their signatures in paragraph C of the *"Notice to siding users in connection with the switching of the electric traction power supply"*. Thereafter loading and off-loading operations may resume. Where a siding user also provides his own private lock to lock the switch, he must be requested to reapply his lock.
- 9146.6 The notice together with the key must be handed to the issuing official who must keep the notice in safe custody for a period of 12 months.
- 9146.7 Should a train hauled by an electric locomotive have to shunt at an interloop, intersiding or unattended place in the section equipped with an isolating and earthing switch or when, for whatever reason, the isolating and earthing switch at that place must be placed in the "power on" position, the responsible person must obtain the key at the controlling station in accordance with subclause 9146.2. The issuing official must, except where otherwise stipulated in the Local Appendix, notify the responsible person at which station the key must be handed in. In such cases the responsible person must hand in the notice at his home depot where it must be kept for 12 months.
- 9146.7.1 As soon as the shunting operations or other work is completed and the isolating and earthing switch has been locked in the "power off" position, the responsible person must, if possible, notify the issuing official accordingly. On arrival at the place as instructed by the issuing official, the key must be handed to the official concerned. If the receiver is not the issuing official at the controlling station, the receiver must send the key along with the driver of the first suitable train to the controlling station and notify the controlling station accordingly. The receiver must, even if it is not a key controlled by him, record the receipt of the key in his book according to subclause 9146.2.1.
- 9146.7.2 To obtain the siding key at places where it is locked electrically, the provisions set out in subclause 7011.2 must be complied with. In such cases the responsible person must hand in the notice at his home depot where it must be kept for 12 months.
- 9146.8 Should the method whereby keys for operating isolating and earthing switches are issued, controlled and kept at specified loading areas, vary from the abovementioned procedure, the additional instructions with regard to the operating of such switches or separate instructions for the sections concerned depicted in the Local Appendix, must also be complied with.

NOTICE TO SIDING USERS IN CONNECTION WITH THE SWITCHING OF THE ELECTRIC TRACTION POWER SUPPLY

A SWITCHING OF THE ELECTRIC TRACTION POWER SUPPLY			
(1)	Please note that the electrical power supply to the under mentioned siding(s) will be switched on.		
	Name(s) of siding(s)	Number of siding(s)	
(2)	Instruct all your employees to stop all loading and unloading operations and handling of long lengths of material near the overhead wires, to withdraw and stand clear of all rail vehicles. None of your employees may be permitted onto any rail vehicle or to handle long lengths of material near these siding(s) after the time and date as agreed to by you in B(1) below. You will be notified by the Spoornet Official when the traction power to the siding(s) has been switched off.		
(3)	AFTER THIS TIME ALL OVERHEAD TRACK EQUIPMENT OVER THE ABOVE MENTIONED SIDING(S) MUST BE TREATED AS "LIVE" AND DANGEROUS		
B ACKNOWLEDGEMENT OF RECEIPT OF NOTICE			
(1)	I (person in control of loading and unloading operations) hereby declare that I have read section A of this notice and it has been explained to me. I fully understand the contents thereof and I take full responsibility to withdraw the employees under my control and warn them accordingly before the time and date agreed to by me below.		
	Name and surname (in print)	Signature	Time as agreed
C SWITCHING OFF OF THE ELECTRIC TRACTION POWER SUPPLY			
(1)	I (Spoornet Official in control of the work) certify that the traction power supply to the siding(s) mentioned in section A has been switched off at the time and date noted directly below. Work on rail vehicles in the siding(s) and the handling of long lengths of material near the siding(s) may be resumed.		
	OVERHEAD TRACK EQUIPMENT OVER ADJACENT TRACKS MUST BE TREATED AS "LIVE" AND DANGEROUS		
	Signature	Employee No. and capacity	Time
(2)	NOTED (Person in charge of loading and unloading operations)		
	Name and surname (in print)	Signature	Time



SECTION 10

ACCIDENTS OR OTHER EMERGENCY SITUATIONS, ETC.: PROCEDURE TO BE FOLLOWED IN CONNECTION THEREWITH

- 10001.0 PROMPT AND EFFICIENT ACTION IN DEALING WITH ACCIDENTS AND OTHER EMERGENCIES**
- 10001.1 The importance of being prepared to deal with accidents or other emergencies in a prompt, safe and correct manner, is impressed upon employees and attention is particularly directed to the following directives viz.:
- 10001.1.1 Train working rule No. 158 – Accidents
- 10001.1.2 Clause 11007.0 – Protection of trains
- 10001.1.3 Train working rules Nos. 227 and 233 – Locomotive failures
- 10001.1.4 Train working rules Nos. 228 and 229 – Obstructions and washaways
- 10001.1.5 Train working rules Nos. 230, 231 and 232 – Pilot-working on single lines
- 10001.1.6 Train working rules Nos. 231, 232 and 234 – Line obstructed (double and single lines)
- 10001.1.7 Train working rule No. 235 – Pilot-working on double lines
- 10001.1.8 Train working rule No. 236 – Damage to line
- 10001.1.9 Train working rule No. 237 – Train on fire
- 10001.1.10 Spoornet contingency plan for rail operations
- 10002.0 PERSONNEL TO BE PREPARED FOR EMERGENCIES**
- 10002.1 Each official in charge must give special attention to the action to be taken in dealing with emergencies in a safe and proper manner. He must also ensure that the employee, who is in charge during his absence, is fully conversant with the duties that are expected from him.
- 10002.2 Each official in charge, Section Manager (Train Traffic) or (Train Control), train-control officer or other responsible official must work out, on the principles laid down in the rules and contingency plan, the details of action required should any accident or other emergency arise. He must give careful thought as to the action to be taken in dealing with the various types of accidents and emergencies, so that he may be fully conversant with the arrangements to be made, and thus be prepared to act promptly in dealing with an accident or emergency.
- 10002.3 After rescue operations have been carried out, the expeditious clearance of an obstruction, with a view to restoring the train service, must be the first aim. After the extent of the accident or emergency has been ascertained, and the fullest information, together with the request for assistance, if required, has been despatched to the nearest official in charge of a station, or the train-control officer at the train-control office has been advised, the efforts of the locomotive personnel should be immediately devoted to the clearing of the line.
- 10002.4 The conditions prevailing at the scene of the accident should readily suggest the procedure to be followed. What is essential is well-directed and prompt action by all the officials on the spot. The senior official on the train, after consulting other officials, must decide which procedure will be the best to follow.
- 10002.5 Emergency cards**
- 10002.5.1 Emergency reference cards (Spoornet 13) for the purpose of recording, for ready reference, particulars of the names and addresses of the nearest doctors and hospitals, the various Spoornet officials, as well as other information which may be necessary in the case of emergency, must be posted up in all train-control offices, stations, locomotive sheds, stores depots, attended substations, power stations and workshops.

10003.0 FIRST-AID ORGANISATIONS TO BE ADVISED

10003.1 When an accident happens, involving injury to a number of persons, the official in charge must immediately advise the commanding officers of the nearest branch of the South African First Aid League, and the division of the St. John Ambulance Brigade.

10003.2 In all cases of injured persons travelling by train, the official in charge of the departure station must advise the destination station. Wherever possible, a member or members of the South African First Aid League or the St. John Ambulance Brigade must accompany all injured persons. The official in charge of the destination station must arrange for an ambulance or a member or members of the South African First Aid League and/or the St. John Ambulance Brigade to meet the train, to see that the necessary first-aid equipment is in readiness and to supervise the removal of the injured to a hospital or elsewhere, as directed.

10004.0 COMFORT AND CONVENIENCE OF DELAYED PASSENGERS

10004.1 The best arrangements practicable must be made for the comfort and convenience of passengers who are delayed by reason of an accident or other cause, and the official in charge must afford such passengers every facility to enable them to advise their relatives and friends of the circumstances and the probable time of their arrival at destination.

10005.0 ACTION TO BE TAKEN WHEN A TRAIN IS INVOLVED IN A SERIOUS ACCIDENT

10005.1 The following procedure, as the circumstances require, must be carried out in case of a serious accident:

10005.2 At the scene of the accident –

10005.2.1 the obstruction must immediately be protected in accordance with clause 11007.0 hereof. In the case of an accident in which a passenger or mixed train is involved, it must be borne in mind that passengers may obstruct a parallel line, and the protection afforded by the train personnel on the adjoining line(s) must not be removed, before it has been established that it is safe to do so;

10005.2.2 personnel must transmit, by quickest means, essential information to the train-control officer, viz.:

10005.2.2.1 Date and time of accident.

10005.2.2.2 Kilometre point.

10005.2.2.3 Nature of accident.

10005.2.2.4 To what extent train is derailed.

10005.2.2.5 How many persons appear to be injured.

10005.2.2.6 Whether breakdown train is required.

10005.2.3 the personnel available must undertake rescue work and precautions against fire. (When present, the Chief Steward and his personnel must undertake this duty.);

10005.2.4 members of the personnel not busy with more essential duties must endeavour to establish communication with the nearest train-control office;

10005.2.5 members of the personnel not busy with more essential duties must attend to the comfort of injured persons, pending the arrival of medical assistance;

10005.2.6 in the case of a passenger train, the Train Manager must endeavour to account for all passengers and make a list of the injured, including names and addresses and identity numbers if available;

10005.2.7 the personnel concerned must examine the interior of all compartments. If necessary, each compartment must be opened;

10005.2.8 when a dining car is available, a continuous supply of hot tea and coffee should be maintained to meet the needs of passengers injured or delayed. The tea and coffee should be supplied free to the passengers. No meals or other refreshments should be supplied free to such passengers, unless specially authorised; and

10005.2.9 suitable action must be taken by the personnel to safeguard the luggage etc. of persons killed or seriously injured, until it can be handed over to the SA Police Services.

- 10005.3 At train-control office –**
- 10005.3.1 Void
- 10005.3.2 the train-control officer must ascertain all essential information and furnish particulars to all concerned, including depot stations on each side;
- 10005.3.3 he must also advise –
- 10005.3.3.1 the station at the opposite end of the section. The official in charge of the station at each end of the section must compare the times of the station clocks concerned. They must also take the first opportunity to establish how the watches in possession of the train personnel concerned compare with the station clocks. Details of these comparisons must be endorsed in the train register at both stations. This action must also be taken in the case of any unusual occurrence;
- 10005.3.3.2 the track inspector and local trackmaster, if not already on scene, and request adjoining stations to summon the trackmasters, and their workers on adjacent lengths, if a large gang is required.
- 10005.3.4 the employee receiving the report of the accident must call out all available personnel (if any are qualified to administer first aid, he must send them to the scene), and arrange with the local or nearest Commander, South African Police Services, for police supervision at the scene;
- 10005.3.5 the responsible employee at the scene of the accident must indicate, if possible, the number injured and the nature of their injuries and, if necessary, summon assistance, e.g. –
- 10005.3.5.1 doctors;
- 10005.3.5.2 nurses;
- 10005.3.5.3 first-aid personnel;
- 10005.3.5.4 ambulance(s);
- 10005.3.5.5 breakdown train and crane and, if required, permanent-way material, ashes for ballast, etc. which must be attached at the depot or en route; and
- 10005.3.5.6 special train or trains;
- 10005.3.5.7 the train-control officers must introduce pilot-working, if necessary;
- 10005.3.5.8 the officials concerned must, if a locomotive is available, arrange for the removal of vehicles not derailed, so that breakdown and other train(s) may, on arrival, be brought close up to the scene of the accident;
- 10005.3.5.9 the official in charge at the scene must, in summoning the breakdown train or steam crane, give essential details to enable the depot locomotive official to determine how much labour and what tools are necessary. Should any person(s) be trapped in the wreckage, immediate advice must be given to Operating and the nearest depot from where assistance can be sent. The depot officials must take steps to despatch by the fastest means (motorcar or locomotive) equipment and personnel to enable the injured to be released; and
- 10005.3.5.10 the personnel must make provision for the comfort of passengers while waiting clearance of the obstruction, and arrange for the transfer of passengers, if necessary.
- 10005.4 Trackmaster to proceed to scene of accident**
- 10005.4.1 The trackmaster must proceed immediately with the gang to the scene, and he must –
- 10005.4.1.1 ascertain how much labour and material is needed to effect repairs or build deviation;
- 10005.4.1.2 advise the nearest official in charge/train-control office;
- 10005.4.1.3 ensure that the track inspector has been advised;
- 10005.4.1.4 call out adjoining gangs, collect material, etc.; and
- 10005.4.1.5 assist with rescue and clearance work pending arrival of the track inspector.

