

INDIAN RAILWAYS (OPEN LINES) GENERAL AND SUBSIDIARY RULES

NORTH CENTRAL RAILWAY 45 Indian Railways (Open Lines) General & Subsidiary Rules (Amended upto A. Slip No. 45) 2017 Second Edition, 2017 3qzi8T (For Office Use only) ä 69-3TR 1 1 1 976 füi 1 8 I 'æq.å. ' 31fr S I 3FTf2ifä a-fi I Äe-rrfta, I PREAMBLE This edition of General and Subsidiary Rules on North Central Railway is presented encompassing operational guidelines while implementing the order of the Railway Board as contained in the Resolution No. 69-RW4 of Ministry of Railways (Railway Board), dated the 1 February, 1976. While the General Rules apply on the Indian Railways, the Subsidiary Rules incorporated in this book especially pertains to North Central Railway. The Subsidiary Rules (S.R.) are to be read in conjunction with the General Rules (G.R.) because both General and Subsidiary Rules are equally binding on the staff. Obviously, the General Rules are printed in bold fonts for clarity and are serially numbered in all the 18 chapters. The Subsidiary Rules below the General Rules to which they pertain, prefixed with letter 'S.R. ' and 05 appendices exclusively are printed in the normal font. While issuing the second edition of North Central Railway an opportunity has been taken to frame the Subsidiary Rules conducive to the safe and smooth operations, keeping in mind the intelligibility and comprehensibility in the light of the provisions of the General Rules. Reasonable care has been taken in compilation of these rules, however, if any omissions might have occurred, same may be provided as amendment/addition is a continuous process and suggestions, if any, may be given with imperative reasons. The working of trains on this Railway has to be governed under the various provisions of the rules incorporated in this book. No order contained in this shall be varied, superseded, suspended or shown to the public. These rules, therefore, have to be studied and adhered to carefully for safe, smooth and expeditious operation on the system of working of trains. (D. K. Singh) Chief Operations Manager 69 — 1 1 1976 1976 1 9 29 1 962 1 968 2.\$4 1 968 1970 1 971 -72 3. 1 962 1968 1972 GOVERNMENT OF INDIA MINISTRY OF RAILWAYS (RAILWAY BOARD) No. 69-RW4 NEW Delhi, Dated the 11th February, 1976 RESOLUTION General Rules for Indian Railways (Open Lines) 1976 administered by the Government, and for the time being used for the Public carriage of passengers, animals or goods. The considerable advance made in recent years in methods of signalling and interlocking, modes of traction and introduction of new types of equipment necessitated a revision of the General Rules, which had been revised last in 1929, for working Open Lines of Railway in India. The revision of these rules was also advocated by the Railway Accidents Committee, 1962 and the Railway Accidents Inquiry Committee, 1968, who desired that the revision of the Rules should be consistent not only with the conditions obtaining at present but likely to obtain in the foreseeable future, and emphasized the need for keeping the basic complexion of rules intact while at the same time providing for technological changes in recent years

2. For this purpose, a committee composed of officers selected from the Traffic and Signal Departments was appointed by the Railway Board in 1968. The committee submitted a set of draft rules for consideration by the Board in February, 1970. The Commission of Railway safety, whose comments were also invited, did not favour the adoption of these draft rules, which had proposed the abolition of certain existing fundamental concepts such as classification of stations, minimum equipment of signals for each class of station, etc. In the Annual Report for 1971-72, the Commission stated that a wholesale revision and re-arrangement of the rules which formed the basis of train working and safety of operations for over 100 years and which were ingrained in the minds of thousands of railway staff, would not be desirable. Accordingly, the Commission conveyed to the Railway Board its inability to agree to the adoption of the new General Rules as drafted

3. In consideration of the strong views expressed by the Commission of Railway Safety and the positive recommendations of the Railway Accidents Committee 1962 and Railway Accidents Inquiry Committee, 1968, Member Traffic, Railway Board, decided in September, 1972, that the revision of the existing General Rules should be so undertaken as to be in consonance with these views and to cover such aspects only of the existing rules as require modification in the light of the technological changes or where certain existing rules have outlived their use. A fresh revision of the General Rules was accordingly taken up by the Safety Directorate in consultation with the other Directorates of the Railway Board. 4. 801, 69-34R 3TR-4 6. (ZIR i) 1989 (1989 60 87 A provisional issue of the revised General Rules was circulated to the Railway 4. Administration, the Research, Designs and Standards

Organisation, the commission of Railway Safety, the Railway Staff College Vadodara, the Indian Railway Institute of Signal Engineering and Telecommunications, Secunderabad, Indian Railways Institute of Advanced Track Technology, Pune, Indian Railway Institute of Civil Engineering, Pune, Indian Railways Institute of Mechanical and Electrical Engineering, Jamalpur ; etc., Indian Railway Institute of Electrical Engineering, Nasik for criticism and suggestions under Government of India, Ministry of Railways (Railway Board) Letter No. 68-RR]2V01. V, dated 25-07-1974. The exhaustive views and comments received from the Railway Administrations, the 5. Commission of Railway Safety, other Railway Institutions and the Ministry of Law, having been considered by Member Traffic, Railway Board, in consultation with the concerned Directorate, a complete revise set of General Rules for Railways administered by the Government have now been framed sanction and issued by the Central Government with Notification No. 69-RR/4 of this day's date to be brought into use on such date as the Central Government may, be notification in the Official Gazette, appoint

6. The Central Government desire that the said rules may be brought to the notice of the Administrations of the several railways not administered by the Government and that the Heads of Railway Administration of such railways may be invited to submit a formal application for the adoption of the rules, with such modifications (if any) as may be considered necessary in each case.

Order:- Ordered that this Resolution, with its enclosures be published under a Notification in the Official Gazette as required by sections 60 & 87 of the Railways Act, 1989 (24 of 1989) and that a copy there of be kept open for inspection at railway stations as directed by sub-section (4) of the same sections, also that a copy of this Resolution and of its enclosures be communicated to the Governments, Administrations and Officers, noted below, for information. Member Traffic, Railway Board and Ex-Officio Secretary to the Government of India 1976 RfÄ, *QI, uwg, *QI, Clfrw, 3*rqr, fi•ä) I q-dl-g-ü-\$, fiä), # , R?tr, I R#åz, Rfiåg, (FTI*fiZA), Documents accompanying: General Rules for Indian Railways (Open Lines) 1976 administered by the Government. Secretaries, Ministries Communications; Defence; Home Affairs, Law Justice and Company Affairs; Petroleum; Shipping and Transport; and Tourism and Civil Aviation. The Chief Secretaries to the Government of Andhra Pradesh, Assam, Bihar, Haryana, Himanchal Pradesh, Gujrat, Chhatisgarh, Uttranchal, Jharkhand, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Mainipur, Meghalaya, Nagaland Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, West Bengal, Delhi, Goa, Mizoram and Arunachal Pradesh. The Chief Secretaries, Administrations of Andaman and Nicobar; Chandigarh; Dadra and Nagar Haveli; Daman and Diu; Lakshadweep, Minicoy and Amandiv and Pondicherry. Additional Deputy Controller and Auditor General of India (Railways) and Ex-Officio Director of Railway Audit. The Chief Commissioner of Railway Safety, Lucknow The Commissioners of Railway Safety, Central, Eastern, Northern, North Eastern, North East Frontier, Southern, South Eastern, South Central and Western Circles. The General Managers, Central, Eastern, East Central, East Coast, Northern, North Eastern, North Central, North Frontier, North Western, Southern, South Central, South Eastern, South East Central, South West, Western and West Central Railways. The General Managers, Chittaranjan Locomotives Works, Diesel Locomotive Works and Integral Coach Factory. The General Manager, Metropolitan Transport Project (Railways), Kolkata. The Chief Administrative Officers, Metropolitan Transport Projects (Railways), Bombay, Delhi and Madras. The Director General, Research, Design and Standards Organisation, Lucknow. The Principals, Indian Railways Institute of Advanced Track Technology, Pune: Indian Railways Institute of Mechanical Engineering, Jamalpur; Indian Railways Institute of Signal Engineering and Telecommunications, Secunderabad; Indian Railway Institute of Electrical Engineering. Nasik and Railway staff College, Vadodara. The Chairman, Bombay Port Trust Railway, Calcutta Port Trust Railway, Kandla Port Trust Railway, Madras Port Trust Railway and Visakhapatnam Port Trust Railway. The Managing Agents, Ahmedpur-Katwa Light Railway Company Limited, Bankura-Damodar River Railway Company Limited, Katakhal-Lal Bazar Railway Company Limited and Martin Light Railways. The General Managers, Bharat Railway and Central Province Railway Company Limited. The Secretary, Dehri-Rohtas Light Railway Company Limited. The Chairman, All Railway Recruitment Boards The Chairman, Railway Rates Tribunal, Indian Railways. The Secretary, Indian Railways Conference Association. The Director, National Archives of India. The Librarians, Central Secretariat Library, National Library, Calcutta Parliament Library and Railway Board Library. The Superintendent, Library and Research, Ministry of Law, Justice and Company Affairs. 19 2006 1989 (1989 24) 198 60 (2) 1 976

Signal is defective Warner or distant signals defective in the 'Off position Warner not to be used when a Stop signal is defective Passing of a gate stop signal at 'ON' Absence of a Fixed signal or a signal without a light Passing of Intermediate Block Stop signal at "ON" Intimation to officials when defects remedied Defective or damaged points Duties of Engine Crew in respect of Signals Duties of Loco Pilot in respect of Calling-on-signals Duties of Loco Pilot when an approach Stop signal is 'ON' or defective Duties of Loco Pilot when a departure Stop Signal is 'ON' or defective Permission before entering on or crossing a running line Assistance of the Engine Crew regarding signals Duties of Loco Pilot as to signals when two or more Engines are attached to train Reporting of defects in signals

CHAPTER-IV WORKING OF TRAINS Generally Timing and Running of Trains Standard Time Adherence to advertised time Setting Watch Time of attendance for Train Crew Proper running in Direction of running Supply of working time table and schedule of Standard Dimensions Speed of trains Limits of Speed generally Caution order Limits of Speed over facing points Limits of Speed while running through stations Engine Pushing Limits of speed with Engine Tender Foremost Equipment of Trains and Train Crew Head Light and Marker Lights Tail and Side Lights 4.16 4.17 4.18 4.19 4.20 4.21 4.22 4.23 4.24 4.26 4.28 4.29 4.30 4.31 4.32 4.33 4.34 4.35 4.36 4.37 4.38 4.40 4.41 4.42 4.43 4.44 4.45 4.46 4.47 4.48 4.49 4.50 4.51 4.52 4.53 4.54 4.55 4.56 4.57 111* Oil* , a-TR17-R17 (EITT) 111* 11Té 4.16 4.17 4.18 4.19 4.20 4.21 4.22 4.23 4.24 4.25 4.26 D. 4.27 4.28 4.29 E. 4.30 4.31 4.33 4.34 4.35 4.36 4.37 4.38 4.39 4.40 4.41 4.42 4.43 4.44 4.45 4.47 4.48 4.49 4.50 4.51 4.52 4.53 4.54 G. 4.55 4.56 4.57 Tail Board or Tail Lamp Responsibility of Station Master regarding Tail Board or Tail Lamp of Passing trains Means of Communication Guard's and Loco Pilot's equipment Manning of Engine in motion Driving an electric train Riding on engine or tender Brake - vans Position of brake-van on train Guards Couplings Vehicles and cranes Cranes Loading of vehicles Damaged or defective vehicles Precautions before Starting Train Loco Pilot and Guard to examine notices before starting Examination of trains before starting Examination of train by Loco pilot Examination of single and multiple units by Loco pilot Duties of Guard when taking over charge of a train Starting of trains Guard to be in charge of train Subordination of Guards in station limits Firemen and Assistant Loco Pilots to obey Loco Pilots Loco Pilots to obey certain orders Duties of staff working trains during journey Loco Pilot and Assistant Loco Pilot to keep a good look-out Loco Pilot and Assistant Loco Pilot to look back Exchange of signals between Loco Pilot, Guard and station staff Guard to keep a good look-out Train held up at first Stop signal Attracting attention of Loco Pilot Assistance from Guard's hand brake Application of Guard's hand brake. Permission of Guard to detach engine from train Starting and stopping of train Sounding of engine whistle Bell signals between Loco Pilot and Guard Throwing out water, fire or cinders Hose or water crane Passengers Duties of Staff on Arrival Shutting off power Guard to see that train is stopped clear of fouling marks Detaching engine 4.58 4.59 4.60 4.61 4.62 4.63 4.64 4.65 5.01 5.02 5.03 5.04 5.05 5.06 5.07 5.08 5.09 5.10 5.11 5.12 5.13 5.14 5.15 5.16 5.17 5.18 5.19 5.20 5.21 5.22 5.23 6.01 6.02 6.03 6.04 6.05 6.06 A1-a ezia-u•T 3-+4 -864 -ä-q•F7 11Tå 342441 Érå (QFT) Ér (v) 4.58 4.59 4.60 4.61 H. 4.62 4.63 4.64 4.65 1. 4.66 5.01 5.02 5.03 5.04 5.05 5.06 5.07 5.08 5.09 5.10 5.11 5. 12 5.13 5.14 5.15 5.16 5.17 5. 18 5. 19 5.20 5.21 5.22 5.23 6.01 6.02 6.03 6.04 6.05 6.06 Loco Pilot to see that train is stopped clear of fouling mark Moving of trains carrying passengers after it has been stopped at a station Guard not to leave train till handed over Loco Pilot not to leave engine when on duty Working of material trains Working of material train in a block section Workers on material train Protection of material train when stabled Working of track maintenance machine Private engines and vehicles Private engines and vehicles

CHAPTER-V CONTROL AND WORKING OF STATIONS Responsibility of the Station Master for working Supply of copies of rules and distribution or exhibition of other documents Obedience to orders and keeping of books and returns Signal cabins Report of neglect of duty Station Working Rules Forms Access to and operation of equipment Reception of a train on an obstructed line Reception of a train on a non-signalled line Departure of a train from a non-signal led line Departure of a train from a line provided with a common departure signal Control of shunting Responsibility for Shunting Shunting at Stations under Centralised Traffic Control Shunting during reception of trains Shunting near level crossing Drawing of a train to an advanced position at night or in thick, foggy or tempestuous weather impairing visibility Obstruction of running line Shunting on gradients Loose shunting Leaving vehicles in sidings outside station limits Securing of vehicles at station

CHAPTER-VI ACCIDENTS AND UNUSUAL OCCURRENCES Accident or obstruction Working in case of accident or failure of communications Protection of trains stopped between stations Trains

unusually delayed Sending advice of accident or breakdown Train in a block section without authority to proceed (v) 6.07 6.08 6.09 6.10 6.11 7.01 7.02 8.01 8.02 8.03 8.04 8.05 8.06 8.07 8.08 8.09 8.10 8.11 8.12 8.13 8.14 8.15 8.16 9.01 QIT3if (3 {IQZN} q..4TITHT --qTä fig' -2--ä -€44 *ufi 'Ü *ufi 'Ü *ufi frq-,-åQT 'Ü *ufi (ZITI) (Q@) 41-ä 6.07 6.08 6.09 6.10 6.11 7.01 7.02 8.01 B. 8.02 8.03 8.04 8.05 8.06 8.07 8.08 8.09 8.10 8.11 8.12 8.13 8.14 8.15 8.16 9.01 Report of conditions likely to affect running of trains to Controller or Centralised Traffic Control Operator Train parting Portion of train left in a block section Fire Vehicle escaping from station CHAPTER-VII SYSTEMS OF WORKING Systems of working. Applicability of General rules referring to the working of signals and trains CHAPTER-VIII THE ABSOLUTE BLOCK SYSTEM Essentials Essentials of the Absolute Block System Conditions for granting line clear Conditions for granting Line Clear at a class 'A' station Conditions for granting Line Clear at a class 'B' station Conditions for granting Line Clear at a class 'C' station C. Obstruction-Double line Obstruction on double line at a block station when a train is approaching Obstruction on double line in the block section D. Obstruction-Single line D1. Class 'A' stations Obstruction on a single line at a Class 'A' station when a train is approaching Obstructing the block section at a class 'A' station on single line D 2. Class 'B' stations Obstruction in the face of an approaching train at a class 'B' station on single line Obstruction within station section at a class 'B' station on single line Obstruction outside station section at a class 'B' Single line station equipped with two-aspect signals Obstruction outside station section at a class 'B' single line station equipped with manually operated multiple aspect signals Obstruction outside the first stop Signal at a class 'B' station on single line E. General Provisions Block back or Block forward Authority for shunting or obstruction in block section Illustrative diagrams CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM Rules applicable to Double line Essentials of the Automatic Block System on double line 9.02 9.04 9.05 9.07 9.08 9.09 9.10 9.11 9.12 9.13 9.15 9.16 10.01 10.02 10.03 10.04 1 c.C5 10.06 10.07 10.08 10.09 (SQ) (e-IY) '34TH' f@-wq--€f '3-717' 11Té Ilfrzif (' @..qfi (erg) ' Illßzif 38---dN1@â-q •34181 11 11 11 11 11 11 .01 .02 .03 .04 .05 .06 12.01 9.02 9.03 9.04 9.05 9.06 9.07 9.08 9.09 9.10 9.11 9.12 9.13 9.14 9.15 10.01 10.02 10.03 10.04 10.05 10.06 10.07 10.08 10.09 11.01 11.02 12.01 Duties of Loco Pilot and Guard when Automatic Stop signal on double line is to be passed at 'ON' B. Rules applicable to Single line Essential of the Automatic Block system on single line Minimum equipment of fixed signals in Automatic Block territory on single line Additional fixed signals in Automatic Block Territory on single line Conditions for taking 'Off Manual stop signals in Automatic Block territory on single line Duties of Loco Pilot and Guard when an Automatic Stop signals on single line is to be passed at Person in charge of working trains on Automatic Block System on single line C. Rules applicable to both Double and Single lines Working of trains on Centralised Traffic Control Territory Protection of a train stopped in an Automatic Block Signalling Section Loco Pilot to report failures Procedure during failure of Automatic signalling Movement of trains against the direction of traffic on the Automatic Block System Procedure when Semi-Automatic Stop signal is 'ON' Passing a gate Stop signal at 'ON' in Automatic signalling territory' Illustrative diagrams CHAPTER-X THE FOLLOWING TRAINS SYSTEM Essentials of the Following Trains System Report to the Commissioner of Railway Safety Conditions to be observed in working trains on the Following Trains System Delivery' of authority to proceed to Loco Pilot or Guard on the Following Trains System Authority to proceed on the Following Trains System Responsibility as to proper preparation of authority to proceed on the Following Trains System Obstruction in face of approaching train or trains on the Following Trains System Cessation of working on the Following Trains System Protection of trains on the Following Trains System CHAPTER-XI THE PILOT GUARD SYSTEM Essentials of the Pilot Guard System Conditions to be observed for following trains on the Pilot Guard System Pilot Guard's dress or badge Pilot Guard to accompany train or give authority to proceed Pilot Guard's Tickets Protection of trains on the Pilot Guard System CHAPTER-XII THE TRAIN-STAFF AND TICKET SYSTEM Essentials of the Train-staff and Ticket System 12.02 12.03 12.04 12.05 12.06 12.07 12.08 12.09 12.10 12.11 12.12 12.13 12.14 12.15 12.16 12.17 13.01 13.02 13.03 13.04 14.01 14.02 14.03 14.04 14.05 14.06 14.07 14.08 14.09 14.10 14.11 14.12 14.13 14.14 14.15 14.16 14.17 14.18 a-Tr qltT -qvä zrr Ér 3-1TQZT% Ei-tl R-417 12.02 12.03 12.04 12.05 12.06 12.07 12.08 12.09 12.10 12.11 12.12 12.13 12.15 12.16 13.01 13.02 13.03 13.04 14.01 14.02 14.03 14.04 14.05 14.06 14.07 14.08 14.09 14.10 14.11 14.14 14.15 14.16 14.18 System where applicable Conditions to be observed for following train on the Train-staff and Ticket System Loco Pilot to have Train-staff or Train-staff Ticket Train-staff or Train-staff Ticket, by whom to be delivered to Loco Pilot Train-staff or Train-

staff Ticket, when to be delivered to Loco Pilot Train-Staff to be kept on engine Trains not to be started until Train-staff returned Train-staff or Train-staff Ticket to be given up and Ticket to be cancelled on arrival of train Procedure when engine is disabled on the Train-staff and Ticket System Train-staff Tickets: how kept Train-staff: how kept Distinguishing marks on Train-staff Tickets and boxes Form of Train-staff Tickets Record of Train-staff Tickets issued Obstruction outside the Home signal Protection of trains on the Train-staff and Ticket System CHAPTER-XIII THE ONE TRAIN ONLY SYSTEM Use of the One Train Only System Essentials of the One Train Only System Authority to enter the section Procedure in case of accident or disablement on the One Train Only System CHAPTER-XIV BLOCK WORKING General Provision Means of granting or obtaining Line Clear Provision of instruments Consent required before interfering with block working equipment B. Block stations at which Electrical Block Instruments, Track Circuits or Axle Counters are provided Certificate of competency Bell codes Acknowledgment of signals Train Signal Register Authority to proceed Loco Pilot to examine authority to proceed Conditions for closing the block section Responsibility of Station Master as to authority to proceed Special responsibility as to electrical token instruments and to the token Failure of electrical block instruments or track circuits or axle counters Closing or intermediate Block Post C. Block stations at which Electrical Block Instruments are not provided. Transmission of signals Train Signal Register Forms or messages and written authority to proceed Distinction of messages 14.19 14.20 14.21 14.22 14.23 14.24 14.25 14.26 15.01 15.02 15.03 15.04 15.05 15.06 15.07 15.08 15.09 15.10 15.11 15.12 15.13 15.14 15.15 15.16 15.17 15.18 15.19 15.20 15.21 15.22 15.23 15.24 15.25 15.26 15.27 15.28 -<--ä-æ-ä u-öt 11T@-zif il*f, AT \$ZTHT - , ZlfrZi (\$14) OTI 14.20 14.22 14.23 14.24 14.25 14.26 15.01 15.02 15.03 15.06 15.07 15.09 15.14 15. 15. 15. 15. 15. 15. 15. 15



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Precautions before commencing operations which would obstruct the line Showing of signals Assistance in protection of trains Gang mate in each gang Knowledge of signals and equipment of gang Inspection of gauges, signal, tools and implements Responsibility of Gang mate as to safety of line Blasting Putting or removing points or crossings Duties of Gang mate and Gang man when apprehending danger B. The working of Lorries, Trollies and Motor Trollies Distinction between trolly, lorry and motor trolly Red flag or light to be shown Equipment of trolly, lorry or motor trolly Efficient brakes Qualified person to be in charge of lorry or trolly when on the line Attachment to train prohibited Time of running Motor trolly Protection of trolly on the line Protection of lorry on the line Lorries and trollies out of use 16.01 16.02 16.03 16.04 16.05 16.06 16.07 16.08 16.09 16.10 16.11 17.01 17.02 17.03 17.04 17.05 17.06 17.07 17.08 17.09 18.01 3411% -å-q-ef (BT\$Z ft--qfu-l (\$gqa.) (t.gqa.) (x) 16.01 16.03 16.04 16.05 16.06 16.07 16.08 16.09 16.10 16.11 17.01 17.02 17.04 17.05 17.06 17.07 17.08 17.09 18.01 CHAPTER-XVI LEVEL CROSSINGS Knowledge of signals Supply and care of equipment Road traffic Gateman to observe passing train Channel for flange of wheels Defects at level crossings Obstructions at level crossings Parting of a train Trespassing Transfer of charge of gate Height gauges CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAY Applicability of General Rules Special definitions applicable to this chapter Inspection of electrical way and works Permit to work on electrical equipment Warning to staff and public Alterations to track Tripping of circuit breakers of locomotives and electrical multiple units at neutral sections Tower wagon Additional rules for electrified sections CHAPTER-XVIII MISCELLANEOUS Repeal and Saving APPENDIX-'A APPENDIX-'B APPENDIX-'C APPENDIX-'D APPENDIX-'E APPENDICES Working Instructions for Manned Level Crossing Gates on Indian Railways Traction Rules for working of EMU trains Rules for working of DMU trains Rules for movement of Rail-cum Road vehicles Ghat Rules (x) / General & Subsidiary Rules / Register of Amendment Slips / Amendment Slips No. Rule No. Date of Issue Date of receipt of Amendment Slip ygæi.tr Amendment on Page No. Initail 1.01. 1.02. (1) (2) (3) (4) (5) (6) (7) (8) (9) 1 989 24 (@•gh•zr) 1989 24 60 87 (1 CHAPTER-I PRELIMINARY CHAPTER-I PRELIMINARY 1.01 1.02. Short title and commencement (1) These rules may be called the Indian Railways (Open Lines) General (Amendment) Rules, 2015 (2) They shall come into force on the date of their publication in the Official Gazette. Definitions - In these rules, unless the context otherwise requires- (1) (2) (3) (4) (5) " Act" means The Railway Act, 1989 (24 of 1989); " Adequate distance " means the distance sufficient to ensure safety ; " Approach lighting" means an arrangement in which the lighting of signals is controlled automatically by the approach of a train. " Approved special instruction" means special instructions approved of or prescribed by the Commissioner of Railway Safety; "Authorized officer" means the person who is duly empowered by general or special order of the Railway Administration, either by name or by virtue of his office, to issue instructions or to do any other thing; S.R. 1.02 (S)/ I Authorized Officer: (a) (b) (c) (6) (7) (8) (9) (11) The Chief Operations Manager is empowered by a Special Order issued by name by the General Manager and is the Authorized Officer under this Rule for the purpose of Sub-Section (1) of Sections 60 & 87 of the Railway Act, 1989 (24 of 1989.) The Cheif Operations Manager alone is authorised to issue or alter Subsidiary Rules. All Subsidiary Rules must be in conformity with the General Rules. "Authority to proceed" means the authority given to the Loco Pilot of a train, under the system of working, to enter the block section with his train; "Axle Counter" means an electrical device which, when provided at two given points on the track, proves by counting axles in and counting axles out, whether the section of the track between the said two Points is clear or occupied. "Block Back" means to dispatch a message from a block station intimating to the block station immediately in rear on a double line, or to the next block station on either side on a single line, that the block section is obstructed or is to be obstructed; "Block Forward" means to dispatch a message from a block station on a double line intimating to the block

station immediately in advance the fact that the block section in advance is obstructed or is to be obstructed; "Block Section" means that portion of the running line between two block stations on to which no running train may enter until Line Clear has been received from the block station at the other end of the block section; "Centralised Traffic Control" means a system by which the working of the trains over a route, to which the system applies, is governed by fixed signals remotely controlled from a designated place; (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) 2 CHAPTER-I (12) (13) (14) (15) (16) (17) (18) (22) (23) (24) (25) (26) (27) PRELIMINARY "Centralised Traffic Control Operator" means the person on duty who may for the time being be responsible for the working of trains on the Centralised Traffic Control; " Commissioner of Railway Safety" means a Commissioner of Railway Safety appointed to exercise any functions under the Act and includes the Chief Commissioner of Railway Safety; "Competent Railway Servant" means a railway servant duly qualified to under take and perform the duties entrusted to him; "Connections" when used with reference to a running line, means the points and crossings or other appliances used to connect such line with other lines or to cross it; "Controller" means a railway servant on duty who may for the time being be responsible for regulating the working of traffic on a section of a railway provided with the system of speech communication; "Day" means from sunrise to sunset; "Direction of traffic" means: (a) on a double line, the direction for which the line is signalled; (b) on a single line, the direction for the time being established, under the system of working, to allow trains to move in that direction; "Electrical Communication Instrument" means either a telephone or a more telegraph instrument; "Facing and Trailing Points" are facing and trailing in accordance with the direction a train or vehicle moves over them. Points are said to be facing points when by their operation a train approaching them can be directly diverted from the line upon which it is running; "Fixed Signal" means a signal of fixed location indicating a condition affecting the movement of a train and includes a semaphore arm or disc or fixed light for use by day and fixed light for use by night; "Fouling Mark" means the mark at which the infringement of fixed Standard Dimensions occurs, where two lines cross or Join one another; "Gangman" means a railway servant employed on permanent way or work connected therewith; "Gangmate" means the person in charge of a gang of workmen employed on permanent way or work connected there with; " Gateman " means a competent railway servant posted at a level crossing for working the gates; "Goods Train" means a train (other than a material train) intended solely or mainly for the carriage of animals or goods; " Guard" means the railway servant in charge of a train and includes a Assistant Guard or any other railway servant who may for the time being be performing the duties of a Guard; 2 (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) GINT GINT, (eTq) * ; g) a--TFTTAT gas ærrrrrq "181" u14r 3 CHAPTER-I PRELIMINARY "Inspector of Way or Works" means any Inspector or Assistant Inspector responsible for the construction or maintenance of permanent way, points and signals, bridges or other works connected their with; S.R. 1.02 (28)/ 1, Inspector of Way and Works and other technical supervisors have also been designated as JE/SE/SSE. (32) (33) (34) (35) "interlocking" means an arrangement of signals, points and other appliances, operated from a panel or lever frame, so interconnected by mechanical locking or electrical locking or both that their operation must take place in proper sequence to ensure safety; "Intermediate Block Post" means a Class "C" station on a double line, remotely controlled from the block station in rear; "Intermediate Block Signaling" means an arrangement of signalling on double line in which a long block section is split into two portions each constituting a separate block section by providing an Intermediate Block Post; "Isolation" means an arrangement, secured by the setting of points or other approved means, to protect the line so isolated from the danger of obstruction from other connected line or lines; "Last Stop Signal" means the fixed Stop Signal of a station controlling the entry of trains into the next block section; "Level Crossing" means the intersection of road with railway track at the same "Level Crossing Gate" means any form of moveable barrier, including a chain, capable of being closed across the road at the level crossing, but does not include a wicket or a turnstile for the use of pedestains; S.R. I .02 (35)/ I , (a) Traffic Gates: Level crossing gates which are located between the outermost stop signals of a station are termed as Traffic Gates. The manning and operation of traffic gates shall be under the control of operations department. (b) Engineering Gates: Level Crossing gates, other than Traffic gates, are termed as Engineering Gates. (36) (37) (38) (39) (40) "Line Clear" means the permission given from a block station to a block station in rear for a train to leave the latter and approach the former; or the permission obtained by a block station from a block station in advance for a train to leave the former and proceed towards the

latter; "Loco Pilot" means the engine Loco Pilot or any other competent railway servant for the time being incharge of driving a train; "Main Line" means the line ordinarily used for running trains through and between stations; "Material Train" means a departmental train intended solely or mainly for carriage of railway material when picked up or put down or for execution of works, either between stations or within station limits; "Mixed Train" means a train intended for the carriage of passengers and goods, or of passengers, animals and goods; 3 (41) (42) (43) (44) (45) (46) amx--en GINT a-Tl'€-e dii I (u) R-2.fi crv:q cret a-TFbT (47) (48) •n*" (49) (50) (51) ' 'QQIA" ur zrr / I 4 CHAPTER-I (41) (42) (43) (44)

PRELIMINARY "Multiple-Aspect Signalling" means a signalling arrangement in which signals display at any one time any one of the three or more aspects and in which the aspect of every signal is pre-warned by the aspect of the previous signal or signals; "Night" means from sunset to sunrise; "Obstruction" and its cognate expressions includes a train, vehicle or obstacle on or fouling a line, or a stop signal at " ON" or any condition which is dangerous to trains; "Overhead Equipment" means the electrical conductors over the tracks together with their associated fittings, insulators and other attachments, by means of which they are suspended and registered in position for the purpose of electric traction; "Passenger Train " means a train intended solely or mainly for the carriage of passengers and other coaching traffic, and includes a troop train; "Point and Trap Indicators" are not signals, but are appliances fitted to and working with points to indicate by day or by night the position in which the points are set; S.R. 1.02 (46)/ 1. (a) Point

Indicators:- All the point indicators must show a white target by day or white light by night in both directions when the points are set for the straight but no target by day and a green light by night in both directions when the points are set for the turnout. (b) Trap Indicators:- Trap indicators installed to protect and indicate the position of the trap points or derailing switches must show a red target by day and red light by night in both directions when the switch is open or the derail is on the rail but no target by day and a green light by night in both directions when the switch is closed or the derail is off the rail. (47) (48)

"Running Line" means the line governed by one or more signals and includes connections, If any, used by a train when entering or leaving a station or when passing through a station or between stations; "Running Train" means a train which has started under an authority to proceed and has not completed its journey; "Shunting" means the movement of a vehicle or vehicles with or without an engine or of any engine or any other self-propelled vehicle, for the purpose of attaching, detaching or transfer or for any other purpose; "Special Instructions" means instructions issued from time to time by the authorised officer in respect to particular cases or special circumstances; "Station" means any place on a line of railway at which traffic is dealt with, or at which an authority to proceed is given under the system of working; S.R. 1.02(51) /1.

Definitions of station- Wherever the word "Station" is used in the Subsidiary Rules, it must be understood to mean either a Block Station or a Block Hut. 4 (52) (53) (54) (55) (56) (57) (58) 3Tftrq. t; (ii) (iii) ur (ii) (ii) ur e. Huq" (O crrzrere - \$1 I CHAPTER-I PRELIMINARY "Station Limits" means the portion of a railway which is under the control of a station Master and is situated between the outermost signals of the station or as may be specified by special instructions; S.R.1.02(52)l. On double line, station limits will be separate for each Direction. "Station Master" means the person on duty who is for the time being responsible for the working of the traffic within station limits, and includes any person who is for the time being in independent charge of the working of any signals and responsible for the working of trains under the system of working in force; " Station Section" means that section of station limits (1) (2) at a class 'B' station provided with two-aspect signals, which is included (a) (b) on a double line, between the Home signal and the Last Stop signal of the station in either direction ; or on a single line - (ii) (iii) At a class

between the Shunting Limit Boards or Advanced Starters (if any), or between the Home signals if there are no Shunting Limit Boards or Advanced Starters, or between the outermost facing points, if there are no Home signals or Shunting Limit Boards or Advanced Starters; t B' station, provided with manually operated multiple aspect or modified lower quadrant signals, which is included- (a) (b) on a double line- between the outer most facing points and the Last Stop Signal of the station in either direction, or (ii) between the Block Section Limit Board, where provided, and the last Stop signal of the station in either direction; or on a single line - between the Shunting Limit Boards or Advanced Starters (if any) or (ii) between the outer most facing points, if there are no Shunting Limit Boards or Advanced Starters; "

Subsidiary Rule" means a special instruction which is subservient to the General Rule to which it relates and shall not be at variance with any General Rule; "System of Working" means the system adopted for

the time being for the working of trains on any portion of a railway; "Track Circuit" means an electrical circuit provided to detect the presence of a vehicle on a portion of track, the rails of the track



forming part of the circuit; "Train" means an engine with or without vehicles attached, or any self-propelled vehicle with or without a trailer, which cannot be readily lifted off the track; S.R. 1.02(58)/1.

Definition of Engines: The following terms are used to designate engines according to the work on which they are employed:- (a) A train engine is an engine which hauls a running train beyond station limits; (b) An Advance Pilot is an engine which runs in advance of a train as a Safety Precaution; 5 711* I - cret (q) (U) (31) (59) (60) 1.03. (2) qe-i A@Ni 1 e, 400 e; 400 I 03/2. — 6 CHAPTER-I (c) (d) (f) (g) (h) (i)

PRELIMINARY An assisting engine is an extra engine attached to a train which is too heavy to be hauled by train engine alone; A banking engine is an assisting engine used to help a train up to heavy grade. It usually pushes the train; A relief engine is an engine sent out in the place of another engine which has broken down, has been damaged or has been derailed; or to bring in vehicle which through some accidents have been left outside station limits; An attached engine is an engine other than a train, assisting, banking or relief engine, attached to train running outside station limits; A light engine is an engine running outside station limits without vehicles attached. A shunting engine or pilot is an engine specially provided for shunting trains/or vehicles. A multiple unit - When two or more loco coupled together electrically and pneumatically. operated by one crew only. "Train Examiner" means a railway servant duly qualified to examine trains and certify their fitness for safe running and includes any other railway servant who may for the time being be performing the duties of a Train Examiner; " Two-Aspect Signalling" means a signalling arrangement in which each signal displays at any one time either of the two aspects. 1.03.

Classification of Stations- (1) (2) (3) S.R. 1.03/1. S.R. 1.03/2. Stations shall, for the purpose of these rules, be divided into two categories-Block Stations and Non-Block Stations. Block stations are those at which the Loco Pilot must obtain an authority to proceed under the system of working to enter the block section with his train; and under the Absolute Block System consist of three classes- Class 'A' Stations: Where Line Clear may not be given for a train, unless the line on which it is intended to receive the train, is clear for at least 400 meters beyond the Home Signal, or up to the Starter signal; Class 'B' Stations: Where Line Clear may be given for a train before the line has been cleared for the reception of the train within the station section; and Class 'c t Stations: Block Huts, where Line Clear may not be given for a train, unless the whole of the last preceding train has passed complete at least 400 meters beyond the Home signals, and is continuing its journey, This will also include an Intermediate Block Post. Non-Block Stations or Class 'D' Stations are stopping places which are situated between two consecutive block stations, and do not form the boundary of any block section. Class 'D' Stations are of two types- (a) Those stations at which there is an outlying siding are 'DK' Station and (b) Those stations at which there is no siding are called flag stations. Special Class Stations- Any station which is not worked wholly under 'A' 'B' 'C' or 'D' Class conditions is termed as Special Class Station. 6 fä-æ-y 2.01. \$1 - 2.02. \$1 - 2.01 (IT) 2.03. \$1 - 2.03 / 2. crrzra•ei 2.04. - Rui-é 2.05. (qi) (IT) aft. 2.06. : 7 CHAPTER-11 RULES APPLYING TO RAILWAY SERVANTS

CHAPTER-11 RULES APPLYING TO RAILWAY SERVANTS

GENERALLY Supply of of rules-The RAILWAY ADMINISTRATION shall supply- 2.01. 2.02 2.03. (a) (b) (c) A copy of these Rules- (i) to each station. (ii) to each locomotive running shed, and (iii) to such other offices as it may prescribe, to each railway servant on whom any definite responsibility is placed by the said rules, a copy of the rules, or of such portions thereof as relate to his duties, and to any railway servant a copy of these rules or translation of the said rules or of such portions thereof as relate to his duties, as may be prescribed by Special Instructions. Upkeep of the copy of rules- Each railway servant, who has been supplied with a copy of these rules, as prescribed under rule 2.01 shall- (a) keep it posted with all corrections. (b) Produce the same on demand by any of his superiors (c) obtain a new copy from his superior in case his copy is lost or defaced, and (d) ensure that the staff working under him are supplied with all corrections and that they also comply with the provisions of this rule. Knowledge of rules- Every railway servant shall- (a) (b) (c) S.R.2.03/1. be conversant with the rules relating to his duties whether supplied or not with copy or translation of the rules relating to his duties and the Railway Administration shall ensure that he does so, pass the prescribed examinations, if any. satisfy himself that the staff working under him have complied with clauses (a) and (b), and if necessary, explain to the staff working under him, the rules so far as these apply to them. Railway employees for whom glasses have been prescribed for the proper performance of their duties must be equipped with a pair of glasses when coming on duty. They must wear them when actually on duty. Running staff must be in possession of two pairs of glasses. while they are on duty. S.R. 2.03/2. All Guards/Loco pilots/Motormen, who are required to work on Automatic

Signalling sections shall be imparted one day's intensive course once in a year about the rules pertaining to this system and competency certificates issued/renewed in token of their knowledge and proficiency in these rules. These competency certificates should be signed by a Traffic Inspector or Loco Inspector.

2.04 Assistance in observance of rules - Every railway servant shall render assistance in carrying out these rules and report promptly any breach thereof, which may come to his notice, to his superior officer and other authority concerned.

2.05 Prevention of trespass, damage or loss- (1) Every railway servant is responsible for the security and protection of the property of the Railway Administration under his charge. (2) Every Railway servant shall endeavour to prevent- (a) trespass on railway premises. (b) theft, damage or loss of railway property, (c) injury to himself and others, and (d) fire in railway premises.

Obedience to rules and orders - Every railway servant shall promptly observe and obey- (a) all rules and special instructions, and (b) all lawful orders given by his superiors.

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CHAPTER-11 RULES APPLYING TO RAILWAY SERVANTS GENERALLY

2.07 2.08 Attendance for duty - Every railway servant shall be in attendance for duty at such times and places and for such periods as may be fixed in this behalf by the Railway Administration and shall also attend at any other time and place at which his services may be required.

Absence from duty- (1) (2) S.R. 2.08/1. (a) No railway servant shall, without the permission of his superior, absent himself from duty or alter his appointed hours of attendance or exchange duty with any other railway servant or leave his charge of duty unless properly relieved. If any Railway servant while on duty desires to absent himself from duty on the ground of illness, he shall immediately report the matter to his superior and shall not leave his duty until a competent railway servant has been placed in charge thereof.

Station Master or Cabin Master leaving Block Offices or Cabins during the hours of duty- If a Station Master, or a Cabin Assistant Station Master or Cabin Master has to leave his Block Office or Cabin for a few minutes, for any unavoidable reason, he should on uncontrolled section, advise the stations on either side on the block telephone of the fact. On a Controlled section, the Controller's permission must first be obtained. At stations where a lock-up lever is provided, he must also lock the levers in whatever position they may be, by means of the lock-up lever and keep the key of that lever in his possession. The Station Master on duty shall also lock the block Instruments, slide Instruments/Panel and keep the keys and also the Private Number sheet in his personal custody whenever he has the occasion to leave the Office. (b) If the Station Master on either side or the Controller knows that line clear will be required for a train. he should advise the station Master who wishes to leave his office temporarily of the impending approach of a train. (c) A railway employee of tram department should be left in SM's Office/Cabin. This person must not operate any gear/instrument nor allow unauthorized person to operate them.

2.09. Taking alcoholic drink sedative, narcotic, stimulant drug or preparation- (1) (2) S.R.2.09/1. While on duty, no railway servant shall, whether he is directly connected with the working of trains or not, be in a state of intoxication or in a state in which, by reason of having taken or used any alcoholic drink, sedative, narcotic or stimulant drug or preparation, his capacity to perform his duties is impaired. No railway servant, directly connected with the working of trains, shall take or use any alcoholic drink, sedative, narcotic or stimulant drug or preparation within eight hours before the commencement of his duty or take or use any such drink, drug or preparation when on duty. When any railway servant found intoxicated at the working place, either On duty or Off duty or suspected to be in a state of intoxication will be liable to summary dismissal. The evidence of two independent witnesses and if possible, a medical report regarding his condition should be obtained. Arrangement for his relief should be immediately made and matter reponed to the controller and concern repon along with medical report should be forwarded to competent authority for necessary action.