- 10005.5 Track inspectors and section managers to proceed to scene of accident**
- 10005.5.1 Track inspectors, Section Managers (Train Control) and (Train Traffic) and other officers concerned, must proceed immediately to the scene of the accident, take up duty and make a note of all details that may be necessary to assist in arriving at the cause of the accident. (See clause 10024.0 hereof.)
- 10005.5.2 When it is necessary to transport injured passengers and employees, the responsible officer at the scene of the accident must keep the official in charge at the train-control office fully informed of the position, so that the latter may be enabled to carry out the provisions of subclause 10005.7 hereof.
- 10005.6 Duties of official in charge of depot station despatching breakdown and special trains**
- 10005.6.1 The officials in charge at the depot stations must –
- 10005.6.1.1 advise the district ambulance officer;
- 10005.6.1.2 send forward all available personnel and first-aid equipment, stretchers, blankets, etc.;
- 10005.6.1.3 arrange for a special train, if required, to have one or more covered vehicle(s) suitable for handling stretcher cases;
- 10005.6.1.4 keep in close touch with the central operating office; and
- 10005.6.1.5 if necessary, hold up or cancel unimportant trains, thereby ensuring free movement of special and breakdown trains between depot or station and scene of the accident.
- 10005.7 Duties of train-control officer where hospital assistance is required**
- 10005.7.1 The train-control office must –
- 10005.7.1.1 keep hospital officials advised as to –
- 10005.7.1.1.1 the number of injured en route;
- 10005.7.1.1.2 the number of injured requiring immediate medical treatment, and other details, when available;
- 10005.7.1.1.3 the time the train is expected to arrive;
- 10005.7.1.1.4 ensure that first-aid personnel are available;
- 10005.7.1.1.5 arrange for ambulance transport either direct or from station to hospital; and
- 10005.7.1.1.6 keep in touch with the running of the train conveying the injured and advise the hospital official of any change in arrangements.
- 10005.8 Action to be taken when flammable or corrosive-liquid tank wagons are derailed or damaged**
- 10005.8.1 In the event of a flammable or corrosive-liquid tank wagon becoming derailed or damaged, the following precautions must be taken by the employees concerned. (In the case of liquefied-petroleum-gas and anhydrous ammonia tank wagons, action must be taken as detailed in clauses 1015.11, Section 1 of this appendix, and 10006.0 hereof.):
- 10005.8.1.1 Security guards must be posted to keep all spectators away.
- 10005.8.1.2 If possible, all leaks must be located and stopped by personnel trained in handling dangerous commodities and in possession of the necessary protection equipment. Only the safety hand lamps provided for the purpose are to be used when lights are necessary. Open flame lamps must not be used.
- 10005.8.1.3 In terms of the Environmental Care Act, 1989 (Act 73 of 1989) and the Water Act, 1956 (Act 54 of 1956) it is illegal to bury any product classified as dangerous or allow it to contaminate water. If it is not possible to immediately transfer it to tight containers, an embankment may be used to contain it until such time that recommendation is either received from the Fire Brigade or Chemical Services on how to deal with the product.
- 10005.8.1.4 Reasonable time must be allowed, after stoppage of leaks for vapour to escape from the derailed wagon and the vicinity.
- 10005.8.1.5 If a steam crane must be used, it must, whenever practicable, be kept on that side of the tank wagon(s) towards which the wind blows, and must not be less than 150 metres away from the derailed or damaged tank wagon, until the procedure laid down in subclauses 10005.8.1.1 to 10005.8.1.4 hereof has been carried out.

- 10005.8.1.6 If a derailment has occurred, and one or more vehicles are affected, the flammable or corrosive-liquid tank wagon or wagons which show the least signs of damage, must first be moved to a safe position.
- 10005.8.1.7 When leaks are to be expected in moving a tank wagon, the tank must first be emptied, either by transferring the contents to another tank wagon or container. When disconnecting a tank wagon or when removing parts of such wagon, care must be taken to avoid any electric or friction sparks.
- 10005.8.1.8 Train or shunting movements must not be allowed on lines adjacent to a place where flammable liquid is leaking or is exposed.
- 10005.8.1.9 When flammable liquid has been disposed of in the manner set forth in subclause 10005.8.1.7 hereof, trains may be allowed to pass a derailed or damaged tank wagon, but drivers must be warned in advance and they must take steps to close the fire box doors, ash pan doors, and slides of the locomotives and must also see that the blowers are used sensibly to prevent sparks being blown out.
- 10005.8.1.10 When a flammable or corrosive-liquid tank wagon becomes derailed, the circumstances must be immediately reported to the central operating office and to the Chief Executive (Spoornet).
- 10005.9 Action to be taken when a vehicle conveying radioactive material catches fire or is involved in an accident**
- 10005.9.1 See the instructions contained in clause 1014.5, Section 1 of this appendix for special action to be taken when a vehicle conveying radioactive material catches fire or is involved in an accident.
- 10006.0 PROCEDURE TO BE FOLLOWED IN THE EVENT OF ANHYDROUS AMMONIA TANK WAGONS BEING INVOLVED IN ACCIDENTS OR DEVELOPING LEAKS**
- 10006.1 Type XN anhydrous ammonia tank wagons work under a high pressure (1930 kPa nominal working pressure) and under conditions of considerable temperature variations (the temperature of the fluid when loaded is approximately -7 degrees C, which may rise to summer ambient temperature), and dangerous conditions may arise under certain circumstances if the necessary precautions are not taken. THE FLUID AND GAS ARE EXTREMELY TOXIC AND CAN CAUSE DEATH AND INJURY ON A LARGE SCALE, PARTICULARLY WHEN RELEASED IN DENSELY POPULATED AREAS. PERSONS IN THE VICINITY OF A SPILLAGE MUST IMMEDIATELY MOVE TO A PLACE UP WIND AND WAIT THERE UNTIL THE AREA IS DECLARED SAFE BY EITHER THE FIRE BRIGADE OR CHEMICAL SERVICES.
- 10006.2 Engineers and the engineering officers and supervisors under their control must make themselves fully conversant with the design and technical details of anhydrous ammonia tank wagons.
- 10006.3 Anhydrous ammonia tank wagons must be handled and shunted with great care, and all inspecting and supervisory officers must ensure that this instruction is strictly observed.
- 10006.4 Supervisory officers must inform all concerned of the danger of allowing a tank wagon to continue its journey after it has been involved in a derailment, collision or other untoward occurrence, without it first having been examined by competent personnel as laid down in these instructions. When a barrel is damaged by dent or score mark, the induced stress could cause the barrel to rupture some time after it has been damaged and all concerned must ensure that all such vehicles are, as soon as practicable, despatched to Transwerk, Germiston for examination as laid down in subclause 10006.6 hereof. Tank wagons must under no circumstances be loaded before such examination has been carried out.
- 10006.5 Procedure to be followed when an anhydrous ammonia tank wagon is involved in an accident**
- 10006.5.1 Should an anhydrous ammonia tank wagon be involved in an accident, the procedure to be followed will depend on the prevailing circumstances. The instructions set out in the following subclauses 10006.5.2 to 10006.5.6 must be observed.
- 10006.5.2 Officers and others to be advised**
- 10006.5.2.1 The Engineer must be advised and he must decide on what steps to be taken.
- 10006.5.2.2 The central operating office and Chief Executive (Spoornet) must be advised of the occurrence, giving all available details, including the serial number(s) of the tank wagon(s) concerned, place of derailment or accident, whether the tank wagon(s) is/are full or empty, the destination(s) and if possible, the extent of the damage, etc. This information must subsequently be confirmed in writing. (See subclause 10006.11 hereof.)
- 10006.5.2.3 All particulars as set out in subclause 10006.5.2.2 must be conveyed to Transwerk, Germiston, telephone (011) 820-2613 – facsimile (011) 820-2424 (working hours) or “Pager” (011) 773-5199 – code 5159 (after hours), as well as Spoornet Headquarters (Operations), telephone (011) 773-8764/5/6/7 – facsimile (011) 773-6982 (working hours) or telephone (011) 773-36640 (after hours).

10006.5.2.4 If an anhydrous ammonia tank wagon belonging to the NRZ (National Railways of Zimbabwe) be involved in a derailment or other accident on Spoornet lines, the procedure outlined in this clause must be followed. In addition, "Traffic T", Bulawayo, must immediately be advised by telegram wherein all available details as indicated in subclause 10006.5.2.2 hereof must be included.

10006.5.3 Procedure to be followed to establish whether tank wagon is empty or not

10006.5.3.1 The following steps must be taken to establish whether a tank wagon is empty or not, irrespective of whether the information on the wagon label, or its destination, indicates that the vehicle is loaded or empty:

10006.5.3.1.1 If the vehicle is in an upright or near upright position the dome cover must be opened and one of the red (liquid) valves opened slightly. Thereafter, the needle valve attached to the same red valve must be opened. If a heavy mist is emitted, the tank wagon is not empty. If only a hiss is heard, accompanied perhaps by a faintly visible gas, the tank wagon is empty.

10006.5.3.1.2 If the vehicle lies on its side or leans over at an angle greater than 45 degrees, the test with the red (liquid) valve as described in the preceding paragraph must be carried out and, in addition, a similar test with one of the yellow (vapour) valves – using the one which is nearest to the ground – must be carried out. If neither valve emits a heavy mist after blowing for at least 30 seconds, the tank wagon may be assumed to be empty.

WARNING – *The person doing the test must wear gloves and goggles (welders' goggles if no other type is available), stay up-wind of any vapour or liquid being released during the test and take great care to avoid ammonia vapour or liquid coming in contact with the skin, particularly the face.*

10006.5.4 Rerailing and/or clearing of tank wagon if empty

10006.5.4.1 Whether the barrel of the tank wagon is damaged or not, the rerailing of an empty tank wagon, if it has been derailed, or the clearing thereof, if it has not been derailed, may be proceeded with by the breakdown crew before the arrival of the engineer, or his deputy, provided it has been ascertained without doubt that the tank wagon is empty and, provided it is necessary to rerail or clear the vehicle to avoid delay in clearing the obstruction.

10006.5.5 Rerailing and/or clearing of tank wagon if loaded

10006.5.5.1 When a loaded tank wagon is involved in an accident, watchmen with instructions to keep away unauthorised persons from the scene of the accident must immediately be posted to ensure that no smoking takes place in the vicinity, and to keep away naked flames and steam locomotives. No attempt must be made to rerail the tank wagon or clear it, if it has not been derailed, before arrival of the engineer, or his deputy, and the tank wagon may only be rerailed or cleared after he has personally authorised this to be done.

10006.5.5.2 If, in the case of a loaded tank wagon, there is no noticeable leakage of ammonia, or only a small leak (see note below), rerailing of any other vehicles that may have been derailed in the accident, may be proceeded with, pending arrival of the engineer, or his deputy, provided the tank wagon is not disturbed provided the area is declared safe by either the Fire Brigade or Chemical Services.

NOTE – *A small leak of anhydrous ammonia is one which causes no serious inconvenience to persons in the vicinity of the leak. (The pungent odour and irritant action of ammonia vapour are such that no person will remain voluntarily in an atmosphere containing a dangerous concentration of ammonia.)*

10006.5.5.3 If there is a serious leak of ammonia, or if the barrel of the tank wagon has ruptured or, in the opinion of the engineer, or his deputy, there is danger of rupture due to damage sustained, or if pools of liquid anhydrous ammonia have formed, all persons in the vicinity, and particularly down-wind of the scene of the accident, must be evacuated as soon as possible. (Smoke from chimneys give a good indication of the direction of the wind.) No attempt must be made to pour water or sand on any anhydrous ammonia, or even to remain in the vicinity of a pool of the liquid. The matter must be reported to the central operating office who must request an employee of Transwerk, Germiston to come to the scene by most expeditious means. This representative and the engineer must then confer and decide on the course to be followed.