2.10. Conduct of railway servants- A railway servant shall- (a) (b) (c) (d) wear the badge and uniform, if prescribed, and be neat and tidy in his appearance while on duty, be prompt, civil and courteous, not solicit or accept illegal gratification, give all reasonable assistance and be careful to give correct information to the public, and when asked, give his name and designation without hesitation.

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CHAPTER-11 2.11 Duty for securing safety- RULES APPLYING TO RAILWAY SERVANTS GENERALLY (1) (2) S.R.2.11/1. (1) (2) (3) Every Railway servant shall- (a) see that every exertion is made for ensuring the safety of the public, (b) promptly report to his superior any occurrence affecting the safe or proper working of the railway which may come to his notice, and (c) render on demand all possible

assistance in the case of an accident or obstruction. Every Railway servant who observes- (a) (b) (c) (d) that any signal is defective, any obstruction, failure or threatened failure of any part of the way or works, anything wrong with a train, or any unusual circumstances likely to interfere with the safe running of trains, or the safety of the public, shall take immediate steps, such as the circumstances of the case may demand, to prevent accident; and where necessary, advise the nearest Station Master by the quickest possible means: Provided that in the case of a train having parted, he shall not show a Stop hand signal but

shall endeavour to attract the attention of the Loco Pilot or Guard by shouting, gesticulating or other means. Defective Permanent Way- Action to be taken by Loco Pilot:- In the event of experiencing a lurch or any abnormal occurrence in the track, he shall note down the location and: (a) (b) (c) (d) (f) (g) switch on the flasher light to attract the attention of the Loco Pilot of a train approaching on opposite road on double line sections. He should also sound short whistles frequently to apprise the Guard and other Railway staff of the danger. Advise the Loco Pilot of the train on opposite road. Guard and SMS of the stations on either side on walkie-talkie, wherever possible. If there is an IBS ahead, stop the train at IBS and advise the circumstances to the SM of the station in rear through the phone provided at the signal post. Proceed to next block station cautiously with keeping flasher light ON while approaching the first block station, bring his train to stop in such a manner that the SM could not give 'Train Out of Section' signal to the station in rear. Issue written memo specifying the location where the defect was noticed, the nature of the defect and the speed at which, in the opinion of the Loco Pilot, trains may pass safely over the affected area, and obtain acknowledgement from the SM. On single line section, wherever applicable, not surrender tangible authority to proceed, till the memo issued to the SM and acknowledgement obtained. Action to be taken by the Loco Pilot of opposite road:- Loco Pilot of opposite road, after seeing flasher light "ON" shall

(a) at once take action to stop his train short of any obstruction and continue his journey at the speed of 15 KMPH up to next station. If however, he finds that the line on which he is to proceed is obstructed the Loco Pilot and Guard of the train will protect the train in accordance with G.R. 6.03. (b) stop at the next station and report the occurrence and the assistance required, if any. Action to be taken by Guard:- In the event of experiencing a lurch or any abnormal occurrence in the track, he shall: (a) advise to the Loco Pilot/SMs on either side on walkie-talkie, wherever possible. (b) ensure that the matter is reported by the Loco Pilot to the SM of the next station. 9 (4) — «eiel "T. (5) (6) 15 A.Ei. -RI-e I 2.11/2. - \$1 zrr \$148 2.11 / 3. - q-Ht \$1 I 6.03 I (u) Rui-é tarp-I) \$1 I a-fi I Rql-é 10 CHAPTER-11 RULES APPLYING TO RAILWAY SERVANTS GENERALLY (4) Action to be taken by SMs:- On receipt of lurch message from the Loco Pilot/Guard, the SM shall: (a) immediately stop all the trains proceeding to affected section and issue caution orders to the Loco Pilots specifying the kilometerage and the speed restriction of 15

KMPH or such less speed as specified by the Loco Pilot who has reported the lurch till the track is certified safe by the SE (P. Way) or ADEN for resumption of normal speed. (b) issue a message to the SM of the station in rear, the SE (P. Way) ADEN and Section Controller under exchange of private number.

The SM shall take action to stop trains and issue caution orders as above. (c) on getting safe certificate from SE (P. Way) or ADEN, advise all concerned accordingly. (5) Action by Section Controller:- Section Controller will advise all concerned and ensure issue of the caution order as mentioned above. (6) Action by SE receipt of report of defective track, the S.E. (P. Way) shall- (a) Proceed as quickly as possible to the site, inspect the affected section (both tracks) completely and record particulars in detail. (b) Arrange to rectify the track defect, if any. (c) Remove or modify the speed restrictions imposed, as found necessary.

(d) Submit a detailed report to the ADEN/DEN and copy to the Sr. DOM and Sr. DSO. S.R.2.11/2. Running of Defective Locomotives:- If, in the Loco Pilot's opinion, the running of a locomotive is, in any way abnormal, the Loco Pilot must exercise his discretion to reduce the speed of the train to an extent, which he considers safe, and he should immediately report the full circumstances to the Diesel Power Controller/Traction Loco Controller. The Diesel Power Controller/Traction Loco Controller must immediately refer the matter to his Power/Traction Officer. The permission of the latter must be obtained before the engine is put back in service. These instructions refer to all types of locomotives. S.R.2.11/3.

Explosion on track or train- (a) On hearing an explosion, the Loco Pilot must stop his train as soon as possible, and examine the track along with the Guard at the site of the explosion to ascertain the extent of the damage. If the Loco Pilot does not bring the train to a stand within a reasonable time, the Guard shall draw the attention of the Loco Pilot on walkie-talkie and by cautiously applying the vacuum wair pressure by means of the Guards Van Valve. (b) The Loco Pilot shall also examine the train along with the Guard

and if little or no damage has been done to the train and it is safe for the train to proceed to the next block station, the train will be taken ahead to the next block station and the Guard and Loco Pilot will jointly report the occurrence to Station Master on duty. (c) If the damage to the track is so serious as to render the track unsafe, a competent Railway servant will be left at the site with detonators to protect the spot in accordance with G.R. 6.03. (d) On receipt of a report from the Loco Pilot and the Guard, the Station Master must immediately advise the Controller, who will inform all concerned for a thorough examination of the train and the engine at the next terminal station. The Controller will also advise the Section Engineer (P. Way), who will proceed to the spot, inspect the track and take such precautions as necessary to put the track right and impose speed restrictions, if necessary. The Station Master immediately issue a message to the Station Master at the other end who must acknowledge the same and the Station Masters at both ends of the reported section must stop all trains and issue caution orders to Loco Pilots, specifying the kilometrage and the speed restriction. The duties prescribed above for the Controller will devolve on the Station Master on uncontrolled sections. IO (i) (ii) (iii) 15 zrr \$1 zrr (u• crzrere qqT8 1 /

5. a-TF zrr 3-11Fi1 3-+441 2.11 6.07 / 1, 6.07 / 2, 6.07 / 3 6.07 / 4 I 11 CHAPTER-11 RULES APPLYING TO RAILWAY SERVANTS GENERALLY (e) No train must pass over the affected spot at a speed exceeding 15 kilometers per hour or such less speed as the reporting Loco Pilot may have specified, until the Senior Section Engineer (P. Way) or the Assistant Engineer has certified the track safe for the resumption of normal speed, when the station Master will issue an "All concerned message" to all those originally advised. S.R.2.11/4. Precautions to be taken for working of trains during storm and strong wind:-

(i) When the warning message forecasting cyclone, storm or strong wind has been received from the Meteorological Department and/or there is a reasonable doubt that severe storm is going to break out endangering the safety of passengers, trains, etc. the Station Master shall, in consultation with the Guard and the Loco Pilot of the train detain the train and also refuse to grant Line Clear to a train coming to his station until storm abates and he considers movements of trains safe. (ii) Should a train be caught on the run in cyclone, storm or strong wind of an intensity which, in the opinion of the Loco Pilot, is likely to endanger the safety of the train he shall immediately control the speed of his train and bring it to a stop at the first convenient place taking care as far as possible to avoid stoppage of the train at places like sharp curves, high embankments and bridges (including approaches thereof). In controlling the speed and bringing the train to halt, the Loco Pilot shall stop his train carefully and without a jerk. He shall restart the train in consultation with the Guard only after the cyclone, storm or strong wind abates and it is considered safe to proceed. (iii) The Guard and the Loco Pilot/Assistant Loco Pilot of the train in co-operation with the railway staff travelling in the train shall try to see that doors and windows of the coaches are kept open by the passengers to allow free passage of the wind through the coaches. S.R.2.11/5. All Railway men on duty or otherwise travelling by the train involved in an accident should report to the Guard without any delay whatsoever to render their services in relief/rescue operations. Note : In addition to SR's under GR 2.11 also refer SR 6.07/1, 6.07/2, 6.07/3 & 6.07/4 11 3.01. - GINT 3.02. - 3.03. — 3.04. (2) (3) 3.04/1.

q•rrr q•rrr gaTQT \$1 (i) I Rth•é u. •ofq 3.05. - 12 CHAPTER-III SIGNALS 3.01. 3.02. 3.03. 3.04. CHAPTER-III SIGNALS A. General Provisions General use of signals- The signals prescribed in these rules shall be used for controlling the movement of trains in all cases in which exceptions are not allowed by approved special instructions. Kinds of signals:- The signals to be used for controlling the movement of trains shall be- (a) fixed signals, hand signals, and (b) detonating signals (c) Use of night signals by day- The signals prescribed in these rules for use by night shall also be used by day in tunnels and in thick, foggy or tempestuous weather impairing visibility. Placing of signals and signal arms; painting of signal arms:- (1) (2) (3) S.R.3.04/1. Fixed signals shall be clearly visible to the Loco Pilots of trains approaching them and shall be placed immediately to the left of or above the line to which they refer unless otherwise authorised by special instructions. In case of semaphore signals, signal arms shall be placed on left hand side of the post as seen by the Loco Pilot of any approaching train to which they refer. (a) (b) (c) Except as provided for in clauses (b) and (c), signal arms shall be painted the same colour as the light exhibited in the 'On' position with white bar on the side facing trains to which they refer and white with a black bar on the other side. Such bars shall be parallel with the end of the arms. In the case of a yellow arm, a black bar shall take the place of the white bar on the side facing trains. Calling-on arms shall be painted white with a red bar on the side facing trains to which they refer, and white with a black bar on the other side. All signals on a section in both directions, must be inspected jointly by SE (P. Way), SE (Signal), Tramc

Inspector and Loco Inspector both by day and by night at least every quarter, to see whether the signals of their repeaters are clearly visible from the adequate distance. A joint report shall be made to Sr. Divisional

Operations Manager on the result of such inspections. 3.05. In addition to this, senior supervisors and officers of the concerned departments should carry out inspections regularly to ensure that the signals are properly maintained. B. Description of Fixed Signals Use of fixed signals- Except under approved special instructions, all railways shall be equipped with (1) fixed signals as prescribed in these rules. 12 a-TEff4—3 fi•uptl : g, e-tf?TGT 45 60 45 90 f&fr 3.06. (4Ffg) (1) @Ffq) I (2) (AFK) fä-ü (3) (4FfN) 1.5 2 (u (erq) ur (one (4) (4Fk) (3) (u) (AFfN) fibit« (erg) (a-MN) O o o o 13 CHAPTER-III SIGNALS (2) The aspects of a semaphore signal shall be displayed by the position of the arm by day and by a light or lights by night.

NOTE: In the illustrations given in this Chapter, which are not drawn to scale, the day aspect of the semaphore signal is shown by the position of the arm and the night aspect is shown by the light or lights to the right of the signal concerned. (3) (4) (5) 3.06. (1) (2) (3) (4) (5) (a) The aspects of a colour light and position light signal both by day and by night shall be the same and shall be displayed by fixed light or lights. The arm of a semaphore signal shall work in- (a) the lower quadrant in two-aspect signalling, and (b) the upper quadrant in manually operated multiple aspect signalling. The 'Off position of a semaphore signal shall be displayed by day by the inclined position of the arm from 45 degree to 60 degree below the horizontal in case of two-aspect lower quadrant signals, and 45 degree or 90 degree above the horizontal in case of multiple aspect upper quadrant signal. Description of Warner signals and their indications:- A semaphore Warner signal has a fish-tailed arm. A Warner signal is intended to warn a Loco Pilot that (a) the condition of the block section ahead, or (b) that he is approaching a Stop signal. A Warner signal may be placed either- (a) on a post by itself with a fixed green light 1.5 to 2 meters above it by night, or (b) on the same post below the first Stop signal or the last stop signal. When placed in accordance with clause (b) of sub-rule (3), the variable light of the stop signal shall take the place of the fixed green light of the Warner signal and the mechanical arrangement shall be such that the Warner signal cannot be taken 'Off while the stop signal above it is 'On' The aspects and indications of semaphore Warner signal are shown below:-

Semaphore Warner signal in Two-Aspect Signalling Territory-on a post by itself. 'On' Position o o Aspect : Proceed with caution Indication: Proceed with caution and be prepared to stop at next Stop Signal. 13 'Off Position O Proceed Proceed €4) (qråg) e-i4 (erg) 14 (ecru) CHAPTER-III SIGNALS (b) Semaphore Warner signal in Two-Aspect Signalling Territory-below a stop signal. 'On' Position o o Aspect : Stop Indication : Stop dead o o Proceed with caution Proceed with caution and be prepared to stop at the next stop signal. Semaphore Warner signal in Two-Aspect Signalling Territory below a stop signal. 'Off

Position o O O o Aspect: Proceed Indication: Proceed 14 a-TEff4—3 (6) @FfN) (erq) R-24fii 15 CHAPTER-III SIGNALS (6) (b) The aspects and indications of a Colour light Warner signal are shown below;- (a) Colour light Warner signal in Two-Aspect Signalling Territory on a post by itself. 'On' Position O O Aspect: Proceed with caution Indication: Proceed with caution and be prepared to stop at the next stop signal 'Off Position O O O Proceed Proceed Colour light Warner signal in Two-Aspect Signalling Territory below a stop signal: 'On' Position 'Off' Position O O O O Aspect Stop Indication : Stop dead O O O Proceed with caution Proceed with caution and be prepared to stop at the next stop signal 15 O O O O Proceed Proceed a-TEff4—3 (7) (8) 3.07. (2) •roll, I 1200 R-um fäü OQe) ft-efi O (erg) RexRr o 16 CHAPTER-III SIGNALS (7) (8) 3.07. (1) (2) A Warner signal with a fixed green light above it by night, on a post by itself, shall be located at an adequate distance in rear of the stop signal, the aspect of which it pre- warns*. Provided that when such a Warner signal applies to a gate stop signal, it shall not display the 'Proceed' aspect unless there is adequate distance between the Gate stop signal and the first stop signal of the station ahead. The adequate distance in such a case shall never be less than 1200 metres. Where special circumstances justify the use of an unworked Warner, it shall be secured in the 'On' position and not be coupled or duplicated for directing purpose. Description of Distant signals and their indications: A semaphore Distant Signal has a fish tailed arm. The aspects and indications of a semaphore Distant signal working in the lower quadrant are shown below- Semaphore Distant signal in Two-Aspect Signalling Territory 'Ont Position O Caution Indication: Proceed and be prepared to Stop at the next stop signal 'Off' Position o Proceed Proceed Note: This signal shall be provided only in modified lower quadrant signalling.

16 (3) 000 Af?BtfÄtT q-fä 000 o O o o fiuq-ufi 1.5 fide O O O O O O altra 17 o o o 21 CHAPTER-III SIGNALS (3) The aspects and indications of a semaphore Distant signal working in the upper quadrant are shown below- Semaphore Distant signal in Multiple Aspect Signalling Territory 'On' Position 000

16 (3) 000 Af?BtfÄtT q-fä 000 o O o o fiuq-ufi 1.5 fide O O O O O O altra 17 o o o 21 CHAPTER-III SIGNALS (3) The aspects and indications of a semaphore Distant signal working in the upper quadrant are shown below- Semaphore Distant signal in Multiple Aspect Signalling Territory 'On' Position 000

16 (3) 000 Af?BtfÄtT q-fä 000 o O o o fiuq-ufi 1.5 fide O O O O O O altra 17 o o o 21 CHAPTER-III SIGNALS (3) The aspects and indications of a semaphore Distant signal working in the upper quadrant are shown below- Semaphore Distant signal in Multiple Aspect Signalling Territory 'On' Position 000

16 (3) 000 Af?BtfÄtT q-fä 000 o O o o fiuq-ufi 1.5 fide O O O O O O altra 17 o o o 21 CHAPTER-III SIGNALS (3) The aspects and indications of a semaphore Distant signal working in the upper quadrant are shown below- Semaphore Distant signal in Multiple Aspect Signalling Territory 'On' Position 000

Attention 'Off Position o o o Aspect: Caution Indication : Proceed and be prepared to stop at the next stop signal Proceed and be prepared to pass next Signal at such restricted speed as may be prescribed by special Instructions. Train is being received either on main line and is required to Stop at the starter Signal; or on a loop line required to Stop at the Starter Signal or to pass run through via loop line. Proceed

Proceed, block section ahead is clear, train is to pass run through the station via main line. Note: The distance between the two yellow light shall be 1.5 metres when this signal displays 'Attention ' aspect at night. (4) The aspects and indications of a Colour light distant signal are shown below- Colour light Distant signal in Multiple Aspect

Signalling Territory 'On' Position O O O Attention 'Off Position O O o Aspect: Caution Indication:

Proceed and be prepared to stop at the next stop signal. O O O Proceed Proceed, block section ahead is clear, train is to pass run through the station via main line. Proceed and be prepared to pass next signal at such restricted speed as may be prescribed by special instructions. Train is being received either on main line and is required to stop at the Starter Signal; or on a loop line required to stop at the Starter Signal or to pass run through via loop line. 17 (5) (6) (7) e, AGI I u-IT e. 2. 3. 4. 3.07/1. (W q«fi) AT XIT\$ r fög Tr r\$ r (GBT g) e-i4 ft-exf?r '3iÉf ft-exfâ O O O ft-efi o O O 18 CHAPTER-III SIGNALS (5) (6) (7) A Distant signal shall be located at an adequate distance in rear of the stop signal the aspect of which it pre-warns. Where necessary more than one Distant signal may be provided. In such a case, the outermost signal, to be located at an adequate distance from the first stop signal, shall be called Distant signal and the other called the Inner Distant signal, with the Distant signal capable of displaying 'Attention' or 'Proceed' aspect only.

Under approved special instructions, a colour light Distant signal may be combined with the last stop signal of a station in rear or with a stop signal protecting a level crossing. When a colour light Distant signal is combined with the last stop signal of the station in rear or with a stop signal protecting a level crossing, arrangements shall be such that the signal shall not display less restrictive aspect than the 'Stop' aspect till 'Line Clear' has been obtained from the station ahead in the former case and until the level crossing gates have been closed and locked for the passage of trains in the latter case. S.R. 3.07/1. Double

Distant Signal- Double Distant signal where provided, the outermost signal should be called Distant signal and the other one shall be called Inner distant signal. In such a case Distant signal shall display 'Attention' (Double yellow) or 'Proceed' (Green) aspect, whereas Inner Distant shall display 'Caution' (One yellow) or 'Attention' (Double yellow) or 'Proceed' (Green) aspect. The aspect sequence chart, in case of

Double Distant signal is given below: S. No. 2. 3

4. Aspect of Aspect Aspect of Aspect of Aspect of Signior as below Distant Sig. of Inn. Home Main Line Loop Line Speed Dist. Sig. Sig. Green (Proceed) Green (Proceed) Double Yellow (Attention) Double Yellow (Attention) Green Double Yellow Double Yellow Yellow Green Yellow Yellow with indicator Red Starter Sig. Starter Sig. Red or Yellow For run through trains via main line. For trains being received on main line. For trains being received on loop line or passing through loop line. For trains being stopped at Home Signal. The Distant signal (where Double Distant signals are provided) is identified by alternate Yellow and Black bands painted on the post with 'P' marker (Black letters on white disc) fixed on it. The aspect and indications of a colour light Distant signal in case of Double Distant Signal are shown below- Colour light Distant signal in case of Double Distant Signal in Multiple-Aspect Territory 'On' position O O O p Aspect : Attention Indication : Proceed and be prepared to pass next signal at such restricted speed as may be prescribed by special instructions. Train is being received either on main line and is required to stop at the Starter Signal; or on a loop line required to stop at the Starter Signal or to pass run through via loop line. 18 'Off position O O O Proceed Proceed Block Section ahead is Clear train is to pass run through the station via main line. m. 2. 3. 4. (i) (ii) (iii) (iv) €TéR (ii) - (iii) (iv) — (ii) frzrr - (iii) - (i) (ii) (iii) 2-1. - 19 CHAPTER-III S.R. 3.07/2 The aspect sequence chart, in case of Single Distant Signal is given below: SIGNALS S. No. 2. 3

4. Aspect of Distant Sig. Green (Proceed) Double Yellow (Attention) Double Yellow (Attention) Yellow (Caution) Aspect of Aspect of Aspect of Signify as below Home Sig. Green Yellow Yellow with route indicator Red Main Line Starter Sig. Green Red Loop Line Starter Sig. Red or Yellow For run through trains via main line. For trains being received on main line. For trains being received on loop line or passing through loop line. For trains being stopped at Home Signal. Speed Loco Pilot Phll control his train to negotiate the turn out at a speed indicated on speed Board provided on the post of Distant Signal S.R. 3.07/3. (i) (ii) (iii) (iv) (a) Gate cum Distant Signal- When the LC gate is open to road tramc — Red. When the LC gate is closed and the train is required to stop at the Home Signal — Yellow. When the LC gate is

closed and the train is required to stop at the main line starter or loop line starter or is required to pass through via loop line - Double Yellow. When the LC gate is closed and the train is required to pass run through via main line— Green. (b) (c) (d) Intermediate Block Signal cum Distant Signal — (i) When the block section ahead is not clear — Red. (ii) When the train is required to stop at the Home Signal of station ahead— Yellow. (iii) When the train is required to stop at the main line or loop line Starter or, is required to pass through via loop line— Double Yellow. (iv) When the block section ahead is clear, train is to pass run through the station via main line — Green. Last Stop Signal cum distant Signal of LC gate— (i) When the line clear has not been obtained from the station in advance — Red. (ii) When the line clear has been obtained and the LC gate is open to road traffic — Yellow. (iii) When the line clear has been obtained and the LC gate is closed to road traffic— Green. Last Stop Signal cum Distant Signal of Intermediate Block Signal — (i) (ii) (iii) When the block section is not clear for an adequate distance beyond Intermediate Block signal (IBS)-Red. When the block section is clear for an adequate distance beyond Intermediate Block Signal and the train is required to stop at Intermediate Block Signal — Yellow. When the train is required to pass run through Intermediate Block Signal — Green. 19 a-TEff4—3 3.08. (2) (3) f-efi o o 000 '3111b' o o o 20 o 0 o o CHAPTER-III SIGNALS 3.08 (1) (2) (3) Description of Stop signals and their indications- A semaphore stop signal has a square ended arm. The aspects and the indications of a semaphore stop signal working in the Lower quadrant are shown below: Semaphore Stop signal in five-Aspect Signalling territory 'On' Position o Aspect : Stop Indication: Stop dead 'Off Position o Proceed Proceed The aspects and the indications of a semaphore stop signal working in the upper quadrant are shown below: Semaphore stop signal in Multiple Aspect Signalling territory. 'On' position 'Off' position o 0 Aspect : Stop Indication: Stop dead 0 o o Caution Proceed and be prepared to stop at the next stop signal 20 Proceed Proceed (4) (u) fÄÄi*fi (tfrT) O O O R-um R-um O O O O O O (ælA) 21 CHAPTER-III SIGNALS (4) The aspects and the indications of a Colour light stop signal are shown below: (a) Colour light stop signal in two aspect signalling territory. 'On' position O Aspect : Stop Indication : Stop dead 'Off position O O Proceed Proceed (b) Colour light stop signal in multiple Three-Aspect Signalling territory- 'On' Position O O O Aspect: Stop Indication: Stop dead O O Caution Proceed and be 'Off Position O O Proceed Proceed prepared to stop at the next stop Signal 21 R-um O o O o O o O O O o O O o O O O Vie ur ft-ufä — qiQtr I 22 CHAPTER-III (c) S.R. 3.08/1. 'On' position SIGNALS 'Off position O O O O Aspect: Stop Indication: Stop Dead O O O O Caution Proceed and be prepared to stop at the next stop signal O O O O Attention Proceed and be prepared to pass next signal at such restricted speed as may be prescribed by special instructions. O O O O Proceed Proceed Junction type route indicators in multiple aspect signalling territory. Red or Yellow or double yellow or green lit as the case may be with junction indicator blank indicates-NO DIVERSION. 3 to 5 white lights lit. Main signal yellow lit With left hand junction indicator lit. Indicates-LEFT HAND DIVERSION. 3 to 5 white lights lit. Main signal yellow lit with right hand] junction indicator lit, Indicates-RIGHT HAND DIVERSION. Note: For the purpose of diversion, a signal displaying yellow aspect With a minimum of 3 lights out of the 5 white lights of the junction indicator lit shall be taken as a signal correctly taken 'Off. 22 3.09. (2) (3) (4) 3.10. (2) (3) (4) (5) €R.3.10/2. 3.11. — 3.12. - 23 CHAPTER-III SIGNALS 3.09. (1) (2) (3) (4) 3.10. (1) (2) (3) (4) Kinds of fixed stop signals for approaching trains- The Stop signals, which control the movement of trains approaching a station, are of three kinds, namely-Outer, Home and Routing signals. The Outer signal, where provided, is the first Stop signal of a station and is located at an adequate distance outside the point up to which the line may be obstructed after Line Clear has been granted to or obtained by the station in rear. The Home signal is the first Stop signal of a station at which an Outer signal is not provided and the second Stop signal of a station at which an Outer signal is provided. It shall be located outside all connections on the line to which it refers. The Routing signal is a signal used to indicate to a Loco Pilot which of two or more diverging routes is set for him, when the Home signal is, in consequence of its position, inconvenient for this purpose. Kinds of fixed Stop signals for departing trains- The Stop signals, which control the movement of trains leaving a station, are of two kinds, namely-Starter and Advanced Starter signal. When a train leaving a station is guided by only one starting signal, it is the last Stop signal of a station and is called the Starter signal. When a train leaving a station is guided by more than one Starter signal, the outermost starting signal is the last Stop signal of the station and is called the Advanced Starter signal. The Starter, where only one such signal is provided, or the Advanced Starter, shall be fixed at the limit beyond which no train may pass, unless the Loco Pilot is given the authority to

proceed required under the system of working, and shall be placed outside all connections on the line to which it refers except where otherwise allowed by approved special instructions. Shunting operations beyond this limit shall be carried out only in accordance with special instructions. Where an Advance Starter signal is provided, the Starter referring to any line shall be placed so as to protect the first facing points or fouling mark of the connections to another running line. S.R.3.10/1. At junction station, either intermediate Starter signals are used or the Starters are provided with route indicators. S.R. 3.10/2. At a Class Station, Home signal Signal. 3.11. Intermediate Block Stop signal-Intermediate Block Stop signal is the Home signal provided at an Intermediate Block Post. 3.12. Kinds of fixed Stop signals in Automatic Block territories- (1) Stop signals in Automatic Block territory shall be colour light signals and may be of the following kinds. (a) (b) An Automatic stop signal which is not dependent upon manual operation but is controlled automatically by the passage of a train into, through and out of the automatic block signaling section; A Semi-Automatic Stop signal which is capable of being operated either as an Automatic stop signal or as a Manual Stop signal, as required; (i) when a Semi-Automatic stop signal works as an Automatic Stop signal, it assumes 'On' and 'Off' aspects automatically according to the condition of the automatic block signalling sections ahead; 23 (ii) (iii) R-erm e, '3fitF' (IT) e. 3.12/1. 3.13. (2) (3) (4) a-r-r zrr R-2.fi u-m) "31fr" 8bfi, qrüQT11 24 CHAPTER-III (ba) (c) (iii) SIGNALS when a semi-Automatic Stop Signal works as a Manual Stop signal, it assumes 'On' aspect automatically on the occupation of the automatic block signaling section ahead, but assumes 'Off' aspect when operated manually, provided the relevant automatic block signaling sections ahead are clear; When a Semi-Automatic stop Signal works as an Automatic Stop signal, the 'A' marker provided under the signal is illuminated. When the 'A' marker is extinguished, the signal shall be deemed to work as a Manual stop signal; A Modified Semi-Automatic Stop signal by converting one of the Automatic Stop signals in mid-section under special instructions, when the 'A' marker is illuminated, the signal works as Automatic stop signal, and when the 'A' marker is extinguished it works as modified Semi-Automatic stop signal and assumes 'Off' aspect automatically or is taken 'Off' manually as required; and A manual stop signal operated manually and which cannot work as an Automatic or a Semi-Automatic stop signal. (2) Colour light signals in Automatic Block territory shall be three-aspect or four- aspect. S.R.3.12/1. (a) (b) (c) (d) Semi-Automatic/Manual signal levers provided with normal indication locks, when required to be replaced to normal either in a face of an approaching train in an emergency or after the train has passed the signal, shall be put back to three quarter position and shall be replaced to normal only after getting the "FR_EE" indication. In case of semi-Automatic/Manual signals of the Relay interlocking system, it should not be possible to change the route ahead of the Signal, which has not been cleared by the train. King levers are provided at certain cabins which when reversed, lock the leavers of all running Semi-Automatic signals in the reverse position and enable the signals to function as Automatic signals. In the case of Relay Interlocking no king levers are provided. Certain signals can function as Automatic signals, the switching arrangements for which will be specified in the Station Working Rules. 3.13 Calling-on signals - (1) (2) (3) (4) A Calling-on signal is a subsidiary signal, which has no independent aspect in the 'On' position and shall be- (a) a short square ended semaphore arm, or (b) a miniature colour light provided with a 'C' marker. A Calling-on signal, where provided, shall be fixed below a Stop signal governing the approach of a train. Under approved special instructions, a Calling-on signal may be provided below any other Stop signal except the last Stop signal. A Calling-on signal, when taken 'Off' calls on the Loco Pilot of a train to draw ahead with caution, after the train has been brought to a stop even though the Stop signal above is at 'On' and indicates to the Loco Pilot that he should be prepared to stop short of any obstruction. A Calling-on signal shall show no light in the 'On' position 24 a-TEff4—3 (5) €4) Rexf?T O o (NZTq) o (erg) 25 ft-p-âfä O 0 0 O O CHAPTER-III SIGNALS (5) The aspects and indications of a semaphore Calling-on signal are shown below: (a) (b) Miniature Semaphore arm type Calling-on signal in Two-Aspect Signalling Territory 'On' position O o Loco pilot shall obey the aspect of the stop signal. 'Off' position o Aspect : Proceed slow Indication . Stop and then draw ahead with caution and be prepared to stop short of any obstruction. Miniature Semaphore arm type Calling-on signal in Multiple-Aspect signalling Territory 'On' Position o o o Loco Pilot shall obey the aspect of the stop signal. 25 'Off Position o o o 0 Aspect: Proceed slow Indication • O Stop and then draw ahead with caution and be prepared to stop short of any obstruction. a-TEff4—3 (6) 3.14. f*er S— R-24fä O O O c (velA) Rexfä O O o c (€114) @Tfä 31FT) '3111b' O O O c q-g-ä R--24fä O O o c @ eie I (3) Qie aFu 26 CHAPTER-III SIGNALS (6) The aspects and indications of colour light type Calling-

on signal are shown below- (a) Colour light type Calling-on signal in Two-Aspect Signalling Territory- 'On' position o O O c Loco Pilot shall obey the aspect of the stop signal 'Off' position O O O c Aspect: Proceed slow Indication: Stop and then draw ahead with caution and be prepared to stop short of any obstruction. (b) Colour light type Calling-on signal in Multiple Aspect signalling territory - 'On' position O O o c Loco Pilot shall Obey the aspect of the stop signal. Shunt signals- 'Off' position O O O o c Aspect: Proceed slow Indication: Stop and then draw ahead With caution and be prepared to stop short of any obstruction. 3.14. (1) (2) (3) (a) A shunt signal is a subsidiary signal and shall be either- (i) a white disc with red bar across it, or (ii) a position light signal. (b) under special instructions a shunt signal may be miniature semaphore arm. Shunt signals control shunting movements. A Shunt signal may be place on a post by itself or below a stop signal other than the first stop signal of a station. 26 a-TEff4—3 (4) (5) (6) (7) (8) (u) kie ete fäü I '31frb' eif&T fäa eie eif&T I eie I ere o eie o 27 o CHAPTER-III SIGNALS (4) (5) (6) (7) (8) More than one shunt signal may be placed on the same post and when so placed the topmost shunt signal shall apply to the extreme left hand line and the second shunt signal from the top shall apply to the next line from the left and so on. When a Shunt signal is taken 'Off', it authorises the Loco Pilot to draw ahead with caution for shun ting purposes although stop signal, if any, above it is at 'On' When a shunt signal is placed below a stop signal, it shall show no light in the 'On' Position. In case shunt signals are not provided, hand signals may be used for shunting. The aspects and indications of a disc type shunt signal are shown below- (a) (b) Disc type shunt signal in Two-Aspect Signalling Territory- 'On' position o Aspect: Stop Indication: Stop dead 'Off' position Proceed slow Proceed with caution for shunting, Disc type Shunt signal in Multiple-Aspect Signalling Territory- 'On' position Aspect: Stop Indication: Stop dead 27 'Off' position o Proceed slow Proceed with caution for shunting a-TEff4—3 (9) — vie R-24fii ft-erm o (10) Qi-e eie o 28 CHAPTER-III SIGNALS (9) The aspects and indications of a position light type shunt signal are shown below- Position light type shunt signal in Two-Aspect or Multiple-Aspect Signalling Territory- 'On' position WHITE LIGHT Aspect : Stop Indication : Stop dead 'Off' Position WHITE LIGHT Proceed slow Proceed with caution for shunting (10) The aspects and indications of a semaphore arm type shunt signal are shown below- (a) Miniature semaphore arm type shunt signal in Two-Aspect Signalling Territory- 'On' position o Aspect: Stop Indication: Stop dead 28 'Off' Position Proceed slow Proceed with caution for shunting a-TEff4—3 3.15. (2) 3.16. (3) e-i4 Re-4f?r o o a-128T uqvrqtff (Rttlf&T 29 CHAPTER-III SIGNALS (b) Miniature Semaphore Arm type Shunt signal in Multiple-Aspect Signalling Territory- 'On' Position o Aspect: Stop Indication: Stop dead 3.15. Co-acting signals - o 'Off' Position o Proceed Slow Proceed with caution for shunting (1) Co-acting signals are duplicate signals fixed below ordinary signals and are provided where, in consequence of the height of the signal post, or of their being an over-bridge or other obstacle, the main arm or light is not in view of the Loco Pilot during the whole time that he is approaching it. (2) Co-acting signals shall be fitted at such height that either the main arm or light or the co- acting arm or light is always visible. 3.16. Repeating signals - (1) (2) (3) A signal placed in rear of a fixed signal for the purpose of repeating to the Loco Pilot of an approaching train the aspect of the fixed signal in advance is called a Repeating signal. A Repeating shall be provided with an 'R' marker and shall be of- (a) banner type, or (b) a square ended semaphore arm, or (c) a Colour light signal. The aspects and indications of banner type Repeating signal are shown below- Banner type Repeating signal in Two-Aspect Signalling Territory- 'On' Position Aspect: Signal 'On' Indication: Signal which it repeats is at 'On' 29 'Off' Position Signal 'Off' Signal which it repeats is 'Off' a-TEff4—3 (RitrZQT R-pxfä '31frf' I twer<kff (Ritlf&T ft-efi 30 CHAPTER-III SIGNALS (4) (5) The aspects and indications of a semaphore arm type Repeating Signal are shown below - Semaphore arm type Repeating Signal in Two-Aspect signalling Territory - 'On' position O Aspect: Signal 'On' Indication: Signal which it repeats is at 'On' 'Off' Position Signal 'Off' Signal which it repeats is 'Off' The aspects and indications of a Colour light type Repeating signal are shown below- Colour light type Repeating signal 'On' Position O Aspect: Signal 'On' Indication: Signal which it repeats is at 'On' 30 'Off' Position O Signal 'Off' Signal which it repeats is 'Off' 3.17. (1) GINT I p (RBI) (41+) :— (te•æ) ærq) 3.07 (7) Adi ("1*) 1B (e-rq) (e•rq) 'ttl' (P) (1B) (RBI) 31 CHAPTER-III SIGNALS 3.17 Note: Distinguishing markers and signs for signals- (1) Where necessary, signals shall be distinguished by prescribed markers, Such markers, shall be fixed on the signal posts below the signals as under: Appearance p Provided on Automatic Stop Signal Semi-automatic Stop Signal Colour Light Distant or Warner signal on a post by itself. Description Letter 'A' in black on white circular disc. White illuminated letter 'A' against black back ground when working as an Automatic stop signal,

and letter 'A' extinguished when working as a manual stop signal. Letter 'P' in black on white circular disc. Where a colour light Distant signal is combined with a last stop signal as provided for under sub- rule (7) of rule 3.07 the marker shall be dispensed with. 1B Intermediate Block Stop signal 31 Letter '1B' in black on white circular disc. a-TEff4—3 c @Tfävr 31Tq) (erq) (erq) 32 •eTIN' (R) (G) aye-R 'off' (\$UfiIQ€) I CHAPTER-III c R Calling-on signal Repeating signal in semaphore signalling territory. Repeating signal in colour light signalling territory. Gate Stop Signal Gate Stop Signal in Automatic Block territory. SIGNALS Letter 'C' in black on white circular disc. Letter 'R' in black on white circular disc. White illuminated letter 'R' against a black background. Letter 'G' in black on yellow circular disc. Letter 'G' in black on yellow circular disc and white illuminated letter 'A' against a black background. Note: Letter 'A' shall be 'lit' only when the gates are closed and locked against road traffic. 32 81, a, 'A' æ•1N 'AG' I €5) (2) (3) 3.18. 'A' iT[fätT 'AG' q-r\$e, fäg Q-ti aäelirf&b 1 AG 00 oo (wrq) (€111) (after) 1 10 o O 33 CHAPTER-III SIGNALS S.R. 3.17/1. When a gate stop signal is a semi-automatic stop signal and protects points where exist in addition to the level crossing, it shall be provided with white illuminated letter 'A' and white illuminated letter 'AG' against black background The Indication of such signal shall be as under- (a) Letter 'A' shall be lit only when the gates are closed and locked against road traffic and points where exist are correctly set and locked for the route. (b) Letter 'AG' Shall be lit only when the gates are either open to road traffic or have failed but points where exist are correctly set and locked for the route. (c) Neither marker shall be lit when points where exist are not correctly set and locked for the route or have failed. or modified automatic signalling system is introduced. (2) distinguishing marker} sign of Semi-automatic gate stop signal AG Where necessary, signal arms shall be distinguished by prescribed sign as under: oo Approach Stop signal for Goods running lines only. Approach stop signal for Dock platform. One black ring on semaphore arm. Letter 'D' in black on semaphore arm. (3) Other distinguishing markers or signs may be used with the approval of the Railway Board or modified automatic signalling system is introduced. 3.18. Signals out of use - (1) When a fixed signal is not in use, it shall be distinguished by two crossed bars, each bar being not less than 1 metre long and 10 cms wide, as illustrated below: O O 33 3.19. qe-i 75 he 3.19/1. 3.20. - 3.21. — he (u) a•rrur @ 15 (u) 15 3.22. — (2) GGi ag-i AGi 34 CHAPTER-III SIGNALS (2) Semaphore or Disc signal when not in use shall be kept fixed in the 'On' position. (3) Signals not in use shall not be lit. 3.19. Placing of stop signals at diverging junctions - Unless otherwise permitted by approved special instructions, where two or more lines diverge, the signals shall be fixed on a bracket post or an approved type of route indicator shall be provided instead of separate signals. Provided that for speed up to 75 kilometers per hour with manually operated multiple aspect signals, only a signal arm Home signal may be provided instead of separate signals on a bracket post or a route indicator. The facing points must be provided with point indicators. S.R. 3.19/1. Route indicators Junction or multiple lamp type of approved design may be provided in multiple aspect Colour light signalling territory. When Junction type Route Indicators are provided, each arm of the Junction indicator should indicate a separate diverging line, unless the lines they indicate track circuited or they are exclusively used for goods traffic in which case there shall be only one arm for each direction i.e. left hand or right hand or both as the case may be. 3.20. Placing of Stop signals at converging junctions - Unless otherwise permitted by approved special instructions, where two or more lines converge, signal shall be placed on separate posts. Where the number of signal is considerable, these may be provided on a bracket post or a signal bridge or gantry. 3.21. Signals on bracket post or signal bridge or gantry:- Where signals are placed on a bracket post or signal bridge or a gantry, these shall be- (a) so grouped that the respective signals are easily distinguishable for each running line and are placed as nearly as possible over the running lines to which they refer, (b) so placed that the signal referring to the main line is higher than the signal or signals referring to the other running line or lines, and (c) so arranged that the extreme left hand signal refers to the extreme left hand line and the second signal from the left refers to the next line from the left and so on. S.R. 3.21/1. Signals for main Lines:- (a) (b) 3.22. (1) (2) The main line signals shall be placed at the same level as other signals, where the speed of running through trains over the straight line is permanently restricted to 15 kmph. The Warner Signal, if provided, shall be fixed in the 'ON' position. Where the permanent speed restriction is higher than 15 kmph the main line signal may be placed at higher level but restricted speed shall be notified in the working Time Table and necessary speed indicators erected. Placing of more than one signal on the same post- Not more than one signal referring to trains moving in the same direction, whether on the same line or on separate lines, shall be placed on the same post, except -

(a) As prescribed in these rules for Calling-on, Shunt, Co-acting and Warner signals, or (b) Under approved special instructions. Where under approved special instructions more than one signal is placed on the same post, the topmost signal shall apply to the extreme left hand diverging line and the second signal from the top shall apply to the next line from the left and so on. Provided that in exceptional cases where two Home signals are placed on the same post, under approved special instructions the top signal shall apply to the main line and the lower signal shall apply to the other lines.

3.23 Electric repeater - The arm and light of any fixed signal which cannot be seen from the place from which the signal is worked shall be repeated to such place by means of an efficient electric repeater.

3.23/1. **3.24.** (2) (3) (4) **3F-u** **3.25.** **3.26.** - ertTTZIT (RITIT) a-RR 30 \$1 ezrra GTFIT (i) — 1200 100 1 800 100 400 di I (ii) (iii) (v) 400 #1-eN 400 400 200 35

CHAPTER-III SIGNALS S.R. 3.23/1. **Failure of Electric Repeater:-** In case of failure of electric repeater, the signal to which it refers should be taken as defective unless it can be ascertained by visual observation from a nearby convenient place that the arm or indication of signal is clearly visible.