10006.5.5.4 If there are no dangerous leaks and there is no visible damage to the barrel of a loaded tank wagon, the engineer, or his deputy, may authorise the rerailing and/or clearing of the vehicle and the despatching thereof to the unloading point. (See subclause 10006.6 hereof.)

10006.5.5.5 If there are no dangerous leaks, but the barrel of the tank wagon is damaged and the damage is of such a nature that, in the opinion of the engineer, or his deputy, there is no danger of rupture, he may authorise the rerailing of the loaded tank wagon, or the clearing thereof, if it has not been derailed, and in the event of the accident having occurred in a section, the subsequent movement of the vehicle to the nearest suitable station, crossing place interloop or intersiding. Here a watchman must be appointed and the instructions listed in 10006.5.5.1 hereof must be carried out.

- 10006.5.5.6 The matter must be reported to the central operating office who must request a representative from the nearest branch of the Transwerk, Germiston to examine the vehicle at this point and to advise in regard to the further action to be taken.
- 10006.6 In all cases where an anhydrous ammonia tank wagon has been involved in a derailment, collision or other untoward occurrence and is still travelworthy, it must be sent to Transwerk, Germiston for examination –
- 10006.6.1 if empty, as soon as possible after having been rerailed and/or cleared; and
- 10006.6.2 if loaded, as soon as possible after decanting at its destination, or directly after having been rerailed and/or cleared, if so desired by the employee of Transwerk, Germiston.
- 10006.7 On no account may an anhydrous ammonia tank wagon which has been involved in an accident, be released for further service, without it first having been sent to Transwerk, Germiston for examination and clearance for further service.
- 10006.8 Under no circumstances may any repairs to the barrel or valves be attempted. If any welding on the underframe or repairs involving the lifting of the barrel is/are to be carried out, the central operating office, as well as the Chief Executive (Spoornet) must be advised telegraphically of full details of the repairs to be undertaken. The work must not be performed until this has been authorised by one of the recipients of the telegram.
- 10006.9 Should a small leak (see subclause 10006.5.5.2 hereof), develop in transit, the tank wagon must be despatched without delay to the nearest discharge point, or to Transwerk, Germiston, whichever is the nearer. In the case of the former, the tank wagon must be emptied without delay at the discharge point, and forwarded to Transwerk, Germiston.
- 10006.10 Should a serious leak develop and normal movement of the tank wagon is not possible, the tank wagon must be left in the nearest open area and the procedure outlined in subclauses 10006.5 to 10006.8 hereof must be followed.
- 10006.11 The central operating office must ensure that anhydrous ammonia tank wagons involved in derailments, collisions or other untoward occurrences, or developing leaks, are suitably labelled before being despatched to Transwerk, Germiston. They must also advise Transwerk full details of the nature of the accident or leakage to enable Transwerk to examine the tank wagon(s) critically. Particulars must also be forwarded to the Chief Executive (Spoornet) as well as to the Executive Manager (Transwerk), Pretoria.
- 10006.12 The instructions contained in clause 1021.10, Section 1 of this appendix are applicable to the marshalling of anhydrous ammonia tank wagons.
- 10007.0 VOID**
- 10008.0 ACCIDENTS TO BE REPORTED BY THE MOST EXPEDITIOUS MEANS**
- 10008.1 Every employee must, with the least possible delay, make himself conversant with the circumstances and report at once to the nearest official in charge/train-control office, any accident or occurrence which may come to his notice. He must thereafter submit a written report of the circumstances to his supervisory officer.
- 10008.2 The official in charge must obtain from the employee making the report, such information as may be necessary with regard to the accident or occurrence. From the information received the official in charge must report to the officers concerned brief particulars of the circumstances, and must state the nature of any assistance required. He must, as early as practicable after the accident, despatch a full report to the central operating office.
- 10008.3 On receipt of advice of an accident or occurrence, whether this takes place at a telegraph station or at a point in the section or CTC/radio based train control territory, all concerned, including the train personnel, train-control officers and operating clerks, must endeavour to establish the exact time of the occurrence. The driver's assistant must also endorse in his journal at what time, according to his watch, the accident occurred. (See also clause 10029.0 hereof.)
- 10009.0 EMERGENCY CIRCUMSTANCES NOT PROVIDED FOR**
- 10009.1 In the event of emergencies arising which are not provided for in the rules and instructions or the contingency plan, and time does not permit of reference being made to higher authority for instructions, the employee who requires to act in such cases must be guided by his own prudence and judgement. He must thereafter make a special report to his superior officer.

10010.0 LIST OF ACCIDENTS AND EMERGENCIES THAT MUST BE REPORTED

- 10010.1 The following is a list of examples of types of accidents and emergencies that must be reported:
- 10010.1.1 Persons killed or injured on Spoornet's premises from any cause whatsoever, whether passengers, employees, or other persons.
- 10010.1.2 Persons (including employees) found dead in trains or on Spoornet's property from other cause than a train accident. (See clause 10011.0 hereof.)
- 10010.1.3 All collisions, including those in which persons were killed or injured.
- 10010.1.4 Collisions not involving injury to persons or damage to equipment or track.
- 10010.1.5 Averted collisions, train despatched without or with wrong token, signals passed at "danger" or other similar train-working irregularities which do not lead to accidents.
- 10010.1.6 Every derailment of a train or portion thereof conveying passengers (irrespective of whether passengers are killed or injured) and all derailments of goods trains.
- 10010.1.7 Void
- 10010.1.8 Yard derailments and other minor accidents of a nature incidental to shunting, such as points run through, damage to couplers, stop blocks, etc.
- 10010.1.9 Washaways, floods, and landslides.
- 10010.1.10 Escape of vehicles from station, crossing place or siding limits on to the main line without causing damage or accidents.
- 10010.1.11 Obstructions on the line, including collisions with vehicles at level crossings.
- 10010.1.12 Grass fires occurring in close proximity to the line.
- 10010.1.13 Fires in which the safety of the line or station is involved or which cause damage to Spoornet's or to goods in the custody of Spoornet.
- 10010.1.14 Damage to the track, rolling stock or other equipment, or to private or public property occurring within Spoornet's limits from whatever cause.
- 10010.1.15 Theft or attempted theft from passengers in trains.
- 10010.1.16 Any other unusual occurrence affecting or likely to affect the safety of persons, trains, or property.
- 10010.1.17 Locomotive failures.
- 10010.1.18 Failure of signals, interlocked points and level crossing appliances.
- 10010.1.19 Communication failures and interruptions including Van Schoor train-token instruments, warning bells and electric lock and block apparatus.
- 10010.1.20 Failure of water supply.
- 10010.2 All accidents and emergencies must be reported to the central operating office as soon as possible, who in return must report it to the Chief Executive (Spoornet). When the incidents are reported, the type and number of each vehicle and/or locomotive must in all cases be given.
- 10010.3 Reportable incidents [see Section 24 of the Machinery and Occupational Health and Safety Act, 1993 (Act 85 of 1993)] must be reported in accordance as made known by the Senior Manager (Group Risk Management) from time to time.

10011.0 DISPOSAL OF CORPSES FOUND ON PREMISES OF SPOORNET

- 10011.1 When a corpse is found on Spoornet's property, the following procedure must be followed:
- 10011.1.1 The official who finds or is notified of the corpse must report the matter immediately to the SA Police Services and confirming it in writing.
- 10011.1.2 The Chief Executive (Spoornet), central operating office and chief health officer must be advised immediately, and if the cause of death is known, it must be stated. If the cause of death is unknown at the time of advising, this information must subsequently be obtained and furnished.

- 10011.1.3 If possible the corpse must be guarded by a Spoornet employee until it is removed or taken into custody by the SA Police Services. Until such time as the cause of death is known, it must be assumed that death was due to an infectious disease.
- 10011.1.4 The corpse must be disposed of in accordance with the instructions from the Magistrate (district registrar) or SA Police Services.
- 10011.2 When death is due to an infectious disease, arrangements must be made with the local health authorities or the health department of Spoornet, to disinfect the place, etc. where the corpse was found and kept on Spoornet's property.
- 10012.0 VOID**
- 10013.0 OBSTRUCTIONS, WASHAWAYS, ETC. MUST BE REPORTED PROMPTLY**
- 10013.1 When a serious obstruction, i.e. derailment, washaway, etc. occurs, the trackmaster, after taking the necessary precautions to stop oncoming trains, must, as soon as possible, provide the train-control office with the following particulars:
- 10013.1.1 Date and time when the obstruction occurred.
- 10013.1.2 Kilometre point.
- 10013.1.3 Extent of damage (approximately).
- 10013.1.4 Approximate number of additional workers, if required to effect repairs.
- 10013.1.5 Time likely to be occupied in making the line(s) safe for passage of trains.
- 10013.2 On receipt of this information the train-control office must promptly furnish the particulars to the officers concerned. A member of the track personnel or other senior official in charge at the scene must inform, from time to time, the train-control office of the progress in repairing the line, and it is the duty of the latter official to keep the central operating office, as well as the depots and other stations affected on each side of the obstruction, fully informed. For this purpose communication must, when necessary, be provided near to the scene of the obstruction. If communication can be established with the central operating office from the scene, the senior official in charge must report from time to time to the central operating office on the progress made with the work.
- 10013.3 The track inspector must take immediate steps to cope with any serious washaway, damage to or obstruction of the running line. He must without fail arrange to obtain adequate labour, together with the necessary rails, sleepers, fastenings, ballast, tools and equipment, so that the line may be restored for traffic movements with the least possible delay.
- 10013.4 As soon as the line is in order or restored to the extent that trains may run at a restricted speed, the trackmaster must, without delay, advise the train-control office. In addition a member of the track personnel who was at the scene must, as soon as possible, endorse and sign the train register at one of the adjacent stations accordingly. Where the train-control office is situated far from the scene, the information can be relayed to the train-control officer there, who must enter it in the train register and sign the endorsement.
- 10014.0 DEFECTS AND DAMAGE TO THE TRACK**
- 10014.1 When a driver or other employee observes or becomes aware of a track defect or damage to the track, he is personally responsible to immediately report full particulars thereof to the train-control office, by the quickest means, and he must ensure that the information is received and understood. If in the judgement of the driver or other employee the track is unsafe for the passage of trains, he must immediately take such steps as may be necessary to ensure the safety of following and opposing trains.
- 10014.2 When the train-control officer receives information of a track defect or damage to the track, he must without fail –
- 10014.2.1 immediately advise the track official(s) thereof;
- 10014.2.2 advise the train-control officer at the opposite end of the section or the train-control officer in the train-control office if a CTC or radio based train control section borders his station.

10014.2.3 advise the drivers of all trains proceeding over the telegraph section in writing (telephonically/by radio in the case of CTC or radio based train control sections or where the delivery of a written warning is impracticable and/or will lead to delays) until such time that the defect/damage has been repaired; and

10014.2.4 furnish full particulars to any other train-control officer who may possibly have to comply with the foregoing subclause 10014.2.4. The train-control officer must record full particulars hereof in his hand over book.

10015.0 DERAILMENTS IN YARDS: WHEN A TRACKMASTER IS TO BE CALLED OUT

10015.1 When a derailment occurs in a yard during the time the track personnel are off duty, the senior official present, after having ensured that the obstruction is protected, must decide the best course to pursue as provided for in the train working rules and the instructions in this appendix.

10015.2 The trackmaster need not be called out after normal working hours to attend to minor derailments in yards when rerailment can be deferred until the following morning, provided train or shunting movements will not be made over that portion of the line between the time of derailment and the time the trackmaster normally commences duty. In such case the trackmaster must be advised as soon as he resumes duty.