3.24 (1) (2) (3) (4) Back-lights - Every semaphore or disc signal, the light of which cannot be seen from the place from which the signal is worked, shall be provided with a back-light to indicate whether the signal light is burning or not. Back-lights of signals shall show a small white light when 'On' and no light at all in any other position. Any fixed light used in conjunction with a semaphore signal shall show a back light. Back lights may not be provided when alternative arrangements are made at the place from which the signal is worked to indicate whether signal lights are burning or not.

S.R.3.24/1 . **Gate signals** are provided with back lights, which shall be visible to the Gateman when the signals is in 'On' position.

(C) Equipment of signals **3.25. Obligation to provide fixed signals at a station:-** Fixed signals prescribed in this sub-chapter shall be provided at every station, except - (a) at stations between which trains are worked on the One Train Only system, and (b) at stations which are exempted from the provision of signals under approved special instructions.

3.26 Commissioning of fixed signals - Fixed signals shall not be brought into use until they have been passed by the Commissioner of Railway Safety as being sufficient to secure the safe working of trains.

S.R. 3.26/1. Whenever any new signal is brought into use or the existing signal is shifted, it must be inspected by a sighting Committee consisting of Tramc Inspector, Loco Inspector, SE (Sig.) and SE (P. Way) to ensure that the signal is correctly placed and focused, and submit joint report.

S.R. 3.26/2. Whenever a new signal is brought into use or an existing signal is shifted, which would effect the running trains, a caution order should be issued for a period of 30 days, after the signal has been brought into use or shifted, drawing the attention of the Loco Pilots to the change.

S.R. 3.26/3. The minimum visibility distance of various signals shall be as under- (a) **Two Aspect Signals-** (i) **Outer Signal** - 1200 meters in sections where sectional speed is 100 Kilometers per hour and above. 800 meters where sectional speed is less than 100 Kilometers per hour. Where minimum visibility as above cannot be achieved, Warner signal may be separated. With the Warner signal separated minimum visibility of Outer signal shall not be less than 400 meters. (ii) **Warner Signal** on a post by itself 400 Meters. (iii) **Home Signal** . 400 Meters. (iv) **Main Starter Signal** . 400 Meters. (v) **All other Signals** . 200 Meters. **Note :** Where adequate visibility of stop signals cannot be provided, Repeater or Co-acting signal shall be provided to ensure the combined visibility or speed restrictions imposed.

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CHAPTER-III (b) Multiple Aspect Signals - SIGNALS (i) (ii) S.R. 3.26/4. **Distant Signal** - 400 Meters. An Inner Distant Signal Where provided, shall be visible from a minimum distance of 200 meters. **All Stop Signals** - 200 Meters if it is not possible to ensure 200 meters continuous visibility of any stop signal while approaching it, a suitable speed restriction shall be imposed. Warning boards of distinctive design are provided in nvo aspect signalling territory' at a distance of 1000 meters and 1400 meters in rear of the first Stop signal for passenger and goods trains respectively to warn the Loco Pilot that he is approaching the first stop signal. If no signal indication is available, the Loco Pilot should control the speed of the train as if the stop signal ahead is at 'On'. If, however, subsequently after passing the warning board, the Loco Pilot gets the indication, either by the stop signal itself or through the Distant or Warner signal that the Stop signal ahead is not in the 'On' position, he shall suitably increase the speed depending upon the signal indications. **Note :** The Warning board located at 1000 meters will have yellow strips diagonally painted on a black board and the Warning board located at 1400 meters will have a circle between two parallel lines and painted Yellow on a black board.

3.27. Minimum equipment of fixed signals at stations provided with manually operated multiple

aspect signalling- The minimum equipment of fixed signals to be provided for each direction shall be as follows- (a) at class 'B' stations (b) at class 'C' stations a Distant, a Home and a Starter, and a Distant and a Home. 3.28. Minimum equipment of fixed signals at stations provided with modified lower quadrant signalling- Modified lower quadrant signalling may be introduced only where it is expressly sanctioned by a special order of the Railway Board. The minimum equipment of fixed signals to be provided for each direction shall be as follows- (a) at class 'B' stations (b) at class 'C' stations a Distant, Home, a Warner below the Main Home, and a Starter a Distant and a Home. 3.29. Minimum equipment of fixed signals at other stations provided with two-aspects signalling- The minimum equipment of fixed signals to be provided for each direction shall be as follows- (a) at class 'A' stations (b) at class 'B' stations : on a single line on a double line (c) at class 'C' stations a Warner, a Home and a Starter, an Outer and a Home, an Outer, a Home and a Starter, and both on a single and a double line a Warner shall be provided in accordance with Rule 3.06, if trains run through at a speed exceeding 50 kilometers an hour without stopping, and a Warner and a Home. 3.30. Additional fixed signals at stations generally - In addition to the minimum equipment of signals prescribed in Rules 3.27, 3.28, 3.29 and 3.32 such other fixed signals shall be provided at every station as may be necessary for the safe working of trains. 3.31. Signals at class 'D' stations - At a class 'D' station, a train may be stopped in such manner as may be authorised by special instructions. 3.32. Provision of an Advanced Starter, Shunting Limit Letter 300 mm high 2M SIGNALS 600 mm • 300 mm high and of White & Black (1) (2) Board or Block Section Limit Board- On a signal line class 'B' station worked on the Absolute Block System, if the obstructing of the line outside the Home signal or the outermost facing points in the direction of an approaching train is permitted under special instructions under rule 8.09, a Shunting Limit Board or an Advance Starter shall be placed at such shunting distance from the Home signal or the Outer most facing points as local conditions may require, provided the distance between the Shunting Limit Board (bearing the words 'Shunting Limit' on the side which faces the station, and fitted with a lamp showing a white light in both directions to mark its position by night) or the Advanced Starter and the opposing first stop signal is never less than 400 meters in the two-aspect signalling territory and 180 meters in the multiple aspect or modified lower quadrant signalling territory. The location of such board or Advanced Starter shall mark the limit up to which shunting may be permitted. On a double line class 'B' station worked on Absolute Block System equipped with multiple-aspect or modified lower quadrant signalling and where there are no points or the outermost points at the approaching end are trailing, a Block Section Limit Board (bearing the words 'Block Section Limit' on the side which faces the station and fitted with lamp showing white light in both directions to mark its position by night) shall be provided. It shall be placed at a distance of not less than 180 meters in advance of the Home signal and shall protect the fouling mark of the outermost trailing points, if any. The location of such board shall mark the limit of the block section at such stations. 3.33. Exceptions to Rules 3.27, 3.28, 3.29 and 3.32- Notwithstanding anything contained in Rules 3.27, 3.28, 3.29 and 3.32: (a) (b) (c) If the station has only one connection of the main line, the station shall be worked in accordance with approved special instructions; On any section where traffic is light and speed is slow, one Stop signal only in each direction may be provided at each stations; Such signal to be located at an adequate distance outside the outermost facing points of the station and trains worked in accordance with approved special instructions; and on any railway having very light traffic all signals may be dispensed with and the trains worked under approved special instructions; Provided that at stations with manually operated multiple aspect signals where the speed of trains through a station does not exceed 50 kilometers per hour, a Distant signal and a Home signal only may be provided in each direction under approved special instructions. 3.34. Fixed signals at level

crossings- SIGNALS (1) Unless exempted under approved special instructions, every level crossing gate which closes across the line at a level crossing shall, except when interlocked with station signals, be provided with signals fixed at an adequate distance from the level crossing showing Stop aspects in both Up and Down directions when the gates are open for the passage of road traffic. (2) Except where otherwise prohibited under special instructions, a 'G' marker shall be provided on a gate Stop signal. S.R. 3.34/1. Every gate signal, except those controlling the entry into rail-cum-road bridge or where there is a bridge between the gate signal and the gate, shall be provided with a yellow circular plate on the post with letter 'G' in black inscribed there on. 3.35. Protection and working of points of out-lying sidings Where there are Points in the main line at a place which is not a block station, Provision for the protection of such points, by signals or otherwise, and for working them, shall be made in order to secure the safe working of trains, as laid down under approved special instructions. S.R. 3.35/1. Fixed Signals and indicators at Points of outlying sidings- (a) (b) (c) When siding points situated outside Block Station limits are so equipped that trains are permitted to run through in the facing direction at the maximum permissible speed of the section, a Stop Signal shall be provided adjacent to the point and a warning signal or warning board at the adequate braking distance in the rear, The signal shall normally remain in the 'OFF' position with the approval of the CRS. The points shall, in such cases, be controlled through the block system in force i.e. by token, staff key, tablet etc. Where speed restriction has been imposed on account of facing points of an out lying siding an 'S' marker should be fixed at the points in addition to the speed and caution board fixed in the rear of the points, where, however, the sanctioned speed of the section does not exceed 50 KMPH, the speed indicator and 'S' marker need not be provided except where the speed over the points is less than the sanctioned speed of the section. The 'S' marker shall be a Yellow Disc 900 mm in 0.900 2.150 diameter on which the letter 'S' 300 mm in height shall be painted in black, the center of the disc shall be 2150 mm above rail level. S.R.3 , 35/2. Operation of points of outlying siding- The mode working outlying points shall be prescribed in the working rules of the stations controlling such points. Guards Who have to perform shunting in such siding shall be responsible for Studying the relevant working rules and give an assurance to this effect. 38 3.36 qra. - O era-qr GGi (i) (ii) '3ftf' æ-rég e-rég GGi æ-ré I qrtl, qe-i I Adi 1. — 10 10 3.36/2. Etå (.3TT7T aft) (i) €TÉR '34M 39 CHAPTER-III D. Working of Signals and Points. 3.36 Fixed signals generally- SIGNALS (1) (2) (3) Every fixed signals shall be so constructed that, in case of failure of any part of its connections, it shall remain at, or return to its most restrictive aspect. A signal which has been taken 'Off for passage of a train shall not be placed 'On' until the whole of the train which it controls has passed it, except - in case of emergency, 'to avert an accident'; or (a) (aa) where Starter and Advanced Starter taken toft' for departing trains that is trains (i) (b) starting from station after coming to stop are required to be put back for the purpose of movement of another train for precedence or crossing shall be put back only after taking following precautions :- relevant Starter and Advanced Starter may be replaced to ton' position and thereafter the Loco Pilot of the train for which the signals had been taken toft' shall be advised by on-duty Station Master through a secured means of communication, specified under special instructions or where secured means of communication are not available, through a written memo to the effect that the said signals have been replaced to 'on' and that the Loco Pilot shall not start; till the Loco Pilot has been advised through secured means of communication referred to in sub-clause (i) or through a written memo and his acknowledgment received, the route set shall not be altered except to avert an accident; or where arrangement is provided to restore the signal to 'On' automatically, the control operating the signal shall not be restored to its normal position till the whole of the train has passed it. No fixed signal within station limits shall be taken 'Off' without the permission of the station Master, and in the case of a signal outside the station limits without the permission of such person as may for the time being be in independent charge of the working of such signal. S.R. 3.36/1. Signals Taking "Off" - Signals for a train shall not be taken off more than 10 minutes before the train is due. Ordinarily, reception signals shall be taken of after "the train entering section signal" has been received for the train from block station in rear, but in the case of short block section where the running time is less than 10 minutes, signals may be taken off before the receipt of the "Train Entering Section" signals. S.R.3.36/2. (a) Signals once taken 'Off for the passage of a train, must not be replaced to 'On', before (b) (c) the complete passage of train in ordinary course. If, in an emergency, a signal has to be put back to 'On' position before the passage of the train, no points set for its passage, shall be moved until the train has been brought to a stand. However, in extreme emergency, points can be altered to avert an accident, However, in the event of any unsafe condition being

noticed on a passing train by the Cabin staff of the near-end-cabin, he shall immediately contact the SM/far-end-cabin, staff by giving non-stop ring on the inter-cabin/station group telephone. The SM/Staff of the far-end-cabin, on receipt of the intimation about the unsafe condition, shall immediately put back the departure signals to 'On' position and take all steps to stop the train. In case Starters and Advanced Starters Signals taken 'Off for departing trains (i.e. trains starting from station after coming to stop) are required to be put back to 'On' for purpose of the movement of another train (precedence or crossing etc.) The following precautions must be taken - (i) Relevant Starter and Advanced Starter Signal may be replaced to 'On' position. Then the Loco Pilot of the train for which the Signal had been taken 'Off should be advised by SM on duty through a secured means of communication (MTRC, etc.) to the effect that his signal has been replaced to 'On' and he should not start. Wherever secured means of communication in the form of MTRC, etc. is not available and in case of Diesel long hood leading loco, the Loco Pilot shall be advised through a written memo that this signal has been replaced to 'On' and he should not start. 39 (ii) (iii) crrzrere zrr (q) 3.37. (2) 3.38. (2) crrzrere tg (i) - a-TN (qq (ii) (iii) €1—1327) I GGi 8bf. (IT) (1) GGi 40 CHAPTER-III SIGNALS (d) (ii) Till the Loco Pilot has been advised through a secured means of communication or through a written memo and his acknowledgment received, the route set should not be altered except to avert an accident. (iii) On single line section the "Authority to proceed" if any handed over to the Loco Pilot must be withdrawn from him. Following systems are prescribed as 'secured means of communication' in regard to communication between Station Master and Loco Pilot- (ii) Tetra based Mobile Communication; and (iii) VHF system. 3.37. Normal aspect of signals- (1) Unless otherwise authorised under approved special instructions, fixed signals, except automatic signals, shall always show their most restrictive aspect in their normal position. (2) The normal aspect of an Automatic Stop signal is "Proceed" Where however, the signal ahead is manually operated; the aspect normally displayed may be "Caution" or "Attention". S.R. 3.37/1. In Automatic section Loco Pilots and Motormen must bring their train to a halt at Station, where stoppages are scheduled in the Working Time Table even though the signal governing departure from the station is 'Off. 3.38. Points affecting movement of train- (1) (2) The Station Master shall not give permission to take "Off" the signals for a train until - (a) all facing points over which the train will pass are correctly set and locked. (b) all trailing points over which the train will pass are correctly set, and (c) the line over which the train is to pass is clear and free from obstructions. When a running line is blocked by a stabled load, wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train at the station etc., the points in rear on double line sections and at either end on single line sections should be immediately set against the blocked line except when shunting or any other movement is required to be done immediately in that direction on that line. S.R. 3.38/1. The person nominated to operate panel, Lever and Switches are responsible to put Lever Collars, Slide Collar/Pins, Button/Switch Collars. S.R. 3.38/2. Setting of points when two trains are to be crossed on signal line section: (1) When two trains are to be crossed at non-interlocked stations and station where interlocking permits, the facing points must be set and locked for respective lines on which each train is to be received Reception signals shall be taken off for one train at a time and reception signals in opposite direction for second arriving train shall be kept at "ON" position. The trailing points at the far end although set against the line on which first train is to be received does not constitute an obstruction in the path of the train. (2) After arrival of first arriving train, reception signals shall be taken off for second arriving train after setting the complete route including trailing points. NOTE: These precautions shall be taken in addition to the observance of other precautions like use of lever collars etc. S.R. 3.38/3. Use of Line Admission Books - At stations where the station Master in charge of Line clear working is not in a position to decide independently on which line a train shall be received or to ensure that any particular line shall remain clear till the arrival of the train, lines for the reception of train shall be allotted by the person nominated in this behalf in the Station Working Rules. 40 3.38/4. 3.39. — ur €R.3.39/1. - (i) (ii) (iii) g) a-rerrzrr a-fi uT sri g•rq a-rerrzrr -fit-ei a•rerr I Ati 41 CHAPTER-III SIGNALS S.R. 3.38/4. At big Junction Stations/ Yards having high density of traffic, where the Station Master, in charge of line clear working, is not in a position to either verify personally the clearance of reception lines or to know sequence of train arriving at his Station line clearance book instead of line admission book shall be maintained. Divisional Railway Manager shall decide the station where Line Clearance Book is to be used. Responsible staff for the maintenance of such books should be nominated in the SWR. 3.39. Locking of facing points - Facing Points, when neither interlocked nor key locked, shall be locked for the passage of a train either by a

clamp, or by a through bolt, with a pad lock. It is not sufficient to lock the lever working the points. S.R. 3.39/1. Locking of Points:- Whenever the points are required to be clamped for the movements of trains, it must be padlocked. S.R.3.3 9/2. Responsibility for setting and locking of points at non-interlocked station-

(i) The Station Master must set and lock all facing points and set the trailing points or ensure the correct setting and locking of the points, as the case may be, for the reception and despatch of all trains except at the modified non-interlocked stations. (ii) When two trains cross or one precedes another and the first train happens to be passenger train, the responsibility for the setting and locking of points will be as in para (1) above, but the Station Master need not proceed to the facing points for the second train, even if it is a Passenger train, and the Guard of the first waiting train will be responsible for verifying that the facing points for all subsequent trains (whether carrying passengers or otherwise) are correctly set and locked. (iii) The change of duty shall not take place, when 'Line clear' has been obtained or granted for a train. The Station Master, who has so obtained or granted Line Clear, shall be responsible for correct setting and locking of points and taking off the relevant signals. NOTE:- (1) Details of the usage of line number, signal and shunting stopped badges, where in force, should be included in the station Working Rules. (2) The details of procedure of receipt and despatch of trains at non-interlocked stations and for crossing of trains on single line should be incorporated in the Station Working Rules of the station concerned. S.R.3.39/3. Manning of Non-interlocked facing points- (a) The Outermost facing points, except the points which are key locked must be manned in addition to their being clamped and pad locked. The responsibility of ensuring the manning of outermost facing point will devolve on the person who is responsible for setting and locking of points. (b) During Shunting operations the Shunting Master or Shunting Jamadar will be responsible for seeing that hand points, which are not fitted with spring levers or otherwise not locked for the movement, are manned. S.R. 3.39/4. Controller's responsibility in regard to Crossing of trains- (a) (b) Controller must study the running of trains very carefully before issuing instructions regarding the crossing of trains to give precedence to more important trains. Once definite instructions have been issued, these instructions must not be altered except in an emergency, as it must be realised that a sudden change of orders is apt to upset the working of a station. On wet dark nights orders once issued must not be changed except under very exceptional circumstances and such cases must be reported specially in the diary with reasons for change of orders. Such unavoidable circumstances should be noted on the chart by the Section Controller also. 41 3.39 / 5. (1) (2) (3) (4) (5) (ii) (iii) (iv) (v) æTtF \$1 g•zi q-lâ I a-T17TTT7 g-ä -€-.*13 aq g•zi 42 CHAPTER-III S.R.3.39/5. Crossing of trains at a station provided with one platform line- SIGNALS (a) When two trains, there is only one platform, the train carrying passenger must be received on a platform line, irrespective of whether the platform is on the main line or on the loop line and the goods train on one of the other lines. When both trains are passenger carrying trains, first train should be admitted on platform line unless otherwise instructed. (b) No train shall run through on the platform line when a passenger train is standing on the non- platform line. S.R. 3.39/6. Special instructions for working station equipped with Rudimentary Interlocking and Modified Key Locking- (1) (2) (3) (4) (5) Applications - These instructions apply to all non-interlocked stations where rudimentary interlocking and modified key locking is provided. Station Master's Line Keys - The Station Master has been provided with the following keys- (i) Line Keys to correspond with the running line as shown in the station working Rules. (a) A Key which controls the Home Signals Levers and siding points where H.P. locks are provided on siding points taking off running line. (b) A Key which controls Home Signal Levers at stations where the siding takes off from a loop line or a line over which trains are not permitted to run through and the points governing the siding/sidings are to be locked by the pad lock. Object of Line Keys - The object of the Line keys is to provide definite instructions for the Pointsman from the Station Master as to the line on which a train has to be admitted. Custody of Keys - The Line Keys the signal control key and the Direction Control Keys must be kept in the custody of the Station Master on duty and when not in use must be kept locked up in the glazed key box provided for the purpose. Procedure for reception of trains- (i) As soon as Line clear has been given the Station Master on duty will have the station bell rung and the description of the train and the station it has left, or about to leave called out loudly to alert the staff. (ii) On hearing the station bell the Pointsman on duty at the facing and trailing ends of the station yards must report to the Station Master on duty for orders. (iii) The Station Master on duty in the presence and hearing of each must instruct the Pointsman as to the Line on which the train is to be received at the same time giving the Pointsman on duty at the facing end of

the yard the appropriate Line Key for the Particular (iv) The Pointsman must then proceed to all facing points over which incoming train will have to pass and set and lock them in accordance with the instructions contained in the signalling appendix attached to the Station Working Rules. (v) After setting and locking the facing points for the reception of the train in accordance with the station Master instructions and the Line key in his possession the Pointsman must insert the key extracted from the H.P. Key lock at the advance facing points and insert in the lock provided on the Home Signal post and then exchange a green signal with the station Master on duty. (vi) The Pointsman on duty at the trailing end of the yard must proceed to the outermost trailing points and on his way there correctly set all trailing points for the line on to which the incoming train is to be received and then exchange a green signal with the Station Master on duty. 42 (6) (vii) (viii) zrrerr a-TITN - (i) \$1 R-2.fi (ii) crzrere (iii) zrrerr 3.40. (ü) '3fitF' - (2) (3) (4) 3.41 . (i•q) '3fi15' (*ZTéq) (m•ra) (2ä7T) (gØ (€1ég) (Rilla) ur 180 120 '31T1b4 (eaa) @ (RÄ-«0 I 43 CHAPTER-III SIGNALS 6) (vii) The Station Master on duty after satisfying himself that the facing points have been set and locked in accordance with his instructions by observing the position of the Points Indicators must take OFF or authorize the taking OFF of the Home Signal. The Pointsman at the facing points will then take OFF the Outer Signal. (viii) After the train has arrived and cleared all points and crossings and if no orders for shunting have been given by the Station Master on duty the Pointsman must extract the key from the lock on the post of the Home Signal unlock the points extract the relevant Line Key from the H.P. Key lock set the points in their normal position return to the station and make over the Line Key to the Station Master on duty. Despatch of trains - (i) Before a train is despatched from a station the station Master on duty must satisfy himself that the trailing points are correctly set for the despatch of the train by the position of the Points Indicators and must then exchange a green hand signal with the Pointsman on duty at the trailing points. (ii) The Authority to proceed must then be made over to the Loco Pilot and the Station Master on duty must then give permission for the train to start. (iii) The Pointsman on duty at the trailing points must display a green hand signal towards the departing train and must remain at the points till the departing train has cleared all points and crossings. (iv) The Pointsman at the trailing points after the passage of the train must reset all points in their normal position and return to the station. 3.40. Conditions for taking 'Off' Home signal - (1) (2) (3) (4) When a train is approaching a Home signal otherwise than at a terminal station, the signal shall not be taken 'Off' until the train has first been brought to a stand outside it, unless - (a) On a double line, the line is clear for an adequate distance beyond the Starter signal; or (b) On a single line, the line is clear for an adequate distance beyond the trailing points, or under approved special instructions for an adequate distance beyond the place at which the train is required to come to a stand. Where a train has first been brought to a stand outside the Home signal, the signal may be taken 'Off' if - (a) On a double line, the line is clear up to the Starter signal; or (b) On a single line, the line is clear up to the trailing points or under approved special instructions up to the place at which the train is required to come to a stand. Except under approved special instructions, the adequate distance referred to in sub-rule (1) shall never be less than- (a) 180 meters at stations equipped with two-aspect lower quadrant or two-aspect colour light signals, or (b) 120 meters in the case of stations provided with multiple aspect signals or modified lower quadrant signals. Where a sand hump of approved design, or under approved special instructions a derailing switch, has been provided for the line on which a train is to be received, they shall be deemed to be efficient substitutes for the adequate distance referred to in sub-rule (3). 3.41. Conditions for taking 'Off' Outer signal - (1) When a train is approaching the Outer signal otherwise than at a terminal station, the Signal shall not be taken 'Off' until the train has first been brought to a stand outside the signal, unless the line on which the train is to be received in the station is clear (a) in the case of a double line, up to the Starter signal, and (b) in the case of a single line, for an adequate distance beyond the first facing points. 43 (IBRiu (l* Ri7T e. (Gbl) I / 1. a-fi '3# 3.42. 3.43. 3.44. ag-i 3.45. Adi 3.46. (2) (8b1) (dl€ æe-réq) t. GGi qrüQT11 3.47. '3TY15' g) GTT - (ii) s:rrq (iii) (i) 3.40 t. (ii) 44 CHAPTER-III SIGNALS (2) Where the train has first been brought to a stand outside the Outer signal, the signal shall not be taken 'Off' unless the line is clear up to the first facing points, or up to the Home signal at a station where there are no facing points. S.R. 3.41/1 .The Outer signal must not be taken 'Off' until the Home signal has been taken 'Off' and the Outer signal must normally be replaced to 'On' before the Home signal. 3.42. Conditions for taking 'Off' Last Stop signal or Intermediate Block stop signal - The last Stop Signal or Intermediate Block Stop signal shall not be taken 'Off' for a train unless Line Clear has been obtained from the block station in advance. S.R.3.42/1 .For despatch of a train, the Starter/Intermediate

Starter Signal where provided shall be taken 'OFF' only after taking 'Off' the Advanced Starter Signal At Terminal and large stations where lines are Track Circuited, exception to this rule is permitted. It should be specifically incorporated in SWR. 3.43. Conditions for taking 'Off' Warner signal -A Warner Signal shall not be taken 'Off' for a train that is booked to stop or for train that has to be stopped out of course. 3.44. Conditions for taking 'Off' Gate Stop Signal -A Gate Stop Signal shall not be taken 'Off' until the concerned level crossing or crossings is or are free from obstruction and the gate of such level crossing or crossings are closed or locked against road traffic. Where a gate Stop signal is interlocked with station signals it shall be worked in accordance with Special instructions. 3.45. Conditions for taking 'Off' Calling On signal -A Calling-on signal shall not be taken 'Off' until the train has been brought to a stand at the stop signal below which the Calling-on Signal is provided. 3.46. Use of fixed signals for shunting- (1) The Outer, Home and the last stop signal of a station shall not be taken 'Off' for shunting purpose. (2) At Stations where advanced Starter signal are provided, Starter signal may be taken 'Off' for shunting purposes, except where the interlocking interferes with this practice, in which case hand signals shall be used where shunting signals are not provided. 3.47. Taking Off Signals for more than one train at a time- When two or more trains are approaching simultaneously from any direction, the signals for one train only shall be taken 'Off' other necessary signals being kept at 'On' until the train for which the signals have been taken 'Off' has come to a stand at the station, or has cleared the station, and the signals so taken 'Off' for the said train have been put back to 'On' except where under special instructions, the interlocking or the layout of the yard renders a contrary procedure safe. S.R. 3.47/1. Simultaneous Reception of Trains - (a) (b) At Interlocked Station on the signal line where trains are permitted to run through without stopping, signals may be taken 'OFF' for two or more trains to arrive simultaneously provided - (i) The station yard is so laid out and the interlocking so arranged that each train is received on a line which is isolated from the line or lines or; (ii) Approved Special Instructions have been obtained and notified and; (iii) Such procedure is definitely laid down in the Working Rules of the Station. At Interlocked Station on the single line where no trains are permitted to run through without stopping, and the lines are not isolated, signals may be taken 'OFF' for two or more trains to arrive simultaneously, provided:- (i) General Rule 3.40 is complied with, and; (ii) Such procedure is definitely laid down in the Station Working Rules. 3.48. (ii) 3.40 (iii) In the case of a double line - en-ge-i : (q) R-äbe '34M di 3.49. (erq) (IT) 3.68 3.72 45 CHAPTER-III SIGNALS (c) NOTE 3.48. At Interlocked Stations on the double lines where the path of one train crosses another, signals may be taken 'OFF' for two or more trains to arrive simultaneously, provided; (i) The Station is laid out and the interlocking so arranged that each train is received on a line which is isolated from the other train or trains, or; (ii) General Rule 3.40 is complied with, and; (iii) Such Procedure is definitely laid down in the Station Working Rules. If the conditions laid down in paras (a), (b) & (c) above are not fulfilled, the Station Master must satisfy himself before allowing signals to be taken 'OFF' for a reception of a train, that all trains previously admitted to the Yard have come to a stand clear of the line on which it is intended to receive the train. Stoppage of trains out of course at stations provided with two aspect signalling - When a train which is booked to run through has to be stopped out of course at a station equipped with two- aspect signals, it shall not be received until- (a) (b) (c) (d) at stations provided with working Warners but not provided with starter signals, the working warner is kept at 'On'. at stations provided with Starter signal but not provided with working Warners, the relevant Starter is kept at 'On'. at stations provided with both working Warners and Starters, both the signals are kept at 'On' and at stations provided with neither a working Warner nor a Starter signal, the first Stop signal is kept at 'On' and the train brought to a stand outside it. S.R.3.48/1. Stopping a run through train at a non-interlocked Station - If it is necessary to bring a run through train to a halt at non-interlocked station, the Home, if any and Outer signals must be kept at 'On' When the train has come to a stop, the Home, if any and Outer signals shall be taken 'Off' Danger Hand signals shall also be exhibited from the platform to stop the train. If a starting signal is provided, that signal must be kept at 'On'. On single line the "authority to proceed" must not be handed over to the Loco Pilot until the train comes to a stand. 3.49. Care and lighting of signal lamps - (1) (2) (3) (4) The Station Master shall see that the lamps of fixed signals, indicators and boards such as Shunting Limit Board, Block Section Limit Board and Stop Board at his station are lighted at sunset, and are not put out until after sunrise, or at such earlier or later time as may be prescribed by special instructions. Sub-rule (1) shall not apply to- (a) approach lighted signals, (b) colour light and position light signals which shall be kept lit throughout the day and night, and (c) the sections where no trains are scheduled to run at night. The Station

Master shall ensure that the lamps of fixed signals, indicators and boards such as Shunting Limit Board, Block Section Limit Board and Stop Board, when lit, are burning brightly and that the lenses of lamps and spectacle glasses are properly cleaned and backlights clearly visible. Whenever night signals are used the Station Master shall not grant Line clear unless he has ensured, either personally or in the manner, prescribed under special instructions, that the lamps of fixed signals at his station which are not approach lighted and which apply to the train are burning. If signal lights cannot be kept burning he shall, before giving Line clear initiate action in accordance with the procedure prescribed in Rules 3.68 to 3.72.

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5) Before lighting a semaphore signal or indicator lamp, the Railway servant deputed for lighting it, shall inspect the lenses and spectacle glasses. In case he finds the red roundel broken, cracked or missing, he shall not light the lamp and shall report the fact immediately to the Station Master who shall treat the signal as defective. (6) Every railway servant in charge of signals shall see that the greatest care is taken in the focusing, cleaning and trimming of signal lamps.

S.R.3.49/1. Fixed Signal lamps to be lit up during thick or foggy weather. In the event of the weather not being clear due to stonn, fogs etc. Signal lamps should be lit during day light hours as well.

S.R.3.49/2. At non-interlocked station the station Master shall daily check that all points and Trap indicator glasses are intact by operating all points after the indicator lamps have been lit and by observing the indication of the lights.

S.R.3.49/3. Divisional Railway Managers will notify to the staff concerned time of lighting and extinguishing of signal lamp taking into consideration the local conditions prevailing on division in respect of the rising and setting of the Sun.

S.R.3.49/4. Visibility of signals from Station Master's Office - Whenever night signals are used, the station Master of station where approach signals are not visible from his place of work and where repeaters are not provided in his office shall not grant Line clear unless he has ensured either personally or through the Cabin Master / Cabinman/Leverman supported by a Private Number that the lights of all signals which apply to the train are burning brightly. A specific provision shall be made in the Station Working Rules of such stations to that effect.

3.50. Traps, Slip sidings and Catch sidings - The Station Master shall take steps to ensure that the points of all traps, slip sidings and Catch sidings and other points are set against the line which they are intended to isolate, except when it is not necessary that they should be open for the purpose of Isolation.

S.R. 3.50/1. (a) Trap Sidings - Trap siding which is provided with trap in the form of a derailing Switch to check the unauthorised escaping of vehicles/ wagons so as not to foul the running line is termed as trap siding. (b) Catch siding and Slip Siding - At a station where there is a gradient of 1 in 80 falling towards the station or 1 in 100 falling away from the station within 45 meters beyond the outer most points at either end, a catch siding in a former case and a slip siding in the latter case should be provided.

3.51. Points- (1) (2) (3) All points shall normally be set for the straight except when otherwise authorised by special instructions. The railway servant concerned with the operation of points and signals shall not, while on duty, leave the place of operation of points or signals which are under his charge except under special instructions. No railway servant shall interfere with any points, signals or their fittings, signal wires or any interlocking or block gear for the purpose of effecting repairs, or for any other purpose, except with the previous permission of the Station Master.

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S.R.3.51/1 Disconnection of Points and Signals:- Before taking in hand any disconnection of points, signals or any interlocking gear the person incharge of the work must advise the station Master on duty in writing on form T/351 (S&T) before the work is started and after it is completed. Where the cabins are under the control of Station Master, he must advise the cabin staff giving the particulars of the point/signal etc which is disconnected under exchange of private numbers. Whenever the Disconnection memo has been received, it is the personal responsibility of Station Master to ensure that such point are set and locked and secured by means of clamps and padlocks before authorizing the movement of any train over such points. If the disconnection of points is made at one end of a cross over. the point at both end of cross-over should be treated as having been disconnected and the train shall be received as under-

A. B. In the case of Mechanically/electrically operated points:- 2

3. The end where work is being done should be treated as having been disconnected and should be clamped and padlocked by the Station Master and the trains passed over the same by piloting. It should also be ensured that the other end of the cross-over shall be set for isolation and clamped and

padlocked if the train passes over the straight road. The other end shall be set and locked for cross movement if the movement is over the cross-over. The end where work is not being done shall also be treated as non-interlocked, and also clamped and padlocked and trains passed on signals but with speed restriction of 15 KMPH as in the case of overhauling of lever frames subject to a written authority from S & T staff that "No work is being done at the end of the cross-over and the trains can be passed over the points at the restricted speed of 15 KMPH on signals". It should also be ensured that for a train passing over the straight road at the end where work is not being done that the other end where work is being done should be clamped also for the straight road, i.e. for isolation. In case of Electrically operated points for the purpose of obtaining detection at the end where work is not being done, the S&T staff at the end where work is being done may undertake requisite temporary modifications in the S&T Gear/circuit for adjusting the detector slide to make contacts corresponding to the other end and the fact be incorporated in the memo exchanged between S&T Staff and Station Master. Procedure of working of trains during failure of electrically operated points of the cross over:- 2. 3



4. On receipt of information from the operating staff about the failure of the point, S&T staff will have to ascertain the nature of fault and put right the failure. If the S&T staff anticipates that the rectification of the failure is likely to take a long time, they will inform the operating staff in writing on a disconnection

Memo to initiate action as under- On receipt of such written information from the S&T staff on a disconnection memo, the Station Master will ensure correct setting on the affected points to normal position and will then clamp and padlock both ends of the crossover in the normal position. Station Master, under to circumstances remove the clamp in the normal setting unless and until he receives the memo from the S&T staff that temporary modifications have been removed, and the conditions in Para 12 are complied with. After clamping and padlocking the point, the Station Master will advise the S&T staff in writing that- "Single ended point/both ends of crossover point No... have been clamped and padlocked in the Normal position and the necessary temporary modification to the installation may please be made." S&T staff will then carry out the temporary modifications as given in Para 5 below.

CHAPTER-III SIGNALS 5. 6. 7. 8. 9. 10. 11. 12. 13. S&T staff not below the rank of a Sectional Engineer, on receipt of such a written advice from Station Master, as per Para 4 above, will carry out temporary modifications to the S&T installations so that point steady normal indication is available on the panel, by making normal detection available and restricting the clearance of signals reading over the said point (including overlap) to yellow aspect only. After carrying out the temporary modifications, the S&T staff shall advise Station Master in writing that "temporary modifications with respect to point No. — have been carried out" and clearance of (signal name) signal Numbers & have been restricted to yellow aspect only. On receipt of the advice as per Para 6 above Station Master will arrange for issue of caution order to the trains for observing 15 Km/h on the route of concerned signals. This may require advising at Station Master of the adjacent stations also. Station Master shall arrange for posting suitable operations staff near the affected point for the purpose of monitoring the conditions of clamps and points after every movement.

The staff deputed to monitor the point should be equipped with communication facility with controlling cabin/Station Master on duty, HS lamps and flags (red and green) and detonators and shall arrange for protection of trains in case the condition of affected point or clamps on it warrants the same. In such a condition, he shall also advise the Station Master to restore the concerned signal to 'ON' position and to refrain from taking them 'OFF' for any subsequent move till the condition of the points and clamps is set right. After ensuring that the caution orders are being issued Station Master shall allow the first train on the affected lines and over the affected points to pass on 'A' marker in the semi automatic territory and on the Calling-On signal or on written authority in the Absolute block section territory. Station Master shall pass the subsequent train by taking 'OFF' signals after setting the route in the normal manner. However due to temporary modifications made by the S&T staff in term of para 5 above, the concerned signals will work as free signals and will clear to one yellow aspect only. (a) After the defect is rectified the SE/S&T in consultation with Station Master will remove the temporary modifications done as per Para 5 and will give a memo to Station Master stating "Work with respect to point No. / Crossover No.. has been completed and temporary modifications have been removed and the point is ready for testing. Before acknowledging a memo Station Master will ensure none of the route sections over the affected point is set and the signals controlling the movement over it are at 'ON' position and the tracks are clear. This is for ensuring that no trains pass over the affected point during the testing. After the points are fully tested, the SE/S&T will give Re-connection memo indicating in a written declaration that "all the temporary modifications made to the installations have been deleted and the installation is made fully normal and safe with respect to point No.

Station Master on receipt of re-connection memo can resume normal working over the affected points under advice to Section Controller. 48 3.51/2 / 3.51/3 — "3-frb" MÄ.3.38 3.39 (üfrät) 3-N-- 21Tt1 1 (i) 15 EieT (ii) 15.09 3-«-emtl (15 fib. 41. fiEieT) 15 I €1/ 351 (g-H €1) 49 CHAPTER-III SIGNALS 3.51/2. Movement during the interval between disconnection and reconnection - If a train is to be passed or any shunting movement is to be performed, the Station Master must advise in writing to the SE (Signal) or the person in charge of the work, stating in which position the points are to be set. The Station Master or the other authorized person on his behalf shall with the permission of the person in charge of the work arrange to set the point/points and clamp the points and secure them with padlock. The clamp and padlock should be removed by the operating staff after the train/shunting movement has been completed and then the person in charge of the work can resume work on the gear. 3.51/3. Working

of frame during Engineering/Signal/Non-Interlocking Work :- (a) (b) (c) (d) (f) S.R. 3.51/4. Station Master shall be responsible for ensuring that all the points over which the train will pass are correctly set, clamped and padlocked as per GR 3.38 (1), 3.39 and SR there under that all trailing points over which the train will pass are correctly set before taking 'OFF' the signals, The manner in which Station Master will ensure, this must be clearly laid down in the Temporary Working Instructions prepared jointly by the Sr. DOM and Sr. DSTE. A Notification showing the date and time when the Non-Interlocking work would be taken in hand,

its probable duration and instruction for the Station Master to issue caution order to Loco Pilots and Section Controller to advise to observe the temporary speed restriction. For the portion of the Yard which is controlled by the cabin to be Non-Interlocked:- (i) (ii) The Loco Pilot must be given a caution order of the speed restriction of 15 KMPH for the station where work is being done. When the work cannot be completed by sun set of the day of commencement and is likely to extend over a few days; temporary caution indicators and speed indicator (15 KMPH) shall be provided as prescribed in GR 15.09 by the concerned department. Only after the Station Master on duty has assured himself that the line has been correctly set and locked for the required movement, may permit the signals to be taken 'Off' for the movement of the trains. The issue of caution orders and the imposition of speed restriction of 15 KMPH should remain in force until the work is completed and normal working is restored. S&T Staff, not below than SE/S&T must produce disconnection memo before starting Non-Interlocking work and Reconnection Memo after completion of work to the Station Master on duty on no T/351 (S&T). Use of crank handles - (a) In case of stations provided with interlocked crank handles :- If a point is defective and has been set to the required position by the crank handle a normal signalled movement can be made after the crank handle is restored to its normal lock and then signal comes 'Off' after being taken 'Off' or if the points in the route are locked by route setting on the panel with steady point indications but the signal does not come 'Off', then no cotter bolting/clamping and pad locking is required in such case. 49 (ii) A. 3.68 / a--TIA?ZEF t, "R7" "311*" (ii) (iii) (E. gi a--TIRF-RF uzlf GIN' so CHAPTER-III SIGNALS No cancellation operation of concerned route are to be initiated till the completion of the entire train movement. It must also be ensured that no other movement is allowed over the said route(line) by any means. The Station Master shall place caps/collars on the signal and point buttons of the concerned route and note down the point lock indications lit on the panel in Train Signal Register (TSR) in red ink as well as in a separate register that shall be maintained for this purpose in the format given below- Sl. Date Time Train Line Signal No. No. button No. Point set and lock indications lit Normal Reverse Sign. of Remarks panel SM If the signal does not come 'off' after operating the signal lever/ button or the route setting is not achieved for locking of points in the route, cotter bolting/clamping and pad locking is to be done as per the rules under GR 3.68 although 'N' or 'R' indication is available and trains pass the defective signal in accordance with the rules. In case of stations provided with non-interlocked crank handles - If a point is defective and is required to be set by a crank handle, the crank handle should be issued to the traffic official deputed for setting the point to the required position. The Station Master / Cabin Master in charge of taking off the signal shall not take off the signal and authorise the movement over the point until- (b) (c) (i) (ii) The crank handle is either returned back to him and kept by him in the steel case/glass case provided for the purpose and locked or The crank handle is retained in the possession of the Traffic official, who shall exchange private numbers with the Station Master/Cabin Master in charge of taking off the signal in token of the crank handle is being in his personal custody and of the points being correctly set for the intended move; If the signal comes off after the signal lever/button is operated, no cotter bolting/clamping and padlocking is required.