10016.0 VOID

10017.0 APPLICATION FOR AND ANNOUNCING OF BREAKDOWN TRAIN

10017.1 When a breakdown train is required, the train-control officer at the train-control office must be advised.

10017.2 Officials who request a breakdown train, must furnish available details of the nature of the accident, e.g. whether the locomotive is completely or partially derailed, particulars of vehicles derailed, whether coaches or wagons, in order that the traction official in charge of the depot may be in a position to send sufficient labour and material to carry out the work expeditiously. (See clauses 10005.3.5.5 and 10005.3.8 hereof.)

10017.3 The official in charge of each traction depot must see that a complete and accurate list of the names and addresses of the employees comprising the breakdown gang is posted up in a readily accessible position in the running shed. (For instructions in regard to supplying provisions to breakdown vans, see clause 10044.0 hereof.)

10017.4 When a breakdown train or a light locomotive has to proceed to clear an obstruction, or if a breakdown train is returning to its depot, it must be so described, and the number thereof inserted in the special notice announcing the train, as well as on telegraph-order tokens or warning advices, as the case may be, issued to locomotive personnel of trains arranged to cross the breakdown train or light locomotive at interloops. (See train working rule No. 213.)

10018.0 BREAKDOWN TRAIN MOVEMENTS TO BE FACILITATED AND RECORD OF PROGRESS MADE MUST BE KEPT

10018.1 To facilitate the clearing of an obstruction by a breakdown train, prompt steps must be taken to have vehicles not derailed taken to a suitable place, so that the breakdown train may have a clear passage to the obstruction.

10018.2 The train-control officer must keep a record of the time on which an accident is reported by him to the maintenance or locomotive officials and depots, the time of the arrival of the breakdown gang, when the line is cleared or repairs effected, also particulars that may assist in determining the cause or causes of an accident. If any delay has taken place, it must be reported to the central operating office, and in all cases the time must be recorded. The train-control office must be promptly notified by the official in charge of the breakdown gang when the line is clear, and by the maintenance officials when the line is in order and safe for the passage of trains.

10019.0 TRANSFER OF PASSENGERS AND LUGGAGE

10019.1 When it is necessary to transfer passengers and luggage at the scene of an accident, this must be arranged and carried out promptly. Every precaution must be taken to ensure safety.

- 10020.0 DEPOT STATIONS MUST BE ADVISED OF LIKELY DELAYS**
- 10020.1 When passenger, mixed or other trains, the locomotives of which are booked to return with passenger or mixed trains, suffer delay to an extent which will disorganise the locomotive or coach working, upset the announced passenger service or interfere with connections, officials in charge and locomotive officials at the depot stations concerned must be promptly advised, in order that special arrangements may be made to carry on the service with the least possible inconvenience to the public.
- 10020.2 Prompt action is essential in the case of local or commuter sections where locomotives are allowed a short margin of time at terminal stations before starting on the return trip.
- 10021.0 VOID**
- 10022.0 VOID**
- 10023.0 REPAIRS TO COMMUNICATIONS MUST BE EFFECTED WITHOUT DELAY**
- 10023.1 When communications fail as a result of an accident, washaway, etc. the communication repair team must go to the scene immediately so that communication may be restored with the least possible delay.
- 10024.0 CAUSE OF ACCIDENT MUST BE ASCERTAINED IF POSSIBLE. THE JOURNAL, TRAIN LOAD CERTIFICATE AND LIST OF VEHICLES MUST BE OBTAINED**
- 10024.1 The first responsible official to arrive at the scene of an accident must make a careful examination of the conditions, and endeavour to form an opinion of the cause, but must exercise care in order to avoid, where possible, disturbing any evidence that might assist in determining the cause of the accident.
- 10024.2 In all cases the first responsible official to arrive at the scene must take into his custody the train journal, train load certificate and list of vehicles. All documents or articles relevant to the accident must be kept in safe custody so as to be readily available for departmental and/or police investigations. (See clause 10029.3.1 hereof.)
- 10024.3 If it is necessary to move a train and/or vehicle involved in an accident before the cause thereof has been established, the position of any vehicle(s) must be clearly marked on the inside of the rail. In the case of a train, such marks must indicate where the front and rear portions of the train came to rest. (See clause 10013.2 hereof.)
- 10025.0 RERAILMENT OF VEHICLES**
- 10025.1 When a vehicle is derailed, and a locomotive or wagon maintenance official is present, he must supervise rerailling operations and he may call upon any employee to render assistance, provided the latter is not engaged on more important work.
- 10025.2 In the absence of a locomotive or wagon maintenance official, the maintenance official or, in his absence, the senior official present must supervise the rerailling operations. As soon however, as a senior locomotive or maintenance official arrives, he must take over control. (See clause 10013.2 hereof.)
- 10025.3 If several vehicles are derailed, and it appears expedient to remove one or more vehicles further from the rails in order to clear the line, the procedure likely to occasion the least delay to traffic, must be adopted. An attempt should be made to place the vehicle(s) as follows:
- 10025.3.1 The nearest part of the derailed vehicle(s) must not be less than 2,2 metres from the centre of the track (1,2 metres measured from the inside of the crown of the nearest rail).
- 10025.3.2 If the provisions of subclause 10025.3.1 hereof cannot be obtained for some or other reason, the official in charge of the rerailling operations must ensure that the clearance is safe for the passage of normal traffic. Adjoining train-control offices and the central operating office must also be advised verbally and in writing that the clearance is less than 2,2 metres from the centre of the track.
- 10025.3.3 Until such time that the vehicle(s) concerned has/have been removed or placed well clear from the line, the driver who is about to enter the section concerned must be advised, of the circumstances (verbally or in writing, as applicable).
- 10025.3.4 The central operating office must arrange that abnormal loads are either diverted or held back, or if necessary, conveyed with special care past this point, as the circumstances require.

- 10025.4 In case of derailment, the senior locomotive official or, in his absence, the senior wagon maintenance official present must take full particulars of damage to rolling stock and certify that vehicles are fit to travel before they are despatched. The track manager or the track inspector must take full particulars as to the condition of the track and submit either a completed Derailment Form (SPOORNET 263) or a completed Accident Form (SPOORNET 264), depending on the cause of the derailment, to the central operating office. (See clauses 10010.2, 10026.0, 10029.0 and 10043.0 hereof.)
- 10025.5 Before attempting rerailling by means of pulling on or propelling, instead of lifting, the opinion of the track representative must, when practicable, be obtained. Undue damage to the track must under all circumstances be avoided.
- 10025.6 If rerailling can be facilitated by unloading the contents of a derailed vehicle on the spot, or by transferring the contents to another vehicle on the train, this course must be taken.

10026.0 EXAMINATION OF LOCOMOTIVE AND VEHICLES AFTER AN ACCIDENT

- 10026.1 All the locomotives and vehicles of a train which may be unserviceworthy as a result of the accident, must be examined by the most suitable technical personnel available before they are conveyed further. The examination must take into consideration the known or possible cause of the accident and the nature of the consequent damage that might have been caused.
- 10026.2 Unserviceworthy locomotives and vehicles and those of which the serviceworthiness is suspect, must only be cleared out of the section to the first suitable place where they can be detached, secured and left for further attention by competent technical personnel. Appropriate fault/trip reports must be left on the locomotive or repair labels must be attached to such vehicles. In addition, the operating official responsible for the place concerned, must be notified of the circumstances.
- 10026.3 In the case of a passenger or mixed train which has been involved in a rough coupling or a collision and cannot be examined by competent technical personnel without serious delay, the engineer must be consulted and he must decide what action must be taken.
- 10026.4 Unless the cause of a derailment is known, the first locomotive or vehicle which derailed, or the locomotive or vehicle which might have caused the derailment, may not be released for further service without authority from the engineer. Before the engineer grants such authority, he must be satisfied that further examination of the locomotive or vehicle concerned is not warranted.

10027.0 EXAMINATION OF VACUUM BRAKES AFTER ACCIDENTS, ETC.

- 10027.1 In all instances of collisions, derailments and other accidents where the efficiency of vacuum brakes may be questioned, also in all instances of trains or vehicles coupled to a locomotive running away or signals being passed at "danger" the first responsible official to arrive at the scene must –
- 10027.1.1 ascertain which vehicles are fitted with a dual power-brake system and make a note of the position of the manual change-over levers on each of the vehicles;
- 10027.1.2 arrange for a leak-off test to be given each vehicle on the train (in terms of clause 1827.2 of the Carriage and Wagon Handbook). The amount of vacuum registered in front and in the rear of the train during the test must be recorded; and
- 10027.1.3 arrange for the piston travel on all vehicles to be measured.
- 10027.2 All the information gained in terms of the foregoing subclause must be submitted to the central operating office together with a special report in connection with the incident. (See clause 10029.0 hereof.)
- 10027.3 Before an employee, who has to attend to wagon maintenance matters at a scene of an accident, is designated as a member of a breakdown gang, his official in charge must ensure that this person is fully acquainted with the examination and testing of trains after accidents.
- 10027.4 On return of the member of the breakdown gang mentioned in subclause 10027.3 hereof, his official in charge must immediately verify his reports to ensure that the information gathered and the measurements taken were done in an acceptable manner.
- 10027.5 If a supervising member of the wagon maintenance personnel attends the clearing up activities immediately after the accident, he must ensure that all the reports are correctly compiled and that the measurements are correctly taken.

- 10028.0 EXAMINATION AND TESTING OF POINTS AND SIGNALS AFTER AN ACCIDENT**
- 10028.1 The trackmaster, track inspector and signal maintenance official must examine all points and signalling equipment that may be in any way affected, either as the result of a derailment or in the course of rerailing operations, and the official in charge or train-control officer must test the interlocking, where such exists, and ensure, by personal observation if necessary, that the points and signals properly respond to the lever movements/operation of the applicable push buttons, and that all is in order for the safe passage of trains. (See clause 8010.20 of this appendix.)
- 10029.0 DETAILS OF ACCIDENTS, ETC. TO BE RECORDED AND SUBMITTED**
- 10029.1 All employees concerned must, in addition to reporting an accident to the train-control officer, send a special report to the central operating office through their supervisory officers.
- 10029.2 Officials in charge and other employees must, furnish in their reports the fullest information in respect of accidents under the following headings:
- 10029.2.1 Particulars of accidents, giving place or exact kilometre point time and date of occurrence.
- 10029.2.2 Cause of accident, so far as is known at the time of drawing up the report.
- 10029.2.3 Names and addresses of persons injured and the nature of injury.
- 10029.2.4 Damage to rolling stock.
- 10029.2.5 Damage to the track.
- 10029.2.6 Damage to parcels, goods, vehicles, or other traffic, and injury to livestock.
- 10029.2.7 Trains delayed and the extent of the delay.
- 10029.2.8 Names and grades of the employees at fault, so far as is known at the time of drawing up the report.
- 10029.2.9 Injury to animals by passing trains.
- 10029.3 In the case of a derailment occurring in a section, the driver's assistant must deliver the train journal to the first responsible official arriving at the scene of the accident, or to the official in charge at the depot, should he reach there before an officer has arrived at the scene of the derailment. The following particulars must be recorded and thereafter submitted in writing by the driver's assistant and driver respectively:
- 10029.3.1 Information to be supplied by driver's assistant:**
- 10029.3.1.1 Date and time of the accident.
- 10029.3.1.2 Marshalling of train from locomotive.
- 10029.3.1.3 Number(s) of derailed vehicle or vehicles as well as the number(s) of vehicle or vehicles immediately adjoining, i.e. in front and in rear of the derailed vehicle or vehicles.
- 10029.3.1.4 Mass and description of traffic and how loaded in each derailed vehicle, noting particularly whether there is any uneven distribution of the load. If one or more livestock wagons are derailed, the number of livestock and the approximate mass in each vehicle must be given.
- 10029.3.2 Information to be supplied by the driver and/or official in charge of the breakdown gang:**
- 10029.3.2.1 Date and time of the accident.
- 10029.3.2.2 Speed of train at time of derailment.
- 10029.3.2.3 Type of coupler on each derailed vehicle as well as the type of coupler on each vehicle immediately adjacent at both ends of the derailed vehicle or vehicles.
- 10029.3.2.4 Whether the couplers at each end of the derailed vehicle or vehicles were level with those of the vehicle to which they were coupled, and, if not, what the difference in height is when the vehicle or vehicles are standing on level straight track (measurements to be taken from top of rail to the centre of the couplers), and whether the springs are of the same dimensions, viz. same number of blades and of same thickness.
- 10029.3.2.5 The deflection of each spring. The measurement to be taken from a straight-edge or piece of string stretched tightly across the top, or from the vehicle frame to the spring buckle.