In such cases if the signal does not come off, cotter bolting/clamping and padlocking is to be done although 'N' or 'R' indication is available. These instructions should be incorporated in the Station Working Rules. 50 a-TEff4—3 3.52. (2) (3) (4) 3.53. muffQtT ur ft-efi \$ifü I (veTq) fifÄ • 51 CHAPTER-III E. Hand Signals 3.52. Exhibition of hand signals SIGNALS (1) (2) (3) (4) All hand signals shall be exhibited by day by showing a flag or hand and by night showing a light as prescribed in these rules. During day a flag or flags shall normally be used as hand signals. Hands shall be used in emergencies only when flags are not available. During night a hand signal shall normally be given by showing a red or green light. A white light waved violently shall be used as a stop signal only when the red light is not available. Red or Green light referred to in sub-rule (3) shall be either a static or flashing type. 3.53. Stop hand signal :- Indication: How given by day: Stop dead By showing a red flag or by raising both arms with hand above the head as illustrated below- 51 3.54. fh4 frag1A' urg fÄ4 52 CHAPTER-III How given by night:

SIGNALS By showing a red light or by violently waving a white light horizontally across the body of the person showing the signal as illustrated below - 3.54. **Proceed hand signal-** Indication: How given by day: Proceed By holding a green flag or by holding one arm steadily as illustrated below - 52 3.55. **Proceed with caution hand signal-** Indication: How given by day: Proceed slowly reducing speed, further if the signal is given at a progressively slower rate. By waving a green flag vertically up and down or by waving one arm in a similar manner as illustrated below - 53

How given by night: By holding a green light steadily as illustrated below - 53 **CHAPTER-III** **How given by night:** By waving a green light vertically up and down as illustrated below- **SIGNALS** Note: When the speed is to be reduced further, this signal shall be given at a slower and slower rate and when a stop is desired, the stop hand signal shall be shown 3.56. **Hand signals for shunting -** The following hand signals shall be used in shunting operations in addition to the Stop hand signal - (a) Indication: How given by day: Move away from the person signalling. By green flag or one arm moved slowly up and down as illustrated below- 54

CHAPTER-III **How given by night:** By a green light moved slowly up and down as illustrated below - **SIGNALS** (b) Indication: Move towards the person signalling. How given by day: By a green flag or one arm moved from side to side across the body as illustrated below - 55

CHAPTER-III **How given by night:** By a green light moved from side to side across the body as illustrated below- **SIGNALS** Note: The hand signals for 'Move away from the person signalling', and 'Move towards the person signalling' shall be displayed slower and slower, until the Stop hand signal is given if it is desired to stop. (c) Indication: How given by day: Move slowly for coupling By a green and a red flag held above the head or both hands raised over the head and moved towards and away from each other as illustrated below- 56 3.57

CHAPTER-III **How given by night:** By a green light moved from side to side across the body as illustrated below- **SIGNALS** Note: The hand signals for 'Move away from the person signalling', and 'Move towards the person signalling' shall be displayed slower and slower, until the Stop hand signal is given if it is desired to stop. (c) Indication: How given by day: Move slowly for coupling By a green and a red flag held above the head or both hands raised over the head and moved towards and away from each other as illustrated below- 56 3.57

CHAPTER-III **How given by night:** By a green light moved from side to side across the body as illustrated below- **SIGNALS** Note: The hand signals for 'Move away from the person signalling', and 'Move towards the person signalling' shall be displayed slower and slower, until the Stop hand signal is given if it is desired to stop. (c) Indication: How given by day: Move slowly for coupling By a green and a red flag held above the head or both hands raised over the head and moved towards and away from each other as illustrated below- 56 3.57

CHAPTER-III **How given by night:** By a green light moved from side to side across the body as illustrated below- **SIGNALS** Note: The hand signals for 'Move away from the person signalling', and 'Move towards the person signalling' shall be displayed slower and slower, until the Stop hand signal is given if it is desired to stop. (c) Indication: How given by day: Move slowly for coupling By a green and a red flag held above the head or both hands raised over the head and moved towards and away from each other as illustrated below- 56 3.57

CHAPTER-III **How given by night:** By a green light moved from side to side across the body as illustrated below- **SIGNALS** Note: The hand signals for 'Move away from the person signalling', and 'Move towards the person signalling' shall be displayed slower and slower, until the Stop hand signal is given if it is desired to stop. (c) Indication: How given by day: Move slowly for coupling By a green and a red flag held above the head or both hands raised over the head and moved towards and away from each other as illustrated below- 56 3.57

CHAPTER-III **How given by night:** By a green light moved from side to side across the body as illustrated below- **SIGNALS** Note: The hand signals for 'Move away from the person signalling', and 'Move towards the person signalling' shall be displayed slower and slower, until the Stop hand signal is given if it is desired to stop. (c) Indication: How given by day: Move slowly for coupling By a green and a red flag held above the head or both hands raised over the head and moved towards and away from each other as illustrated below- 56 3.57

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adequacy of visibility through VTO is to guide the station Master so that he can decide when detonators are to be placed to warn the Loco pilot of the location of an approach stop signal and for deciding onset of the thick, foggy or tempestuous weather impairing visibility which calls for lighting of signals before granting line clear, fixing of tail lamps even during day time, shunting in face of an approaching train etc. VTO is to be provided at all stations. The VTO must be specified in SWRs. The VTO may be a HS Lamp of a type that corresponds to the specific type of signal lamp on the signals provided at the station i.e. a K. Oil lit HS lamp for K. Oil lit signals, or an electrically lit with battery type HS lamp for LED or color light signals respectively. (ii) VTO for Semaphore signalling and for nonvo aspect CLS - The VTO may be the light (or ann by day) of a Starter Signal (where exists) or the back light of the Home Signal etc. as defined in GR 3.61 In such cases, the VTO is normally located 300-350 meters at a place from where it is to be seen by the SM. During foggy or tempestuous weather, when such a VTO is not seen by the SM, it shall determine that fog has set in. (iii) VTO for Multiple Aspect Colour light signalling- (a) At Station with MACLS, the prescribed VTO will be the Starter Signal of either side located at a distance of not less than 180 meters from the centre of the SM's office where the Station Master shall normally stand for exchanging of signals.. (b) when a prescribed VTO is not visible from 180 meter or more during dense fog, the SM shall not use his discretion as per GR 3.61 (2) (a) but will arrange to place the detonators to warn the Loco Pilot, unless specified otherwise in these instructions. (iv) When the VTO (or the prescribed (VTO) provided under conditions laid down is not visible to the Station Master, he shall take action as under-

(a) Ensure that signals are lit during night as well as during day in Semaphore Signalling sections when visibility is impaired due to fog. (b) Observe the VTO before granting Line Clear to a train. (c) In case prescribed VTO is not visible take action as under- Station Master shall depute fog signalman with detonators to place detonators in situations prescribed under SR 3.61/1 (b) (ii) at 270 meters from the first stop signal to inform in advance the location of this signal to the Loco Pilot of the approaching train. No shunting should be carried out on non-isolated lines after granting Line clear to an approaching train. (d) Provisions given as per GR 5.18 to be followed strictly and no train to be advanced beyond the Starter, or beyond intermediate Starter signal where this exists, up to the Advance Starter at stations which do not have track circuiting in this zone. 58 (u) (q) (U) (q) (\$1) (FIT 15 50 Eier 15 2) (ii) 270 41-e-R \$1 (q) 270 \$1 I OTT *fifi aq•rzrr \$1 ZITOTZIITT (u) 20 di 2 10 cre•rū 1 (q) 45 45 cret \$1 10 : 270 59 CHAPTER-III

(b) Where it is not necessary to place detonators- SIGNALS It is not necessary to place detonators to indicate location of a stop signal to the Loco Pilot in following circumstances- (a) (b) (c) (d) (e) (f) (g) In sections where a reliable Fog Safe Device has been provided on locomotives; Where adequate pre-warning is provided i. e. at stations where double distant signals are provided; Where maximum speed allowed in the station section is upto IS hnp/h even at station where pre- warning signal is not available, but a Warning Board exists; Where speed of the section is less than 50 kmph (but more than 15 kmph) and the first signal of Station is not a stop signal; In Automatic Signaling territory; On Gate Signal; On Departure Signal; At the site (s) of Temporary Speed Restriction imposed due to maintenance of TracWOHE/ Signal. (ii) Where it is necessary to place detonators- The detonators should be placed at 270 meters short of the first stop signal at stations detailed as under- (a) At 'A' class stations where Warner exists - Detonators to be placed short of Home Signal and not the Warner Signal. (b) At 'B' class station equipped with Lower Quadrant Signals Detonators to be placed short of Outer Signal. (c) In Multiple Aspect Signalling, where single Distant Signal is provided- Detonators to be placed short of Home Signal. Note: The Fog Signal posts will be provided only at stations where there may be a requirement for placing detonators, Such posts may, therefore, be shifted suitably based on the above mentioned position (s). (c) The fog signal post be erected at 270 meters from the first stop signal. The Fog signal post will consist of steel trough sleepers or wooden sleepers painted alternatively black and white and fixed vertically in the ground. On electrified section OHE mast on either direction to serve as Fog Signal post, which will be painted in the direction of traffic at height of three feet from Rail level, one foot wide white band with two circular Red marks of the size of a detonator. No fog signal posts are to be provided at stations with Double Distant Signals and at stations which do not qualify for placement of detonators. (d) Each of these fog signalmen shall be provided with 20 detonating (fog) signals. The fog signalman shall place two detonators on the centre of the head of the rail, about 10 meters apart from each other, which on explosion under the wheels of an engine, will warn the Loco Pilot of his proximity to the Outer. Warner or Distant/Inner distant signal of the station, as the case may be. (e) After the passage of each train over the detonating (fog) signals, which have been so placed

on the rails, the signalman shall immediately replace them by two fresh detonators. (f) When a railway servant has to place detonators on the line, he must withdraw beyond the safety radius of 45 meters from the detonator or detonators before they are exploded by an approaching engine or train. He shall be responsible for warning as far as circumstances permit any person in the vicinity to stand beyond the safety radius. (g) The Position of the fog signal post, the fog signals and the fog signalman are shown in the diagram below: :POSITION OF FOG DIRECTION 45 FOG SIGNA-S FOG POST SIM*E MILS In 59 270 (@8NT) (crel@) tFPT (crel@ Altí) (Aléál) æe-rt5) (trrét) grat•eqe) (31) tFTTr cre•rur GTT I 30 (d) 3-1i\$1 \$1 15.09 uT 270 \$1 cret (i) (ii) (iii) (u) 60 Eier di I AIN—QIN I (i) \$1 60 'tqr 60 di (O 30 (q) a-fi cra di 3.61 / 2 (a) (i) (iv) -H-et--ä -E #18/" OTT 60 CHAPTER-III SIGNALS (h) Each of the trained men sent out with detonating (fog) signals, shall carry a hand signal lamp. Should the fog signalman be aware of any obstruction on the line, he shall show a danger hand signal in accordance with General Rule 3.53, in the direction in which a train is expected or approaching. On single line sections for trains leaving a station, the fog signalman deputed to place detonators shall show to the Loco Pilot a "Proceed" (green) hand signal in accordance with G.R.3.54. (i) As soon as it is necessaw for the SM on duty to take action under SR.3.61/1(c), he will immediately call on duty two men trained in fog signalling duties and will depute them to either end of the station limits. Fog signalman will be detailed for duty at stations, partly drawn from the station Traffic staff and partly from Engineering Gangman and must not be substitutes but regular employees of the Railway. (i) On branch lines or sections on which traffic is light, instead of a fog signalman remaining continuously on duty at each fog signal post, a fog signalman may be sent out to place detonating (fog) signals for each individual train. This procedure may only be adopted under special instructions. In such cases, line clear shall not be given for a train, unless the fog signalman has been sent out at least 30 minutes before the train is due to leave the station in rear. (k) A Station Detonator Register must be maintained at each station with all requisite entries. The Station Master will obtain signature or thumb impression of all men deputed to his station as detonator (fog) signalman, as an acknowledgment that they understand the rules relating to the fog signalling of trains. (l) In foggy or tempestuous weather or in dust storms SE (P. Way) or Gangmates must promptly arrange for a regular Gangman to be deputed to place detonators on the rails 270 meters in rear of (i.e. outside) the first caution signal in each direction when cautious driving is necessary due to repairs of the line or other works being in progress vide G.R. 15.09 and the relevant Subsidiary Rules on the subject. Note :- In Automatic Signalling territory and in the section where distant signal of the concerned station is combined with the last stop signal of the station in rear, placing of fog signals may be dispensed with. 3.61/2. Precautions during fog- (ii) (iii) (iv) (v) During fog when the Loco Pilot in his judgement feels that visibility is restricted due to fog, he shall run at a speed at which he can control the train so as to be prepared to stop short of any obstruction, this speed shall in any case not be more than 60 kmph. Loco Pilot to whistle frequently to warn the Gateman (Where Provided) and road users of an approaching train at level crossings. In absolute Block System the speed should not exceed 60kmph as detailed at item (i) above. In Automatic Block Territory the speed will be subject to the judgment of the Loco Pilot as mentioned in item (i) above and shall not exceed as under- (a) After passing an Automatic Stop signal at 'Green', the speed not to exceed 60 kmph. (b) After passing an Automatic stop signal at 'Double Yellow' the speed not to exceed 30 kmph. (c) After passing an Automatic stop signal at 'Yellow', the Loco Pilot to run at a further restricted speed so as to be prepared to stop at the next stop signal or short of any obstruction. In Automatic signalling Territory, when Modified Automatic Signalling system is introduced and visibility is not clear due to fog or any other reason, the Loco Pilot shall comply with S.R.3.61/2 (a)(i) to(iv) whereas in case of clear visibility he can run the train at maximum permissible speed except any other speed restrictions imposed. (b) During fog season, lime marking across the track at the signal sighting board or at the Distant Signal in case of double Distant signaling territory must be done. (c) All Signal Sighting Boards, Whistle Boards, W/LBoards, fog signal posts and busy vulnerable level crossing gates which are accident prone should either be painted or provided with yellow/black luminous strips. 60 3.62. (2) 3.63. 3.64. (2) (3) * , *1115 (æe•rq) -t 400 AGi | \$1 800 10-10 (are 600 1200 10 I GTFTT — cgrere. e•rqg 10 I 10 I @ q-lâ (Qaw) (q) rrei (O Ati g•zi I \$1 -q-ä-aa--\$t 61 CHAPTER-IW 3.62. Placing of detonators in case of obstruction- SIGNALS (1) Whenever in consequence of an obstruction of a line, it is necessary for a railway servant to stop approaching trains, he shall proceed, plainly showing his Stop hand signal, to a point 400 meters from the obstruction and place on the line one detonator and then proceed to a point 800 metres from the

obstruction and place on the line three detonators, about 10 meters apart, at such place. Provided that on the Broad Gauge the first detonator shall be placed at 600 meters and three detonators at 1200 meters from the obstruction about 10 meters apart from each other. (2) If the said railway servant is recalled before the obstruction is removed, he shall leave down three detonators and, on his way back, pick up the intermediate detonator. 3.63. Replacement of detonators on the line-Every railway servant placing detonators on the line shall see that they are, when necessary, replaced immediately after a train has passed over them. 3.64. Knowledge and possession of detonators. (1) (a) All Station Masters, Guards, Loco Pilots, Gangmates, Gatemen, and all other railway servants on whom this duty is laid by the Railway Administration, shall keep a stock of detonators. (b) The Railway Administration shall be responsible for the supply, renewal periodical testing and safe custody of such detonators and for ensuring that their use is properly understood. (2) Every railway servant concerned with the use of detonators shall have a correct knowledge of their use and keep them ready for immediate use. (3) Every railway servant shall see that the railway servants in his charge concerned with the use of detonators have a correct knowledge of their use.

S.R. 3.64/1 Stock of Detonators :- (a) A case containing 10 detonators shall form part of the equipment, when on duty, of every Guard, of every Loco Pilot on the footplate, of every motorman, of every Tower wagon/ TTM driver, of every RRV driver, of every Gangmate, of every Gateman, of every Bridge Guard, or every Cutting Guard, of every patrolman and of every push trolleyman, motor trolleyman and lorryman. Every Keyman shall be supplied with a case containing 10 detonators as a part of this equipment. (b) The Divisional Railway Manager shall prescribe the number of detonators, which must be kept in stock at stations, yards, depots and running shed. Minimum stock of the detonators at stations should be equal to 10 days consumption of the station. The Station Masters, Loco Foremen, SE(P.Way) and Supervisor Incharge of depots are responsible for seeing that the stock of detonators is never allowed to fall below the minimum. S.R. 3.64/2. Supply of Detonators :- (a) Station Master will supply detonators to Guards headquartered at their stations and Gatemen working under their control. (b) SE (P.Way) shall supply detonators to Gangmates, Keymen, Gatemen (not covered in (a) above). Bridge Guards, Cutting guards and Patrolmen. (c) Loco Foremen will supply detonators to Loco Pilots. (d) The users of push trolley motor trolley lorries etc, shall arrange for the supply of detonators. (e) In other cases where the staff required to have detonators, respective supervisors will supply the detonators. S.R. 3.64/3. Storage of Detonators:- (a) Detonators must be carefully handled, as they are liable to explode if handled roughly. (b) Detonators shall be kept in the tin cases especially supplied and they shall be stored in dry places and not left in contact with the brick walls, damp wood, chloride or lime or other disinfectants, nor exposed to dampness or steam or other vapours. S.R. 3.64/4. Use of Detonators- (a) For use, a detonator shall be placed on the centre of the head of the rail with the label or brand of the detonator upwards, and shall be securely fastened to the rail by bending the clasps attached with the detonators round the upper flange of the rail. If the clasp is damaged, a handful of soft earth will hold the detonator on the rail. (b) Station Master, Loco Foreman, SE (P. Way) and Supervisor Incharge of depot are responsible for ensuring that the detonators in possession of the Railway servants under them are tested as prescribed under the rules and that the staff known how and when to use them. (c) Each Station Master, Loco Foreman, SE (P. Way) and Supervisor incharge of depot will maintain a register of receipts, use and testing of detonators in respect of Railway staff to whom detonators were issued by him. S.R. 3.64/5. Testing of Detonators- (a) Testing of detonators shall be done at the stations/depots where stock of detonators are kept for issue to roadside stations/running staff/P. Way & other staff. The depot incharge shall be responsible for testing of detonators one from each batch at least once in 12 months. Proper record of testing done should be maintained. (b) The normal shelf life of detonators manufactured during 2010 and thereafter shall be 5 years. Reckoned from the year of its manufacture. It can however, be extended further for a maximum of 3 more years provided that detonators which are more than 5 years old are effective. For this purpose two detonators of each batch lot should be tested at the end of 5 years and if the result of these tests are satisfactory life of the detonators of that batch should be extended by one more year, on expiry of which similar tests should be conducted annually to

extend the life of detonators of that particular batch/lot upto a maximum of 8 years from the year of manufacture. Other than this, which are manufactured before 2010, the life of detonators will remain 7 years from the month of manufacture. (c) Detonators bearing any sign of rust on the surface or appearing unsatisfactory in any way or those failing to explode during tests or in actual working shall be promptly returned to the issuing officer for replacement. (d) While testing detonators from a plastic case, the one which is the oldest as regards the date of manufacture should be used. (e) Detonators shall be tested under an empty wagon moving at 8 to 11 Kms. per hour. The empty wagon must be propelled by a electric or diesel locomotive. Test shall not be carried out by any person below the rank of a Traffic Inspector, SE (P. Way), Loco Inspector, Loco Foreman. Station Master at Guard's headquarter station are, however, authorised to test detonators in their charge or issued by them. Care must be taken to ensure that test is not conducted in a crowded locality or near a level crossing where splinters from detonators may cause injury. (f) Excepting the Crew of the locomotive employed in the test, no person shall be allowed to remain within a radius of 45 meters of the detonator which is being tested. The engine crew shall also keep themselves well within the cab while passing over the detonators. The official-in-charge of the testing operation, shall before commencement of the operation, be responsible for posting sufficient men to ensure that no person encroaches upon the 45 meters safety radius until the test is completed. (g) The staff shall, while observing the safety radius of 45 meters, place them as far as possible in rear of the locomotive of train or wagon passing over the detonators as it has been found in practice that splinters from detonators seldom fly in a direction towards the rear of the wheel which explodes them. (h) A record of the number of detonators tested as also the result of test shall be maintained in a special register kept for the purpose at the place of testing. (i) After the test is completed, results of the tests shall be communicated to the issuing officer of the detonators, by the Official conducting the test. (j) The staff in possession of detonators must not make any improper use of them.

62 (ii) (iii) (iv) (v) (vi) *crzzrere crzzrere* I \$1 AIR—AIN a-FtR 3.65. • \$iel 3.66 (ATMIT) - m.m. 3.65 I 3.67. GINT 3.65 3.65 t:rruere, 3.65 GINT QQ I 63 CHAPTER-III S.R. 3.64/6.

Important Warning SIGNALS (a) In no case the detonators should be buried or thrown in water at such places where they could be recovered by human beings. (b) In case when at a station the fog signals are totally exhausted the following action should be taken:- (i) Fog signalman must remain posted at the fog signal post with hand signal lamp showing white light to the Loco pilot so as to attract his attention. The fog Signalman should continuously h-y to draw the attention of the Loco Pilot by all means at his command including by lighting of mashals and shouting etc. (ii) Loco Pilot should be more vigilant and on the look out for the fog signalman. (iii) Running of the trains be monitored by utilizing Inspectors of all concerned departments during the period when normally dense fog is expected in a particular area. (iv) Control staff should frequently check the alertness of the staff and ensure that they are awake and cautious. (v) Use of loop lines for stabling of loads be avoided and trains should be passed on main lines as far as practicable. (vi) Loco Pilots should make use of the inter station distances indicated in the working time table along with the kilometer reading on their speedometers while passing stations so that they may control the speed of their trains.

G. Signals to warn Incoming train of danger ahead 3.65 Description: The signals to be used to warn the Incoming train of an obstruction shall be notified by the Railway under special Instructions. However, a red flashing hand signal lamp at night or a red flag during day will normally be used for this purpose. S.R. 3.65/1. In case of any obstruction, a red flashing hand signal at night or a red flag during day will normally be used for warning the Loco Pilot of an approaching train.

3.66 Use of Warning Signals :- When it becomes necessary to protect an obstruction in a block section, a signal as specified by special instructions under GR 3.65 may be used, while the Railway Servant proceeds to place detonators.

3.67 Knowledge and possession of Warning signals :- (1) (a) All concerned Railway servants on whom this duty is laid by the Railway Administration shall keep a stock of such signal (s) as specified by Special instructions under GR 3.65. (b) The Railway Administration shall be responsible for the supply, renewal, and safe custody of such signals as specified by Special instructions under GR 3.65 and for ensuring that their use is properly understood. (c) The Railway Administration shall supply every Guard, Loco Pilot, Patrolman and Gateman working on the Double or Multiple line, Ghat, Suburban or Automatic Block Territories with such signal (s) as specified by special Instructions under GR 3.65.

63 2. 3. 3.68. 3.65 GINT 3.65 GINT t. 69 3.70 -e-u-d -a-ti (ii) (iii) (iv) I zrr R-2.fi \$1 arqN-2TT I '.3# \$1 64 CHAPTER-III SIGNALS (2) Every Railway servant concerned with the use of signals as specified by special instructions under GR 3.65 shall have a correct knowledge of their use and keep them ready for

immediate use. (3) Every Railway servant shall see that the Railway servants in his charge concerned with the use of warning signals as specified by Special instructions under GR. 3.65, have a correct knowledge of their use. H. Defective fixed Signals and Points 3.68. Duties of Station Master generally when a signal is defective - (1) As soon as a Station Master becomes aware that any signal has become defective or has ceased to work properly, he shall- (a) immediately arrange to place the signal at 'On' if it is not already in that position; (b) depute competent railway servants with such hand signals and detonators as may be required to give signals at the foot of the defective signal until he is satisfied that such signal has been put into proper working order; (c) take action in accordance with Rules 3.69 and 3.70 as may be required for movement of trains past the defective signals; and (d) report the occurrence to the railway servant responsible for the upkeep of the signals, and if the section is controlled, the controller also. (2) When the Station Master receives information of any defect in a signals not pertaining to his station from the Loco Pilot or the Guard or any other railway servant he shall immediately inform the Station Master concerned of the fact and keep the controller advised, where the section is controlled. (3) In case of signals becoming defective at stations situated on Centralised Traffic Control territories, the Centralised Traffic Control Operator on becoming aware of such defects, shall take action in accordance with special instructions. (a) At an interlocked station provided with a cabin or cabins, should it be found even after S.R. 3.68/1. due check that a signal governing the movement of a train cannot be taken 'OFF' the Station Master on duty shall be informed. He shall arrange to have it checked by the Cabinman/Cabin Master concerned or, where there is a Cabin S.M. by the latter, whether :- (i) all relevant points have been correctly set; (ii) all relevant facing points have been locked; (iii) interlocked level crossing gates, if any, have been closed and locked; (iv) correct slot has been given or received; (v) the relevant line is clear and free from obstructions. If after these checks, the concerned signals come 'OFF' normal working shall be resumed, with the permission of the Station Master. If a signal still does not come 'OFF' the Cabinman/Cabin Master or cabin A.S.M. as the case may be, shall then ascertain whether there is a gap in any of the points caused by ballast or any other obstruction and arrange to remove them. If after this, the signal comes 'OFF' normal working shall be resumed with the permission of the station Master. Should, however, the signal still fails to come 'OFF' the Cabinman/Cabinmaster or the Cabin A.S.M. as the case may be, shall confirm to the Station Master on duty that the signal is defective and such advice shall be confirmed by an exchange of private numbers. (b) (i) At stations where electric point indications are provided in cabins to indicate the position of electrically detected points and in cases where such an indication does not appear in spite of correct route having been set & locked, the signal concerned should be operated by pulling its relevant lever in case of colour light or motor operated signals. If signals come 'OFF' the train should be received/despached on signals as usual. If, however, the signal fails to respond the signal should be treated as defective and reception/departure arranged as per the procedure prescribed in these rules for reception/despatch of trains on defective signals. In the case of semaphore signals provided with Electric signal reverser, if the point indication does not appear, the signal should be treated as defective and reception departure arranged as per the procedure prescribed in these rules for reception/despatch of trains on defective signals. NOTE:-The Station Working Rules of each station shall enumerate the precise signals provided with reverser or electric signal motors or colour light signal units to make the application of this procedure clear to the Cabin man. (ii) In case of electric indication of slots provided in Cabins, if electric indication of the slot fails due to failure of bulb or any other reason, the colour light or electric motor operated signal should be operated by the Cabinman by pulling its relevant lever after verifying under exchange of private numbers that the relevant slot has been given. If the signal comes off, the train should be received/despached on signals as usual. If, however, the signal fails to respond, the signal should be treated as defective and reception/despatch arranged as per the procedure prescribed in these rules for reception/despatch of trains on defective signals. (c) At interlocked stations where no cabin staff are posted, the Station Master on duty shall ensure the checks (mentioned in SR 3.68/1 (a)) personally or by the deputing of any competent staff. (d) At non-interlocked stations where points are fitted with key lock, the Station Master must satisfy himself personally that there is no gap in the points due to ballast etc. or any obstruction and if there is, should remove it, if this results in the signals coming 'OFF' normal working shall be resumed. At such stations the extraction of appropriate key will ensure that the points have been correctly set and locked without any gap. S.R. 3.68/2. If interlocking is in order and whenever possible,

relevant levers shall be pulled in order to obtain the security provided by the interlocking. S.R. 368/3. The Station Master on duty at the Station where any signal has become defective, shall act in accordance with G.R.3.68(a). Where it is not possible to put the signal back to 'ON' he shall arrange to have a stop hand signal exhibited continuously at the foot of the defective signal. If the signal lamp has been lit, it shall be put out until the signal is put back to 'ON'. S.R. 3.68/4. Defective interlocking-When interlocking fails or becomes defective at an interlocked station, the relevant signals shall be treated as defective. S.R. 3.68/5. A shunt signal where provided should be used for shunting operations unless it is defective. The Loco pilot will ensure that shunt signal is taken off before he passes it except in the case he is informed that it is defective. In such a case he will be guided by hand signal exhibited by the person in charge of shunting operations. The person-in charge of shunting operation shall ensure that all relevant points are properly set and facing points are not gaping and also the facing point locks where provided are operated locking the points. S.R.3.68/6. Reporting of Defective Signals to the Signal Maintenance Staff- (a) On receipt of information of a signal being defective the Station Master on duty shall report such defects with complete particulars either in writing or on control local phones, if any, available to the concerned Signal Maintainer/s with copy to the JE/SE (Sig.). A copy of the reports of Signal/Signals shall also be endorsed to the Tramc inspector, and the Control on controlled section. 65 (q) zrr 3.68/1 @ (ii) / 369(341) di u-l@e (iii) 45 (iv) 1 3.68 3.70 uT g—qae di (vi) I I "34Tv," "3-fiTF" '34TH' 66 CHAPTER-III SIGNALS (b) (c) (d) The Station Master shall also make an entry of the failure immediately in the Signal Failure Register. If the defect has been put right and certified by the person attending to the fault, the Station Master should satisfy himself, if necessary, by demonstration by the person attending to the fault. Thereafter, the Station Master and the person attending to the fault shall jointly issue a rectification message to all concerned and make an entry in the Signal Failure Register. Loco Pilots and Guards must note on their journals respectively every case of signals being out of order or working improperly stating the name of the Station or Cabin and the description of the signal, Loco Pilot must record P. Way, S&T, OHE etc. failure in the concerned register with Lobby Supervisor while signing off. S.R. 3.68/7. (a) (b) On Panel interlocking wherever the signal does not come 'off' but the route light appears on the panel then all the relevant points are to be taken as correctly set and all relevant facing points as locked, thereby fulfilling the requirement of SR 3.68/1(a). Reception /dispatch arranged as per the procedure laid down for reception/ dispatch of trains on defective signals. In Mechanical Interlocking when the point and lock levers are pulled properly, the proper setting of the point and also the locking of the relevant facing point can be taken as confirmed; Where the light indication of the point i.e. for the 'N' or 'R' aspect has been provided in the ASM's office/cabin and the light indication of the point is in working order, in case of failure of signal the relevant point may be taken to be correctly set and facing point locked. (ii) (iii) (iv) (v) (vi) When the authority to pass a defective signal on form T/369 (3b) is issued by a person other than the one who has ensured the correct setting and locking of points detected by defective signal such authority shall not be issued unless Private Numbers have been exchanged between them to confirm the correct setting of the route. The Station Working Rules shall lay down the specific responsibility of the various staff in this regard. The taking 'Off of the signal arm to half a right angle (i.e. 45 degree) is the minimum required and a signal arm at an inclination less than this should be treated as defective and considered as in the 'On' position. Station staff must not try to take 'Off defective signal by pulling the wire by hand, as it is a dangerous practice and defeats the object of interlocking the signals. Inspection of Signal Glass- The Railway servant, who lights the signal, shall inspect the roundels for cracks or breakages and if any defect is noticed, immediately report the matter to Station Master on duty who will enter the report in the station diary. Such signals should be treated as defective during the period they are required to be kept burning and action shall be taken in accordance with the procedure prescribed in General Rules 3.68 to 3.70 and Subsidiary Rules made there under provided further that if there is any crack or breakage in the red roundel, the signal must not be allowed to remain lit and a railwayman shall be deputed to show a danger hand signal to the approaching trains from the foot of the signal. In the event of storms, heavy winds etc. the Station Master on duty should inspect the signals immediately thereafter, note the condition of lenses, and take further steps as necessary. S.R. 3.68/8. Signals Conflicting- (a) Conflicting signals should be treated as defective and as such equivalent to danger signals, for example, if the reception signals for a particular line are 'Off' and departure signals for the same line for the opposite direction are also 'Off' then all these should be treated as conflicting and hence defective. Similarly when the signal is 'Off' while the stop signals are 'On'

the signal should be treated as conflicting and hence defective. 66 '34Tv,' '34M 3.80 (ii) "341V," *ZITI) - 3.69. (1) qī•æ ur (8b1) OF") aarg•rrr. \$1 q•rvfi Q, '3TIA' R-Q* 312.1fq— m. 3.68 (1) (u) GINT '31Td' (IT) '31115' (4) (Bbl) 67 CHAPTER-III SIGNALS (b) In case the Outer signal is 'Off' and the Home Signal is in the "ON" position the Loco Pilot should bring his train to a stand at the Outer Signal. If, However, due to inadequate sighting distance of the Home signal, the train cannot be brought to a stop at the Outer Signal, the Loco Pilot must bring his train to stop short of Advance Starting Signal or Shunting Limit Board for the opposite direction in case of single line stations and short of Home signal in the case of double line stations, and he should not draw up to the Home signal until that signal is taken "Off" or unless he is authorised to pass it in the 'On' position, in accordance with G.R. 3.80. (c) The following signals are inter-related signals- (1) Reception signals- Outer, Home, Routing Home (2) Departure Signals- Starter and intermediate Starter (if provided), Advance Starter, Hence, when one or more signals of a group of interrelated signals are defective, the Loco Pilot of a train may be given a single written authority for passing all the interrelated signals, However, in doing this, advantage of detection by taking 'Off' signals, which are in order, should not be 3.69. Duties of Station Master when approach stop signal is defective - (1) (2) (3) In the event of an Outer or a Home or a Routing signal becoming defective, the Station Master shall advise the station in rear and the nominated station in rear, save in a case where a signal post telephone or a Calling-on signal is provided on the defective signal, in order that the Loco Pilots of approaching trains may be warned of the defective signal and issued a written authority to pass such signal on receipt of Proceed hand signal at the foot of the defective signal. The Station Master in rear as referred to in sub-rule (1), on receiving the advice of the defective signal, shall immediately acknowledge it and advise the station Master of the station where the signal has become defective, of the number of the first train which will be notified of the defective signal and again on receipt of the advice that the defective signal has been put into proper working order, shall advise the number of the train so notified last. The Station Master of the station where the signal has become defective shall, before authorising a train to pass the defective signal ensure that the conditions for taking 'Off' that signal has been fulfilled. He shall then authorise the Loco Pilot to pass the defective signal at 'On' in one of the following manners- (a) (b) (c) (d) When the Loco Pilot of an approaching train has been advised of the defective signal at a station in rear-by deputing a competent railway servant in uniform under clause (b) of sub-rule (1) of Rule 3.68, to exhibit proceed hand signal at the foot of the defective signal to the approaching train. In such cases, the Station Master shall not give Line Clear to the station in rear unless the conditions for taking 'Off' the signal which has become defective, have been complied with; or When the Loco Pilot of an approaching train has not been advised of the defective signal at a station in rear-by having written authority, authorising the Loco Pilot to pass the defective signal at 'On' delivered at the foot of the defective signal through a competent railway servant; or By taking 'Off' the Calling on signal where provided; or By authorising the Loco Pilot to pass the defective signal at 'On' over the signal post telephone where provided, in accordance with special instructions. (4) When the Home signal becomes defective, the Outer shall also be deemed to be out of order and the procedure prescribed in sub-rules (1), (2) and (3) shall be followed. 67 1. (341Seq). 4.09-1 "3TTt (ii) / 369(1) / 409 a-rr \$1 a-TQ / 8i I g•rq crrzrere 3.69/2. (.3TT<a) - (arrg•æ) "3TF" g) crrzrere \$1 '3113' t/ 369(30 crrzrere crrzrere Atre•r '31115' I R-äbe 68 CHAPTER-III S.R. 3.69/1.

Defective Outer, Home and Routing Signals- SIGNALS (a) In the event of an Outer or a Home or a Routing Signal/Signals of a station becoming defective, the Station Master on duty shall advise the Station in rear, and also the Station Master of the "Notice Station" in rear supported by a private number, giving the particulars of signal/signals in detail. He will again advise the station Master in the rear and the "Notice station" when the signals are rectified. (b) The Station Master of the station in rear and the "Notice Station" in rear, on receipt of advice of the defective signal/signals supported by a private number, shall immediately acknowledge it supported by private number, specifying the number of the first train which will be notified regarding the defective signal/signals. Again on receipt of advice that the defective signal/signals has/have been put into proper working order, shall advise the number of the last train so notified. (c) (i) The Station Master of the station in rear will issue written authority to the Loco Pilot of each train to pass such defective signal/signals on receipt of 'proceed' hand signal at the foot of the defective signal/signals, till he receives advice of the defective signal/Signals had been rectified and put into proper working order, supported by a private number. In case of trains not scheduled to stop at the station in rear, the Written authority shall be issued by the Station Master of the Notice Station' in rear till

he receives advice of the defective signal/signals had been rectified and put into proper working order, supported by a private number. In this authority the description of the signal/signals and the name of the station must be clearly given in full. (ii) In Colour light signalling territory, in the event of approach signal

(s) going blank (no light etc.) due to power failure or otherwise, the Station Master of station in rear/nominated station will issue T/409 apart from T/369(1), advising the Loco Pilot for the absence of any light on the signal(s) and therefore he should keep a good vigil and look out for the hand signal of Pointsman/Porter at the foot of defective signal and obey it. (d) In case, a train has left the station in rear with a written authority to pass the defective signal/signals and in the mean while such signal/signals has/have been put into proper working order, the station Master concerned must follow the same procedure as if the signal/signals is/are still defective, till the train as notified last has arrived. In case the advice was

received at the Notice Station' the Loco Pilot can be advised at a convenient station that the signal concerned has been set right. This advice should be in writing. S.R. 3.69/2. Defective outer Signal- When the Outer Signal is defective, the Home Signal must be kept in the 'On' position and the Station Master on duty will take the following action- (a) When the Loco Pilot of an approaching train has been advised at the previous station - The Station Master will depute a Pointsman/Porter in uniform with hand signals to the Outer Signal after ensuring that the conditions for taking 'Off the Outer signal are fulfilled. The Pointsman/Porter will show hand signal, the train pass the defective outer, and the Home Signal will be taken 'Off for the admission of the train. (b) When the Loco Pilot has not been advised at the previous station - The Station Master, after ensuring that the conditions for taking 'Off the Outer are fulfilled will sent an authority on Form T/369(3b) to the Loco Pilot to pass the Outer signal at 'On' with the Pointsman/Porter in uniform who will hand over this authority to the Loco Pilot and pilot the train up to the Home Signal, and on the train coming to a stand, the Home signal will be taken 'Off for its admission. NOTE: When there is only an Outer and no Home signal, the train will be piloted up to the station where

the train usually comes to a stand. 68 a-F R-2. fi I g; '31115' a-TF (i) crzrere crzrere (ii) I -fit-a-ra I crzrere / dii I '3117' / 369(341) I / 369(3t) (ii) / 1 g•zi / uh-éq / trzrere I 3.70. (2) (æ•rq) — (e-rég) 3.13

(2) «ré•q) GINT QQ «ré•q) 69 CHAPTER-III SIGNALS S.R.3.69/3. Defective Home Signal - Either Home signal or both the Home and Outer Signals are out of order, both must be kept in the 'On' position and the Station Master on duty must take following action- (a) The Station Master will sent the Pointsman/Porter in uniform with hand signals at the Outer signal. After ensuring that the condition for taking 'Off' the Home and Outer signals are fulfilled the pointsman/Porter deputed at Outer signal must be provided with T/369(3b) signed by the station Master on duty for delivering the same to the Loco Pilot to pass the Outer and Home signals in the 'On' position. Only when the train comes to a stand at the Outer signal the Pointsman/Porter will handover the authority T/369(3b) and exhibit a green hand signal to the Loco Pilot. The Loco Pilot having secured the written authority on form T/369/(3b) and finding the green hand signal from the Pointsman/Porter at Outer signal shall proceed to the Station past the Outer and Home signals. (b) At a station where the Home signal is the first stop signal- (i) When the Loco Pilot has been advised at a previous station- The Station Master on duty after ensuring that the, conditions for taking 'Off the Home signal are fulfilled shall depute a pointsman/Porter in uniform at the foot of the Home signal with hand signals. The Pointsman/Porter deputed at the foot of Home signal shall exhibit green signal to the Loco Pilot of an approaching train to proceed to the Station after ensuring correct and locking of points (route). (ii) When the Loco Pilot has not been advised at a previous station - The Station Master on duty after ensuring that the conditions for taking 'Off the Home signal are fulfilled shall depute a Pointsman / Porter in uniform at the foot of the Home signal. The Pointsman/Porter deputed shall be provided with T/369(3b) to pass the Home signal in 'On' position only after the train comes to stand at the Home signal the Pointsman/Porter will hand over the authority T/369(3b) and exhibit a green hand signal to the Loco Pilot. The Loco Pilot having secured the written authority on form T/369(3b) and finding the green hand signal from the pointsman/Porter at Home signal shall proceed to the station passing the Home signal. S.R.

3.69/4. Defective Routing Signal- Routing signal may or may not be interlocked with Home signal, if interlocked, the Outer and Home signals should also be deemed to be defective. (i) In case the Routing signal is interlocked with the Home signal- Station Master on duty, after ensuring that conditions for taking 'Off the Routing signal are fulfilled, will send one Pointsman/Porter in uniform with hand signal and prescribed authority T/369(3b) to pass defective Outer, Home and Routing signal at 'On' at the foot of Outer signal. The T/369(3b) will be handed over to the Loco Pilot and after stopping train at Outer signal

and the train will be piloted up to the station. (ii) In case Routing signal is not interlocked with Home signal- Station Master on duty, after ensuring that conditions for taking 'Off the Routing signal are fulfilled, will, send one Pointsman/Porter in uniform with hand signal and prescribed authority T/369(3b) to pass defective Routing signal at 'On' at the foot of Routing signal, Outer and Home signal will be taken 'Off' after stopping train at Outer signal. T/369(3b) will be handed over by Pointsman/Porter to pass Routing signal at 'On' at the foot of Routing signal and train will be piloted up to the station. 3.70. Duties of Station Master when a departure Stop signal is defective- (1) In the event of a Starter becoming defective, the Station Master may authorise the Loco Pilot to pass such signal by a written authority which shall be handed over to the Loco Pilot at the station where the defective signal is located and in addition thereto, a competent railway servant shall show hand signals to the departing train in accordance with the instructions of the Station Master or by taking 'Off the Calling-on signal, if provided under sub-rule (2) of Rule 3.13, after the train has been brought to a stand at the defective signal. (2) In the event of an advanced Starter becoming defective, hand signals may be dispensed with and the Station Master may authorise the Loco Pilot to pass such signal by a written authority, which shall be handed over to the Loco Pilot at station, where the defective signal is located: Provided that in exceptional circumstances where, under approved special instructions, an Advanced Starter Protects any points, hand signals shall not be dispensed with. 69 (æ•rq) (RBI) '3fitF' '34TH' a-fi I cra s:rrq / 369(341) 3.68 / 7 •e I 3.68 / 7 g•rq / 369(30 I / 369(30 GGi R-2.fi aq frzrr 70 CHAPTER-III SIGNALS (3) For the Purpose of handing over the written authority mentioned in sub-rules (1) and (2), the train shall be stopped at the station where the defective signal is located. The written authority to pass a defective departure stop signal shall not be handed over to the Loco Pilot unless all the conditions for taking 'Off such signal have been fulfilled. (4) Where under approved special instructions a Calling-On signal has been provided below a departure Stop signal, other than the last Stop signal, the Calling-on signal shall not be taken 'Off unless the conditions for taking 'Off the departure Stop signal above it have been fulfilled. S.R. 3.70/1. Defective Starter signal- The train must be brought to a stand at the station and the Loco Pilot will then be given an authority on Form T/369/(3b) to pass the signal at 'On'. A Pointsman/Porter shall also be deputed at the starting signal concerned to exhibit a green hand signal to the Loco Pilot. On receipt of the authority and green hand signal from the Pointsman/Porter at the foot of the Starting signal, the Loco Pilot will start his train. When a Starter Signal is the last Stop signal, Station Master shall mention clearly in authority on Form T/369(3b) that 'Line Clear' has been obtained from the station in advance, quoting the Private Number received from the station in advance in the space provided. The Station Master shall personally verify the correct setting and locking of the route as per S.R. 3.68/7 before he parts with the authority on Form T/369(3b) to be delivered to the Loco Pilot. At a station where cabin ASM/Cabin Master/Cabinman is made responsible for the verification of the correct setting and locking of the route, as per the provision contained in S.R.3.68/7, the authority on Form T/369(3b) shall not be issued unless the Station Master has been advised to this effect under the exchange of Private Numbers. S.R. 3.70/2. (a) When the Advanced Starter becomes defective, all trains must be stopped at the Station and an authority to pass the signal at 'ON' on Form T/369(3b) shall be handed over to the Loco Pilot, clearly mentioning in the authority that 'Line Clear' has been obtained from the station in advance and quoting the Private Number received from the station in advance in the space provided. The authority to pass the signal in the 'ON' position shall not be delivered to Loco Pilot unless the points, if any, detected by the Signal have been correctly set and locked and personally verified by the station Master/Cabin A. S .M ./Cabinmaster/Cabinman as per S .R. 3.68/7. (b) Advanced Starter signal is defective and IBS is working- In the event Advance Starter signal is defective at a station provided with IBS ahead in working condition, all the trains must be stopped at the station and the station Master/Cabin ASM of that station after ensuring that Block Section between Advanced Starter and IBS is clear with the help of clear indication of axle counter/track circuit, shall issue an authority to the Loco Pilot to pass the advance Starter signal at 'ON', on prescribed form T/369(3b) filling up the number of defective Advance Starter in the proper column and quoting his private number in the private No. Column and will indicate the word 'You are authorised to proceed up to IBS and further follow its aspect'. (c) Both Advanced Starter and IBS are defective- In the event both Advanced Starter and IBS are defective then both Block sections to be treated as a single block section. All trains must be stopped at the station (where Advanced Starter is defective) and an authority, to pass Advanced Starter signal and Intermediate Block Signal at 'On' on form T/369(3b) will be handed over to the Loco Pilot, clearly mentioning in the authority that 'Line Clear' has

been obtained from the station in advance and quoting the private no. received from the station in advance, in the space provided. 70 (u) €Tér A' gel \$1 T/369(3h) I 10 \$1 9.02 3.61 / 2 I 3.70 / 3. '3-fiTF \$1 I (Aftt) @€e) : 3.71. (1) O (A-MN) R-2.rm (æ•rq) @Fig) 'G' (€111) (A-MN) \$1 I (2) (4140 (erq) a-IA' 3.75 I / 1. '34Tv,' '34TH' GTT / GTItrr I crrzrere 71 CHAPTER-III SIGNALS (d) Advanced starter signal working in Automatic Block System- In the event the white illuminated letter 'A' of the Advanced starter signal working in Automatic Block system is extinguished. the signal will be treated as manual stop signal. In such a situation, if signal is 'On' the Station Master concerned shall issue written authority T/369(3b), dispensing with endorsement of private number, to the Loco Pilot to pass the signal at 'On' after ensuring that section is clear up to next automatic signal and adequate distance beyond it. The Loco Pilot shall proceed at speed not exceeding 10 KMPH till the foot of next automatic signal and thereafter be guided by the aspect of this signal observing GR. 9.02&SR. 3.61/2 (a). S.R.3.70/3. In the event of the last Stop signal, which is also the first Stop signal of the block Station in advance, becoming defective the Station Master shall not issue the authority to pass the last stop signal at 'ON' unless the station Master of the block station in advance has complied with the conditions for taking 'OFF' this signal. Such an assurance should be supported by a separate Private Number. 3.71. Warner or Distant signals defective in the 'Off position- (1) (a) If a Warner signal on a post by itself or a Distant signal is out of order and cannot be kept in the 'On' position, a Stop hand signal shall be shown at the foot of the signal. At night, the light or lights of the signal shall be extinguished and the train, after being first brought to a stand, may then be hand-signalled past the signal. Advice of the defective signal shall be given to the Loco Pilot of trains at the Station in rear warning them to stop at such signal. (b) If a Warner signal placed below a stop signal becomes defective and cannot be kept in the 'On' position, the stop signal above it shall be treated as defective and by night the light of the Warner signal shall be extinguished. (2) If the Warner or Distant Signal of an Intermediate Block Post is defective and cannot be kept in the 'On' position, the Intermediate Block Stop signal shall also be kept at 'On' and treated as defective and action taken as per Rule 3.75. S.R.3.71 / 1 . (a) When a Warner/Distant Signal in Semaphore Signalling fails in 'Off position and cannot be kept at 'On' the Station Master shall immediately advise the Station Master of the station immediately in rear exchanging private Numbers. 'Line Clear' shall not be granted for a train unless a Pointsman/Porter has been deputed at the foot of defective Warner/Distant Signal to exhibit danger signal to approaching trains. In case a Warner signal is placed below a fixed green light, the fixed green light shall also be extinguished. (b) The Station Master of the station immediately in rear of the station where defective Warner/Distant is located shall stop all trains and give a written advice to the Loco Pilot and obtain his acknowledgement. The Loco Pilot of the train who has been so advised shall bring his train to stop at the foot of the signal and proceed only after he has been hand signalled past by the pointsman/porter. S.R.3.71/2 When a Warner/Distant signal of gate Stop signal has become defective in the 'Off position and cannot be kept at 'On', signal light shall be extinguished and the Gateman shall intimate this fact to the station Master of the Station having telephonic communication with level crossing gate. The Station Master, on receipt of this information shall advise the Station of the Station immediately in rear exchanging Private Numbers, to stop trains and issue caution orders to the Loco Pilots of each train to stop short of the defective warner/Distant Signal and further act on the aspect of the gate Stop signal ahead. 71 zrrerr (itra EFIfi#T) crrzrere («rq) (41<0 - 3.72. (Aftt) gg (€BI) (*ZTII) (41<0 (erq) I 3.73. (2) (3) 3.74 (RI-q) — (*ZTII) ("G")) "Riu) '\$1' ("G") (qrfi) GGi (IT) (*ZTII) \$1 I (RBI) Rui-é 72 CHAPTER-III SIGNALS When there is no telephone communication between the gate and any of the stations on either side or when the telephone is out of order, the Gateman shall keep the gate stop signal at 'On' and the level crossing closed and secured against the road traffic. The road traffic may be pass only when he has ensured that no train is approaching the level crossing. For the first approaching train, the Gateman, after closing and securing the level crossing against road traffic, shall proceed to the foot of the defective Warner/Distant signal and display hand danger signal to the Loco Pilot of approaching train After the train has been brought to a halt the Gateman shall advise the Loco Pilot of the circumstances and Pilot the train pass the level crossing gate. The Loco Pilot of the first train shall stop at the next station and advise the station Master about the nature of signal defect, who shall take action as given above. The Caution Order shall continue to be issued till the defect is rectified. 3.72. Warner not be used when Stop signal is defective Whenever a Stop signal is defective or cases to work properly at a station provided with Warners, the Warner applying to the line to which the defective Stop signal applies shall be kept at 'On'

until the defective Stop signal is rectified. 3.73. Passing of a gate Stop signal at 'On' (1) When a Loco Pilot finds a gate Stop signal at 'On' he shall sound the prescribed code of whistle and bring his train to a stop in rear of the signal. (2) (a) If the gate Stop signal is provided with a 'G' marker, the Loco Pilot shall wait the signal for one minute by day and two minutes by night, and if the signal is not taken 'Off' within this period, he may draw his train ahead cautiously up to the level crossing, and (b) If the Gateman is available and exhibiting hand signals, proceed further past the gate cautiously, or (c) If the Gateman is not available, or, is available but not exhibiting hand signals, he shall stop short of the level crossing, where he shall then be hand signalled past the gate by the Gateman, if there is one, or in the absence of a Gateman, by one of the members of the engine crew of the train after ascertaining that the gates are closed against road traffic. (3) If the Loco finds, after stopping at signal, that there is no 'G' marker, he shall proceed further only in accordance with the procedure laid down under special instructions. 3.74. Absence of a fixed signal or a signal without a light- (1) (a) If there is no fixed signal at a place where a fixed signal is ordinarily shown, or (b) if the light of a signal is not burning when it should, or (c) if a white light is shown in place of a colour light, or (d) if the aspect of a signal is misleading or imperfectly shown, or (e) if more than one aspect is displayed, the Loco Pilot shall act as if the signal was showing its most restrictive aspect: Provided that during night, if in the case of a semaphore Stop signal for approaching trains only, the Loco Pilot finds the signal light extinguished he shall bring his train to a stop at such signal. If he finds that the day aspect of such signal is clearly visible and is fulfilled that the signal is in the 'Off' position, he shall proceed past it up to the station cautiously at a restricted speed obeying all intermediate Stop signals, if any, relating to him, and report the matter to the Station Master for necessary action. 72 (2) after ('P') (H*) (qr) (e) (3.74/1. I g•rq 60 FT I 60 (i) 369,380 3.81 (ii) 3.74/2. *R" crzrere I 3.75. (\$•vfrÄe) (e-rq) :— (1) (RI-q) (2) («vtme) (RBI) 15 Eid 8 Eid \$1 Rqie I GINT R-Q* 3.75/1. — 2; 3-+441 am—em •e crzrere \$1 a-fi s:rrq I crzrere 73 CHAPTER-III SIGNALS (2) At stations equipped with a colour light signal provided with a 'P' marker, the Loco Pilot shall bring his train to a stand if it does not show any light or shows as imperfect aspect and having fulfilled himself that the signal is provided with 'P' marker, shall proceed preparing to stop at the next stop signal and shall be guided further by its aspect. S.R. 3.74/1(a) When a Loco Pilot comes across any signal which is flickering/bobbing, he should consider that signal to be showing the most restrictive aspect and bring his train to a stop short of it. If the signal assumes steady aspect and remains steady for 60 seconds, the Loco Pilot should act according to the steady aspect so shown. If, however, the signal continues to flicker/bob and does not assume the steady aspect for 60 seconds, he should treat the signal as defective and take further action accordingly. (b) When a Loco Pilot comes across any signal which is showing more than one aspect simultaneously, he shall take action as detailed below:- (i) In case of a manual stop signal, he shall observe GR & SR 3.69, 3.80, 3.81 treating the signal as defective. (ii) In case of automatic signal, he shall obey the most restrictive aspect. S.R. 3.74/2. The Repeating signal, which is distinguished by letter 'R' can be passed cautiously even when the signal arm or light is imperfectly shown, or signal light is extinguished. The Loco Pilot shall act further on the aspect of the signal ahead. 3.75. Passing of Intermediate Block stop signal at 'On' (1) When a Loco Pilot finds an Intermediate Block Stop Signal at 'On', he shall stop his train in rear of the signal and contact the Station Master of the block station in rear on the telephone, if provided on the signal post. (2) The Station Master shall authorise the Loco Pilot to pass the Intermediate Block Stop Signal, if defective as prescribed by special instructions. (3) If the telephone is not provided or is out of order, the Loco Pilot after waiting for 5 minutes at the signal shall pass it at 'On' and proceed cautiously and be prepared to stop short of any obstruction, at a speed not exceeding 15 kilometers an hour if he has a good view of the line ahead otherwise at a speed not exceeding 8 kilometers an hour and report the failure to the Station Master at the block station ahead. (4) The Station Master of the block stations working the intermediate Block stop signal on becoming aware that such a signal is defective shall, before dispatching a train, treat the entire section up to the block station immediately ahead of the Intermediate Block Post as one block section and issue a written authority to the Loco Pilot to pass the defective intermediate Block stop signal at 'On' without stopping at the signal, in accordance with the procedure prescribed by special instructions. S.R.3.75/1 .Passing Intermediate Block Stop signal at 'On'- When a Loco Pilot finds an intermediate Block Stop signal at 'On', he shall bring his train to a stop in rear of the signal, advise the Guard of the fact by sounding one long continuous whistle at distinct intervals as well as on walkie-talkie and contact the Station Master of the block station in rear, on the telephone provided for the purpose on the signal post.

S.R. 3.75/2. If the Station Master, on being contacted on telephone by the Loco Pilot finds that the signal is defective, he shall, after obtaining 'Line clear' for the train from the station in advance, authorise the Loco Pilot on the telephone to pass the Intermediate Block Stop signal at 'On' and enter the block section ahead. He shall also advise the Loco Pilot, under which he had received 'Line Clear' from the station in advance.

The Loco Pilot will note this Private Number in his Memo Book. 73 R-2. fi \$1 24 ' 15 10 y Ei. crgrere 1 crzrere 3.75/4. q-g-ä. '31%' R-2. fi s:rrq crzrere I 3.76. 3.77. (ql\$d) : (2) (mte) (mrRiu) (ql\$d) 2. zrr sri I di (gqT) I uzlfi 74 CHAPTER-III SIGNALS S.R. 3.75/3. If, however, the telephone provided at the

Intermediate Block Stop signal post, is out of order and the Loco Pilot is unable to contact the station in rear, he shall wait for 5 minutes at the signal and if within this period the signal is not taken 'OFF' he may, after advising the Guard of this fact by sounding one long whistle which may be repeated as necessary and

after exchanging all-right signal with him, pass the Intermediate Block Stop signal at 'On' and proceed cautiously into the block section ahead. When such a signal is passed in this manner, the speed of the train shall not exceed 15 KMPH if the visibility is good. Where, owing to any reason, the line ahead cannot be seen clearly, the Loco Pilot shall proceed at a very slow speed, which shall under no circumstances exceed

10 KMPH. Loco Pilot shall be extremely vigilant and continue to proceed cautiously till he reaches the foot of next stop signal. Even if that signal is 'Off' the Loco Pilot shall continue to look out for any possible obstruction short of the same and will act upon its indication only after he has reached it. After being

received at the block station ahead, the Loco Pilot shall report the failure of the signal/the telephone, as the case may be, to the Station Master. S.R. 3.75/4. (a) However, if the Station Master of the block station immediately in rear of an Intermediate Block Stop Signal is aware that such a signal is defective, he shall, before dispatching a train, obtain 'Line Clear' for the block section between the intermediate Block Stop signal and the block station in advance and then issue a written authority to the Loco Pilot to pass the Intermediate Block Stop signal ahead at 'On' without stopping at the signal. An endorsement shall be made

on such an authority that 'Line Clear' for the block section up to next station has been obtained under Private Number, quoting the Private Number so obtained from the station Master of the block station in advance. (b) The Station Master of the block station working the intermediate block stop signal shall not despatch the third train till such time complete arrival of the first train has been received from the block station in advance. Note:- On those sections, where due to gradients and other local conditions, the Loco Pilot cannot leave the engine. In such cases the duties of the Loco Pilot will devolve upon the Asstt Loco Pilot. 3.76. Intimation to officials when defects remedied - As soon as a defective signal has been put into good working order, the Station Master shall intimate the fact to the officials who were advised of its being

defective. 3.77. Defective or damaged points etc. (1) Whenever points, crossings or guardrails are defective or damaged, the railway servant in charge of operation of points shall protect them and immediately arrange to report the circumstances to the station Master. (2) The Station Master, on becoming aware of such defective or damaged points etc. shall- (a) immediately arrange to have the defect rectified by the railway servant responsible for their maintenance. (b) arrange to ensure the safe passage of trains, and (c) keep the signal or signals concerned at 'On' until the defect is rectified. S.R. 3.77/1.

Defective Points - On receipt of information that points are defective or cannot for any reason be fully operated, the SM, or the Cabin ASM/Cabin Master must normalise the signals and points concerned and attempt to re-operate them. If the defect still persists, and S&T staff responsible for the maintenance of

S&T gears are available, they must be promptly advised. Where, however, such S&T staff are not available, he must personally inspect the points to find out the cause and remedy the defect, if he can. If he cannot, he must promptly advise " All Concerned. " 74 3.77 / 2. — 3.77 / 3. — a-fi 3.78. (2) (3) (4) (5) e), 1.5 \$1 R*qié ur I ur \$1 tram, Rum *iei4 10 crzrere 75 CHAPTER-III SIGNALS S.R. 3.77/2. Damaged

Points- The Station Master must examine the damaged points immediately and take steps to prevent any movement over the damaged track until the defect has been rectified. S.R. 3.77/3. Trailing through Points

by Loco Pilots- [for any account a point is trailed through, the Loco Pilot must not under any circumstances back his train over the point trailed through before the defect to the point has either been rectified, or the Point been properly set and clamped for any further movement, provided that after clamping, the point does not gap. 3.78. Duties of locomotive engine crew in respect of signals- (1) (2) (3) (4) (5) (a) (b) (a) (b) (c) The Loco Pilot shall pay immediate attention to and obey every signal whether the cause of the signal being shown is known to him or not. The Loco Pilot shall in addition to giving attention to signals, be vigilant and cautious. When his engine explodes detonator(s); the Loco Pilot shall whistle

intermittently and take every possible caution including reduction of speed as necessary, so as to have the train well under his control and be able to stop short of any obstruction on the line. after proceeding 1.5 kilometers from the place where his engine exploded detonator(s), if his engine does not explode any more detonator(s), the Loco Pilot may resume authorized speed, and The Loco Pilot shall report the incident to the next station or cabin. If in consequence of fog or storm or for any other reason, the view of the signals is obstructed, the Loco Pilot shall take every possible precaution, so as to have the train well under control.

When the Loco Pilot notices a signal warning of an obstruction, except detonator(s), he will stop his train immediately and act on advice of the person exhibiting warning signal or on the basis of obstruction noticed by him. In case no further details of exhibition of warning signal are noticed after stopping for one

minute by day and two minutes by night to ascertain the location and/or cause of the warning, he shall proceed cautiously upto the next block station, keeping a sharp look out. A Loco Pilot shall acquaint himself with the system of working, location of signals and other local conditions affecting the running of trains on a section or sections of the railway over which he is to work and if he is not so acquainted with any portion of the railway over which he is to work, obtain the services of a qualified railway servant who is conversant with it to assist him. S.R.3.78/1. Non-Interlocked facing points- If the Loco Pilot finds that the outermost facing points at a Non Interlocked station are not manned by a railway servant in uniform he shall reduce speed to 10 Kms in case of goods trains and shall stop dead and proceed cautiously in case of passenger trains. On arrival of his train at the station he shall advise the station Master and the Guard of

the train and the later shall record this in the journal. S.R.3.78/2. Need for careful attention- While approaching or leaving a station. the Loco Pilot shall pay careful attention to the various signals displayed in order- (a) to distinguish between the signals applicable to train and those not applicable. (b) to observe the aspects of such signals as are applicable to his train until he passes them. Note: The Loco Pilot of a train shall be responsible for observing the position of all facing points fitted with point indicators, while arriving at or leaving a station. 75 (a) (i) (ii) a • \$ I crrzrere crrzrere I (iii) — *QT I— 2 3.79. 31F) - (æ • r q) 31F) e. (RBI) I (€111) I 31M) 3.80. (819 R-erm (2) (Bbl) 15 I 76 CHAPTER-III SIGNALS S.R.3.78/3.

Whenever due to fog, heavy dust, storm or for any exceptional circumstances the visibility of the line ahead is impaired, the Loco Pilot shall exercise caution and keep his train under control ensuring the safety of the train and of any obstruction ahead particularly at level crossing gates, if any. S.R.3.78/4.

Acquaintance of new/2nd/3rd line or section. (i) initial road learning of Loco Inspector and set of crew - one trip in day and one trip in night on a light engine. (ii) Loco Pilots of first few goods trains- One trip in day and one trip in night working a goods train with a Loco Inspector, who has done initial road learning. Thereafter, Loco Pilots of other goods trains shall be given road learning for one trip in day and one trip in night on footplate of a train with working crew. After this the Loco Pilot will be eligible for working of a train on that line/section. (iii) Loco Pilot of passenger carrying trains- Two trips in day and one trip in night

on footplate of a train with working crew. Thereafter, Loco Pilot becomes eligible for working of passenger carrying trains. Note: In order to guide the engine crew, a signal location table for the new / 2nd/3rd line/section shall be provided to the crew as a ready reference. S.R.3.78/5. In case, the Loco Pilot/Guard has not worked in the section for a long period, he shall re- acquaint himself by undertaking road learning as mentioned below- Period of absence over 3 months over one year No. of trips for road learning During day During night 3.79. Duties of Loco Pilot in respect of a Calling-on signal- The Loco

Pilot of a train shall be guided always by the indication of the stop signal below which the Calling-on signal is fixed. If this Stop Signal is at 'On' he shall bring his train to a stop. If he finds that the Calling-on Signal is taken 'Off', he shall, after bringing his train to a Stop, draw ahead with caution and be prepared to stop short of any obstruction. 3.80. Duties of Loco Pilot when an approach Stop signal is 'On' or defective- (1) The Loco Pilot of a train shall not pass an Outer, a Home or a routing signal that refers to him, when it is 'On' or defective unless - (a) he has, at a previous station, received notice in writing specifying that the signal is out of order and unless he also receives a Proceed hand signal from a railway servant in uniform at the foot of such signal; or (b) after coming to a stand, he is either given a written authority by the Station

Master to proceed to pass such signal or is authorised by a Calling on signal in the 'Off' position or is authorised by the Station Master over the signal post telephone in accordance with special instructions. (2) The Loco Pilot of a train while passing an Outer, a Home or a Routing signal, when it is 'On' or defective, shall ensure that the speed of his train does not exceed 15 Kilometers an hour. 76 zrr 3.81. (erq) : (1) (€111) qra • r, 3.13 (2) (2) (*ZTII) 15 I 3.82. — 3.83. \$1 - a-T17F-RT7 crrzrere 3.84. — GGi 1. crrzrere

crfi•e, a-Fl-err crzrere 77 CHAPTER-III SIGNALS S.R. 3.80/1. Loco Pilot's duty when an approach Stop signal is 'On' or defective- The Loco Pilot of a train must not pass a fixed approach Stop signal which refers to him when it is 'On' or defective unless- (a) he has received a written authority from the Station Master of the Station in rear or the nominated station in rear authorising him to pass such defective signal/signals and also he has received a Proceed hand signal at the foot of the defective signal/signals, or (b) after coming to a stop at the defective signal he is given a written permission on Form T/369(3b) by the Station Master on duty and is also signalled to pass by the Pointsman/Porter in uniform. 3.81. Duties of Loco Pilot when a departure Stop signal is 'On' or defective- (1) The Loco Pilot of a train shall not pass a departure Stop signal that refers to him, when it is 'On' or defective, unless his train has been brought to a stop at the station where the defective signal is situated and he is authorised to do so - (a) by a written permission from the Station Master, in addition, in the case of a Starter, Or Advanced Starter protecting points, he shall not pass such signals, when "ON" or defective. Unless he also received a "Proceed" hand signal from a duty authorised member of the station staff posted at the signal, or (b) by taking 'Off the calling-on-signal, if provided under approved special instructions, vide sub-rule (2) of Rule 3.13. (2) In the case of a last Stop signal, he shall not pass such signal, when 'On' or defective, unless he is also in possession of a proper authority to proceed under the system of working. S.R.3.8 1/1. Loco Pilot's duties when Departure signals defective or 'ON' - When departure Stop signal protecting the points is to be passed at 'On' the Loco Pilot shall ensure that while passing over such points, the speed of his train does not exceed 15 kilometers an hour. 3.82. Permission before entering on or crossing a running line No Loco Pilot shall take his engine on or across any running line until he has obtained the permission of the Station Master and has ensured himself that all the correct signals have been shown. 3.83. Assistance of the engine crew regarding signals (1) The Loco Pilot and the Assistant Loco Pilot, as the case may be, shall identify each signal affecting the movement of the train as soon as it becomes visible. They shall call out the aspects of the signals to each other. (2) The Assistant Loco Pilot shall, when not otherwise engaged, assist the Loco Pilot in exchanging signals as required. (3) The Provisions of sub-rules (1) and (2) shall, in no way, absolve the Loco Pilot of his responsibility in respect of observance of and compliance with the signals. S.R. 3.83/1 Loco Pilot and Assistant Loco Pilot shall exchange all right signal with Station Master, Cabin Master/Cabin man and Pointsman / Porter from their respective (own) side. 3.84. Duties of Loco Pilots as to signals when two or more engines are attached to train When two or more engines are attached to a train, the Loco Pilot of the leading engine shall be responsible for the observance of and compliance with the signals and the Loco Pilot, or Loco Pilots of other engine or engines shall watch for and take signals from the Loco Pilots of the leading engine, except in the cases where special instructions are issued to the contrary. S.R. 3.84/1. Loco Pilot's duties of Coupled engines- When two engines are attached to a train, the Loco Pilot of the leading engine will be in charge of the train, and will receive the Line Clear Token or Starting Permit and Caution Orders when issued. The second Loco Pilot should, however, satisfy himself that everything is in order, correct signals given, etc. The leading Loco Pilot will satisfy himself that the other Loco Pilots have noted the Caution Orders. 77 3.85. (2) R•qíé — R•qíé I 1. crzrere 78 CHAPTER-III 3.85. Reporting of defects in signals- SIGNALS (1) Should a Loco Pilot or a Guard observe that a signal is rendered imperfectly visible by branches of trees or by any other cause, or that a signal light is partially obscured or not burning brightly enough to give a clear aspect, he shall report the matter to the Station Master at the next station at which the train stops. (2) When such a report is made by a Loco Pilot or a Guard, the Station Master shall take immediate steps to advise the Station Master concerned who shall get it rectified. S.R. 3.85/1. The Loco Pilot shall report signal, track, station working, OHE and other irregularities noticed at stations or enroute in concerned register maintained in crew lobby. It will be responsibilities of crew lobby incharge to relay such abnormalities to the all concerned for immediate action. 78 4.01 . ByrfR•a i. 16.00 / 1. 16.00 16.00 zrrerr 4.02. I "34Tv," 4.03. 4.04. GINT I 30 45 GGi ,/T11é 4.04 / 2. — afr) 30 I 79 CHAPTER-IV WORKING OF TRAINS GENERALLY CHAPTER-IV WORKING OF TRAINS GENERALLY A. Timing and Running of Trains Standard time-The working of trains between stations shall be regulated by the standard 4.01. time prescribed by the Government of India, which shall be transmitted daily to all the principal stations of the Railway at 16.00 hours in the manner prescribed. S.R.4.01/1 . The Section Controller on duty at 16.00 hours shall transmit the time signal to the stations in the section controlled by him. In case the duty of the Section Controller changes at 16.00 hrs. the outgoing Section Controller shall transmit the signal. In the non-controlled section, the time shall be relayed by the

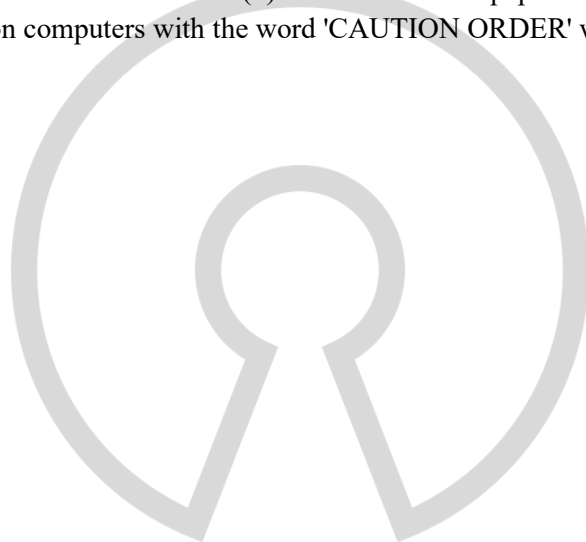
controlling station on phone. 4.02. Adherence to advertised time:- No passenger train or mixed train shall be dispatched from a station before the advertised time. S.R.4.02/1 . Punctuality of trains- (a) Every endeavor must be made to make up time at stations when a train is running late. No delay must take place in taking 'Off the departure signals. (b) Loco Pilots must be on the alert and start their trains immediately they have received the Guard's signal and have satisfied themselves that the departure signals have been taken 'Off and, on the single, line, the correct 'Authority to proceed' has been received. (c) Trains, if running late, may be allowed to start if the full halt allowed for the train has not elapsed; but no train carrying passengers must start before the departure time shown in the Public Time Table. 4.03. Setting watch:- Before a train starts from a terminal or crew changing station, the Guard shall set his watch by the station clock or the clock at the authorized place of reporting for duty and communicate the time to the Loco Pilot who shall set his watch accordingly. 4.04. Time of attendance for train crew:- Every Guard, Loco Pilot or Assistant Loco Pilot shall be in attendance for duty at such place and at such time as may be prescribed by special instructions. S.R.4.4./1. Attendance of Guards- Passenger Guards must report for duty at least 30 minutes before the scheduled departure of the train. In the case of goods trains originating from a terminal yard, the Guards shall appear on duty at least 45 minutes before the train is scheduled to leave. At intermediate points where only the change of Train Crew/Guard takes place, the time of attendance will be prescribed by the Divisional Railway Manager. S.R.4.04/2. Attendance of Loco Pilots and Assistant Loco Pilots- Loco Pilots and Assistant Loco Pilots must 'Sign on' at such time in advance of the Starting time of their trains, as the Divisional Railway Manager will fix. In the Calculation of the time required. The following will be allowed for- (a) 30 minutes for examining and taking over engine in shed after 'Signing on' duty. (b) Such time as is required for the journey between the shed and the train. This time should be calculated for each separate station, on an average of the actual time required. (c) 15 minutes for free shunting time before the departure time of the trains. They must also remain with their engines on arrival at the shed after finishing a journey for such time as may be prescribed for the purpose of examining their engines, booking repairs, or such other work as may be necessary. 79 4.05. 4.06. (2) 4.07. (2) (3) GINT I (u) x--p-412tr — 4.08/1 (A) (B) e. 15.09 \$1 (O — 60 (i) 60 80 CHAPTER-IV WORKING OF TRAINS

GENERALLY 4.05. 4.06. Proper running line:- The Loco Pilot shall take his train along the proper running line. Direction of running- (1) On a double line, every train shall run on the left hand line, unless otherwise prescribed by special instructions. (2) If there are two or more parallel lines, the direction in which trains are to run on each line shall be prescribed by special instructions. 4.07. Supply of Working Time Table and Schedule of Standard Dimensions- (1) A copy of the Working Time Table for the time being in force shall be supplied to each Station, Guard, Loco Pilot, Inspector of Way or Works and any other railway servant requiring the use of the Working Time Table during the course of his duties. (2) A copy of the Working Time Table shall, on issue, be supplied to the commissioner of Railway Safety. (3) A copy of the Schedule of Standard Dimensions for the time being in force shall be supplied to each Inspector of Way or works and train Examiner. B. Speed of Trains Limits of speed generally- 4.08. (1) (a) Every train shall be run on each section of the railway within the limits of speed sanctioned for that section by approved special instructions. (b) The Sectional speed sanctioned and permanent speed restrictions shall be shown in the working Time Table. (c) "The Loco Pilot shall observe the sanctioned sectional speed except when either one speedometer in case of electric loco or two speedometers in case of other locomotives are defective. In such cases of defective speedometers both the maximum permissible speed and booked speed of coaching trains shall be reduced by ten percent from the speed otherwise permissible.

In Automatic Signalling Territory, when Modified Automatic Signalling System is introduced and visibility is not clear due to fog or any other reason, the loco Pilot shall comply with SR.4.08/1(A) & (B) Where as in case of clear visibility he can run the train at maximum permissible speed except any other speed restrictions imposed. (2) The Loco (a) regulate and control the running of the train according to the Working Time Table, so as to avoid either excessive speed or loss of time, and (b) not make up between any two stations more time than is allowed in this behalf in the Working Time Table, and shall also observe all speed restrictions. (3) When it is necessary to indicate to the Loco Pilot where trains are to run at a restricted speed or where trains have to come to a stop due to the line being under repairs or due to any other obstructions, action shall be taken as specified in Rule 15.09. S.R.4.08/1. (A) The Loco Pilot shall run the train at a speed at which he can control the train depending on brake power load, visibility etc. (B) During thick, foggy or tempestuous weather impairing visibility- (a) In Absolute Block Section - The Loco

Pilot shall run the train at a speed not exceeding 60 kmph: and (b) In Automatic Signalling Territory'- (i) On passing a signal with 'Green' aspect, the Loco Pilot shall run the train at a speed not exceeding 60 kmph: and 80 (ii) (iii) On passing a signal with 'Yellow' aspect, the Loco Pilot shall run the train at a speed not exceeding 30 kmph: and (iii) On passing a signal with 'Single Yellow' aspect, the Loco Pilot shall run the train at cautious speed, so as to be prepared to stop at the next stop signal or short of any obstruction. (C) In Automatic Signalling Territory, when Modified Automatic Signalling system is introduced and visibility is not clear due to fog or any other reason, the Loco Pilot shall comply with SR 4.08/1 (A) & (B) whereas in case of clear visibility he can run the train at maximum permissible speed except any other speed restrictions imposed. S.R. 4.08/2. Speed of Trains entering dock platform- The Speed of trains while entering dock platform lines shall not exceed 10 K MPH. 4.09. Caution Order - (1) Whenever, in consequence of the line being under repair or for any other reason, special precautions are necessary, a Caution Order detailing the kilometres between which such precautions are necessary, the reasons for taking such precautions, and the speed at which a train shall travel, shall be handed to the Loco Pilot at the stopping station immediately short of the place where such precautions are necessary, or at such other stations and in such manner, as prescribed under special instructions. (2) Sub-rule (1) does not apply in the case of long continued repairs when fixed signals are provided at an adequate distance short of such place and have been notified to the running staff concerned. (3) The Caution Order referred to in sub rule (1) shall be on white paper in blue or black font or typed or made out on computers with the word 'CAUTION ORDER' written on top of

uT I 81 CHAPTER-IV WORKING OF TRAINS GENERALLY (ii) On passing a signal with 'Double Yellow' aspect, the Loco pilot shall run the train at a speed not exceeding 30 kmph: and (iii) On passing a signal with 'Single Yellow' aspect, the Loco Pilot shall run the train at cautious speed, so as to be prepared to stop at the next stop signal or short of any obstruction. (C) In Automatic Signalling Territory, when Modified Automatic Signalling system is introduced and visibility is not clear due to fog or any other reason, the Loco Pilot shall comply with SR 4.08/1 (A) & (B) whereas in case of clear visibility he can run the train at maximum permissible speed except any other speed restrictions imposed. S.R. 4.08/2. Speed of Trains entering dock platform- The Speed of trains while entering dock platform lines shall not exceed 10 K MPH. 4.09. Caution Order - (1) Whenever, in consequence of the line being under repair or for any other reason, special precautions are necessary, a Caution Order detailing the kilometres between which such precautions are necessary, the reasons for taking such precautions, and the speed at which a train shall travel, shall be handed to the Loco Pilot at the stopping station immediately short of the place where such precautions are necessary, or at such other stations and in such manner, as prescribed under special instructions. (2) Sub-rule (1) does not apply in the case of long continued repairs when fixed signals are provided at an adequate distance short of such place and have been notified to the running staff concerned. (3) The Caution Order referred to in sub rule (1) shall be on white paper in blue or black font or typed or made out on computers with the word 'CAUTION ORDER' written on top of



Form in bold letters of appropriate font size to draw attention distinctly and signed in full.' S.R.4.09/1. I. When it is necessary to give a Loco Pilot special instructions in regard to restriction of speed, need for observing caution due to damage, repairs to track overhead equipment, signalling and interlocking equipment or for any other reason endangering safety, a caution order on form T/409 on white paper shall be issued to the Loco Pilot and the Guard by the Station Master on duty. The circumstances are listed below. (1) When engineering works or repairs are undertaken inside or outside station limit. Note: Notwithstanding anything contained in G.R. 4.09/(2), Provisions of G.R. 4.09(1) shall apply (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) and caution order for all temporary speed restrictions must be issued. For block section where permanent speed restriction provided, caution order need not be issued by notice station or by station immediately preceding that section. When rough running or heavy lurch is reported by the Loco Pilot. When any patrolman does not report within 15 minutes of his scheduled arrival at the station. Unsafe condition of bunds or tanks or rivers. When water level rises over the danger level marked at bridges. When Gate signals are reported to be defective. When there is doubt or suspicion that a block section may have been affected or obstructed during the passage of an earlier train. Trolley or lorry working in section, as required under the rules. When a signal is newly erected or resited on the sections. On a double line section if a passenger train does not arrive within 10 minutes or a goods train within 20 minutes of its normal running time, for train proceeding in opposite direction. When overhead equipment is damaged or under taken for repairs. 81 (12) (13) (14) (15) (16) (17) (18) (19) -#a-ra-a filA€1 a-Tm I 3F4 I 11- 111- (1) wfi:rrq \$1 \$1 arre•ÉFT g•rq a-TIZFI GINT, sri \$1 cram - (2) crzrere g•zi (ii) (1) (u) (q) (iii) \$1 g•zi 82 CHAPTER-IV WORKING OF TRAINS GENERALLY (12) (13) (14) (15) (16) (17) (18) (19)

When signalling and interlocking equipment is damaged or undertaken for repairs. When sending an engine to assist a disabled train in section. In connection with temporary single line working on double line section, working of double line when all communications fail, and working under abnormal conditions as required under the rules or considered necessary. To authorize working of ballast train in the section. When a train engine returns to pickup the rear portion left behind in the Block section. To notify a train engine Loco Pilot when a banking engine will assist. When alarm chain apparatus to any coach/compartment is blanked off. Any other conditions or circumstance necessitating issue of caution orders, Note : The above is the usual list of contingencies under which a Caution Order is required to be issued but is not exhaustive.

111. Sending of Information- (1) Whenever in circumstances detailed above special precautions are necessary, or when any danger to safety of trains is apprehended, the Station Master receiving such information shall immediately inform the Station Master at the other end of affected block section, and the Section Controller, who will inform to the Power Controller, the Traction Power Controller, the Loco Foreman, other Railway servants concerned and the notice station or stations of such conditions under exchange of Private Numbers.

(2) The Section Controller shall in return inform to the Station Master that all concerned have been advised of such conditions. Procedure for issue of Caution Order- (i) By the Station Master at either end of the affected Block section- (i) The Station Master receiving advice about the line being under repairs, or any other eventuality endangering safety of trains, necessitating exercise of caution shall not permit any train running to enter the affected block section either from his station or from the other end unless- (a) The Station Master at the other end has acknowledged receipt of such information, (b) He has warned the Loco Pilot and the Guard of the danger ahead and its location by the issue of a Caution Order except in case of permanent speed restrictions, which are notified in the Working Time Table, (c) He has ensured that Caution Order has been issued by the Notice Station concerned, and (d) He has received advice about restoration of normal working. (ii) The Station Master at the other end of the affected block section shall also take action in accordance with sub-clauses (b) to (d) of the clause (i) above. (iii) Run through trains shall be stopped out of course for issue of Caution Order till such time it has been ensured that a Caution Order has been issued by the Notice Station concerned. (2) By the Station Master of Notice Station- (a) On receipt of advice of the line being under repairs or any other eventuality endangering the safety of trains, necessitating exercise of caution, the Station Master of the Notice Station shall acknowledge the same and shall not allow any train, which has to pass through the affected block section, to leave his station unless he has warned the Loco Pilot and the Guard of the danger and its location through the issue of a Caution Order. He shall also advise the Section Controller about the first train to which the Caution Order has been issued. (b) The Station Master of a Notice station shall issue 'NIL' Caution Order to the Loco Pilots and the Guards of all trains leaving his station if he has received no intimation of any special precautions to be observed between his station and the next Notice Station of the train, in the direction of movement. Note: The Loco Pilot shall not start the train and the Guard shall not give signal to start the train from a Notice Station until they have received the Caution Order. 82 (3) (4) (5) (6) (7) (8) g*rv--q-T zrr I zrr (HE 3-+441 /71Té s:rrq (âffTT) — (âfifT) \$1 crrzrere Z12.rN-2.fi erm. q-lå I crrqg crrqg \$1 crrzrere (8m #1fiTT) «lGäT) crrq•å I (8 tRi.) I a--TIRF-RF a-fi - crrq•å \$1 crrq•tl 1 zrrerr s:rrq 83 CHAPTER-IV WORKING OF TRAINS GENERALLY (3) (4) (5)

(6) (7) In case of trains originating from station other than Notice Station- In case of a train originating from a station which is not a Notice Station, the Station Master shall consult the Section Controller or the Notice Station in rear or the Notice Station in advance (on single line section only) and issue Caution Orders upto the Notice Station in advance. However, when such information cannot be collected by the station due to failure of communications with the Section Controller or the Notice Station in rear or the Notice Station in advance (on single line section only) the train should be started after issuing a Caution Order for restrictions, if any, or a 'NIL' Caution Order upto the block station in advance giving a written advice to the Loco Pilot to stop at the block station in advance and act upon the instructions given there. This procedure will be followed up to the station from which he can obtain particulars of all restrictions upto the Notice Station in advance. Change of train crew enroute- In case of change of train crew enroute, the Loco Pilot and Guard taking over charge must take over all Caution Orders relating to his train giving acknowledgment to the Pilot and Guard who is being relieved. Attaching of Assisting/Banking engine enroute- In case of an Assisting or a Banking engine being attached at a station enroute, the responsibility for acquainting himself with restrictions shall lie on the Loco Pilot of such an engine who shall contact the train engine Loco Pilot or the Guard, as the case may be, and get the necessary information. During failure of communications- During failure of communications, the Station Master of the station immediately in rear of the affected block section shall issue Caution Order to trains of all descriptions irrespective of whether it is a single line section or a double line section and irrespective of the system of working in force on the section. In case of Power Blocks on electrified sections- In case it becomes necessary to permit movement of vehicles hauled by diesel locomotives on a section under Power Block for a running line, a Caution Order must be issued as per rules. While asking for the Power Block, the Traction Power Controller concerned shall invariably mention the duration of the Power Block, the block stations and the

exact kilometre between which the work is to be done, the nature of work, the speed at which the train shall travel, and other special precautions required to be observed by the Loco Pilot. Note: In case of other engineering works- In case of works like relaying, deep screening of ballast, string lining of curves etc., where the work progress and the location of the speed restrictions consequently change from time to time, the engineering official in charge of the work will issue a daily message, when the block is lifted, to the Station Master of the nearest block station (preferably the block station controlling entry into the block section concerned) indicating the kilometreages and speed restrictions to be observed and obtain his acknowledgment. The copy of this restriction message should also be endorsed to the Section Controller, the Loco Foreman, the Power Controller and the Traction Power Controller. The Station Master immediately on receipt of this advice shall inform the Station Master of the block station immediately in rear of the affected section on double line and the Station Masters on either side of single line and the controller, under exchange of Private Numbers. (8) In case of Stations where no train is booked to stop- (a) A Caution Order shall normally not be issued except in an emergency necessitating imposition of sudden speed restrictions. (b) If any information warranting issue of Caution Order is received by the Station Master of such a station, he shall immediately advise the adjoining block stations for the issue of Caution Order and only after obtaining their acknowledgments in this regard under exchange of Private Numbers, shall acknowledge the message requiring imposition of speed restrictions. (c) On receipt of such information, the Station Master of the adjoining station who receives the information first, shall act as if he had himself received the message for imposition of the restriction. 83 v. (2) (2) / 409 EF•zrr I q-lå I G-Åe)

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GENERALLY [V. V. VL Description and Preparation of Caution Order- (a) Caution Order shall be prepared in the prescribed Form No T/409 on white paper, All forms should be serially numbered and the name of the station issuing it shall be stamped on each foil- one each for the Record, Loco Pilot, and Guard. In cases of trains worked by engine manned by Loco Pilots and Co-Loco Pilots, the Caution Order shall be got noted by the Co-Loco Pilot also, Caution Order should be prepared neatly and legibly in triplicate by carbon process. "Printing of Caution Order forms should be bilingual in English and Hindi. (b) No entries should be made on the back of the Caution Order. If more than one Caution Order

form is used, pages should be serially numbered as Page- I , Page-2, Page-3 etc. (c) The Caution Order shall specify the kilometrage and the station at which or the Stations between which caution is required to be observed the reasons therefore, and the speed at which the train will travel on the restricted zone.