- 10029.3.2.6 The height of each corner of the vehicle frame or ends of headstocks above top of rail, when the vehicle is standing on level straight track.
- 10029.3.2.7 Whether or not axle boxes move freely in horn guards.
- 10029.3.2.8 Whether the frame is resting on bogie centres or on both side friction blocks, and also whether the side friction blocks and bogie centres are properly greased or not.
- 10029.3.2.9 Distance between the bogie centre and axle boxes on each side of the vehicle.
- 10029.3.2.10 Details of all defects, other than those disclosed by the foregoing examination, which must be fully described.
- 10029.3.2.11 When the breakdown train is not called, the measurements set forth in the preceding subclause must, when practicable, be recorded.

NOTE – *The official in charge of the rerailling operations must record the particulars set forth in the preceding subclauses 10029.3.2.3 to 10029.3.2.10, inclusive, and forward the information to the central operating office. The locomotive personnel must, however, report the circumstances to the best of their ability.*

10029.3.3 Information to be supplied by track manager, track inspector or trackmaster:

- 10029.3.3.1 In the case of a derailment between stations/interlocking areas or in a station yard, and where the derailment is neither the result of a collision nor due to an obstruction, the track maintenance official in attendance must take measurements and particulars in accordance with the Derailment Form (SPOORNET 263). Such measurements and particulars must in every case be taken before repairs are done to the track.
- 10029.3.3.2 After completion the Derailment Form (SPOORNET 263) must be submitted to the appropriate controlling officer. (See also clause 10043.0 hereof.)
- 10029.3.3.3 The instructions in subclauses 10029.3.3.1 and 10029.3.3.2 hereof will apply in the case of a derailment where the causes are unknown.
- 10029.3.3.4 Where the derailment is clearly not due to a track defect, the Accident Form (SPOORNET 264) is to be completed in so far as track matters are concerned and submitted to the appropriate controlling officer in lieu of a Derailment Form (SPOORNET 263).

10030.0 INQUIRY MUST BE HELD AND REPORT SUBMITTED

- 10030.1 The Chief Executive (Spoornet) will arrange for an investigation or for the holding of an inquiry into all accidents/occurrences if the circumstances warrant the adoption of this course.
- 10030.2 The Section Manager (Train Control) must be delegated, whenever possible, to carry out an investigation or to hold an inquiry and he must, when practicable, do so in collaboration with the Section Manager (Train Traffic), track inspector or other official in charge.
- 10030.3 In the case of accidents/occurrences of a minor nature occurring at locomotive depot stations, unless instructions are issued to the contrary, the station official in charge and technical supervisor (locomotive depot) must arrange to hold an inquiry as early as possible after the accident/occurrence if the cause of the accident/occurrence cannot be clearly established.
- 10030.4 A full report, setting forth the result of the inquiry held into each accident/occurrence, together with the written statements of the employees concerned, and witnesses if any, must be submitted as early as possible to the Chief Executive (Spoornet).
- 10030.5 The SA Police Services, as officer of the law, will carry out investigations into –
 - 10030.5.1 an accident involving loss of life or serious injury or serious damage to property and/or goods;
 - 10030.5.2 a collision between a train and any road vehicle, private or otherwise;
 - 10030.5.3 any other accident involving, or which might have involved, loss of life or serious injury to persons; and
 - 10030.5.4 any accident or occurrence which they are obliged to investigate.

10031.0 EMPLOYEES TO ANSWER ALL QUESTIONS PUT BY AN AUTHORISED EMPLOYEE

- 10031.1 Employees in every branch of Spoornet must fully and freely answer all questions put to them by an authorised employee of Spoornet, and must sign the statements made by them when requested to do so.

10032.0 MAGISTERIAL INQUIRIES

10032.1 In cases of individuals being killed or fatally injured on Spoornet's property, or by an agency under the control of Spoornet on other than Spoornet's property, and the Resident Magistrate has decided to hold an inquest, particulars of the case, together with the date, time, and place of inquest, must be furnished to the Chief Executive (Spoornet) who will arrange, if necessary, for Spoornet to be legally represented.

10032.2 If legal representation is not considered necessary, the Chief Executive (Spoornet) must arrange for the inquest proceedings to be attended by an employee of Spoornet, who must afterwards submit a summary of the evidence, together with the verdict, to the Chief Executive (Spoornet).

10033.0 DISPOSAL OF GOODS DAMAGED OR DELAYED BY AN ACCIDENT OR WASHAWAY

10033.1 Where an accident involving damage to goods occurs, the officer in charge must make arrangements to collect and store in a safe place all goods recovered, and make an inventory of such goods.

10033.2 If the officer in charge is unable to make the necessary arrangements for the custody or disposal of goods he must advise the circumstances to the central operating office.

10033.3 Reports in regard to damaged goods must be submitted to the central operating office as well as to the forwarding and destination stations giving full particulars of the extent of the damage and of salvage. The report to the central operating office must be accompanied by a copy of the inventory.

10033.4 Until the goods can be safely stored or secured and loaded for despatch a strict and continuous watch must be placed over it. Loose articles must be packed into suitable receptacles available, care being taken to avoid further damage or loss from any cause.

10033.5 When large consignments of perishables will be unduly delayed as a result of washaways, accidents or other cause, sending stations must be advised and the consignors given the opportunity of furnishing disposal instructions.

10034.0 FIRE ON OR NEAR PREMISES OF SPOORNET

10034.1 Trackmasters or other employees first discovering a fire, must state the time at which it was discovered. If there is reason to suppose that it was occasioned by sparks from a locomotive, the time and particulars of the last train passing the spot must be reported.

10034.2 Locomotive personnel observing any fire in the vicinity of the line must report the matter to the train-control officer, and the relevant driver's assistant must make an endorsement on his journal. Record of this information must be kept in the train-control office. When it is observed that wattle plantations, sugarcane, hay-stacks, or crops are in danger of being set on fire by locomotive sparks, the matter must be reported at once to the central operating office. (See train working rule No. 201.)

10035.0 EMPLOYEES TO TAKE ACTION TO PREVENT THE SPREAD OF FIRE

10035.1 Officials in charge, drivers, trackmasters and the employees in general must exercise vigilance during the dry season, and take instant steps to extinguish or prevent the spread of any fire that may occur on or near Spoornet's property.

10036.0 VOID

10037.0 FIRE CAUSED BY LOCOMOTIVES: EXAMINATION OF SPARK ARRESTER

10037.1 When a fire is caused by a locomotive, it is essential that an examination of the spark and cinder arresters of the locomotive concerned be made as soon as possible. Trackmasters and other employees must furnish the train-control officer as soon as practicable, with full particulars of trains likely to be concerned. The train-control officer must promptly report the information to the central operating office who will make arrangements for the locomotive(s) to be examined.

10037.2 The train-control officer, in addition to furnishing the information to the central operating office, must, where a locomotive is proceeding to a locomotive depot, similarly advise information to the official in charge of that depot. The latter official must arrange for a thorough examination of the locomotive, particularly the spark and cinder arresters, as soon as practicable after the arrival of the locomotive at the depot, and before the relative appliances have been dismantled or interfered with in any way.

10038.0 ANIMALS KILLED OR INJURED ON LINE

10038.1 Drivers must furnish information in regard to animals killed or injured on the line at the first opportunity to the trackmaster, if he is encountered in the section, and to the train-control officer. In addition, drivers must submit a report on form T502 at the termination of the journey. Any evidence that the accident was due to want of ordinary care and diligence on the part of the owner or his employees, which may have been observed by the driver, must be fully set out and commented upon the Report of Accident to Livestock (SPOORNET 410).

10038.2 Action to be taken by trackmaster

10038.2.1 When animals are injured or killed on the line the trackmaster must immediately inform the owner of the accident and request him to take possession of the dead or injured animals.

10038.2.2 If the owner declines to take possession, or cannot be found or communicated with expeditiously, injured animals must be attended to as far as practicable and, if necessary, a veterinary surgeon summoned (if available). Animals injured beyond recovery must be slaughtered as soon as possible.

10038.2.3 In cases where the owner is unknown, any mark or brands which may assist to establish ownership must be carefully noted.

10038.2.4 It must be ascertained how the animals gained access to the line and action taken at once to prevent any further similar occurrences, if practicable.

10038.2.5 A T502 form must be completed in detail by the trackmaster and any evidence that the accident was due to want of ordinary care and diligence on the part of the owner or his employees, must be fully set out and commented upon. The report must be forwarded to the track inspector who, in turn, must send it to the central operating office.

10038.3 Value of animals to be assessed

10038.3.1 Where practicable, the value of animals killed or injured on the line, and the extent of injury must be assessed in every instance. In the event of a dispute with the owner in regard to such assessment, the opinion of a veterinary surgeon or other experienced impartial person should be obtained, if possible.

10038.4 Claims

10038.4.1 Claims received in respect of animals killed or injured on the line must be promptly submitted to the central operating office. Full particulars of the occurrence must be furnished, i.e. train number, date, kilometre point where the accident occurred, whether the owner was notified and afforded the opportunity of taking delivery, and if he refused delivery, how the dead or injured animals were disposed of, as well as particulars of salvage, if any.

10039.0 PROCEDURE WHEN ANIMALS ARE FOUND DOWN, INJURED OR DEAD

10039.1 Animals found down in wagons

10039.1.1 When animals are found to have fallen in transit, prompt action must be taken to have them raised. If difficulty is experienced in raising a fallen animal, the wagon must be taken to the nearest cattle kraal for the purpose of rendering the necessary assistance.

10039.2 Injury to livestock

10039.2.1 Should animals be injured in transit through an accident or jumping from wagons, they must, if only slightly injured, be cared for at the nearest station on behalf of the owner. If an animal is seriously injured and the owner or his representative is present, he must be requested to give instructions regarding the disposal of the animal. If the owner or his representative declines to give instructions, arrangements must be made for the animals to be slaughtered at once. Seriously injured animals must not be allowed to suffer unnecessarily and when it is apparent that a veterinary officer or member of the SA Police Services cannot reach the scene of the accident within a reasonable time, a trackmaster or other responsible employee may arrange the slaughtering of the animals.

10039.2.2 When reporting an accident it is particularly important that such report should mention whether livestock has been injured, and what arrangements have been made for the slaughtering of any seriously injured animals.

- 10040.0 IMPOUNDING OF LIVESTOCK FOUND ON THE PROPERTY OF SPOORNET**
- 10040.1 Where animals are found on the property of Spoornet, representations must be made to the owner (if he is known and resides in the vicinity) to have them removed. If the owner does not heed the call and the animals continue to stray on Spoornet's property, they should be placed in the nearest pound. If the owner is not known, the animals should be immediately impounded. The person driving the animals to the pound must be furnished with a letter addressed to the poundmaster in which full particulars of the animals to be impounded are reflected.
- 10040.2 Animals found straying on the line must be promptly removed and steps taken to prevent trespass by them where practicable.
- 10040.3 A Spoornet employee is not permitted to graze his own animals on Spoornet property where access can be obtained by them to the running lines.
- 10041.0 MATERIAL MUST BE REMOVED FROM SIDE OF LINE WHEN POSSIBLE**
- 10041.1 As far as is practicable, loose track material must be stored away from the line and not left in section longer than is necessary.
- 10042.0 OBSTRUCTIONS PLACED ON LINE MUST BE REPORTED PROMPTLY**
- 10042.1 Detection of offender**
- 10042.1.1 The utmost vigilance must be exercised by every member of the personnel to detect anyone guilty of placing obstructions on the line or maliciously interfering with the points, etc. Such cases must be reported immediately to the nearest SA Police Services. The matter must also be reported to the official in charge at the nearest depot. (See train working rule No. 252.)
- 10042.2 How obstructions must be dealt with**
- 10042.2.1 Pending the arrival of the SA Police Services, the obstruction must not be touched, unless this is imperative for reasons of safety or to permit of the passage of trains. The obstruction should not, if practicable, be directly handled by the personnel, but must be removed by means of a suitable implement, such as a shovel, iron bar, etc. and guarded to prevent any unauthorised person interfering with it before the SA Police Services arrive. The employee who first discovers the obstruction must take steps to preserve the conditions as they existed at the time of discovery and cover over, as far as possible, any fingerprints, footprints, or other clues which may assist the SA Police Services in tracing the culprit.
- 10043.0 FORMS TO BE USED WHEN REPORTING ACCIDENTS**
- 10043.1 The following forms must be used for the reporting of the various kinds of accidents:
- 10043.1.1 SPOORNET 263 – Derailment Form.
- 10043.1.2 SPOORNET 410 – Report of Accident to Livestock.
- 10043.1.3 SPOORNET 21 – Derailed Vehicle Report.
- 10043.1.4 SPOORNET 264 – Accident Form.
- 10043.1.5 WCL2 – Employers Report of an Accident.
- 10044.0 STANDARD LIST OF PROVISIONS FOR BREAKDOWN VANS**
- 10044.1 The standard list of provisions to be supplied and carried in breakdown vans is set forth in subclause 10044.5.4 hereof. To determine the quantity of each item, those items shown on a per-person-per-day (24 hours) basis, must be multiplied by the normal number of persons in the breakdown gang, plus two track gangs, and then doubled to provide a sufficient quantity of each item to cover requirements for 48 hours. These quantities must further be increased by 20 per cent, or more where specially authorised (e.g. on electrified sections), to cover the requirements of any employees whose services may be required at a breakdown, but who do not form part of the normal complement of the breakdown van. In addition, extra supplies of tea, coffee, milk and sugar must be carried for six graded employees and 50 track workers, i.e. 56 additional persons, for issue to additional track gangs engaged on repairing the track at the scene of an accident. The quantities of provisions arrived at on the foregoing basis are the maximum quantities that may be held in stock at any one time and must not be exceeded. In no circumstances may intoxicating liquor be supplied to breakdown vans.

10044.2 Provisions carried in breakdown vans should only be issued to gangs engaged on breakdown work when the necessity arises. Whilst the scale of provisions to be carried in breakdown vans is determined on a per-person-per-day (24 hours) basis, the quantities of each item issued will be at the sole discretion of the official in charge at a breakdown. In the event of a breakdown gang being engaged on the line for a period in excess of 48 hours, the official in charge may order supplies of fresh meat, bread and vegetables from the nearest catering depot, or where this is not practicable, he may requisition for these articles of food from the nearest official in charge, who will arrange for their supply from the nearest available source.

10044.3 Where track personnel in excess of two gangs (for which sufficient provisions are carried in the breakdown van) are employed at a breakdown, the track inspector in charge of the work will arrange for supplies of fresh meat, bread, vegetables, mealie meal, etc.

10044.4 Standard list of provisions to be carried in breakdown vans:

10044.4.1 *Tea, 28 g per person per day.

10044.4.2 *Coffee or cocoa, 28 g per person per day.

10044.4.3 Orange cordial, 2 bottles (740 ml) per 20 persons.

10044.4.4 Lemon cordial, 2 bottles (740 ml) per 20 persons.

10044.4.5 Lime juice, 1 bottle (740 ml) per 20 persons.

10044.4.6 Grenadilla cordial, 2 bottles (740 ml) per 20 persons.

10044.4.7 *Milk (dried or condensed), 113 g per person per day.

10044.4.8 *Sugar, 85 g per person per day.

10044.4.9 Biscuits, water, unsweetened (also cream crackers), 227g per person per day.

10044.4.10 Biscuits assorted, 57 g per person per day.

10044.4.11 Corned beef or canned steak, 397 g per person per day.

10044.4.12 Pilchards (plain), 454 g per person per day.

10044.4.13 Pilchards (in tomato), 454 g per person per day.

10044.4.14 Pickled fish, 454 g per person per day.

10044.4.15 Sausages, pork, beef, viennas or steak and kidney, 340g per person per day.

10044.4.16 Peas, 227 g per person per day.

10044.4.17 Baked beans, 227 g per person per day.

10044.4.18 Sweet corn, 227 g per person per day.

10044.4.19 Canned fruit, 170 g per person per day.

10044.4.20 Jam, 57 g per person per day.

10044.4.21 Worcester sauce, 1 bottle for use by all the personnel.

10044.4.22 Tomato sauce, 1 bottle per 4 persons.

10044.4.23 Salt (table), sufficient for the requirements of the personnel.

10044.4.24 Soup, 1 packet per ten persons.

* Quantities of these items must be increased by the following to cover requirements of additional track gangs: Tea, 1,6 kg; Coffee 1,6 kg; Milk 6,3 kg; Sugar 4,8 kg.

Total quantities supplied to be levelled up to complete packets or tins, as the case may be.

10044.5 A supply of sal volatile must be maintained in all breakdown vans.

SECTION 11

SAFEGUARDING OF EMPLOYEES AND PROTECTION OF TRAINS

11001.0 HAND-SIGNAL EQUIPMENT

11001.1 For the safeguarding of employees working on, near or above the track, a white flag (by day) and detonators are used.

11001.2 For the safeguarding of coach cleaners, the following equipment are used:

Red metal discs, mounted on tripods (by day)
Red metal discs, mounted on tripods, equipped with red lights (at night)
Detonators

11001.3 For the safeguarding of rolling-stock maintenance personnel [i.e. examiners and repairers (Wagon Maintenance), electricians, etc.], the following equipment are used:

Red metal discs, mounted on tripods (by day)
Red metal discs, mounted on tripods, equipped with red lights (at night)
Red warning board inscribed **WM AT WORK/ TI AAN DIE WERK**
Warning notices inscribed **MEN WORKING ON EQUIPMENT/ MANNE WERK AAN TOERUSTING**
Handlamps
Detonators
Padlocks and keys
Points locking device

11001.4 For the protection of trains, when the line is unsafe for the passage of trains, the following equipment are used:

A red flag (by day), a red light (at night)
A red banner (by day), a red light (at night)
Detonators

11001.5 For the protection of trains, coming to a standstill as a result of an accident, a failure, an obstruction or any other exceptional cause, a red flag (by day), a red light (at night) and detonators are used.

11001.6 Each employee, who is on duty and whose duties require that he must safeguard himself or other employees or must protect trains, must have the necessary hand-signal equipment and at least ten detonators.

11001.7 The applicable safeguarding or protection must be afforded before any employee is allowed to commence work on, above or near the line or to work on rolling stock or to clean rolling stock.

11002.0 USE, STORAGE AND OBSERVANCE OF DETONATORS

11002.1 Handling

11002.1.1 Detonators must be handled with care, since they can explode if roughly handled. They must be kept dry and away from damp walls, damp wood and chemicals. They must also not be exposed to steam or other vapour.

11002.2 Method of use

11002.2.1 Detonators must only be used for signalling purposes, as and when required by the train working instructions, and must not be used for any other purpose whatsoever.

11002.2.2 Where both detonators and hand signals are used, the first detonator must be placed 100 metres outside the place where the hand signals are displayed. Should there be points within the 100 metres, the distance between the detonator and the hand signal may be reduced.

11002.2.3 It is dangerous to be within three metres from a detonator when it explodes. Therefore employees using detonators must, as far as practicable, warn persons not to loiter in the vicinity of detonators placed on the line.

11002.2.4 Detonators that are used near a station platform must be placed in such a position that when they explode, persons, who may be in the vicinity, will not be harmed by flying fragments. If this cannot be done, verbal warning must be given and the officer in charge must be advised, who must take the necessary precautions.

11002.2.5 Detonators must be placed far away enough from level crossings, so that, when they explode, road users will not be harmed by flying fragments.

- 11002.2.6 On curves, detonators must, if possible, be placed on the lower rail.
- 11002.2.7 Detonators must be placed at least one metre away from a rail joint.
- 11002.2.8 If vehicles conveying dangerous or flammable goods are damaged in an accident, detonators must in no circumstances be used within 150 metres of the damaged vehicles, except if authority has been obtained from the Fire Officer if there is one on the scene, or from the senior official in charge at the scene of the accident if there is no Fire Officer.

11002.3 Issuing and handing over

- 11002.3.1 Officials authorised to issue detonators must keep proper record of all detonators issued and on hand. Stocks must be kept locked away in a steel cabinet or safe and must be checked at least once per month. Issuing officers must keep a proper book, suitably ruled to indicate the following particulars. All entries must be entered in ink:

RECEIPTS

Number of detonators received
 Received on (date)
 Month and year of manufacture

ISSUES

Issued on
 Number
 Month and year of manufacture
 Name of employee
 Grade
 Signature
 Date
 Name of issuing officer

RETURNS

Return to warehouse to be destroyed
 Depot to which returned
 Date
 Number
 Month and year of manufacture

CHECKED BY

Name
 Grade
 Date

- 11002.3.2 The month and year of manufacture are stencilled or stamped on each container and on each detonator. Detonators must be issued in date order of manufacture and a signature obtained therefor. The oldest detonators must be issued first.
- 11002.3.3 Drivers, drivers' assistants, Conductors (Commuter Services) and other persons whose duties require that they must safeguard themselves or other employees or that they must protect trains, must have at least ten detonators for immediate use. Each official in charge of a station, train-control office, yard or other place required by the Train Working Instructions, must keep a supply of detonators within reach of employees authorised to use them.
- 11002.3.4 Employees who have received detonators must hand them over to their official in charge when no longer required in the performance of their duties, when transferred to another station or depot or on termination of their services. Officials in charge must ensure that this instruction is strictly observed in all instances.
- 11002.3.5 Except where specially otherwise stipulated, detonators may be used until they are five years old.
- 11002.3.6 Detonators that show signs of rust and all detonators older than five years must be handed back to the issuing officer, for return to the warehouse for destroying. A report in this connection must be forwarded to the central operating office.
- 11002.3.7 Should a detonator fail to explode when a train passes over it, the employee concerned must immediately report the circumstances to his controlling officer. The defective detonator and the remainder of the detonators in the container must be forwarded for examination.
- 11002.3.8 Destroying of detonators must be done in consultation with the official in charge of the warehouse only. Detonators must under no circumstances be destroyed by throwing them into furnaces or open fires. It may, however, be ignited in specially designed furnaces.