Station codes should not be used. Names of the Stations concerned should be written in full. (d) Caution order shall be specifically made out for each train separately except at specified stations and for specified trains for which case it may be typed, cyclostyled or printed, provided that it shall be checked up again at the time of service to ensure that all locations where caution is required to be observe have been incorporated there in. Wherever speed restrictions are required to be observed at nvo or more locations, the

kilometerage of all such locations shall be indicated in geographical order in relation to the direction of movement. (e) Caution Order shall always be dated and signed in full. (D In case of any error of ovemvriting, it shall be cancelled and a fresh Caution Order shall be prepared. Serving of Caution Order- (l) The Caution Order shall be delivered to the Loco Pilot and the Guard of a train by the station Master either personally or through a competent railway servant deputed by him and the signatures of Loco Pilot and Guard obtained on the record foil in token of their having received and understood it. When more than one foil is served, each counter foil will be signed by the Loco Pilot and Guard. (2) Where there is more than one engine, the Caution Order shall be given to Loco Pilot of the leading engine and his signature obtained. In case, there is a Banking engine/ Assisting engine or engines in rear/front a fresh Caution Order should be issued by Station Master where such engines are attached. Method

of notiWing/cancellation of special precautions- (l) When a competent railway servant finds it necessary to impose any speed restriction or any special precaution on a portion of a line, including OHE, due to repairs or work or for any other reason, he shall- (i) (a) advise in "Titing the Station Master of the nearest block station (preferably) the block station controlling entry into the block section concerned) the exact kilometrage and the station at which or the stations between which the restriction or special precaution is to be observed, its nature and likely duration, the method of protection of the place of restriction or special precaution is to be observed, its nature and likely duration, the method of protection of the place of restriction together with the location where Engineering Indicators are to be exhibited etc., and also advise other railway servants concerned as per clause (l) of paragraph 11 who are required to be notified in this regard, and (b) not commence such operations until WTitten acknowledgment is received from the Station

Master. (ii) The Station Master receiving the advice shall not acknowledge it until he has advised the Station Master of the block station at the other end of the block section if any to be affected and obtain his acknowledgment under exchange of pri vate No. (2) When the cause of such restriction or special precaution has been removed, the competent railway servant shall advise this fact to the Station Master of the nearest block station under exchange of Private Numbers and other officials concerned who were notified earlier of the imposition of restriction. 84 VII. - VIII. IX. x. 0000 .3TFBT-a-TFBT : (l)qa s:rrq

rrrq•å - "RTTé qof" 12 \$1 - crrzra•est g•zi 4.10. (1) 15 15 Eié GINT GINT I 4.10/1. I gq: R-2.fi 4.11. - (1) 50 Eié e, 3F-u 85 CHAPTER-IV WORKING OF TRAINS GENERALLY V 11. Action by the Station Master after cancellation of the speed restriction. (l) The Station Master receiving advice regarding the removal of the restriction shall advise the station Masters at the other end of the block section concerned and the Section Controller (under exchange the private number) who will advise to all concerned about it.

After issue of the advice regarding cancellation of the Caution Order, the Station Master should discontinue the issuing of the Caution Order. (2) If no train is booked to stop at the station, the advice regarding the removal of restriction shall be sent to one of the adjoining block stations who should take action in accordance with para (l) above. VIII. Record of Caution Orders- [X. X. (a) At all stations where Caution Orders are issued, the Station Master shall keep an up to date record of all the speed resh-ictions imposed with the dates of their enforcement and cancellation, authority, nature, etc. in the Caution Order Register and bring forward every Monday at 00 hrs. in geographical order in relation to the direction of movement, the Caution Orders due to be issued. No code names of station shall be used in these register. The Notice Stations will maintain such registers separately for each Notice Area. (b) Similar record should also be kept in Control Offices, Loco sheds etc., where information in this regard is received. Note: (l) When a Station Master is relieved, either for change of duty or otherwise, he will_ensure that his reliever is acquainted with all the cautions/speed restrictions that are in force_at the time of relief. When a Station Master comes on duty he must record in station diary the_serial numbers of all the Caution Orders in force at that time. (2) A Similar Caution Order Register should be maintained by the Loco Foreman separately,

for each section. A separate register should be maintained for obtaining the acknowledgments of Loco Pilots before they are booked out for each trip in token of their having acquainted themselves with the cautions/speed restrictions in force over the section of their run. It will be the responsibility of Loco Pilots to peruse the register and acquaint themselves with all cautions speed restrictions what are to be observed over the section over which they are booked to run. Preservation of Caution Orders- Record foils of the

Caution Orders shall be preserved for a period of twelve months after issue. List of Notice Stations -

Caution Orders will be issued to the Loco Pilots and Guards of all trains at Notice Stations that are nominated by the DRMs for each section under his jurisdiction and notified in the working Time Table. Limits of speed over facing points- 4.10. (1) The speed of trains over non-interlocked facing points shall not exceed 15 kilometers an hour in any circumstances, and the speed over turnouts and crossovers shall not exceed 15 kilometers an hour unless otherwise prescribed by approved special instructions, which may permit a higher speed. (2) Subject to the provisions of sub-rule (1), a train may run over interlocked facing points at such speed as may be permitted by the standard of interlocking. S.R. 4.10/1. The Loco Pilot must observe the prescribed speed limits over turn-outs and cross overs and shall not resume normal speed until the entire length of the train has cleared the same and until this has been so indicated to him by the Guard by exchanging an "All Right" signal. In such cases the Guard shall not give all right signal to the Loco Pilot unless the last vehicle of his train has cleared the trailing points. Limits of speed while running through stations- 4.11 (1) No train shall run through an interlocked station at a speed exceeding 50 kilometers an hour, or such less speed as may be prescribed by approved special instructions unless the line on which the train is to run has been isolated from, all other lines by the setting of points or other approved means, and interlocking is such as to maintain this condition during the passage of the train. 85 5.23 (ii) 81/2 1 (iii) (iv) 15 ufiEi-eT 15 10 OT) UT 81/2 15 8) (i) \$1 zrr 81/2 1 a-fi a-fi trRft-2.fi (ii) \$1 10 A.Ei. : 81/2 1 a-TTG 10 4.12. — (2) (3) 25 I 40 A.Ei. I •R«ui I 86 CHAPTER-IV WORKING OF TRAINS GENERALLY

(2) In every case in which trains are permitted to run through on a non-isolated line, all shunting shall be stopped and no vehicle unattached to an engine or not properly secured in accordance with Rule 5.23 may be kept on a connected line which is not isolated from the through line. S.R. 4.11/1. (a) On the Broad Gauge sections the speed over points must not exceed- (i) Non-interlocked Points (ii) Interlocked when the train takes a turn out from one line to another with I in 12 or I in 8 h turn out with curve symmetrical split switches. (iii) Motor trolley (Heavy or light) while passing through points and crossings (irrespective of whether the trolley is running through the straight or a turnout.) (iv) When a train takes a turn out from one line to another with I in 8 1 2 turnout with straight switches or over - 15KMPH - 15 KMPH - 15 KMPH - 10KMPH (b) (c) (d) an emergency crossover having 1 in 8 1/2 turnout with straight switches. The prescribed limits of speeds over the facing points on the Narrow Gauge sections are given in the Working Time Table. Trains running through on the loop line with I in 12 turn out or I in 8 1/2 turn out equipped with curved/symmetrical split switches- The Loco Pilot shall not exceed a speed limit of 15 KMPH when running through a loop line at the stations. Trains running through on goods loop lines with I in 8 1 2 turn outs with straight switches- (i) In no circumstances is a train allowed to run through an interlocked or non-interlocked station over a goods loop or a loop with I in 8 1/2 turn out with straight switches. The train must first be brought to a stand on that line and then signals, if provided, may be taken 'Of' and the 'Authority to proceed' handed over to the Loco Pilot. (ii) The Loco Pilot shall not exceed the speed limit of 10 KMPH while entering or leaving such lines of the stations. Note : Warning Boards of speed limit have been provided at all I in 8 1/2 turn outs with straight switches for warning the Loco Pilot to restrict the

exceed to 10 K MPH, A list of such turnouts will be notified in the Working Time Table. 4.12. Engine pushing- (1) (2) (3) No engine of self-propelled vehicle shall push any train outside station limits except in accordance with special instructions and at a speed not exceeding 25 kilometers an hour : Provided that this sub-rule shall not apply to a train the leading vehicle of which is equipped with driving apparatus and which may be operated under approved special instructions : Provided further that this sub-rule shall not apply to an engine assisting in rear of a train, which may be permitted under approved special instructions to run without being coupled to the train; Provide also that no train, which is not equipped with continuous vacuum/air brake, shall be pushed outside station limits except in case of emergency; Provided further that a "Patrol" or "Search-light" special with one or more vehicles in front of the engine may be permitted to run at a maximum speed of 40 kilometers an hour. For movement of trains outside station limits with engine pushing during night or in thick, foggy or tempestuous weather impairing visibility or where

otherwise prescribed by special instructions the leading vehicle of such trains shall be equipped with the prescribed head light and marker lights except in case of emergency. When trains are worked as described in sub-rules (1) and (2) the engine pushing the load when it is the rearmost, or the rearmost vehicle if any, shall carry a tailboard or tail lamp. 86 (8) (\$1) Giq • 3-0181 æT8TZltrr 25 di I 10 -ü 'fill* a-fi R-2.fi *iei4 87 CHAPTER-IV WORKING OF TRAINS GENERALLY S.R. 4.12/1. Position of engine when moving a train- With the following exceptions no engine must push a train upon any running line, but must draw it.

(a) (b) (c) (d) (D) (g) (h) (i) When within stations limits, or where special ly authorized. Under Special Instructions when used as an assisting engine. When it is necessary for a train to push back to the station from which it entered the section under the instructions laid down in S.R. 4.12/2. In the case of a disabled train or accident, a following engine may push the train or vehicles slowly to the next siding or to the first station or cabin at which the engine can be transferred to the front of the train, when it is necessaw for a train to push back to the site of accident in case of a passenger being thrown out or a person being knocked down by a train, outside the station limits, except that such pushing back should not be done on ghat sections in automatic block signalling sections and at other places where prohibited by special instructions.

When the line is obstructed and trains are being worked to the point of obstruction on both sides. When required to assist a train in starting. When required to do so in connection with Engineering works or material trains, provided the brakevan occupied by the Guard of the train is the leading vehicle. When required by the General Manager, Chief Operations Manager, or Chief Engineer travelling on an Inspection Special train. S.R. 4.12/2. Train pushing back from block section- (a) (b) (c) (d) No train must be allowed to push back from the block section without a written authority from, the Station Master of the station from which it has entered the section. After an authority to push back has been given, no obstruction of the line beyond the Staring signal in the same direction must be allowed, except at a class "B" station, on the single line, where obstruction may be permitted within the station section in accordance with instructions laid down in Block Working Manual. The Guard of a pushing train will travel in the leading vehicle, which is fitted with a vacuum brake/air brake valve or hand brake. If the leading vehicle is not so fitted, the Guard will travel in the nearest vehicle there to which is so fitted. The speed of a pushing train with the Guard travelling in to leading vehicle must not exceed 25 kms. per hour. If the Guard is not travelling in the leading vehicle, the speed must not exceed 10 kms per hour. The Station Master at a station where the train starts from and pushes back to, must advise the station in advance on the telephone and also the section Controller on controlled section that the train will push back to the station. He will then obtain Line Clear from the station in advance on the block instrument, and then give the "Train Entering Section" Signal in the usual way. On return of the train, the Guard will intimate that the whole train has returned complete from the section, and he must sign in the Train Signal Register to that effect, and return the "Authority to push back" to the station Master who will cancel it. The Station Master will then give 'Cancel last signal' on the block instrument and endorse that remarks in the Train Signal Register or the Line Clear Enquiry Book 'Train pushed back' against the entry of the train. In the case of signal line, the token must be returned to the block instrument, where token instruments are provided or the Line Clear Ticket cancelled. When it has been arranged for a train to push back from the section it must always do so, and not go to the station in advance. 87 3F4 I (tp.T I a-T17TiF "31115" (tp.T \$1 10 I (€1.3ã.g-«.) GT&TT I 4.13. (1) GINT, (ii) a 25 AM. ur 40 A.Et. (2) 25 I 40 Y.Ei. 4.14 (a-gang) (qrü) I 4.14 GINT (ie a-Ige) (qrfi) 1 88 CHAPTER-IV WORKING OF TRAINS GENERALLY (D) (g) (h) (i) While a train is being pushed back from the section, the Loco Pilot and the Guard shall be vigilant and be prepared to stop short of any obstruction including obstruction at a level crossing. The Loco Pilot shall make frequent use of engine whistle as a warning to the road traffic passing across the level crossing, The Guard shall keep a sharp look-out in front and take measures to stop the train, if circumstances so warrant. On the double line, when a train is required to be pushed into a station the train must come to a stand opposite the outermost signal pertaining to the other track and the Loco Pilot shall whistle when, if a line is clear for its reception, it must be pi loted into the station. On the single line, when a train is required to be pushed back, it must first come to a stand outside the outer most signal and whistle, if a line is clear, reception signals may be taken 'Off for its reception. At a Non-interlocked station, the train must, in addition, be piloted from the outermost signal. Except in an emergency/material trains may be pushed back during daylight only. If it is necessary to push back at night the speed should be restricted to 10 kms. per hour. S.R. 4.12/3. Pushing back to trains on single line section tokenless instruments have been provided if a train is required to push

back to the station from where it started Line Clear shall be obtained according to the procedure detailed in the Block Working Manual. The train will be despatched as usual when the 'TOL' indication will appear.

When the train returns, the reception signals shall be taken 'Off using cancellation switch and the procedure for closing the line will be as for normalising block instrument when train returns to the despatching block station as given in Block Working Manual. 4.13. (1) (2) (3) 4.14. (1) (2) Limits of speed with engine tender foremost- (a) A passenger train or a mixed train shall not be drawn outside station limits by a steam engine running tender foremost, except- (i) under a written order issued by the authorised officer; or (ii) in a case of unavoidable necessity, to be established by the Loco Pilot. (b) When any such train is so drawn, the speed shall not exceed 25 kilometers an hour, or such higher speed, not exceeding 40 kilometers an hour, as may be authorised by approved special instructions. In case of unavoidable necessity, goods trains may run with steam engines tender foremost at a speed not exceeding 25 kilometers an hour or such higher speed, which shall, in no circumstances, exceed 40 kilometers an hour, as may be laid down by special instructions. When trains have to be worked with steam engines tender foremost as a regular measure under sub-clause (i) of clause (a) of sub-rule (1) and sub rule (2) the head light and marker light as prescribed in Rule 4.14 shall be provided on the tender. C. Equipment of Trains and Train Crew

Head light, Marker lights and speedometer- A train shall not be worked at night or in thick, foggy or tempestuous weather impairing visibility or in long tunnels, unless the engine carries an electric head light of an approved design and, in addition, two oil or electric white marker lights. An engine employed exclusively on shunting at stations and yards shall, at night or during thick, foggy or tempestuous weather impairing visibility, display such head lights as are prescribed by the Railway Administration, and exhibit two red marker lights in front and in rear. 88 (3) \$1 a-rge R-erm \$1 I (eqa) (4) GINT (4) (5) (6) al*e) \$1 (q•rfi) Adi 40 Eid 14 1. _ 4.14 4.14 4 40 15 N.Ei. AIN—QIN 4.14 / 4. \$1 89 CHAPTER-IV WORKING OF TRAINS GENERALLY (3) The electric head light on the engine shall be fitted with a switch to dim the light and shall be dimmed (a) When the train remains stationary at a station (b) When the train is approaching another train which is running in opposite direction on double or multiple track of same or different gauges; and (c) on such other occasions as may be prescribed by special instructions. (4) In case the electric head light fails or a train has to be worked with the engine running tender foremost in an emergency, the engine shall display the two oil or electric white marker lights referred to in sub-rule (1) pointing in the direction of movement and the train shall run at a speed prescribed by special instructions. (5) In case of defective electric head light of locomotive running in a section provided with reflective type of engineering fixed signal, during night or thick foggy weather impairing visibility, on BG and MG, the Loco Pilot shall work the train cautiously at a speed not exceeding the severest temporary speed restriction imposed in the block section or 40 KMPH which ever is less. (6) Coaching Locos should not be turned out from shed if the speedometers/Recorders are in defective condition. In case of speedometer/Recorder becoming defective during run, the train should run at a speed prescribed by special instructions. S.R.

4.14/1. Electric Headlight on Engines- (a) Light engines should display the same lights as train engines. (b) Suburban electric multiple unit stock must be equipped with an electric headlight and nvo white marker lights or head code lights of approved design in front. S .R.4.14/2 .(a) Before leaving the Loco Shed, the Loco Pilot ofa train engine/light engine must ensure that he has effective head light and marker lights on his engine as prescribed in GR 4.14 and also flasher lights on both side in proper working condition. (b) The electric headlight Fitter is responsible for certifying that the electric headlight equipment is in proper working order. (c) The Loco Pilot must test the electric headlight and satisfy himself that it produce sufficient illumination. (d) Ifthe electric head light becomes defective on the run during the hours ofdarkness and /or thick and foggy weather, the Loco Pilot shall light marker lights and work the train cautiously at a speed not exceeding 40 KMPH on B.G. & MG. and 15 KMPH on NG subject to maximum pemissible speed of the section and other speed restrictions enforce and sound engine whistle frequently. The Loco Pilot shall also inform the station Master of the next block station in advance ofthe incidence so that he may inform the section controller ifany. S.R. 4.14/3. When a train is approaching a station, the station Master on duty will see that the engine has headlight and marker lights. If the engine has neither a headlight nor the marker lights, and the train is running through, the Station Master must advise the station in advance. The Station Master of the other Station on receipt of this information, will stop the train and find out the reason why the prescribed headlight and marker lights are not lit up, and instruct the Loco Pilot to switch on the electric headlight and marker lights. S.R. 4.14/4. Before entering a long tunnel

during day, even the Loco Pilot should switch on the electric headlight and electric marker lights. S.R.

4.14/5. Where trains have to cross at station, the first train to arrive must have its electric head light dimmed. If the dimming switch is out of order the headlight must be extinguished altogether. 89 I g•zi 3-+441 10 4.15. - (2« ârq) (*TI\$) (IT) ö. (éa0 I ag-i crrzrere 4.16. 3T2Tfa- 3T2.ßT, 90 CHAPTER-IV WORKING OF TRAINS GENERALLY S.R. 4.14/6 Working of Speedometer- No Locomotive shall be turned out from the shed with deficient or defective speedometer. In case, the speedometer becomes defective enroute, Loco Pilot shall work the train at speed 10% less than the maximum permissible speed by estimating the speed with the help of his watch, Kilometer posts and inter-section running time given in the Working Time Table. 4.15 Tail and Side lights- (1) At night or in thick, foggy or tempestuous weather impairing visibility no train shall be worked outside station limits unless it has- (a) In case of an engine with vehicles attached, save in a case to which sub-rule (2) applies, at least one red tail light, and two side lights showing red towards the rear white towards the engine: Provided that, provision of sidelights on goods trains and electric multiple unit trains may be dispensed with under special instructions. (b) In case of a single engine without vehicles attached at least one red tail light; and (c) In case of two or more engines coupled together without vehicles attached, at least one red tail light affixed to the rear engine. (2) A colliery pilot, i.e., a train used for collecting or distributing vehicles in colliery sidings, when working in a block section or in the colliery sidings taking off from a block section, need carry a red tail light only as it enters or leaves the block station, at either end of such block section, provided that special instructions are issued to ensure that no other train is permitted to proceed into the block section until the Guard of the colliery Pilot has certified that he has left no vehicle obstructing the block section in which he has been working. (3) When trains may run in the same direction on parallel lines, the side lights mentioned in clause (a) of sub-rule (1) may be arranged in accordance with special instructions. (4) When a train has been shunted for a following train to Pass, the tail and side lights mentioned in clause (a) of sub-rule (1) shall be dealt with in accordance with special instructions. (S) Within stations limits or in a siding, an engine employed in shunting shall have tail lights in accordance with special instructions. S.R. 4.15/1, Tail and Side lights- (a) At night and in thick, foggy and tempestuous weather impairing visibility, one side lamp showing white light at the front and red light to the rear must be placed, unless otherwise exempted under special instructions on each side of the rear brakevan. (b) At night when a train is shunted for another train to precede it, the side lamp on the side on which the other train will pass it should be reversed so that the white instead of a red light is exhibited to the approaching train. If the side lamp is fixed and provided with a red slide, the slide should be withdrawn until the approaching train has passed. The Loco Pilot of an approaching train, when he observes that the nearest side lamp has not been changed from red to white, must whistle until it is changed, and if this is not done, must stop his train and wait till it is changed. (c) Provision of side lights on goods trains and electric multiple unit trains may be dispensed with. 4.16. Tail board or tail lamp- (1) In order to indicate to the staff that a train is complete, the last vehicle shall, except as provided for in sub-rule (2), be distinguished by affixing to the rear of it- (a) by day, a tail board of approved design or a red painted tail lamp of approved design which may be unlit, or 90 (2) (3) (IT) AGi I 211. @ a-TIAITT (at:é) \$iél I CT) zrr a-q / a-RN 1 crrzrere I 4.17. 4.16 (éa) (éa 91 CHAPTER-IV WORKING OF TRAINS GENERALLY (b) by night as well as in thick, foggy or tempestuous weather impairing visibility during day, a red tail lamp of approved design displaying either a steady or flashing red light to indicate last vehicle check device or, (c) such other device as may be authorised by special instructions. (2) A colliery pilot, i.e. a train used for collecting or distributing vehicles in colliery sidings, when working in a block section or in the colliery sidings taking off from a block section, need carry a tail board or tail lamp, or such other device as may be authorised by special instructions, only as it enters or leaves the block station at either end of such block section, provided that special instructions are issued to ensure that no other train is permitted to proceed into the block section until the Guard of the colliery pilot certifies that he has left no vehicle obstructing the block section in which he has been working. (3) In emergencies only, and under special instructions in each case, a red flag may be used in lieu of a tail board or an unlit tail lamp. S.R. 4.16/1. Tail lamps and Tail Boards- (a) In an emergency, when a tail board or a red painted tail lamp is not available or when it is desired to make a short trip with a shunting engine, a red flag is permitted during daylight and in clear weather only to indicate that the train is complete. (b) When an assisting engine is attached in rear of a train, the last vehicle indication must be affixed behind the assisting engine, and replaced behind the last vehicle when the assisting engine is detached. The Guard is

responsible for carrying out this rule. (c) Guards, when working trains on the double line, shall watch the tail boards or lamps or red flag of passing trains on adjacent line and the next station if they are not available on the last vehicle or if during the night the tail lamp is not lit up properly. (d) Running of light engine/engines in block sections- During Night:- One of the rear panel (marker) light must be lit and covered with red slide over it. During Day:- A red flag should be affixed at the rear of the locomotive. In case of two locomotives running coupled together, the panel (marker) light covered with red slide/red flag will be on the rear of the rearmost locomotive. (e) The Guard must carry an oil tail lamp or LED based flashing tail lamp, which must be attached behind the rearmost vehicle. The Guard must ensure that the tail lamp is lit only on the last vehicle and electric tail lamps of intermediate coaches, if any, are switched off and LED lamps are not kept inside the window of the SLW Brake van. (f) Brake vans and certain other vehicles are fitted with fixed electric tail lamps. These fixed tail lamps must not be used, but a portable tail lamp should be used. Particular care should be exercised that the fixed tail lamp is not lit when vehicles are attached behind such brake vans or other vehicles. (g) If for any reason a train comes to a stop in a tunnel the Guard of the train should immediately light the tail lamp. This responsibility will devolve upon the Loco Pilot in the case of a light engine.

4.17. Responsibility of station Master regarding tail board or tail lamp of passing trains- (1) The Station Master shall see that the last vehicle of every train passing through his station is provided with a tail board or tail lamp or such other device in accordance with the provisions of Rule 4.16. (2) If a train passes the station without such indication to show that it is complete, the Station Master shall- (a) immediately advise the station in advance to stop the train to see that the defect is remedied and to advise whether or not the train is complete. (b) meanwhile withhold the closing of the block section to ensure that no train is allowed to enter the block section from the station in rear, and (c) if the defect is remedied, he shall advise the station in advance to stop the train to see that the defect is remedied and he need not withhold closing of block section in rear as prescribed in clause (b) and (c) of sub-rule 2 in such cases.

S.R. 4.17. I(a) For run through train and other train which comes to a stop at a place where the Station Master can conveniently watch the Lamp/Tail Board, he himself will be responsible to ensure the complete arrival of a train. (b) (c) At a station where cabin (s) is/are provided, whenever stopping train comes to a stand such that the station Master cannot readily ensure the complete arrival of the train, the Cabin Master/Cabinman shall ensure its complete arrival by watching the Tail Lamp/Tail Board. Where cabins are not available at panel interlocked stations as well as BPAC is not provided or non-functional and the Station Master or Pointsman/Porter on 'OFF' side is unable to watch the passing through train due to line occupied by standing/stabled train/stable train/rake and view is obstructed, the Gateman, if available as authorized in SWR (Station Working Rules), shall ensure complete arrival of the train by seeing Tail Lamp/Tail Board and shall inform the Station Master by telephone under exchange of Private Numbers. In case the Gateman also fails to watch the complete arrival of a train, the Station Master shall inform the Station Master of the station ahead who shall watch the train without stopping the train and confirm the same to the Station Master in rear under exchange of private Numbers, who will then close the line. However, in case of train running without Tail Lamp/Tail Board, SR 4.17/2 shall be complied with. In case of stopping train, the Gateman if available and authorized in SWR, shall ensure the complete arrival of a train and inform the Station Master under exchange of Private Numbers. Note: (i) When a train comes to a stand at a station, the Guard shall see that train is stopped clear of Fouling Mark as per GR 4.56 and SR. 4.56/1. (ii) In case the complete arrival of a train cannot be ascertained by means as mentioned above, SR 4.56/1 (c) will be complied with (through Train Intact Arrival Register). S.R. 4.17/2. Train Passed without Tail lamp or Tail board- (a) (b) (c) (d) If a train passes a station without a tail lamp or tail board being visible to the Station Master, he must at once send the 'Train passed without Tail lamp or Tail board' signal advice to the station in advance, and also inform the Section Controller. The Station Master must not give the 'Train out of section' signal to the

station in rear, but must give the 'Train passed without tail lamp or tail board' advice. On the double line, the Station Master sending the 'Train Passed without Tail lamp/board' signal advice, must put departure signals at 'On' to stop any train from the opposite direction, advise the Guard and the Loco Pilot of the circumstances and issue a Caution Order to proceed cautiously and stop short of any obstruction. The

Station Master of the station in advance on receiving the 'Train passed without tail lamp/board' signal/advice must- (i) acknowledge it; (ii) place departure signals at 'On' to stop train for which the 'Train passed without tail lamp/board' signal/advice is received; (iii) Stop the train proceeding towards the station from which the signal was received, advise the Guard and Loco Pilot of the circumstances and issue a Caution Order instructing them to proceed cautiously and be prepared to stop short of any obstruction; 92 (iv) vrrqq I zrr zrrerr -a-rlT (vi) 6.09 I (vii) (ta Qté) -\$1* \$iél I "34TH" dii 24 ' ß-o--t 'fill* -21 4.18. (2) (3)

(4) (O @qq) Ck0f crrzrere zrr a-TIA?ZEFTTT I zrr crrzrere I crrzrere (tt•a) / gqrq I 93 CHAPTER-IV WORKING OF TRAINS GENERALLY (e) (D (iv) ascertain from the Guard of the train for which the 'Train passed without tail lamp/board' signal was received if the train is complete except where a block proving axle counter or track circuit or complete track circuiting of the station yard on either end provided with block section clear indication the complete arrival of train will be ascertained by the clear indications provided with S.M/Cabin Master. (v) if the train is complete, send the 'Train out of section' signal or the 'in' report to the station in rear; (vi) if the train is incomplete, advise the Section Controller and the Station Master in rear and take action in accordance with GR 6.09; (vii) instruct the Guard to light the tail lamp if it is out; or fix a tail lamp/board or if no tail lamp./ board is available, a hand signal lamp displaying red light during the night and in thick or foggy weather or a red flag by day and in clear weather should be fixed. If the Station Master receiving 'Train passed without tail lamp/board' signal finds that he cannot stop the train without bringing it to a sudden stand, he should not place the departure signals at 'On' against the approaching train, but must be given the 'Train entering section' signal and also the 'Train passed without tail lamp/board' signal to the station in advance. Should a train pass with a tail lamp not lit, but the lamp is clearly visible to the Station Master, the Station Master will give the "Train out of section" signal to the

Station in rear, and the 'Train passed without tail lamp' signal to the Station in advance and advise the Station Master in advance on the telephone that the tail lamp is extinguished, when the latter will stop the train, and inform the Guard. In such a case it is not necessary for the Station Master sending or receiving this signal to stop any train going in the opposite direction. 4.18. Means of communication- (1) No

passenger train or mixed train shall be dispatched from any station unless, every passenger carriage is provided with means by which communication can be made with the Guard or the Loco Pilot. (2) Sub-rule

(1) shall not apply to- (a) passenger or mixed trains in case of complete or partial failure of vacuum; and (b) such particular trains as may be exempted under approved special instructions. (3) If a Railway Administration is satisfied that mischievous use of the means of communication referred to in sub-rule (1) is prevalent, it may, notwithstanding anything contained in that sub-rule, direct the disconnection, for the time being, of the means of communication provided in all or any of the passenger carriages in any such train. (4) A goods vehicle in which passengers are carried is not a 'passenger carriage' within the meaning

of this rule. S.R. 4.18/1. Control of Vacuum/Air Brake on running trains- (a) When two engines are employed to draw a train, the Loco Pilot of the leading engine, unless there are local rules to the contrary, is responsible for the working of the automatic vacuum/air brake. The Loco Pilot of the second engine must however, in case of emergency, assist in stopping or reducing the speed of the train by applying the automatic vacuum/air brake or hand-brake, as may be required, but he must not maintain or re-create vacuum/air pressure. (b) When an additional engine/engines are employed to push a train from the rear, the

Loco Pilots thereof must not interfere with the working of vacuum/air brake, which shall be under the control of the leading engine Loco Pilot as laid down in (a) except in cases of a run-back, when the rearmost assisting engine Loco Pilot automatically becomes the leading Loco Pilot. (c) Loco Pilots of all additional engines will, at all times, keep the handle of the vacuum/air brake, in the running position and should not create vacuum/air brake pressure. 93 (g) (q) (U) (q) (30 4.46 I I crrzrere I --45-q-* I AltI I

crrzra•e æT8TZlrr \$1 10 / 1 zrr Rui-é I *-21Tt1 Rch•é I 4.18 (3) g) u-lu-«ei 94 CHAPTER-IV WORKING OF TRAINS GENERALLY (d) In the event of the Loco Pilot of the engine in rear requiring in an emergency to attract the attention of the leading engine Loco Pilot, he shall give a whistle signal as laid down in General Rule 4.46 and S.R. 4.46/1. Note: In case two engines are pushing a load in an emergency, the leading Loco Pilot in the direction of the motion will be the controlling Loco Pilot. S.R.

4.18/2. Alarm signal- (a) (b) (c) (d) (e) (f) (g) (i) On observing a drop in the Vacuum Indicator/Brake Pipe Pressure Indicator, the Loco Pilot must at once bring his train to a stand as quickly as possible and he must, at the same time give five short one long whistle. This whistle code must be repeated while the train is being brought to a stand and until the Guard shows a red flag by day and a red light by night indicating that he understands the situation. If it is noticed that the alarm chain has been applied at a place which will necessitate the train being stopped on a bridge, viaduct, tunnel, cutting catch points, spring points or another spot considered unsuitable for stopping the train, the Loco Pilot may recreate vacuum/air pressure and work the train on to a safe place to stop, giving one short whistle to advise the Guard that he is doing so. When the train comes to a stand, the Guard must immediately show a red hand signal and leave his brake van on the left side of the train, unless the train is standing on a right hand curve, in which case, he will detrain on the right side, and proceed to the carriage from which the communication chain has been pulled. The Loco Pilot shall also depute his Assistant Loco Pilot to assist the Guard in finding out the bogie from which the communication chain was pulled. When the chain is pulled, a red disc projects outside on some carriages or revolves from horizontal to vertical position in others on either side at the end of the carriage where the clappet valve is fitted. The carriage from which the alarm signal is pulled can be ascertained by the position of the red disc, and the compartment by the slackness of the chain inside the compartment.

When the train comes to a stop the Guard should immediately ascertain by whom the chain has been applied and its cause and, if necessary, attend to the requirements of the passenger who used it. If it is found that the reason for the stoppage of the train will necessitate a halt of more than ten minutes, the train must be protected in accordance with S.R. 6.03/1. Should it be found that the alarm chain has been mischievously pulled or for an unjustifiable cause, the Guard incharge if possible will ascertain the name of the person who pulled the chain. His name and address along that with those of other occupants must be obtained and the matter reported at the next station of importance where the passenger can be dealt with in accordance with standing instructions issued by the Divisional Railway Manager. Before restarting the train, the Guard should also satisfy himself that the correct amount of vacuum/air pressure is available in the train. The Guard must record the fact in his journal and, in addition, send a special report to the Divisional Railway Manager with full details of the use of the communications. Whenever under clause (3) of G.R. 4.18 alarm chain apparatus on coach/compartment of passenger carrying train is blanked off on its run or over a particular section, caution order should invariably be issued to the Guard and Loco Pilot working that train directing them to exercise greater vigilance while working the train. S.R. 4.18/3.

Automatic Vacuum Brake/ Air Brake Rules for working- (a) The competency examination of Loco Pilots and Guards must include questions on the operation of the automatic vacuum/air brake. (b) When an assisting engine is attached in rear of the train, the hose pipes/air pressure pipes between the assisting engine and the train must be coupled up and the Loco Pilot of the assisting engine will be jointly responsible with the Guard to see that this is done. (c) The automatic vacuum/air brake may be applied from the brakevan in an emergency. The application of the automatic vacuum/air brake must, in such cases, be gradual as there is the risk of the train parting owing to sudden application of the vacuum/air brake from the rear. 94 (q) (q) (U) zrr 3/4 (75%) 75% zrra•r crzrzere crzrzere æT8TZlrr I 75% di \$1 / gzrq I (i) (iii) 6 95 tr.q. 5 5 5 5.8 40 \$1 8 40 B test I tr.q. 4.8 4.8 4.7 CHAPTER-IV WORKING OF TRAINS GENERALLY (d) When an automatic vacuum cylinder or air brake cylinder or gear on a vehicle is out of

order, the cylinder must be put out of action. This must be done in case of vacuum cylinder by disconnecting the syphone pipes from the release valve and dummieing the loose end of the syphone pipes with a wooden plug in case of air brake vehicle by passing the particular vehicle. (e) (D) (g) If on any goods train, less than three fourth (75%) of the total number of vehicles are equipped with effective automatic vacuum cylinders and in case of air braked train less than 75% of the total number of vehicles are equipped with effective brake cylinders,, the train is to be treated as non-automatic or non-air braked and worked in accordance with paragraphs (f) & (g) below. In the event of failure of vacuum\air brake, during the journey, the Loco Pilot must take his train cautiously upto the next station, where the defective vehicle or vehicles can be detached or where the defect can be rectified. The Guard must be prepared to assist the Loco Pilot in controlling the load by applying the hand brake in the brakevan. The Loco Pilot must exercise great care and maintain effective control of the load. The Guard must always be vigi lant and prepared to assist the Loco Pilot by applying hand brakes, if called upon to do so by the Loco Pilot, if the Loco Pilot requires additional brake power, the Guard shall pin down hand brakes or put on hand brakes of

as many vehicles as the Loco Pilot may consider necessary. S.R. 4.18/4. Whenever shunting is done on a train at an intermediate station where train examining staff are not available, the Loco Pilot and Guard of the train shall jointly examine the vehicles which are attached or detached to see their cylinders are effective to the extent that the percentage of effective cylinders in the entire train does not go below 75% in case of vacuum braked train and air braked train any case. The Loco Pilot and Guard shall ensure that the prescribed amount of vacuum/air pressure is available in the engine and the brakevan before starting the train. They shall prepare a joint Brake Power Certificate and work the train on it. A copy of joint BPC will be kept with Station Master for record. S.R. 4.18/5. The Loco Pilot, after starting the train from the originating station or an intermediate station where shunting has been performed on his train, shall apply the vacuum/air brake to test its efficiency without actually stopping the train. S.R.4.18/6. Minimum air pressure/vacuum in engine and rear brakevan- (a) Minimum air pressure in engine and rear brakevan of passenger and Goods trains at the time of starting a train. Sl. No. (i) (ii) (iii) On Engine On Mail, Express and Passenger train On Goods train Kg/Cm² with load up to 40 air braked 8 wheeler wagons On Goods trains with more than 40 air braked 8 wheeler wagons 6 vwc² 5 Kg/Cm² 5 Kg/Cm² 5 Kg/Cm² 5.8 On rear brakevan 4.8 Kg/Cm² 4.8 Kg/Cm² 4.7 Kg/Cm² (b) standardization of vacuum level in engine and brakevan of passenger and goods trains: (i) Minimum level of vacuum in engine and brakevan: Type of Service Mail/Express Passenger Goods Engine 53 Brakevan 47 Average 50 42 When ever a coaching train runs initially on passenger and subsequently on express services, vacuum levels on such rakes will be maintained as those prescribed on WE trains. 95 (ii) (iii) (v) (vi) 4.19. 45 - -qⁱ* q-g-d — (341<€) crrg•tl I gfr•zrr ** - Ėg 5/ 16" (8 53#41. I (8 tra) (8 tra) 7 dⁱⁱ I a-fi \$1 — 2.2 (u) 5 13 -ATO-TT zrr 2.01 I e. (a-Fl)

CHAPTER-IV WORKING OF TRAINS GENERALLY (ii) Creation of Initial Vacuum on Electric Locomotives- In case of Electric locomotives, at the time of initial creation of vacuum as well as after frill application of brakes the vacuum is obtained. Thereafter only one exhaustor will run. (iii) Vacuum trouble on trains - In case of vacuum trouble in a train, the locomotive should be tested first, followed by the rake, if loco is found normal. The respective guidelines for testing are given below: (iv) Testing of locomotive in case of Vacuum trouble: In case the desired vacuum level is not created the identification of problem on diesel and electric locomotives, is to be carried out with the help of the following tests: * ** Blockage Test: With one exhaustor on electric loco/diesel loco running at idle, remove vacuum hose pipe on one side of the loco from dummy and raise it upward (to avoid suction of dirt etc.) Normally with hose pipe open, the vacuum should drop to zero but if it more than 8 cm, it indicates blockage in the system, Repeat the procedure from the other end of the loco. Efficiency Test: Electric [Diesel locomotives be tested to ascertain that on 5/16" dia (8mm) leak hole in 3 mm plate with single exhaustor working at slow speed on electric locomotive and with engine working at idle speed on diesel locomotive, the vacuum level of 53 cm is achieved. Loco Diesel Electric Vacuum Loco Dual Brake Loco Dummy 56 56 Disc:3mm (8mm hole) 53 53 Dummy 58 58 Disc:3mm (8mm hole) 53 53 On newly manufactured, rebuilt and POHed locomotives, the difference between the dummy and 8 mm hole disc should not be more than 3cms. *** Leakage Test: If the above conditions are achieved, then tests may be carried out to ensure that Maximum leakage rate on diesel/elctric locomotives is not more than 7 Cm/min. The blockage and efficiency tests on diesel and electric locomotives, should be carried out not only before turning it out from the shed but also in the yard to rule out loco defects whenever the train is held up for creation of vacuum. The leakage test on both the locomotives should be carried out in the shed only. (V) Testing of Train in case of Vacuum Trouble- (a) Coaching Train- On passenger carrying train maximum leakage rate should not be more than 5 Cm/Min. on one vehicle and 13 Cm/min. for the full rake as per [RCA Pt. Appendix D./ Para 2.2. (d). (b) Freight Train On goods trains maximum leakage rate should not be more than 5 Cm/min. on one vehicle, as per [RCA Pt. iii, Appendix E Clause E-54, (vi) Percentage effective brake Power in Coaching & Freight Trains- The percentage effective brake power for different services at originating station as well as enroute are given below- Coaching Freight Freight Service M Express/Pass. CC rake Others En-route(%) Originating (0 0) 100 85 90 75 4.19. Guard's and Loco Pilot's equipment- (1) Each Guard and Loco Pilot shall have with him, while on duty with his train, the following equipment- (a) a copy of these rules or such portions thereof as have been supplied to him under Rule 2.01, (b) a copy of the Working Time Table, and all correction slips and appendices, if any, in force on that section of the railway over which the train is to run, 96 (u) (q) (8) (q) (2) (3) (2) (3) (4) (5) (6) t) (8) (9) (11) (12) (13) (14) (15) (2) (3) (4) (5) (6) t) (8) (9) (10) (11) (12) (1) (2) (IF*é m), e. \$1 R•q^{ié} - (1) ByrfR•a 10 3 (02 01 10 A5T yuh•u) 3 (02 01

rrrei 97 CHAPTER-IV (c) (d) (e) (f) (g) (h) WORKING OF TRAINS GENERALLY a hand signal lamp or tri-colour dry-cell or dry-fit or lead acid type battery operated hand signal lamp and/or torch, a whistle (for Guards only) a red nag and a green flag. a stock of detonators sufficient to comply with the relevant rules as may be prescribed by special instructions. a first aid box (for Guards of passenger carrying train only), and such other articles as may be prescribed by the Railway Administration in this behalf. (2) (3) if any Guard or Loco Pilot is not in possession of any article mentioned or referred to in sub rule (1), he shall report the fact to his superior who shall make good the deficiency. Each Guard and Loco Pilot shall have with him while on duty with his train, two pairs of such spectacles, as he is required to wear under medical

advice. Note: Each Guard and Loco Pilot should also be in possession of a watch in addition to the equipment prescribed in sub-rule (1). S.R. 4.19/1 .(a) Equipments of Passenger carrying train's Guard:- (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (15) Torch cum hand signal lamp 2 red flags and I green flag mounted on stick. 1 0 detonators in a case Extract of Relevant Rules. Working Time Table with appendices. I Whistle Tail lamp painted in red (use in extinguished for day and lit during night/dark hours)

Rough Journal Guard's Certificate Book Guard's Memo Book 3 Padlocks (02 large and 01 small) Chain with a suitable lock for securing briefcase Carriage key ACP resetting key Complaint/Suggestion Book (b) Equipments of Goods train's Guard:- (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) Torch cum hand signal lamp 2 red flags and I green flag mounted on stick 1 0 detonators in a case Extract of Relevant Rules Working Time Table with appendices I Whistle Tail lamp painted in red (use in extinguished for day and lit during night/dark hours) Rough journal Guard's Memo Book Padlocks (3 nos -02 large and 01 small)

Air pressure Gauge Chain with a suitable lock for securing briefcase Note: (1) Vacuum Guage will also cease to be an item of equipment of Goods Guard and will be issued to outgoing Guard of vacuum goods train by the concerned lobby and deposited back, (2) The Incharge of a station where Guards is stationed must check their personal equipment once in a month. 97 (2) (3) (4) (5) t) 2 2 2 1 * 2003 / 81€1(1) / 51 / 2 m:) 20.06.2002) (2) g•zi \$1 (ii) (iii) (iv) I 4.19/3. — 4.19 a-TFTTAT (2) (3) (4) (5) (6) t) (8) (9) 10

(34RR«) crrzrere RTi) g•zi yrfi•r I 98 CHAPTER-IV S.R.4.19/2. (a) Brakevan equipments- Guard of passenger provided with the fol lowing equipments- WORKING OF TRAINS GENERALLY trains must see that their brakevans are (1) (2) (3) (4) (5) (6) (7) Equipments Brakevan side lamps complete Wooden Wedges Fire extinguishers in good order Portable field telephone with instructions for use (Electrified and non-electrified section) Emergency lighting equipment Stretcher * First Aid Box Nos. 2 2 2 I each

Maintained/Supplied by Already fixed JE/C&W JE/C&W JE/Te1e JE/Elec(G) swss swss * (Refl- Railway Board's Letter No. 2003/TT(1 1/2 Dt. 20.06.2002) (b) First Aid Box- (1) First Aid Box will be provided by the Station Master at the originating station and kept in the cupboard of brakevan. He shall ensure that the medicines and other contents kept in the FirstAid Box are not expired dated. (2) Supply of First Aid Box and refilling of medicines shall be done as per instructions of the DRM on Division. (3) If the Guard of train uses the First Aid Box during the journey, he will note down the following particulars in his journal :

(i) Train number and date, (ii) Name, designation and address of the person to whom first aid was rendered. In case ofpassengers, detail oftickets held will also be recorded. (iii) Nature ofinjury, and (iv) Name, designation and address ofthe person who rendered the first aid (4) The Guard must also enter the relevant particulars on the case card within the box under the appropriate columns. S.R. 4.19/3.

EquipmentOfLocoPi10t: (a) In addition to items given in G.R.4.19, a Loco Pilot, while incharge of a train engine or a light engine, must also have the following equipment. (2) (3) (4) (5) (6) (7) (8) (9) General & Subsidiary rules Book and Accident Manual complete and up to date or such portion there ofas relevant to his duties, 10 Detonators in a case. 2 hand signal lamps with red and green slides 2 red and I green flags mounted on sticks Loco Pilots memo book. Key for resetting ACP valve for air braked coaches. Head light and Cab light bulbs (spare) Trouble shooting guide (for diesel Loco Pilots only), and Trouble shooting directory for AC Loco Pilots. Portable filed telephone. (b) On Diesel Locos, two fire extinguishers and in AC locos two fire extinguishers in each of the two driving cabs must be provided. In addition to above Mobile Radio set, 4 wooden wedges, one spare hose pipe for vacuum braked trains and one spare feed pipe/brake pipe for air braked trains should also be provided. The Loco Pilot must satisfy himself that necessary tools are provided in the driving cab or engme. Note: Loco Foreman/Supervisor in charge of loco shed will check each Loco Pilot's equipment once in a month. 98 4.20. (2) (3) 4.20/1. (2) (3) (4) (5) (3) trR•R-Q.1R ur zrtBT | zrrerr <3TT) 4.21. t. q•rvfi I 99 CHAPTER-IV 4.20. Manning of engine in motion- WORKING OF TRAINS GENERALLY (1) (2) (3) Except when othenvise provided by special

instructions no engine shall be allowed to be in motion on any running line unless the Loco Pilot as also the Assistant Loco Pilot are upon it. Subject to the Provision of sub-rule (3), in no circumstances shall a person other than the Loco pilot or a Railway servant duly qualified in all respects, drive and engine on any running line. If a Loco Pilot becomes incapacitated while the engine is in motion, the Assistant Loco Pilot, if duly qualified may work the train to the next station cautiously and where the Assistant Loco Pilot is not duly qualified, he shall bring the train to a stop and send a message to the Station Master of the nearest station to make arrangements for a Loco Pilot to take over the train, and for so doing he may take the assistance of the Guard. S.R. 4.20/1. Driving a Diesel hauled train: (2) (3) (4) (5) Only Loco Pilots who are in possession of Diesel Loco Pilot's competency certificate issued by Sr. DME/DME of the division will be permitted to work the train. If a Loco Pilot has not worked on Diesel traction for more than 6 months, he should be accompanied by certified Loco Inspector for Ds1/Traction by Sr. DME[DME on footplate in first trip and after examination certificate will be renewed by Sr. DME/DME. Staff under training for driving Diesel engines, when specially authorized by the Sr. DME[DME, may drive such engines under the supervision of certified Inspector Regular Loco Pilot. While a trainee is driving under these conditions, the supervising Instructor/Regular Loco Pilot shall keep a continuous watch over the trainee and keep himself in readiness to take any action that may be required to control the train in an emergency. Within Loco shed premises authority to work a loco should be given by AME. In case of emergency, in the event of Loco Pilot becoming incapacitated while the engine is in motion, the Asstt. Loco Pilot who is duly qualified (Passed Loco Pilot's Promotion Course at ZTC) may work the train to the next station cautiously. If however he is not qualified, he must bring the train to stop and send the message to the nearest Station Master to make arrangement for a Loco Pilot to take over the train. 4.21. Driving an electric train. (1) (2) In the case of electric trains, the Loco Pilot shall be in the leading driving compartment when the train is in motion or when the train is standing on any running line except as otherwise prescribed in these rules. (a) (b) In the case of a single or multiple unit train, if the driving apparatus in the leading driving compartment becomes defective, the train shall be driven cautiously from the nearest driving compartment which is serviceable in this event, the Guard shall travel in the leading driving compartment and shall convey the necessary signals to the Loco Pilot; the Guard shall also sound the horn or whistle as necessary and apply the brake in case of emergency and shall be responsible for stopping the train correctly at signals, stations and obstructions. In the case of an electric engine, if the leading driving compartment becomes defective, the train shall be driven from the trailing driving compartment by the Assistant Loco Pilot if he is duly qualified to drive; and the Loco Pilot shall remain in the leading driving compartment, and shall be responsible for the correct operation of the train. Existing GR 4.21(1) & (2) (b) which is applicable to electric engine shall also be applicable for working of trains by diesel engine having twin cab (ref: Railway Board's letter no 2014/Safety dated IS.01.2015). 99 4.21/1. 40 crrzrere R-2.fi I 15 di g) crrzrere (q) crrzrere Ati 3.78 / 4 a-ft *Qi) I GT&fi. (qa (3) a-TIAITT 4.21 / 3 (i) (O \$1 I crrzrere a--TIRF-RF \$1 40 100 CHAPTER-IV WORKING OF TRAINS GENERALLY S.R. 4.21/1. (a) When an engine cannot be driven from its leading cab, the Loco Pilot shall follow the special instructions issued by the Sr. Divisional or Divisional Electrical Engineer (Rolling Stock). (b) (c) (d) If the driving apparatus in the leading compartment of an electric engine becomes defective, the Loco Pilot shall send the Assistant Loco Pilot to drive the engine from the trailing cab. The Loco Pilot shall be responsible for the correct operation of the train. All operation will be done by exchange of signals between Loco Pilot and Assistant Loco Pilot. The speed of the train shall not exceed 40 ki lometers per hour. At the first opportunity the Loco Pilot shall inform the Traction Loco Controller to arrange for a relief engine. In the event of the driving apparatus in the leading driving compartment of an EMU train becoming defective, or in the event of it being necessary for the Motorman to drive from another driving compartment for any reason whatsoever the Guard will station himself in the leading driving compartment of the train, sound the horn as necessary and operate the Loco Pilot's brake valve handle for operation of the air brake or the Guard's emergency brake handle for operation of the air brake as required. It is the duty of the Guard under such circumstances to apply the brake as required and stop at the next station. In the event of the possibility of over running or in the case of emergency, the Motorman must also apply the air brake from the driving compartment he is occupying. The speed shall not exceed 15 ki lometers per hour. S.R. 4.21/2. (I) (a) Only certified Locopilots and Assistant Loco Pilots for electric rollingstock shall be allowed to drive electric rolling stock on any part of the running lines. They shall not allow any one to enter the driving

compartment other than those who are authorised to do so under these rules or who hold a permit signed by the Divisional Electrical Engineer (Rolling stock). No Person shall be allowed to handle any apparatus in the engine or in the driving compartment unless he is in possession of a Loco Pilot's Certificate of Competency. (b) (c) (d) If a Loco Pilot has not driven an electric engine or multiple unit for six months, he shall be re-examined after a refresher course and his certificate of competency endorsed before he is allowed to drive again. When Loco Pilot has not worked on any section for three months and over, he must not be booked on that section unless he has learnt the road and a competency certificate has been issued in his favour. A record of all competency certificate issued to Loco Pilot shall be maintained in the office of the Divisional Electrical Engineer (Rolling Stock)/Divisional Mechanical Engineer, in case of diesel Loco Pilot. (See also S.R. 3.78/4) However, staff under training for driving electric engines, when specially authorised by the Divisional Electrical Engineer (Rolling Stock), may drive such engines under the supervision of a certified Instructor/regular Loco Pilot. While a train is driving under these conditions the supervising Instructor/regular Loco Pilot shall keep a continuous watch over the trainee and keep himself in readiness to take any action that may be required to control the train in an emergency. (2) (3) No Person shall be allowed to move any electric rolling stock within the limits of the loco shed and stabling sidings unless he has been certified competent to do so by the Assistant Electrical Engineer (Rolling Stock). In the case of an emergency or in the event of a Loco Pilot becoming incapacitated while the engine is in motion, the Assistant Loco Pilot, if duly qualified, may work the train to the next station cautiously. If, however, the Assistant Loco Pilot is not duly qualified, he must bring the train to a stop and send a message to the nearest Station Master to make arrangements for a Loco Pilot to take over the engine. S.R. 4.21/3. (i) (a) When an engine cannot be driven from its leading cab, the Loco Pilot shall follow the special instructions issued by the Sr. Divisional or Divisional Mechanical Engineer (O & F). (b) If the driving apparatus in the leading compartment of a diesel engine becomes defective, the Loco Pilot shall send the Assistant Loco Pilot to drive the engine from the trailing cab. The Loco Pilot shall be responsible for the correct operation of the train. All operation will be done by exchange of signals between Loco Pilot and Assistant Loco Pilot. The speed of the train shall not exceed 40 kilometers per hour. 100 15 ETT (8) ZR (3U & W) I AR. 3.78 / 4 eat) (30 (i) (.3fi & W) / crgrere (ii) dii (3â & w) -a TIAT crzrere crzrere GTTR 4.22. Qiü \$1 Q-ei uT dii I 101 CHAPTER-IV WORKING OF TRAINS GENERALLY (c) (d) (e) (D) (h) At the first opportunity the Loco Pilot shall inform the Power Controller to arrange for a relief engine. In the event of the driving apparatus in the leading driving compartment of a DMU train becoming defective or in the event of it being necessary for the Motorman to drive from another driving compartment for any reason whatsoever the Guard will station himself in the leading driving compartment of the train, sound the horn as necessary and operate the Loco Pilot's brake valve handle for operation of the air brake or the Guard's emergency brake handle for operation of the air brake as required. It is the duty of the Guard under such circumstances to apply the brake as required and stop at the next station. In the event of the possibility of over running or in the case of emergency, the Motorman must also apply the air brake from the driving compartment he is occupying. The speed shall not exceed 15 kilometers per hour. Only certified Loco Pilots and Assistant Loco Pilots for diesel rolling stock shall be allowed to drive diesel rolling stock on any part of the running lines. They shall not allow any one to enter the driving compartment other than those who are authorized to do so under these rules or who hold a permit signed by the Sr. Divisional Mechanical Engineer (O & F). No person shall be allowed to handle any apparatus in the engine or in the driving compartment unless he is in possession of a Loco Pilot's certificate of competency. If a Loco Pilot has not driven a diesel engine or multiple unit for six months, he shall be re-examined after a refresher course and his certificate of competency endorsed before he is allowed to drive again. When a Loco Pilot has not worked on any section for three months and over, he must not be booked on that section unless he has learnt the road and a competency certificate has been issued in his favour. A record of all competency certificate issued to Loco Pilot shall be maintained in the office of the Sr. Divisional Mechanical Engineer (O & F), in case of diesel Loco Pilot (See also SR 3.78/4). However, staff under training for driving diesel engines, when specially authorized by the Sr. Divisional Mechanical Engineer (O & F), may drive such engines under the supervision of a certified Instructor/regular Loco Pilot. While a trainee is driving under these conditions, the supervising Instructor/regular Loco Pilot shall keep a continuous watch over the trainee and keep himself in readiness to take any action that may be required to control the train in an emergency. (ii) No person shall be allowed to move any diesel rolling stock within the limits of the loco

shed and stabling sidings unless he has been certified competent to do so by the Assistant Mechanical Engineer (O & F). (iii) In the case of an emergency or in the event of a Loco Pilot becoming incapacitated while the engine is in motion, the Assistant Loco Pilot, if duly qualified, may work the train to the next station cautiously. If, however, the Assistant Loco Pilot is not duly qualified, he must bring the train to a stop and send a message to the nearest Station Master to make arrangements for a Loco Pilot to take over the engine. 4.22. Riding on engine or tender- (1) No person other than the engine crew shall be authorised to ride on the engine or tender of a steam locomotive, except in accordance with special Instructions. (2)

Except as may be permitted by special Instructions, no person other than the engine crew shall be authorised to enter any driving compartment of a single or multiple unit train or a train propelled by electric, diesel or petrol engine. (3) No unauthorised person shall manipulate any apparatus contained therein. S.R. 4.22/1. Riding on Engine- No person other than a Loco Pilot, Assistant Loco Pilot, is permitted to ride on an engine, unless he is in possession of an engine pass, except Guards and shunting staff when performing shunting operations or staff proceeding to the site of an accident, or in an emergency in the discharge of their duties. In the case of Loco Pilot learning the road, an Engine Pass on the prescribed form should be supplied to him through his Foremen. Officers and Inspectors whose passes are endorsed "Available on Engines" are allowed to ride on the foot plate provided not more than three at any time except in case of emergency or when specially required. 101 4.23. - (ii) I (iii) (T) (q) (g) - #a-ft crrzrere a-TIRT7 \$1 (ii) cra (iii) zrrerr (iv) (vi) (vii) 3-RR -2 -dfh-f?q-d --45-&IT (viii) (ix) Gi— (711* qæ) R-2.fi

102 CHAPTER-IV 4.23. Brakevans- WORKING OF TRAINS GENERALLY (1) No train shall be allowed to enter a block section, unless one or more brake vans or hand-braked vehicles are attached to it, except in emergency or as provided for under special instructions. (2) This rule does not apply to rail cars, light engine or light engines coupled together. S.R.4.23/1. The following goods trains may run without goods brake-vans but not without a tail board or tail lamp affixed on the last vehicle- (i) Colliery Pilots. (ii) Goods pilots which operate between a yard and a siding, which do not have to run over the main line. (iii) Goods shuttles on short specified routes, which will be worked by a leading engine for which the prior approval or the Chief Operations Manager will be obtained. Working of goods trains without brakevan: (a) The Sr. DOM [DOM may authorise working of trains without brakevan as the last vehicle only in emergent circumstances to cater for operational exigencies. A goods brakevan must be attached at the first possible opportunity. (b) Trains may run without brakevan only in controlled sections. (c) Running of trains without brakevan is prohibited during total failure of communications and single line working on double line section. (d) No damaged wagon or vehicle should be attached to a train running without brakevan. (e) Procedure to be observed for running goods train without brakevan- (i) The Guard shall travel on the engine. While running through a station the green hand signal shall be exchanged on station side by the Guard and on the other side by the Assistant Loco Pilot, The shall look back and ensure that the train is following in a safe manner. (ii) The train shall be provided with continuous vacuum/Air Pressure from the engine to the rearmost vehicle and with adequate brake power. The train examiner must mention in the brake power certificate the number and description of the last vehicle. (iii) The LV board/Tail lamp shall be fixed by the Guard and he should travel on the engine. For CBC stock the last vehicle Board/Tail Lamp should be clamped to the coupler with the clamp of approved design. In absence of the clamp and tail board/tail lamp on the rearmost vehicle no train is permitted to run without brakevan. (iv) The Guard of the train travelling on the engine should look back frequently while on run. (v) Before starting a train without brakevan the station Master of the originating station must intimate to the Section Controller on duty the last vehicle number under exchange of private number. (vi) While asking 'Line Clear', the SM/Cabin masters shall specifically mention that the train for which line clear is being asked is running without brakevan. (vii) The Station Master/Cabin In-charge before clearing back the section must verify that the train has passed safely with tail lamp/tail board. In case, the train is stopped at station for precedence, crossing or due to any other reason, SM/Cabin In-charge shall send the 'Train Intact Register' in advance to the Guard who will certify the complete arrival of the train inside the fouling mark with Tail Lamp/ Tail Board on the last vehicle after physically verifying the last vehicle. (viii) A register should be maintained in control office showing the trains run without brakevan and Sr. DOM/DOM should sign in the register in token of his permission to run the train without brakevan. (ix) The duties of the Guard which can be performed on by his presence in Brakevan like applying hand brakes during parting, exchanging hand signals with the Loco Pilot etc. will not be applicable in this condition. (x) At night or in thick Foggy

weather, when visibility is affected. Such a train should stop at each station for verification of the last vehicle number. 102 I \$1 zrr (ii) \$1 g•zi (iii) q-181" zrr zrr \$1 a-IPT I a-fi ertTTZIT GTT @ \$1 75 uzlfi (30 zrra•r 103 CHAPTER-IV WORKING OF TRAINS GENERALLY (D Procedure to be observed in case of vacuum trouble enroute- When a train running without brakevan encounters trouble enroute the following steps which are normal for train operation are required to be taken by the Guard of a train: (i)

Guard along with Assistant Loco Pilot should check complete train for any hose pipe disconnection or leakage etc. The help of C&W staff or pointsman should be taken when the vacuum trouble occurs within the station limits. (ii) The Guard should arrange to connect the hose pipe, plug etc. and attend the leakage of hose pipe with the help of Assistant Loco Pilot and start his train after ensuring that the vacuum trouble has been frilly attended to and the requisite amount of vacuum is maintained on the locomotives. (iii) The Loco Pilot should regulate the speed of the train depending on the 'Feel Test' conducted by him in the first block section. S.R. 4.23/2. Definition of Coaching Stock- The following vehicles are to be considered as

Coaching stock-passenger carriages, postal vans, horse boxes, carriage trucks, motor vans, store vans, restaurant cars, luggage and fruit vans, passengers brakevans, goods vehicles marked 'Coaching vehicles' and any other vehicles that may from time to time to be included in the list of Coaching stock. S.R.4.23/3.

Goods stock- Definition of Goods stock includes all goods wagons, i.e. all rolling stock other than coaching stock, irrespective of contents wheather attached to passenger or goods trains. S.R. 4.23/4. Marshalling of passenger and mixed trains (a) (b) (c) (d) (f) (g) (i) (j) The composition and marshalling of Mail, Express, Passenger and Mixed trains is prescribed by special instructions, issued by COM from time to time. On passenger trains, there must be at least one SLR or LR in the rear of the fixed composition of the train. On passenger and mixed trains on short branch lines, one bogie SLR may be attached in the middle of the train to avoid reversing provided not more than 2 bogies are on ei ther side. The marshalling arrangements on mixed trains shall ordinarily be-Train engine,. goods vehicles, passenger vehicles, SLWLR, vehicles fitted with vacuum/air brake in good working order and must be connected with vacuum air brake system of train. However, vehicles loaded with the live stock, explosive, dangerous and inflammable goods should be attached in rear. Vehicles fitted with and connected with vacuum\air brake system of train throughout can be attached behind rear SLR. In Passenger trains- not more than two bogies/four-4 wheelers may be attached behind rear SLR. In addition, one inspection carriage fitted with hand brake may be attached as rear most vehicle. In mixed train- One Inspection carriage or Power (Generator) car may be attached as rear most vehicle in addition to nvo bogies/four 4 wheeler behind rear SLR. A single 4 wheeler vehicle must not be marshalled between two bogies or between engine and bogie. When four wheelers are attached to a passenger train, speed of train should not exceed 75 KMPH subject to local restrictions. No goods stock wi ll be attached to a passenger train unless certified by the Train

Examiner that it is safe to run on passenger train. Trained piped vehicles are not to be attached by Passenger train. However, in case of mixed train they may be attached inside rear brakevan of frilly vacuum/air brake train and not behind rear brakevan, provided they do not cause any interference to train lighting connections. Train Examiners at all coaching and goods 'Maintenance' and 'Fit to Run' Stations shall examine all goods stock attached to Passenger trains, even though the train to which they are attached is not ordinarily examined at that station. At these stations, the examination will be limited to the goods stock only and will be confined to a safe to run examination. On such stations where no C & W staff is provided on the terminal stations, the C&W staff at originating station of mixed train will give the certificate for both outward and inward journey of the wagons whether loaded or empty indicating the terminal stations. 103 (q) (g) 5. zrrerr \$1 a-Ild 3-116 4.29 / 1 (ii) 6. a-FQ ertTTZIT g•zi RNZFTé (nr Ali)

\$1 I (q) (ii) — (iii) g•zi 104 CHAPTER-IV S.R. 4.23/5. Marshalling of goods train- WORKING OF TRAINS GENERALLY (a) (b) (c) (d) (D There should be at least one goods brakevan in the rear of the train, except in case of train mentioned in S.R. 4.23/1. No load which infringes the standard moving dimensions shall be attached to a train without the sanction of the Chief Operations Manager. A Single four wheeler wagon must not be marshalled between any two eight wheeler wagons or eight wheeler wagon and the engine. A single empty four wheeler wagon must not be marshalled between two loaded four wheeler wagons. One damaged (or sick) vehicle/wagon, or engine certified fit to run, may under special instructions be attached in the rear of the rear brakevan of a goods train during day light hours only. Provisions of S.R. 4.29/1 should also be complied with. Dead or defective engine- If a dead Locomotive is worked without any one of locomotive couplings or connecting roads, it is termed as an

unbalanced locomotive. (ii) Whenever a locomotive working a train fails in the block section, the dead train locomotive may be coupled to the relief engine and the train worked to the next block station, where the dead locomotive should normally be detached. Otherwise the train may be worked double headed with

the dead locomotive up to destination. S.R. 4.23/6. (i) (ii) (iii) Attachment of Dead locomotive- The following condition shall be satisfied before attachment of dead locomotive to any train/light engine- (a) (b) (c) (d) Certificate for 'Fit to run' is issued by Section Engineer/Loco Inspector/Power Controller for Passenger/Goods train. In addition to freight/passenger train, a dead locomotive can also be attached to Mail/Express trains including Super fast train but excluding Rajdhani and Shatabdi if the locomotive brakes including proportionate brakes are operational and maximum permissible speed of the locomotive is not less than the booked speed of the train in which it is being attached. Locos with inoperative brakes can be attached subject to the brake power of the train being within the permissible limits. Locomotive with defects in under gear equipment can be attached only in freight trains. Escorting of dead locomotive (Diesel as well as Electric) attached to freight and passenger carrying trains is not necessary if the brakes including proportionate are fully operational and the dead locomotive is attached next to the train engine. The dead

locomotive will continue to be escorted if attached in the rear of brake van or has defect in under gear equipment. As a final check, the coupled locos should be run for about 500 meters and the Loco Pilot shall check for any abnormal rise in the temperature of the wheels of the dead locomotive and shall also check it

at subsequent stops during the journey. Attaching/hauling of dead locomotives by Passenger Trains- In addition to the above, the following precautions should be taken for hauling the dead locomotives - (a) Only one dead locomotive (diesel/electric) can be attached. (b) Brake power of the train should be 100% excluding dead locomotive. (c) As far as possible, brake should work on dead locomotive. However, if it is not possible, then in the case of air-braked train, brake pipe and feed pipe of working locomotive shall be connected to brake pipe and feed pipe of trailing stock and dead locomotive will work as piped vehicle. (d)

In the case of vacuum braked train, vacuum pipe of locomotive shall be connected with vacuum train pipe of trailing stock and the dead locomotive shall be treated as a piped vehicle. However, pure air/vacuum

brake locomotive shall be attached only by air vacuum brake stock respectively. Attaching Hauling of dead locomotive by goods trains - (a) Movement of maximum three locomotive (2 working + 1 dead) with load is permissible subject to observations of all restrictions on operation of double/triple headed working

Locomotives in the section provided that brakes in dead locomotives are operational. (b) If a dead locomotive is not coupled with the train engine, the minimum distance between the dead locomotive and the train engine/banking engine (if any) should not be less than the largest span of the bridge on the section where dead locomotive is hauled. However when a dead diesel/electric locomotive is coupled next to the

train engine, dead engine should be treated as a piped vehicle and at least ten fully vacuum braked/air braked wagons should be attached in rear 104 3-014124—4 (iv) ulé a-fi GTT 1 2 5 6 7 8 4.24. - e, 4.25. —

(2) (3) 105 CHAPTER-IV WORKING OF TRAINS GENERALLY (iv) A locomotive when it is sent to shops for POW repairs should normally be sent on its own power. If a locomotive has to be sent dead to shop for repairs by a train, it should be attached to a goods train. An unbalanced engine being sent to shops for repairs, should be hauled by a light engine at a speed not exceeding 15 KMPH. MARSHALLING

CHART The position of wagons should be as shown in chart below. However such wagons may be attached at a later position. 2. 3. 4. 5. 6. 7

8. Live stock/loaded Horse box Motor vehicles in open and ventilated covered wagon Motor vehicles of military Specials.

Cotton in covered wagon Open wagon loaded with Bhoosa, Hay etc. Damaged (or sick) vehicles/engine certified fit to run. Dead engine Crane Where double heading is not permitted Where double heading is pennitted. In Goods Trains worked by DSL/AC locomotive 2nd from engine 3rd from engine 3rd from engine 2nd from engine 2nd from engine Behind rear brakevan during day light hours only. Next to engine or 7th * Next to engine or 7di * In Passenger/mixed trains worked by DSL/AC locomotive 2nd from engine from engine Not applicable Not applicable Not applicable Not applicable Next to engine* * With guard wagons & with permission of COM. 4.24. Position of brakevan on train- Unless it be otherwise directed by special instructions, one brakevan shall be attached to the rear of the train, provided that reserved carriages or other vehicles may, under special instructions, be placed in rear of such brake-van. 4.25 Guards- (1) Except under special instructions or in an emergency, every running train shall be provided with one or more Guards. (2) The Guard of a running train shall travel in his brake-van, except- (a) in an emergency, or (b) under special instructions. (3) When a train is worked without a Guard, such of his duties as can be performed by the Loco Pilot shall devolve on him as may be specified by special instruction. IOS (2) \$1 crrzrere arqN-2TT g•zi g•zi g•rq (711* \$1) dii / zrré -\$ -t gf?firr zrr a-TN g•zi \$1 I (q) zrr zrr (U) 21/2 I 106 CHAPTER-IV S.R. 4.25/1. WORKING OF TRAINS GENERALLY (1) (2) Guard's Journals- (a) (b) The Guard's Journal on the prescribed



form must be filled by the Guard. This form shall be used for train (except suburban and material trains for which separate forms are provided). The cause of each detention to trains must be clearly explained. All irregularities in connection with the working of trains such as absence of signals or improper exhibition of signals, slack working of staff, complaints made by Loco Pilots or the travelling public or accidents must be reported in the journal. Remarks on the following heads must also be passed at the foot of the journal- Time checked with the Controller, amount of vacuum or air pressure maintained in the brakevan, weather conditions, weather cautious driving observed, condition of the rolling stock and fitting defects in lighting on the train, correctness of the brakevan side lamps and tail lamp and other brakevan equipment. In the case of passenger and special trains, the number of the First Aid Box, wooden wedges, portable field telephone, emergency train lighting equipment, fire extinguishers, stretcher and such other equipment's (provided as brakevan equipment) must be recorded. Station Master/Yard Master must maintain a register on the prescribed form (to be kept in Carbon process) in which should be recorded particulars of trains run and journals received. One foil will be retained by the Station Master and the other sent daily to the divisional office with the Guard's journals. Wagon Way bills (vehicle guidance): (a) (b) (c) (d) (e) (D) (h) Wagon way bills (vehicle guidance) for all goods, passenger, mail and other trains must be entered up by the staff at the starting station, and handed to the Guard in charge of the train. The wagon way bill at each terminal starting station must be prepared direct from the trains Clerk's hand book in which the Trains

Clerk must record the numbers of each individual vehicle composing the train from the vehicles themselves. The numbers are not to be copied out from one wagon way bill into another. Entries of vehicles attached to a train at intermediate stations must be made by the station staff there. The Guard must obtain the signature of the station staff in the wagon way bill for any vehicle detached from his train. The wagon way bill must be carefully and legibly prepared at the starting station. Wagon way bills (vehicle guidance) for passenger trains must be sent through to the destination station. It is not necessary to prepare sectional way bills for passenger trains. Wagons way bills for through goods trains must be prepared in duplicate, one copy must be made over to the station Master/Yard Master of the last terminal station of the division for submission to the Divisional Railway Manager, the original copy to go through as far as the destination station. These through wagon way bills are to be transferred from Guard to Guard. The Guards handing over through wagon way bills will obtain acknowledgement in their memo book of having done so; otherwise they will be held responsible if the wagon way bills go astray. Before starting, the Guard will be responsible for checking the load on the train with the entries on the wagon way bill of wagon numbers, booking and destination stations, type of vehicle open or covered, four wheeler, bogies or special types, tare weights, weights of contents and gross weights etc. On arrival at destination, the Guard of an incoming train will make over the wagon way bill to the station Master or the Yard Master or other yard staff specially deputed for the purpose, who will sign for the same in the Guard's memo book. In

calculating the load of goods and mixed trains, Weights less than 5 quintals should be omitted and 5 quintals or more should be counted as one tonne. When a bogie carriage (i.e. coaching stock) is attached to a goods train, it should be counted as equivalent to two and half four-wheeler units for the purpose of calculating the vehicle load of the train. 106 (i) (ii) (iii) (iv) (v) (vi) (vii) (viii) (ix) (x) (xi) R-2. fi crrzrere GTT 711* I q-lâ crrzrere I crrzrere EF•zrr u-l@e s:R-2.TT7 a-TFßT a--TIRF-RF crrzrere gq, fâ-g I crrzrere I \$1 R-2. fi 107 CHAPTER-IV WORKING OF TRAINS GENERALLY S.R. 4.25/2. RUNNING

OF TRAIN WITHOUT GUARD- Running of train without Guard should be done with the specific order of Sr. DOM/DOM in that case such of the duties of the Guard shall be performed by the Loco Pilot. Train without Guard will not run in night, thick, foggy weather and during total failure of communication except in case an emergency such as when a Guard is fallen down or sick or left behind or any mishap necessitating running of train without Guard may be allowed to continue its journey for a short distance up to a station where it can be properly stabled/arrange Guard. Procedure for running of trains without Guard is as under- (ii) (iii) (iv) (v) (vi) It should be ensured that the train is provided with continuous vacuum/air pressure from the engine to the rear most vehicles, which may be a brakevan. If the Guard is not provided at the originating station of the train, the T XR shall mention the number and type of the rear most vehicles in the brake power certificate issued for such a train. And if no Guard is provided at any intermediate point, the crew changing station, the Loco Pilot on being informed by the Station Master, shall examine the brake power of the train and ensure that the rear most four pistons are in working order. Before signing the vacuum/brake power certificate the Loco Pilot shall ensure that the required amount of vacuum/air

pressure is provided in the brake van. Vacuum Pressure gauge shall be provided by the originating station.

L.V. Board/Tail lamp must be made available to the Loco Pilot and the last vehicle indicator shall invariably be fixed at the tail end of the rear most vehicle by the Loco Pilot. The Tail lamp is essential in running such a train in the night time. Caution Order shall be issued to Loco Pilot by the SM with necessary endorsement stating that the train is to run without Guard and section controller shall also be advised of the fact under exchange of private numbers, who will inform the station enroute. The Station Master will inform the end cabins, where provided and gateman of all the level crossing gates enroute provided with telephonic communication accordingly under exchange of private numbers. The fact that the train is running without Guard and also the last vehicle number shall be mentioned in each line clear enquiry and reply message, and with the departure report while working train on Automatic Block System. Line clear enquiry message and reply shall be recorded in the Train Signal Register. A separate private No.

shall include the number of the last vehicle of the train and this No. shall be exchanged stating that the train is running without Guard. The SM of the block station working the Intermediate Block stop signal on becoming aware that the train is running without Guard, shall before dispatching such a train, treat the entire section upto the block station immediately ahead of the intermediate block post as one block section and obtain line clear for the block section between intermediate block stop signal and the block station in advance. Assistant Loco Pilot will keep a continuous look out, while running through a station, towards the rear and shall acknowledge any danger signal shown by the station staff. (vii) When such a train stops at a station the Station Master/Cabin Master/Cabinman shall ensure that the train has arrived complete and is standing clear of the fouling mark. (viii) Extra sets of detonators should be carried by the Loco Pilot who shall be responsible for protection of the train. (ix) When such a train is stopped between stations on account of accident, failure, obstruction or other exceptional cause and the Loco Pilot finds that his train cannot proceed further, he shall immediately on single line, protect the train in front and the Asstt. Loco Pilot in the rear. In case of double line, when adjacent line is not blocked, the Loco Pilot shall protect in front and Asstt. Loco Pilot in rear in case adjacent line is blocked the Loco Pilot shall first protect the adjacent line and then his own line in front and Asstt. Loco Pilot in the rear. (x) In case of passenger carrying trains, the Loco Pilot shall also be provided with First Aid Box, portable field telephone and emergency light equipment. (xi) In Automatic Block Sections territory, no train shall be allowed to follow until the proceeding train, which has been allowed to run without Guard, has arrived complete at the block station in advance. 107 4.26. (4) 4.27. (2) (2) zrr (.3h-zrq#e) (3öqQ€) I (tra•vq) s:rrq I ercre \$1 (ata:eg) \$1 zrr I zrn•r 108 CHAPTER-IV WORKING OF TRAINS GENERALLY 4.26. Couplings-No vehicle that is not fitted with a coupling or couplings of approved pattern shall be attached to any train. S.R. 4.26/1.

Coupling of vestibuled stock- (a) (b) (c) (d) The vestibule connections of coaches and other stock so equipped are to be carefully coupled together so that there is no gap between the fall plates. When a vestibuled coach is the last vehicle on a train or is isolated and the vestibule is not in use, the doors of the unused vestibules must be closed and properly secured. The Train Examiner must not allow a train to proceed without satisfying himself that the vestibule connections are properly secured and vestibuled. The

Guard must not allow a train to proceed without satisfying himself if some defect is reported to him or comes to his notice. D. Vehicles and Cranes 4.27. Cranes- (1) (2) No travelling crane shall be attached to a train until it has been certified by a duly authorised person that it is in proper running order, and with a dummy truck for the jib, if necessary. When a crane is to work on any line provided with electric traction or any line adjacent to it, the procedure and precautions as laid down under special instructions shall also

be followed. S.R. 4.27/1. Cranes Use of the Electrified area- (a) (b) The cranes shall not be worked adjacent to overhead lines, unless such overhead lines are dead. If the use of steam or hand crane which may foul the overhead equipment, or track lifting is necessary on the electrified area, the Power Controller, Traction Foreman (Overhead Equipment), and Assistant Traction Engineer (Distribution) must be advised and their sanction obtained. All movements of the crane jib shall be exercised with great care so as not to foul overhead lines, Wherever possible, the direct blast from the crane chimney to the overhead lines or insulators should be avoided. S.R. 4.27/2. Working and care of cranes- (1) Cranemen- All Cranemen must

be in possession of a competency certificate issued by the competent authority. The Craneman is responsible for the efficiency of the crew working under him, who must be trained men. (2) Attachment of Cranes- (a) Before a travelling crane is allowed to run outside station limits, the jib must be lowered on to its dummy truck, with the jib resting freely on the bolster. The cams beneath the balance weight box or

such other contrivance with which the crane is fitted must be brought into use. On hand cranes the balance weight box must be fixed close to the crane-pillar. The grippers and all other fittings must be securely stowed away and fastened to prevent their moving. The weight of the crane must be taken on the springs. The Craneman shall ensure (b) The craneman is responsible to see that no one other than the crane staff are allowed to travel on the crane and travelling in the crane platform is completely prohibited. 108 40 trrrrq I

140 eq (i) 75 (ii) 140 100 zrr (?NRIT) I Ati I g; zrr I frfi&T) gelt «•a•rzrr a-TN 4.28. (1) 53 (3) 109 CHAPTER-IV WORKING OF TRAINS GENERALLY (c) (d) (f) Where possible all cranes should travel with the jib to the rear, but where this is found impracticable, care must be taken to see that the instructions

regarding the securing of the jib have been fully observed. When the jib faces the engine, a speed restriction of 40 kilometers an hour must be observed. 140 T Jessop Crane (JHS Division) 75 KMPH or maximum sectional speed whichever is (ii) 140 T Gottwald Crane (ALD Division) 100 KMPH or maximum sectional speed whichever is less. The Train Examiner will certify in the Guard's Memo Book if the crane is fit to run. Before certifying that the crane is fit to run, he must ascertain from the Craneman that the above rules have been complied with. Travelling crane shall ordinarily be hauled by goods train. Not more than two cranes are to be attached to a train. If there is no goods train on the section, it may be attached to mixed train. When attached to a mixed train, the crane must be placed amongst the goods

wagons. A crane may only be attached to a passenger train with the Chief Operations Manager's permission. When the jib of a travelling crane projects beyond the truck, an additional hook shall be attached to act as a dummy. Note: Cranes must not be allowed to lift or swing loads on steel or arched bridges without the special permission of the Chief Engineer. Operation- (3) (4) (a) (b) (c) (d) Under no circumstances must a crane be loose shunted or a loose shunt made against a crane. The bearing spring must be relieved of the weight of the crane by the means provided, the outrigger girders must be fully extended to project equally on both sides of the crane and securely packed up and the claws or grippers must clip the rails firmly. On hand cranes the cam beneath the balance weight box may next be thrown out of gear and the balance weight box must be traversed outwards to its full extend and clamped. The rising pulley block on the chain must always be used when lifting loads above half lifting capacity of a hand crane. Two cranes of unequal lifting capacity must not be operated together to lift any one heavy article, unless the lifting capacity of the smaller crane is at least equal to half the weight to be lifted. In such cases the sanction of the Divisional Railway manager must be obtained. When a crane is liable to foul another line during working, it must be in charge of responsible official, such as an Inspector. The Station Master at either end of the section must be advised to issue Caution Orders to the Loco Pilots of trains proceeding into the section. The Inspector in- charge of the crane must, when the crane is likely to foul another line, protect that line with banner flags and hand signals in accordance with S.R. 15.09/1. Such banner flags and hand signals may only be removed on his authority when the crane has stopped working and the jib has been placed parallel to the track, clear of the adjacent road. It is desired to work a crane of cranes on a

bridge, the permission of the Divisional Engineer must be obtained, who will, if necessary obtain the sanction of the Chief Engineer. The maximum weight to be lifted and the maximum radius and angle at which the jib will work should be given for guidance. Cranes belonging to the engineering or mechanical departments must be worked solely by Certified Craneman appointed by those departments and the Craneman are responsible for the proper working of the cranes. 4.28. Loading of vehicles- (1) No wagon or truck shall be so loaded as to exceed the maximum gross load on the axle fixed under sub-section (3) of section 53 of the Act, or such less load, if any, as may have been prescribed by the Railway

Administration. 109 (2) (3) (4) - zrr crRo•rrrq rrei (ii) (ili) a--TA?ZI I zrr (q) g•zi 'T Nqfte), 110

CHAPTER-IV WORKING OF TRAINS GENERALLY (2) (3) (4) Except under approved special instructions, no vehicle shall be so loaded as to exceed the maximum moving dimensions prescribed from time to time by the Railway Board. When a load in a truck projects to an unsafe extent beyond the end of truck, and additional truck shall be attached to act as a dummy. The Guard shall, unless this duty is by special instructions imposed on some other railway servant, carefully examine the load of any open truck which may be attached to the train, and if any such load has shifted or requires adjustment, shall have the load made secure of the truck removed from the train. S.R. 4.28/ 1. Moving dimensions- Except under approved special instructions, every vehicle and its load must be within the dimensions. S.R. 4.28/2. Projecting load- When it is found necessary, in consequence of the contents projecting beyond the end or ends of a wagon, to attach one or more guard wagons there to, Guards must be careful to see that they are

not separated from the wagon or wagons in which the overhanging load is placed. Loads infringing Standard Moving Dimensions- Loads which infringe standard moving S.R. 4.28/3. dimensions will not be dispatched without the sanction of the Chief Operations Managers, who will, if necessary, obtain the sanction of the Commissioner of Railway Safety through Chief Engineer. S.R. 4.28/4. Explosives and Ammunitions. Wagons containing- (a) The maximum number wagons or powder vans containing military explosives and (b) (c) (d) (D ammunitions that can be carried by each class of trains is as follows- (i) By goods trains-5 (ii) By passenger trains-2 As far as possible, powder vans will be used for transport of explosives. (iii) By mixed trains-4 powder vans or 3 covered wagons. All wagons containing ammunition and explosives must be marshalled together and close coupled to one another and also to the adjoining vehicles on either side. The total quantity of explosive permitted to be carried in any one wagon shall not exceed the marked capacity of the wagon subject to rules given in Red Tariff. Wagons containing ammunition and explosives must be preceded and followed by two guard wagons exclusive of brakevan.