- 11002.4 Prevention of loss and theft**
- 11002.4.1 Employees issued with detonators must keep it in safe custody and must take suitable steps to prevent loss or theft.
- 11002.4.2 All irregularities in regard to the use of and custody of detonators, as well as cases of theft or loss thereof, must immediately be reported to the central operating office as well as the South African Police Services.
- 11002.5 Observance of detonator signals**
- 11002.5.1 When a detonator explodes near a fixed signal, it must be regarded that the signal is displaying its most restrictive position or aspect and the driver must act accordingly.
- 11002.5.2 When a train explodes one detonator, the driver must, except when the detonator is obviously used to direct attention to a "whistle" hand signal (white flag), reduce speed and be ready to stop his train.
- 11002.5.3 When a train explodes two detonators, the driver must stop his train. Thereafter he may, if he sees that the line ahead is clear, proceed on sight until he receives a further signal or an oral instruction.
- 11002.5.4 When a train explodes three detonators, the driver must stop his train and, except as provided in subclause 11005.2.1, remain there until authorised to proceed.
- 11003.0 SAFEGUARDING OF EMPLOYEES**
- 11003.1 Gangs at work**
- 11003.1.1 The employee in charge of the gang that must work on, above or near the line must, before commencing work, advise the train-control officer(s) controlling the section of the work to be undertaken and the latter must enter particulars in the train register.
- 11003.1.2 The employee in charge of a gang working on, above or near the line must ensure that he and his gang are adequately safeguarded against approaching trains. Special care must be taken when safeguarding gangs working in busy station yards, on curves, in cuttings, on multiple lines or in places where the view is restricted. Where gangs are working close to mechanical equipment, they must be warned of the approach of a train by means of a hooter, siren or other device, the sound of which must be audible above the noise of the equipment.
- 11003.1.3 As part of his safeguarding action, the employee in charge must arrange for one or more white flags to be displayed at (a) suitable distance(s) from the gang. If necessary or desirable one detonator must be placed on the line at least 100 metres outside the place where the furthest white flag is displayed.
- 11003.1.4 The employee in charge of the gang must decide where the flagman/men for safeguarding must be positioned. He must also ensure that flagman/men is/are there, has/have the necessary hand signal equipment and wear(s) the prescribed high-visibility clothing.
- 11003.1.5 A flagman must take up position as indicated, keep a good lookout and continuously display a white flag. He must, except when it is necessary to place detonators on or remove detonators from the line, not leave his position or allow his attention to be drawn away from his duties.
- 11003.2 Employees working alone**
- 11003.2.1 An employee working alone is solely responsible to safeguard himself against approaching trains. He must, en route to his working place, inform the train-control officer where he is going to work, whether the nature of the work will render the line unsafe for the passage of trains and whether he has flagmen available to afford protection. The train-control officer must enter full particulars in the train register and the entry must be signed by him and the employee concerned. In CTC areas, larger train-control centres and at remote-controlled interloops, the employee may inform the train-control officer telephonically. The train-control officer must enter particulars in the train register and the employee concerned must enter the particulars in his pocket book.
- 11003.2.2 If the nature of the work will render the line **unsafe** for the passage of trains and:
- 11003.2.2.1 **flagmen are available**, protection must be afforded in accordance with clause 11004.0;
- 11003.2.2.2 **flagmen are not available**, the train-control officer must arrange for an occupation of the line between the nearest stations where the work will be done, or the shortest portion of the line, at each end of which there are fixed signals as well as a cross-over road.

- 11003.2.3 If the nature of the work will **not render the line unsafe** for the passage of trains and:
- 11003.2.3.1 **a flagman or other employee is available**, personal protection must be afforded to the employee by the flagman or other employee standing next to him and warning him, by touch, of each approaching train. The employee working must ensure that the flagman or other employee affording personal protection fully understands his duties in this respect and agreement must be reached beforehand between these two employees as how each is to stand clear of the line.
- 11003.2.3.2 **a flagman or other employee affording personal protection is not available**, the train-control officer must arrange for an occupation of the line between the nearest stations where the work will be done, or the shortest portion of the line, at each end of which there are fixed signals as well as a crossover road.
- 11003.2.4 The train-control officer must notify the driver of each train entering the section in writing (telephonically where the issue of a written notification is impracticable) of the employee working in the section.
- 11003.3 Duties of driver**
- 11003.3.1 When one or more white flags is/are displayed along a line, the driver must, immediately he notices a white flag, sound the locomotive whistle at short intervals to warn workers. The whistle must be sounded until the locomotive has passed the workers. The speed of the train must not necessarily be reduced, except if necessary for other reasons.
- 11003.4 Coach cleaners**
- 11003.4.1 The employee in charge of coach cleaners must ensure that they are properly safeguarded against approaching movements.
- 11003.4.2 Before commencing any work on the in- or outside of any vehicle which necessitates the use of ladders or work which may cause coach cleaners to loose balance if the vehicles are moved, is commenced, the employee in charge of the coach cleaners must ensure that –
- 11003.4.2.1 two red metal discs, mounted on tripods, or discs with lamps, one on each rail, are placed at a distance of not less than 10 metres, if possible, from the vehicle nearest to the side(s) from which vehicles may be shunted against the vehicles on or in which the employees are at work; and
- 11003.4.2.2 that two detonators, one on each rail, are placed outside the discs. The first detonator must be placed at least 3 metres from the disc and the second at least 5 metres beyond the first detonator.
- 11003.4.3 Planks, steps or long-handled brushes must not be used on the side of a vehicle standing adjacent to a running line, except when authorised by the central operating office.
- 11003.4.4 The hand-signal equipment must remain in position until the work has been completed or suspended to permit vehicles to be moved. Before the vehicles are moved, the employee in charge of the coach cleaners must ensure that all cleaners have ceased work and have taken up a safe position.
- 11003.5 Wagon maintenance personnel, electricians and others personnel repairing rolling stock**
- 11003.5.1 In repair sidings and examination pits**
- 11003.5.1.1 Before work in a repair siding or examination pit is commenced, the officer in charge must lock the relevant points against access to the line. In addition he must ensure that –
- 11003.5.1.1.1 two red metal discs mounted on tripods, or discs with lamps, one on each rail, are placed at a distance of not less than 10 metres, if possible, from the vehicle nearest the side(s) from which vehicles may be shunted against the vehicles on which or in which the employees are at work; and
- 11003.5.1.1.2 two detonators, one on each rail, are placed outside the discs. The first detonator must be placed at least 3 metres from the disc and the second at least 5 metres beyond the first detonator.
- 11003.5.1.2 The points must be kept locked and the hand-signal equipment must remain in position until the work has been completed or is suspended to allow vehicles to be moved and the officer in charge has satisfied himself that all employees have withdrawn from underneath the vehicles.
- 11003.5.2 In sidings and lines other than repair sidings and examination pits**
- 11003.5.2.1 Prior to the commencement of work on vehicles in a siding or line other than a repair siding or examination pit, the employee carrying out the examination or repairs must place two red metal discs, mounted on tripods, or discs with lamps, one on each rail, at a distance of not less than 10 metres, if possible, from the vehicle nearest the side(s) from which vehicles may be shunted against those on which he must work. In addition, he must place two detonators, one on each rail, outside the discs. The first detonator must be placed at least 3 metres from the disc and the second at least 5 metres beyond the first detonator. If necessary the wheels of the vehicle on which he has to work must be scotched.

- 11003.5.3 On trains**
- 11003.5.3.1 If a vehicle on a through train is found to have developed defects which can be readily repaired without having to detach the vehicle, the employee having to perform the work must advise the train-control officer accordingly and give the approximate time required to repair the defects. If it is decided to hold back the train to repair the defects, the driver must be informed of the circumstances. On completion of the repairs, the same employee who repaired the vehicle must notify the train-control officer.
- 11003.5.3.2 If the repairs to be performed necessitate the employee to work underneath the vehicle or between two vehicles, the employee must –
- 11003.5.3.2.1 in the case of a vacuum-braked train, destroy the vacuum at the vehicle receiving attention, as well as between the locomotive and the first vehicle on the train, by disconnecting the vacuum pipes;
- 11003.5.3.2.2 in the case of a compressed-air braked train, request the driver to make an emergency brake application, whereafter the brake pipe behind the locomotive must be uncoupled; and
- 11003.5.3.2.3 hand the red warning board/notice board to the driver and obtain the latter's assurance that vacuum will not be created, the brakes will not be released and the train will not be moved.
- 11003.5.3.3 When informed of the repairs to be performed on the train, the driver must take all necessary precautions to ensure that the train will not move and place the red warning board/notice board on the controls.
- 11003.5.3.4 If, however, the driver is requested by the same truck maintenance personnel to create vacuum or to release the brakes for the purpose of tracing vacuum defects etc., the driver must do so while the red warning board/notice board is still in position on the controls, but he must ensure that the train does not move.
- 11003.5.4 While working underneath a vehicle, the employee performing the work must, as far as practicable, take up a position that will prevent his limbs from fouling the rails.
- 11004.0 **PROTECTION OF TRAINS WHILE REPAIRS OR OTHER WORK ON THE TRACK IS IN PROGRESS OR IF THE TRACK IS UNSAFE FOR THE PASSAGE OF TRAINS**
- 11004.1 When protection must be afforded**
- 11004.1.1 Trains must be protected when –
- 11004.1.1.1 the nature of the work carried out on, above or near the line, renders the line unsafe for the passage of trains;
- 11004.1.1.2 apparatus/equipment, with or without wheels, which cannot immediately be removed from the line by one person, is used (i.e. light Matisa tamping machines, Stumec machines and saw and drill machines clamped to the rails);
- 11004.1.1.3 equipment causing an obstruction is used (i.e. ladders, high-level jacks (A type));
- 11004.1.1.4 the speed of trains must be limited to less than 30 km/h;
- 11004.1.1.5 blasting is carried out within 500 metres from the line;
- 11004.1.1.6 work is carried out in a tunnel with ordinary hand equipment and approaching trains cannot be seen or heard on time; and
- 11004.1.1.7 a patrolman observes a track defect or damage to the line which could affect the safe running of trains. (See clause 11005.0.)
- 11004.2 How protection must be afforded**
- 11004.2.1 A red banner must be placed across the line at the end(s) of the unsafe portion of line on that/those side(s) from which trains can be expected. A flagman exhibiting a danger hand signal (red flag by day, red light at night or in foggy weather) must take up position 1,5 km from the red banner and two detonators must be placed 20 metres apart on the line. The first detonator must be placed 100 metres outside the place where the danger hand signal is displayed. During the night, in foggy weather and when working in tunnels, the red banner must be replaced by an employee exhibiting a red light.
- 11004.2.2 Where, except as laid down in subclause 11004.2.4, there are points within the full protection distance, the distance between the red banner and the flagman initially, and then, if necessary, the distance between the flagman and the detonators, and then even the number of detonators must be reduced in order that the furthest detonator or, should there not be space at all for at least one detonator, the red banner and flagman are short of the points alongside the stock rail joint or clearance mark depending whether they are facing or trailing points.

- 11004.2.3 If the unsafe area is near or between points and protection cannot be afforded at full protection distance, the employee in charge of the work and the train-control officer must arrive at a clear understanding. The train-control officer must ensure that the unsafe area is properly protected by controlled signals, where provided, at the side(s) where protection is not afforded at the full protection distance. *Furthermore, the train-control officer must not allow a train to depart from the telegraph station, crossing place or interlocking area concerned or to enter the unsafe line before the employee in charge of the work has informed him that the train may proceed.* Where applicable, the train-control officer must make use of reminders or, in the case of hand points, the employee in charge of the work must, in consultation with the train-control officer or the operating official in charge of the yard, as the case may be, arrange for the points to be clamped against entry to the line on which work is performed.
- 11004.2.4 Should the unsafe area be at or near an interloop (including a remote controlled interloop), a token station or an intersiding, or on the main or through line at or near an unattended junction, protection must be afforded at full distance, even if there are points, warning boards and, where applicable, colour-light signals.
- 11004.3 If the employee in charge has any doubt about whether the line on which work is to be performed is a uni- or bidirectional line, he must come to a clear understanding with the train-control officer(s) concerned when authority is requested to commence work.
- 11004.4 Should there be a tunnel within the prescribed distance, or should work be carried out in a tunnel, the employee affording protection must, except where otherwise provided for in the Local Appendix for specific tunnels, walk through the tunnel and afford protection at full protection distance outside the mouth of the tunnel. The red banner must be so placed that oncoming trains will not stop with the locomotives in the tunnel.
- 11004.5 Duties of driver**
- 11004.5.1 When the locomotive has exploded two detonators, the driver must stop the train. Thereafter he may, if he sees that the line ahead is clear, proceed on sight until he receives a further signal or oral instruction.
- 11005.0 PROTECTION OF TRAINS BY PATROLMAN**
- 11005.1 Should the patrolman observe a track defect or damage, which could influence the safe running of trains, to the track, he must place a red flag upright at the damaged place and place three detonators on the line, 1,5 km on either side of the damaged place. Preference must be given to the side from where the first train is expected. Thereafter he must, should there be a telephone or emergency telephone plug point in the area, report the damage to the train-control officer. If he cannot communicate with the train-control officer telephonically or, after he has reported the damage to the train-control officer, he must return to the damaged place, wait there for the arrival of the first train and inform the driver of the nature of the defect or damage.
- 11005.2 Duties of driver**
- 11005.2.1 The driver of the train stopped by the patrolman must inspect the damaged place personally and decide whether it is safe to negotiate the damaged place. Should the driver decide that it is safe to negotiate the damaged place he may proceed without receiving a hand signal.
- 11006.0 PROTECTION OF TRAINS BY FIXED SIGNALS**
- 11006.1 On single lines, where trains are controlled by train tokens, a train on a running line is protected in the rear by a fixed signal as indicated below when the last vehicle of a train is –
- 11006.1.1 within the **home signal** at danger, protection is afforded up to the clearance mark at the opposite end of the station, junction or remote-controlled interloop. (A home signal is the absolute-stop signal nearest to the facing points at a station or remote-controlled interloop.);
- 11006.1.2 within the **intermediate home signal** at danger, protection is afforded up to the home signal;
- 11006.1.3 within the **outer-home signal** at danger, protection is afforded up to the intermediate home signal or, where there is no intermediate home signal, up to the home signal;
- 11006.1.4 100 metres inside a **distant signal** at caution, protection is afforded up to the intermediate home or, where there is no intermediate home signal, up to the home signal;
- 11006.1.5 200 metres inside a **warning board**, protection is afforded up to the intermediate home signal or, where there is no intermediate home signal, up to the home signal. Where a home signal is not provided, protection is afforded up to the clearance mark at the opposite end of the station, junction, interloop, intersiding, token station or halt. Where, at a token station or halt, there is no clearance mark at the opposite end, protection is afforded up the centre of the token station or halt, or up to the points of an intersiding or junction which is not in the form of a loop; and
- 11006.1.6 200 metres inside a **watering board**, protection is afforded up to the watering place.

- 11007.0 PROTECTION OF TRAINS THAT STOPPED AS A RESULT OF AN ACCIDENT, FAILURE, OBSTRUCTION OR OTHER EXCEPTIONAL CAUSE**
- 11007.1 Personnel who must afford protection**
- 11007.1.1 The driver must afford protection in the front and the driver's assistant must afford protection in the rear.
- 11007.1.2 Should there be reason to believe that some members of the locomotive personnel are disabled, the remaining personnel must, bearing in mind the risk of a train approaching on a parallel line, use their discretion over the priority of protection.
- 11007.2 Priority for protection**
- 11007.2.1 Priority for protection will generally be as follows:
- 11007.2.1.1 The line(s) on which trains approach in the opposite direction;
- 11007.2.1.2 The line(s) on which trains approach in the same direction;
- 11007.2.1.3 The line on which the train is standing.
- 11007.3 When protection must be afforded**
- 11007.3.1 Should there be one or more parallel lines, protection must immediately be afforded on all the lines on which opposing or following trains are expected, unless or until, it has been established without doubt that no parallel line is obstructed.
- 11007.3.2 If it has been established that no parallel line is obstructed, or if the train has stopped on a single line alongside which there is no parallel line –
- 11007.3.2.1 protection in the rear need only be afforded when –**
- the train is running with an SD-2 authority (station to station), telegraph order or paper ticket;
- the train is divided or has parted accidentally and must be cleared from the section in two portions;
- when assistance is send or called for; and
- the train runs on a pilotman's ticket, unless the pilotman's ticket is amplified that no train will be allowed to follow; and
- 11007.3.2.2 protection in the front need only be afforded when –**
- the train is divided or has parted accidentally and must be cleared from the section in two portions; and
- assistance is send or called for.
- 11007.4 How protection must be afforded**
- 11007.4.1 The member concerned of the locomotive personnel, must display a danger hand signal at least 1,5 km from the obstruction and must place three detonators 20 metres apart on the line. The first detonator must be placed on the line 100 metres outside the place where the danger hand signal is displayed. En route to the protection point a danger hand signal must be displayed continuously. Should a train approach, three detonators must immediately be placed on the line on which the train approaches as far as possible from the obstruction and a danger hand signal exhibited. When the person who must afford protection is called back before he has reached the protection point, he must place two detonators on the line and thereafter return to his train.
- 11007.4.2 Should there, within the prescribed distance, be points or a signal controlling entry to the line on which protection must be afforded and provided that it has been established that no other line is obstructed, three detonators need to be placed just outside the points or signal, i.e. on the side nearest to the obstruction, on the line and the danger hand signal must be displayed at that point. If there is a telephone in the vicinity, the train-control officer must be advised.
- 11007.4.3 Should there be a signal cabin en route to the prescribed distance, the member concerned of the locomotive personnel must place three detonators 20 metres apart on the line(s) concerned just outside the first running- line points or, where there are no points, opposite the signal cabin and furnish full particulars to the train-control officer. Unless otherwise instructed by the train-control officer, the member of the locomotive personnel must return to his train and take such other action as the circumstances necessitate.
- 11007.4.4 Should there be a telephone affording communication with the train-control officer en route to the prescribed distance, the member concerned of the locomotive personnel must place three detonators, 20 metres apart opposite the telephone on the lines concerned and furnish full particulars to the train-control officer. If prompt reply is not received or if not otherwise instructed by the train-control officer, he must proceed to the prescribed distance.

11007.4.5 Should there be a tunnel within the prescribed distance, the concerned member of the train personnel must, before entering the tunnel, place three detonators 20 metres apart at the entrance of the tunnel. Thereafter he must, except where otherwise provided for in the Local Appendix, proceed through the tunnel and afford protection at the full distance outside the mouth of the tunnel.

11007.5 Duties of train-control officer

11007.5.1 When the train-control officer is advised of an accident, a failure, an obstruction or any other exceptional cause, he must place or keep all the necessary signals in the most restrictive position and place lever collars/reminders on the levers/push buttons.

11008.0 PROTECTION DURING ACCIDENTS IN STATION AND MARSHALLING YARDS

11008.1 Should an accident occur in a station or marshalling yard, the points giving access to the obstructed line(s) must be set against entry to the line(s). In consideration of the circumstances and the availability of employees to afford protection, the operating official in charge of the station or yard must arrange for such protection measures to be taken that will prevent other movements from entering the obstructed line(s). Should there be fixed signals that control entry or may control entry to the obstructed line(s), the train-control officer must be advised.

11009.0 BLASTING

11009.1 When blasting is to be done within 500 metres from the line, authority must be obtained from the central operating office.

11009.2 Before blasting is commenced, the track official in charge must arrange for protection to be afforded in terms of clause 11004.2.1. A red banner must be placed across the line at least 500 metres from the blasting area, at that/those side(s) from which trains can be expected.

11010.0 USE OF TROLLEYS

NOTE: In this instruction "trolley" means any hand-propelled device designed for the conveyance by rail of workmen, tools, material or equipment and includes push trolleys, pump trolleys, trestle trolleys and rail transporters.

11010.1 The following instructions are applicable in general and must be read in conjunction with any other instruction issued by the engineering section concerned.

11010.2 Trolleys may only be placed and used on a line by an authorised employee holding a certificate to use such trolley.

11010.3 Trolleys must only be used for the purpose for which it has been provided and may not be used for pleasure. Unauthorised persons may also not be allowed to ride upon the trolleys

11010.4 Trolleys not in use must be placed at least three metres away from the centre line of the track and during as well as after working hours they must be chained and locked.

11010.5 A trolley may not be attached to or propelled by a train.

11010.6 The employee in charge of the trolley must keep it in good order. He must also, where applicable, test the hand brake before commencing a journey and satisfy himself that the brakes work properly.

11010.7 Before starting from or passing through a station, the employee in charge of the trolley must establish from the train-control officer how trains are running.

11010.8 The employee in charge of the trolley must ensure that all points over which the trolley must pass are correctly set.

11010.9 Trolleys must not be used at night or during foggy weather, except in the case of train accidents or other unusual circumstances affecting the safe running of trains.

11010.10 On an unidirectional running line, trolleys may only run in the same direction as trains, except where otherwise stipulated in the Local Appendix.

11010.11 Protection

11010.11.1 Before a trolley is placed on the line and whilst it is on the line, the employee in charge of the trolley must arrange for an employee, clearly displaying a danger hand signal, to protect the trolley at a distance of at least 1,5 km on the side(s) from which trains can be expected. On a unidirectional line, it is only necessary to afford protection in the rear.

11010.11.2 Should a train approach, or whilst the trolley is stationary, the employee affording protection must place three detonators, 20 metres apart, on the line. Should there be sufficient time, the first detonator must be placed 100 metres outside the place where the danger hand signal is displayed. The detonators and danger hand signal must not be removed until the trolley has been placed clear of the line.

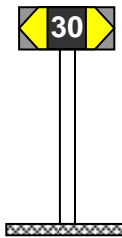
11010.12 The employee in charge of the trolley must not permit the trolley to travel at a speed which will prevent the employees protecting it from keeping the prescribed distance from the trolley.

11011.0 TEMPORARY SPEED RESTRICTIONS

11011.1 The purpose of temporary speed restrictions is to indicate to a driver that the line is unsafe at normal speed, but safe at the speed indicated on the temporary speed-restriction boards. If a decrease-speed hand signal (yellow-black flag) is displayed it means that the line is safe at a maximum speed of 30 km/h.

11011.2 Temporary speed restriction boards and decrease speed hand signal (yellow-black flag)

11011.2.1 Speed-restriction Warning Board



Location: To the right of and adjacent to the line to which it refers and 1,5 km from the portion of the line where the speed is restricted.

Indication: Reduce speed and be prepared to travel, 1,5 km ahead, at the speed indicated on the speed-restriction warning board.

11011.2.2 Beginning-of-speed-restriction Board



Location: At the start of the unsafe portion to the right of and adjacent to the line to which it refers.

Indication: Proceed at the speed indicated on the board until the end-of-speed-restriction board is reached.

11011.2.3 End-of-speed-restriction Board

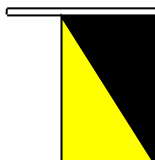


Location: To the right of and adjacent to the line to which it refers and at least 500 metres beyond the unsafe portion of the line.

Indication: Increase speed after the locomotive has passed the board or, with due allowance of the length of the train, by expectation, the rear of the train has passed the unsafe area.

NOTE: This board may be used in place of the all-right hand signal, which must be used in accordance with clause 110011.2.4.

11011.2.4 Decrease-speed hand signal (yellow-black flag)



Location: Adjacent to the line to which it refers, and 1,5 km from the portion of line where the speed is restricted. One detonator must be placed on the line 100 m outside the place where the hand signal is displayed.

Indication: Sound locomotive whistle to acknowledge hand signal, reduce speed and be prepared to travel 1,5 km ahead, at a maximum speed of 30 km/h and to maintain that speed until the locomotive has passed the all-right hand signal, displayed at least 500 metres beyond the unsafe portion of line, or, with due allowance of the length of the train, by expectation, the rear of the train has passed the unsafe area.

NOTE: An end-of-speed-restriction board may be used in place of the all-right hand signal.

- 11011.3 Temporary speed restrictions must, as far as possible, be arranged beforehand and details thereof must be included in the Speed-restriction Notice. When, however, a speed restriction must be arranged at short notice, the track official in charge must not erect the temporary speed-restriction boards before he has furnished full particulars to the train-control officer(s) concerned. In the latter case, the train-control officer(s) must enter particulars in the train register(s) and inform all drivers in writing (telephonically where the delivery of the written warning is not practical), of such speed restriction. If the speed restriction will continue for a lengthy period, a notice must be issued.
- 11011.4 If the temporary speed restriction is applicable during working hours only, all boards must be removed on completion of the working shift.
- 11011.5 If a driver comes across a speed restriction board lying flat along the line, he must report it to the train-control officer at the station in advance or the first place where communication can be established with the train-control officer. The train-control officer in turn must notify the track personnel.
- 11011.6 **Temporary speed-restriction boards and the decrease-speed hand signal (yellow-black flag) must not be used for the safeguarding of personnel working on, near, or above the line.**