One guard wagon should be provided between the locomotive and such wagons if marshalled next to engine. As far as possible, wagons containing explosives or explosive vans on passenger trains will be attached in the rear. The above rules regarding guard wagons will also apply to military specials. The number of explosive and ammunition wagons to be carried by military special train and their marshalling arrangements will be regulated by rules in the Military Tariff. The maximum load of such a train should be the load that a scheduled locomotive can haul on the various sections. S.R. 4.28/5. Carriage of Petroleum and other inflammable liquids by trains Petroleum and other inflammable liquids are divided into Class 'A' which are highly inflammable, and Class 'B' which are inflammable. The common types of class 'A' liquids carried on the railway are aviation spirit, benzene, crude oil, petrol (motor spirit), solvent oil, methanol and naphtha. The common types of Class 'B' liquids are diesel oil, furnace oil, jet turbine fuel, kerosene and turpentine. Details are given in the Red Tariff. S.R. 4.28/6. Carriage of Petroleum and other inflammable liquids by Passenger or Mixed trains (a) The maximum number of tank wagons or vans containing packed petroleum and other inflammable liquids that can be carried by passenger or mixed trains is four. (b) Such wagons must be grouped together and close-coupled to one another and also to the adjoining vehicles on either side and must be marshalled as far away as possible from the locomotive. 110 (q) (q) 'T a' qq.p.i I (q) a-TF&T I uz:rft 21 111 CHAPTER-IV WORKING OF TRAINS GENERALLY (c) Wagons containing

Class 'A' liquids must be preceded and followed by two guard wagons exclusive of brakevan. If wagons containing Class 'A' liquids are marshalled next to locomotive, one guard wagon should be provided between locomotive and such wagons. Wagons containing Class 'B' liquids need to be separated by one guard wagon in front and one in rear. However, the number of guard wagons in front and in rear will not be less than two when wagons contain gases (Compressed, liquefied or dissolved) (d) All empty wagons which had contained either Class 'A' or Class 'B' inflammable liquids should be treated in the same way as wagons actually containing the inflammable liquids and should be separated in front and rear as per item (c) above. S.R. 4.28/7, Carriage of petroleum and other inflammable liquids by goods trains- (a) (b) (c) (d) Tank wagons or other wagons loaded with petroleum or other inflammable liquids Class 'A' or Class 'B' may be carried by goods train or specials as load permits. Such wagons must be grouped together and close-coupled to one another and also to the adjoining vehicles on either side and must be marshalled as far away as possible from the locomotive. In the case of wagons containing Class 'A' liquids, they must be preceded by one and followed by two guard wagons exclusive of brakevan. Wagon containing Class 'B' liquids need be separated by one guard wagon in front and one in rear, However, the number of guard wagons in front and in rear will not be less than two when the wagons contain gases (compressed, liquefied or dissolved) All empty tank wagons which had contained Class 'A' or Class 'B' inflammable liquids should be treated on par with wagons actually carrying the inflammable liquid. Maximum & Minimum Dimensions Coaching & Goods Stock Loaded or Empty Broad Gauge FOR GUTTER IUG CORNICES, LAMPS, BOARDS & ALARM SIGNAL Discs. FOR NOMOER PLATE, BARS AND "OLDERS- 3252 sroex 3200 -FOR 4 WHEELED GOODS Stock 3043 MAR.FOR& OOGIE GOODS STOCK*If COACHING STOCK 25.4 mm. FOR COACHING STOCK 3045 mm. 243B*4 mm. 'Goo mm RAIL . LEVEL All Dimensions are in mm. 111 oo E. a--rrzrrq 762 4.29. (2) a--rrzrrq 609-6 e. cret zrr zrr zrr ertTTZIT I a-TF&T I qiq uT 112 CHAPTER-IV Maximum Moving Dimensions 762 mm Gauge (Narrow) RAIL WORKING OF TRAINS GENERALLY Maximum Moving Dimensions 609.6 mm Gauge (Narrow) All Dimensions are in mm. 4.29. Damaged or Defective vehicles- (1) No vehicle which

has been derailed shall run between stations, until it has been examined and passed by a competent Train Examiner: Provided that in case of a derailment between stations, the Loco Pilot may, if the vehicle has been rerailed and if he considers it safe to do so, take such vehicle to the next station at a slow speed. (2) If a Guard or Station Master has reason to apprehend danger from the condition of any vehicle on a train before it can be inspected by a Train Examiner, the Loco Pilot shall be consulted, and if he so requires the vehicles shall be detached from the train. S.R. 4.29/1. Movement of disabled vehicle, wagon or damaged engine- Whenever a Loco Foreman or Train Examiner considers it safe to attach a disabled vehicle, wagon or damaged engine behind the rear brakevan, a Station Master on receiving a written advice to this effect, may attach such a vehicle, wagon or engine behind the rear brakevan of goods train or a mixed train. The original advice must be given to the Guard of the train for submission with the journal. If the vehicle, wagon, or damaged engine is detached before reaching its destination, the original advice must be made over to the Station Master, who will give it to the Guard of the train by which the vehicle, wagon or engine is subsequently despatched. Only one such vehicle, wagon or engine can be attached in the rear of goods or mixed train. S.R. 4.29/2. (1) Hot axle- (a) Any railway servant observing a hot axle on a running train must do everything in his power to stop the train and warn the train staff. (b) If an axle box of a vehicle or wagon is found running hot at a station, other than a train examining station, the vehicle or wagon must be detached from the train. The vehicle or wagon must not be worked onward except as provided for in sub-para (c). (c) If an axle box is observed to be running hot between stations, the train must be brought to a stand immediately and the axle box examined by the Loco Pilot. Who should exercise his discretion with regard to the restricted speed at which it is safe for the vehicle or wagon to travel. On arrival at the first block station with detaching facilities, the vehicle or wagon must be detached from the train. 112 (q) (q) a-TFTTAT a-TFßT crzrzere -d-111-* I (11) (III) 65) (O (ine) I (q) \$1 a--rrq•rq a--TQZI I \$1 I R-2.fi R-2.fi fiu-f*-r g---cfi -q-râ 4.29/3. (i) '34TH' am—em (ii) sri (iii) qiq mg•rq I '31115' R-2.fi 'trzra•er 10 YEi. I 113 CHAPTER-IV WORKING OF TRAINS GENERALLY 11. (d) Immediately a vehicle is detached from a train at other than a train examining station, the Station Master must advise the Head Train Examiner under whose jurisdiction his station is situated. (e) Water must not be poured on a hotbox to cool it. (f) Before a wagon is attached to a train at a way-side station other than a train examining station, the Loco Pilot must examine the axle boxes to ensure that the wagon is safe to run. The signs of an axle running hot is stages as follows- (a) (b) (c) (d) The box commences to warm up and can only be detected in this stage by feeling with the hand, which should be placed on the side of the box facing the rear. There is a strong smell of heated oil and waste, which can be detected at some distance from the vehicle. A whistling noise may commence at any time during the process of heating. A box, which is whistling must be examined. The box becomes sufficiently hot to ignite the waste and oil. Flames and smoke can be seen issuing from the box and the metal of the box becomes red hot. In this condition the axle will break within a few kilometers. (III) The signs of a roller bearing Hot Boxes are as follows- (a) (b) (c) (d) (e) There is splashing of grease around the roller bearing axle box and the wheel/bogie surrounding it. There is an emission of smoke from the axle boxes due to burning of grease and it is often visible during day time, usually it is also accompanied by a smell of burning grease. Unusual metallic sound like whistling or cracking sound is heard on roller bearing hot box. Axle box cover may also get damaged/missing. In some cases, the grease may run so hot as to catch fire and flames can be seen. Skidding of wheels and tilting of particular spring usually takes place at the last stage when due to breakage of roller bearing the wheels may get locked. A roller bearing hot box may cause seizure of wheels within a short time leading to derailment. S.R.4.29/3. (i) Whenever any unsafe condition on a train while passing through the station is noticed, such as hot axle, loose wagon/vehicle undergear hanging etc., the Station Master/Cabin Staff should take immediate steps to stop the train by exhibiting hand danger signal, putting the fixed signals to 'On' and advising the Loco Pilot/Guard on walkie-talkie or by other means available and In case of an electric engine, the Section Controller and Traction Power Controller should be advised to switch off the power supply to that section, simultaneously if the measures taken by station staff to stop the train fail to attract the attention of the train crew, the Station Master/CASM/Cabin Master should immediately transmit 'Stop and Examine Train' signal to the station in advance on block instrument, telephone attached to the block instrument or on electric communication instrument. (ii) The Station Master of station in advance receiving the signal and the message shall immediately acknowledge both and shall use all available means to stop the train in question at the station. Till such time the affected train arrived complete at his station,

the Station Master shall not permit any train or trains running on any adjacent line or lines to leave his station towards the station, which sent signal and message. (iii) The Station Master, on receipt of 'Stop and Examine Train' signal, shall where possible receive the train on the main line, if he is unable to do so he shall bring it to a stop out the first stop signal before admitting it into the loop line. The Station Master, after ensuring that the train has come to a stop outside the first stop signal, shall arrange to advise the Loco Pilot of the train of the reason of the train being so stopped through a member of station staff. The Loco Pilot on being so advised shall examine the train to ascertain if it would be safe to work the train up to the station-negotiating crossover for entry into the loop line. The train, thereafter, may be piloted up the station after fixed signals have been taken 'Off' and it has been ascertained by the Loco Pilot that it is safe to do so. The Loco Pilot while negotiating the facing points shall observe the speed restriction, which, under no circumstances, shall exceed 10 KMPH. 113 4.29 / 4. _ 'Fti (7E va) q•errzrr / zrré -ail-a (q) \$1 frzrr 4.30. GIRT \$1 1. crrzra•est \$1 - crrzrere g•zi 4.31. (2) (3) R•qié (i) ur \$1 (aqq) ur (ii) (iii) \$1 \$1 (iv) (iv) 114 CHAPTER-IV S.R. 4.29/4. Repairs to Vehicle- WORKING OF TRAINS GENERALLY (a) (b) (c) (d) 4.30. When a vehicle has to be taken out of traffic for repairs, it must be stencilled 'Not to run' on both sides as near the label holder as possible, in the case of goods stock, and on the sole-bars in the case of coaching vehicles. In addition, the prescribed 'Damaged not to Go' labels must be pasted on both sides of a goods vehicle near the label holders, or tacked on to foot boards in the case of a coaching vehicle. If a vehicle is not to be transhipped, the inscription on the same label 'Tranship load' should be deleted. When a vehicle or wagon has been marked sick for placement in a sick siding, the Train Examiner will send a written memo giving the number of vehicle, owning railway, time and date marked sick and reasons, and send it to the Station Master/Yard Master or Trains clerk concerned a register will be maintained in the station master or Yard Master's office in which particulars of sick vehicle will be maintained and also the date and time at which a vehicle was marked fit for traffic. The Trains Clerk, Shunting Master and Yard Master as they come on duty will examine this register and initial it. All wagons marked sick shall be detached in a siding set apart for sick wagons and placed into the sick siding or tranship shed as required, without delay. The Train Examiner, the Guard, the Station Master/ Yard Master, the Shunting Master and the Trains clerk are jointly responsible to see that no sick vehicle is worked away until certified fit to run. After the repairs are carried out, the stencil marks and labels must be removed. E. Precautions before Starting Train Loco Pilot and Guard to examine notices before starting- Every Loco Pilot and Guard before starting with a train shall examine the notices issued for their guidance, and ascertain therefrom whether there is anything requiring their special attention on that section of the railway over which they have to work. S.R. 4.30/1. Loco Pilots and Guards to acquaint themselves with Notices- Safety literatures are kept in Crew Booking Office, when 'signing on duty' Loco Pilots and Guards must read all instructions pertaining to them in the safety literatures and sign in acknowledgment of having read and understood them. A register is also maintained in which all current speed restrictions are entered and before going out on each trip each Loco Pilot must scrutinize this register and sign it. The Loco Pilot must also acquaint themselves with the instructions contained in the Order Book, maintained in the Engine Turner's office and append their signatures in token of having read and understood them. 4.31. Examination of trains before starting- (1) (2) (3) When a train is examined by a Train Examiner at a station the Station Master shall not give permission to start the train until he has received a report from such examiner to the effect that the train is fit to proceed and has the prescribed brake power. At station where no Train Examiner is posted or at way side station while clearing the stabled load, the Guard and the Loco Pilot- (i) Shall ensure vacuum or air pressure continuity and adequate brake power by counting operative or non-operative pistons before starting. (ii) Shall ensure by visual examination that there are not loose fittings in the under gear including brake blocks, safety brackets, track area pins, brake gear pins which may endanger the safe running of the train; (iii) Shall check up the validity of the Brake Power Certificate. In case validity period is over, shall work the train up to the next train examiner point in the direction of movement and control shall be informed through the SM by making endorsement on joint memo which shall be prepared as specified in clause (iv); and (iv) Shall prepare the memo jointly on plain sheet in triplicate indicating the brake power and deficiency. If any, and shall append their signatures on the same and both of them shall retain a copy of the same. Third copy thereof shall be handed over to the station Master. The Station Master shall not permit the Guard and the Loco Pilot to start the train until he has received a joint memo from both of them to the effect that the train is fit to proceed. 114 @æab) \$1 erra erra / zrré (ii) \$ieu-i V&QT) *zrt g•eT (alga)

zrr cra / 2. — q-lå 24 Ett a-fi (#NF Qh) crrzrere - sri *TIT I (i) 46 38 I (ii) 35 (iii) 115 CHAPTER-IV
 WORKING OF TRAINS GENERALLY S.R.4.3 1/1. Protection of carriage and wagon staff- Whenever it is necessary for the carriage and wagon or electrical staff to work underneath or between rolling stock or in any other dangerous position on the train, they must take the following precautions. (a) (b) (c) (d)
 Passenger trains- Before commencing work the Train Examiner must place a red disc by day and a red light by night at each end of the train. Before giving the hand signal for starting. Guard must satisfy himself that the red disc or the red light is removed by the Train Examiner. The red disc or red light must only be removed by or under the personal direction of the Train Examiner. Goods trains- (i) (ii) The Train Examiner must first protect the train by placing a red banner flag or a red lamp at each end of the train and before commencing work, he must obtain the signature of the Station Master. The banner flags or the lamps should be placed so as to be clearly visible on both sides and in both directions and may only be removed by the person who put them in position, or under his directions. When the flags or lamps are removed, the time must be noted in the aforesaid form and the signature of the official concerned must again be obtained. The instructions for the protection shall apply in respect of all stock standing alone or forming part of a rake on any road or siding. In case of air braked trains (coaching/goods) Loco Pilot and Guard, before signing the record copy of brake power certificate, shall carry out pressure continuity test for ensuring continuity of air pressure from locomotive to the last vehicle of train. Air pressure continuity test should be carried out as per procedure laid down in working Time Table. Loco Pilot and Guard should personally check the correct quantity of air pressure in feed pipe/brake pipe gauge to avoid cross connection between feed pipe and brake pipe. S.R. 4.31/2. Starting a train from non-TXR station - Whenever a train has to be started from a non-TXR Station or a load stabled for more than 24 hrs. (including for traction changing) has to be lifted from a road side station, following action will be taken by the Guard and Loco Pilot of the train. (a) (b) (c) (d) The Guard and Loco Pilot of the train shall examine the load by walking along the length of the train Loco Pilot on one side, Guard on the other side and will ensure that there is no loose or missing fitting in the under gear which may endanger safe running of train. Station Master should maintain an 'Examination-cum-Brake Power Register' wherein coming train number, composition incoming BPC number, from-to, date percentage of Brake Power, composition of outgoing train, time of arrival of outgoing train engine, old BPC/manuscript BPC, percentage of brake power, faults detected by Guard and Loco Pilot departure time, remarks, signature of station Master, signature of Guard should be recorded. Loco Pilot will conduct a 'Brake Feel Test' at the earliest to ensure that the train has adequate brake power. However, if the incoming train has come with an invalid BPC or if the incoming train has come with a valid BPC, but the rake integrity has been disturbed beyond permissible limits action shall be taken as under. (i) The Loco Pilot will first create at least 46 Cms of vacuum on the engine and 38 Cms. in the brake van. (ii) The guard on seeing, 35 Cms of vacuum in the brake van, shall show Red Hand Signal' to the Loco Pilot to destroy the vacuum. (iii) In such cases while checking the load, the Guard and Loco Pilot shall jointly ascertain the brake power of the train. 115 (iv) crrqg 2. 3. 4. 5. 6. 7. 8. (ii) (iii) HIÄT — (ii) (q) 4.32. (i) GGi (ii) crrqg \$1 24 Ett zrr a•zrrg GINT q-iq — (IT) 4.14 (1) 116 CHAPTER-IV
 (iv) (v) 2. 3. 4. 5. 6. 7

8. Note: (i) WORKING OF TRAINS GENERALLY Thereafter, the Guard shall prepare a memo in triplicate indicating the number of operative as well as inoperative pistons as also the number of piped vehicles and percentage brake power which shall be signed jointly by the Guard and Loco Pilot, in addition to filling in the 'Examination-cum-Brake Power Register', one copy of this certificate will be retained by the Loco Pilot, one copy by the Guard and one copy will be given to the Station Master for station record. Proforma for Joint check by the Loco Pilot and Guard- Train No & Description From to Engine No. Engine attached at Total Load (i) Total No. of cylinders. (ii) Total No. of working cylinders. (iii) Brake Power per-cent. Vacuum/Air Pressure available in (i) Engine (ii) Brake van Signature of Loco Pilot Signature of Guard This certificate is valid up to next T XR examination station where the train will be offered for examination. (f) 4.32. (ii) In case of invalid B.P.C. or if its integrity of the incoming train with a valid B.P.C. has been disturbed beyond permissible limits, the Guard and Loco Pilot shall ascertain the Brake Power of the train and prepare the B.P.C. as per above proforma. These instructions will not be applicable for crew changing and for loads having valid BPCs for the outgoing train Agni, King Rocket etc. rakes with detention less than 24 hrs. at that station. In these cases, only SM will record the particulars in the Register. At train originating station or engine changing station where T

XR is available, the brake continuity test is to be carried out by TXR otherwise by Loco Pilot and Guard, whenever there is change in train composition by attaching or detaching of Rolling stock at Roadside stations or a stabled load is started the Loco Pilot and Guard should test the brake continuity and prepare joint certificate in 3 foils i.e. one for Loco Pilot, one for a Guard and one for station record. Examination of train by Loco Pilot- The Loco Pilot shall, before the commencement of the journey and after performing any shunting enroute, ensure- (a) that his engine is in proper working order, (b) that the coupling between the engine and the train is properly secured, and (c) that the head light and marker lights as prescribed in sub-rule (1) of Rule 4.14 are in good order, and these are kept burning brightly, when required. S.R. 4.32/1. (a) Precaution before moving an engine - Loco Pilots and Shunters must personally satisfy themselves before moving an engine that nobody is working under it or is in a position to be injured by moving the engine. 116 (O) 4.34. - (ii) \$1 (ii) 117 CHAPTER-IV WORKING OF TRAINS GENERALLY (b) A Loco Pilot shall not take his train on to a running line until he has tested all his control, power and brake apparatus and found them in proper prescribed working order and is in possession of the required brake power certificate. He shall, in addition carry out inspections and tests in accordance with special instructions. The brake power of the train shall be tested by the Loco Pilot in the first block section after taking over charge of the engine and after performing shunting enroute. In case of air braked train also ensure continuity of air pressure in whole train. 4.33. Examination of single and multiple units by Loco Pilot - When coupling single or multiple units or coaches of any such units together, the Loco Pilot shall be responsible for observing that all electrical couplings are properly made. After all couplings have been made, the Loco Pilot while taking over the complete train shall satisfy himself that all control and power apparatus and brakes of the complete train are in proper and prescribed working order. 4.34. Duties of Guard when taking over charge of a train - The Guard when taking over charge of a train shall satisfy himself. before the train is despatched- (a) (b) (c) (d) (e) that the train is properly coupled, that the train is provided with the prescribed brake power, that the train carries tail board or tail lamp and side lamps and that such lamps are lighted and kept burning brightly, when required, that an appliance, if any, for communication between the Guard and the Loco Pilot, is in proper working order, and generally that, as far as he can ascertain, the train is in a state of efficiency for travelling. S.R. 4.34/1. Duties of Guards- The Guards must, before starting, comply with the following additional instructions: (a) (b) (c) (d) (e) (f) Guard's Order Book - Guard's order books are maintained at all Headquarter stations and Guards, on reporting for duty, are responsible for scrutinizing this book for any fresh orders which may have been received and issued through this medium and append their signatures in token of having understood them. Coupling of Trains- (i) In case of goods train originating from a station/yard the Guard must see that all the screw couplings of his train are tightly screwed and the vacuum hose piped/air pressure pipes are connected before the train leaves station/yard. (ii) In case of coaching trains this responsibility lies with Train Examiner. The Guard must test the hand brake of his brake-van and inspect tail lamp/tail board. The Guard shall see that his train is properly marshalled in accordance with instructions in force. When taking over charge of a train and before signing the train examiners Brake Power Certificate, the Guard of a train shall ensure that the train examiner has signed in the Brake Power Certificate form that (i) the doors of all carriages and wagons are in proper working order and can be closed and fastened. (ii) Vestibule connection are properly secured that doors, when necessary are locked and bolted. If it is noticed enroute that the vacuum/air pressure of the rear brakevan has fallen below the minimum prescribed and the defect cannot be traced, the Loco Pilot will work the train forward to the next train examining station by utilising the available brake power of the train. In such a case the train shall be treated as partially automatic vacuum/air brakes and the Loco Pilot and the Guard must exercise great care. If the Loco Pilot is unable to control the load effectively by means of the available brake power, he shall work forward cautiously at a reduced speed with the assistance of hand brakes. In addition, the hand brakes of sufficient number of wagons may be pinned down/screwed to have effective brake power for controlling the train. 117 (8) (\$1) (31) 4.35. (2) (3) (4) (5) (6) 4.35/1. --818 I rrrr•g, \$1 qaa. msrfR•« (2) (3) (4) (5) TAT I GGi a-rerrzrr errzrr 3.70 3.70/1, 3.70 / 2, 3.70/3 3.75/1 118 CHAPTER-IV WORKING OF TRAINS GENERALLY (g) (h) (i) (i) The Guard in-charge of a goods train must see that open wagons are properly sheeted to protect inflammable or perishable goods from sparks or from rain and that heavy loads are securely fastened; that the doors of all wagons are properly secured and every fastening fixed and that all seals are intact. The Guard of the train should also examine the setting of the empty/loaded box

when taking over charge of the train and ensure correct setting. When a box wagon is attached or detached at roadside stations, the Guard should ensure the correct setting of the empty/loaded box. The prescribed load is given in the Working Time-Table. Guards are jointly responsible with Station Masters for seeing that shunting operations on their trains are properly carried out. Guard of a passenger carrying train must ensure that the doors of the rear luggage van are properly closed and locked. Front SLR will be locked as per instructions issued by DRM time to time.

4.35. Starting of trains- (1) (2) (3) (4) (6) A Loco Pilot shall not start his train from a station without the authority to proceed. Before starting the train, he shall satisfy himself that all correct fixed signals and, where necessary, hand signals are given and the line before him is clear of visible obstructions and the Guard has given the signal to start. The Guard shall not give the signal for starting the train unless he has received the permission of the station Master to start, in the manner prescribed by special instructions. The Guard shall not give the signal for starting unless he has satisfied himself that, except in accordance with special instructions, no person is travelling in any compartment or vehicle or roof of the vehicle not intended for the use of passengers. Guard, Loco Pilot or Assistant Loco Pilot shall take help, if necessary from Government Railway Police, Railway Protection force and station staff to remove the unauthorized persons from the compartment or vehicle or roof of the vehicle. The Station Master shall see, before he gives the Guard permission to start a train, that all is right for the train to proceed. The permission of the Station Master referred to in sub-rule (2) may be dispensed with in case of suburban trains on such section of a Railway as may be specified by special instructions. When permission of the Station Master to start has been dispensed with under sub rule (5) or at a station where no Station Master is posted, the Guard shall see, before giving the starting signal, that all is right for the train to proceed.

S.R. 4.35/1. (i) (a) (ii) Starting of trains- No train shall be started from a station by the Guard of the train unless the station Master has permitted the train to leave. The Station Master will give permission to start a train only when the following conditions are fulfilled- (1) (2) (3) (4) (5) Line Clear from the Station ahead has been obtained. Correct Starting signal has been taken 'Off' or starting permit has been sent to the Loco Pilot. The last stop signal has been correctly taken off on double line or on single line where tokenless block instruments are in use. In addition, on single line, the tangible authority to proceed, where in use, has been sent to the Loco Pilot. In case of starter or Advanced Starter signal being defective, the provisions of GR 3.70 and S.R. 3.70/1, 3.70/2, 3.70/3 thereunder have been complied with. For defective Intermediate Block Home Signal, the Station Master shall in addition, comply with the provision of S.R. 3.75/1. 118 (u) (i) zrr (ii) (i) GGi I qei di Adi (ii) CT) (1) zrr R-2.fi / 369 (30) I crrzrere zrr 2 Etr•zrt 1 I (ii) (iii) (iv) crrzrere 4.35/3. — uT q-lâ di I g•zi zrra•r I q-Nûl-a-q GTT Etâ 3-+441 119

CHAPTER-IV (b) (c) (i) (ii) (i) (ii) WORKING OF TRAINS GENERALLY For passenger trains, the Station Master will give permission to the Guard to start the train either personally or by having the Station bell rung according to the prescribed code or giving a green hand signal to the Guard. The Guard of the EMU, DMU or MEMU should authorise the train to start, provided he has satisfied himself that conditions for the train to start are complied with except that responsibility to see that the correct signal has been taken 'Off' for the train will be that of the Motorman Loco Pilot. For trains taking 'Off' of the Starter and the Advanced Starter signals on double line or on single line where tokenless block instruments are in use will be considered as the Station Master's permission to start the train. On single line where tangible authority to proceed is in use, the Loco Pilot should be in possession of the same in addition to the taking 'Off' of the Starter and Advanced Starter signals. Where Starting signals are not provided, the Loco Pilot must also be in possession of a Starting permit. When the conditions laid down in (c) (i) are fulfilled, the Loco Pilot of a train will sound the engine whistle in token of having observed that the correct signal have been taken 'Off' for his train or in the event of defective starter and of Advanced Starter signals that he has in his possession the authority on form T/369 (3b) to pass the same at danger, on which the Guard will give his permission to start. S.R. 4.35/2. Guard's duties before starting of trains- (i) On receipt of Station Master's permission to Start the train and when all work in connection with the train is completed, the Guard will sound his whistle and display a green flag by day or a green light by night to the Loco Pilot to start his train. On the electrified suburban section, the code of bell signal to be given by the Guard to the Motorman will be 2 rings for Starting and 1 ring for stopping. In the event of the bell circuit becoming defective the train should be started by the Guard by means of hand signals as for other trains. (ii) The Guard in-charge of a passenger carrying train must satisfy himself by visual check that passengers have detrained and entrained. (iii) On sections of the line where banking engines are employed, the Guard, after giving the

starting signal to the Loco Pilot in front, shall immediately repeat the signal to the Loco Pilot in rear. (iv) In case of the Loco Pilot having to pass an automatic signal in the 'On' position, the Guard will observe the provisions of G.R. 9.07. S.R. 4.35/3. Travelling in Brake vans- No Railway servant shall, otherwise than in the execution of his duty, ride in a brakevan or in any vehicle in which luggage or parcels are being carried. Railway servants and others whose passes are endorsed as 'Available by Goods train brakevans' may be allowed to travel in goods brakevans. Train crew/Guard, Maintenance staff & Security staff can travel in B/Van of passenger train in case of emergency only. Not more than three persons excluding Guard should be permitted to travel in B/van of passenger train. The number of persons permitted to travel in the brake van of goods trains in addition to the Guard should not exceed five. However in emergent cases exception may be made for security staff, Police, Repair gangs of S&T medical staff etc. which the prior approval of Sr. DOM of the concerned division. S.R. 4.35/4. When a train carrying passengers is due to leave and all work in connection with it is finished, the Station Master shall authorise the station bell to be run. Two beats for starting a down train, three beats for an up train and four beats for a branch line train. S.R. 4.35/5. Precautions-drawing a train ahead :- If a train after it has stopped at a station/Yards to be drawn ahead for any reason beyond and starter signal, the station Master shall advise Guard and Loco Pilot of the train in writing the reason for doing so. A Pilotman would invariably be deputed by Station Master for this purpose. The Loco Pilot may then draw his train ahead on receipt of "All Right" hand signal from the Pilotman only up to the fouling mark. The Starter signal, must not be taken 'Off for drawing the train ahead. 119 4.36. - (W Ile) (§ülü) I 4.37. — 4.38. t:rruere. - 4.39. — GGi 4.40. — ElfiFq --8---&1 // 450 / 450 120 CHAPTER-IV WORKING OF TRAINS GENERALLY When a train, part of which has gone beyond the Starter signal after drawing it ahead has to restart, the Station Master after ensuring that Line Clear has been obtained from the Station in advance shall authorise the taking 'Off of the last Stop signal and issue starting permit on prescribed form to the Loco Pilot. The Loco Pilot will not start his train unless he has received such an authority from the Station Master. 4.36. Guard to be in charge of train-After the engine has been attached to a train, and during the journey, the Guard or (if there be more than one Guard) the Head Guard shall be in charge of the train in all matters affecting stopping or movement of the train for traffic purposes. In the case of any self-propelled vehicle, such as a motor coach without a trailer and unaccompanied by a Guard, the duties of the Guard shall devolve on the Loco Pilot. 4.37. Subordination of Guards in station limits-When a train is within station limits, the Guard shall be under the orders of the Station Master. 4.38. Assistant Loco Pilots to obey Loco Pilots-The Assistant Loco Pilot shall obey the lawful orders of their Loco Pilots in all particulars. 4.39 . Loco Pilot to obey certain orders -After an engine has been attached to a train and during the journey, the Loco Pilot shall obey - (a) The Orders of the Guard, in all matters affecting the starting, stopping or movement of the train for traffic purposes, and (b) all orders given to him by the Station Master or any railway servant acting under special instructions, so far as safe and proper working of his engine will admit. F. Duties of Staff Working Train during Journey 4.40. Loco Pilot and Assistant Loco Pilot to keep a good look out-Every Loco Pilot shall keep a good look out while the train is in motion, and every Assistant Loco Pilot shall also do so when he is not necessarily otherwise engaged. S.R. 4.40/1. Calling out of signal aspects by engine crew- The Assistant Loco Pilot/Diesel Assistant shall assist the Loco Pilot in sighting the signal aspects. He shall call out the aspects displayed by the signals from the place from where the signals can be sighted. The Loco Pilot, after personally verifying the correct aspect of the signal shall repeat the same. This however does not absolve the Loco Pilot of his responsibility contained in G.R. 3.78 and S. Rs there under. The aspects of the signals shall be called out in various signalling territories as under (a) In two aspect lower quadrant signalling territory: Outer Warner Main Home/Loop Home Starter Advanced Starter right/against. right/against. right/against. right/against. right/against. (b) In colour light signalling territories the names of signals should be called out with the colour displayed by the signal. Distant Home (c) In MAUQ Signalling Territory Distant Home Starter Advance Starter Green/Double Yellow/Yellow/Double Yellow/Green/Red. right/against/450 right/against/450 right/against right/against Night indication same as for colour light signalling territory 120 34ü4T4-4 4.41. — 441 / 1. uT 24 ' 4.42. - GINT I (ii) I (iii) (iv) g) crrzrere Afifi-efrfi (ii) zrr crrzrere g•zi (T%l.) s:rrq Rulé u-l@e 120 ete-T uT 121 CHAPTER-IV WORKING OF TRAINS GENERALLY 4.41. Loco Pilot and Assistant Loco Pilot to look back-The Loco Pilot and the Assistant Loco Pilot shall look back frequently during the journey to see whether the train is following in a safe and proper manner. S.R. 4.41/1. When a train passes a gang working on the line or a

manned level crossing gate, the Loco Pilot, Assistant Loco Pilot or Diesel Assistant should look back to ascertain if every thing is all right with the train and if any signal is being exhibited warning them of a danger of an accident. S.R. 4.41/2. In case of animal run over, Loco Pilot will abide by the instructions issued "Animal run over" in the "Classification of Accidents" of Accident Manual. Whenever animals are run over and the carcass does not foul the track, Loco Pilot and Assistant Loco Pilot should look back to see whether the train is following in safe and proper manner. In case of slightest doubt, the train should be stopped and examined for safe running before starting. 4.42. Exchange of signals between Loco Pilot, Guard and Station staff- (1) The Loco Pilot and the Guard of a train shall exchange signals with each other, at such time and in such manner as may be prescribed by special instructions. (2) The Loco Pilot and the Guard of a train shall, while running through a station, look out and, except under special instructions, acknowledge the 'All Right' signals which the station Master and such other staff at the station as may be specified by special instructions shall give if the train is proceeding in a safe and proper manner. If the train is not proceeding in a safe and proper manner, the Station Master or the other staff shall exhibit a stop hand signal, on receipt of which the Guard and the Loco Pilot shall take immediate steps to stop the train. S.R. 4.42/1. Signals between the Guard and the Loco Pilot- (a) The All Right Signals must be exchanged between the Guard and the Loco Pilot as detailed below : (i) When a train starts from an originating Station. (ii) When a train starts after stopping at a station. (iii) When a train starts after stopping between stations. (iv) When a train clears a speed-restricted zone. (b) If a Loco Pilot does not receive an All Right signal from the rear brake van, by the Guard, he shall whistle and talk on Walkie-talkie, If there is no response, he shall stop the train and ascertain the cause. S.R.4.42/2. Manner of exchange of Signals- (a) (i) The All Right Signal to be shown by the Station Master / Cabin Master / Cabinman / Pointsman or Porter, by holding a green flag by day and green lamp by night and thick, foggy or tempestuous weather in right hand. (ii) The Station staff, while exchanging green hand signal during day should also have red flag furled in left hand, which should be exhibited immediately to attract the attention of the train crew if any unsafe condition on the train is noticed. (b) In case of train running through a station, the Station Master shall show an All right Signal to the train if all is right for the train to continue the journey otherwise he shall show Danger Signal or other prescribed indications. While running through the station, the Loco Pilot and the Guard shall be on the lookout for such signals, which shall be duly acknowledged by the Loco Pilot and Guard. In case the Loco Pilot and the Guard do not receive such signals, they shall exercise extra caution to ensure that all is right for the train to proceed on. Failure on the part of Station Master to display signals shall be reported in Guard's Journal and also to the Station Master on duty at the next stopping station. On Controlled Section the same will be relayed to the Section Controller for taking suitable action by the Station Master receiving the report under exchange of Private Number. Note : The Guards of such trains having speed 120 KMPH or more, are exempted to exchange All Right Signal with station staff but they shall watch the signal given by the station staff. 121 34ü4T4-4 (q) g•zi crzrere (q) \$1 zrr (3117 (q) g•zi (30 (30 zia 'F: w' Etå I a-fi 4.42/4. (i) uT dii uT di a-T17F-RT7 (ii) (æréq) 10-10 creTü (iii) -a -q-ra-å 122 CHAPTER-IV WORKING OF TRAINS GENERALLY (c) (d) (D) (h) (i) (j) All Right Signal also be exchanged between the Cabin staff of Block and Non Block cabins with the Loco Pilot and the Guard of a train, they shall see whether the train is proceeding safe. In the event of the view of the passing train being obstructed by another train or by vehicle or any other obstruction, the green hand signal shall as far as possible be shown from a place, from where it can clearly be seen by the Loco Pilot and Guard of the train concerned. When, however, two trains are passing through the station simultaneously, it is not possible for the Station Master to cross over and exchange signals with the train which is running on the other side of the stalled load/train, the Station Master shall depute a competent Railway Servant to show All Right Signal. The Station staff shall take measures to stop the train when any unusual condition endangering safety of the train is noticed. At stations where frequent shunting movements take place or circumstances warrant otherwise, exceptions should be incorporated in the Working Rules of those stations. However, the cabin staff who are exempted from exchanging hand signals with train crew should be watchful and show danger signal and take steps to stop the train, if anything dangerous is noticed. In case of a train starting from a station when Guard's signal cannot be seen by Loco Pilot, the Guard may communicate to Loco Pilot on Walkie-Talkie to start the train. While exchanging the All Right Signals with each other the Loco Pilot and the Guard will wave the Green Hand Signal, before the train starts and just by holding Green Hand signal steadily when the train is in motion. The Loco Pilot's All Right Signal shall be given by him

from his side and Assistant Loco Pilot will exchange the signal from his side with Guard and station staff by showing a green flag steadily by day and a green lamp steadily by night and during thick, foggy or tempestuous weather. When a train, either stopping or non stopping at a station, has passed a station inclusive of a train halt, the Guard shall look back and satisfy himself that no Danger Signal or other indication is given by any of the Station Staff, as warning that there is anything umong with the train. When a train has come to a stand in the block section, the Loco Pilot must not start his train until the Guard has signalled from the brake van to proceed. S.R. 4.42/3. If the Guard fails to exchange all Right Signal the Station Master on duty should immediately advise the Station in advance and give "Stop and Examine" bell signal (six pause one) through Block Instrument and through telephone explaining the circumstances for giving this signal under exchange of Private Number. The Section Controller will also be advised. S.R. 4.42/4. The Loco Pilot/Assistant Loco Pilot should whistle and show All Right Signal while running through a Station- (ii) (iii) If the Loco Pilot or Assistant Loco Pilot fails to exchange signal or whistle, the Assistant Station Master on duty should immediately advise the station in advance and give " Stop and Examine" Signal (Six pause one) explaining the circumstances for giving this signal under exchange of private number. The Section Controller will also be advised. The Station Master in advance on receiving such advice when the train is booked to run through, will put back the departure signal to 'ON' but the departure route must be kept set and locked for the passage of the train. If time permits, three detonators 10 meters apart will be placed immediately beyond the starter signal to draw the attention of the Loco Pilot/Assistant Loco Pilot. In case the Loco Pilot comes to a stop at the Starter Signal, the detonators, if placed, will be removed and the train allowed to proceed after ascertaining from the Loco Pilot, the reasons for non exchange of signal or of not whistling at the last Station. The reason given by the Loco Pilot will be advised to the Section Controller. 122 34ü4T4-4 (iv) \$1 (qq 24) 1 crrzrere R-2. fi 'Nil' (c q•ta Etâ) (vi) '3117' 4.42/5. I crrzrere R-2. fi I crgrere 4.43. — - «*1" 3FiPfa (éa arq) I 4.44. (1) (æe•rq) ur (ét4e) I ur I fiz•rq) \$1 6.03 123 CHAPTER-IV WORKING OF TRAINS GENERALLY (iv) In case the Loco Pilot fails to stop at the Starter Signal and runs through after exploding detonators and disregarding the departure signals, the Station Staff should try to attract the attention of the Guard. The Guard on receiving Danger Signal from the Station Staff will stop the train. The Station staff will treat it as an accident under Accident Manual Para (H) i.e. Loco Pilot passing signals at danger and take suitable action as laid down in the Accident Manual. (v) The Station Staff will at the same time advise the next Station in advance by giving 'train running without proper authority' signal (six pause five) specifically asking the Station in advance to put on both reception and departure signals. (vi) The Station in advance will immediately put back all signals to 'ON' and arrange to place three detonators as far away from the Home Signal as possible. S.R.4.42/5. In the case of and electric engine, the Section controller should advise the Traction Power controller the Section in which the train is working, the T PC will then arrange to 'switch off the power supply to that section. S.R. 4.42/6. The Loco Pilot of a running train on double line will whistle continuously to alert the Guard of another train running on adjacent line, so that he may keep vigil and watch the train of adjacent line. Both Loco Pilot /Asstt. Loco Pilot and Guard will watch it. In case, any abnormality noticed both Loco Pilot / Asstt. Loco Pilot and Guard must inform to Loco Pilot and Guard of affected train through walkie-Talkie and showing danger signal. If all is right then All Right Signal will be exchanged between Loco Pilot to Loco Pilot and Guard to Guard. 4.43. Guard to keep a good lookout- During the journey including halts at stations, every Guard shall keep a good look-out and satisfy himself from time to time that the tail board and brake-van lamps are in position and that all brake-van lamps, where required, are burning brightly, that the train is complete in every respect and is proceeding in a safe and proper manner. Note- The term brakevan lamp " includes "tail lamp ". S.R. 4.43/1. When a vehicle is attached to a train behind the rear brakevan, the Guard must keep a good look out and if it becomes detached, must take steps to stop the train carefully. S.R. 4.43/2. When passing a manned level crossing gate the Guard must look back to see if the Gateman is exhibiting any danger hand signal. S.R. 4.43/3. Whenever a train has been stopped out of course by Station staff by exhibiting a hand danger signal or by any other means, Guard of the train shall not authorise the train to re-start unless he has personally ascertained from the Station Master on duty of the cause of the train being so stopped. The train shall be started only after it has been ascertained that everything is safe for the train to proceed. 4.44. Train held up at first stop signal- (1) When a train has, without an apparent cause, been kept standing at the first Stop signal for five minutes, the Loco Pilot shall sound the prescribed code of whistle to warn the Guard, and

the Brakesman shall proceed to the cabin or station to warn the Station Master. If there is no Brakesman, the Loco Pilot shall depute Assistant Loco Pilot to proceed to the cabin or station to warn the Station Master. The Brakesman or Assistant Loco Pilot Proceeding to the cabin or station shall show a Stop hand signal towards the station. The Guard shall, as soon as the train is stopped at the first stop signal, check up that the tail board or tail lamp is correctly exhibited and shall maintain a vigilant attitude in rear of the train. After fifteen minutes or such less time as may be prescribed by special instructions. the Guard shall, irrespective of whether the cause is apparent or not, proceed to protect the rear of the train in accordance with instructions laid down in Rule 6.03. If in the meantime the signal is taken 'Off' or the Loco Pilot receives the necessary authority to pass the signal in the 'On' position, he shall sound the prescribed code of whistle to recall the Guard and exchange hand signal with him before starting the train. 123 34ü4T4-4 6.03 4.45. - GGi (*IØ 4.46. \$1 \$1 Hi•T 4.47. (2) (eaa) GINT I 4.48. - GINT 124 CHAPTER-IV WORKING OF TRAINS GENERALLY (2) In the case of a train not accompanied by a Guard, these duties shall devolve on the Loco Pilot. S.R.4.44/1. Whenever the detention to a train at the first stop signal exceeds 15 minutes necessary action to protect the train shall be taken in accordance with G.R. 6.03. Provided mrther when a train is detained at the first stop signal ofa Station having a tunnel in rear, the train shall be protected if the detention is likely to exceed 5 minutes. 4.45. (1) (2) (3) (4) Attracting attention of Loco Pilot- If any Guard sees reason to apprehend danger or considers it necessary for any reason to stop the train, he shall use his best endeavors to attract the attention of the Loco Pilot. In the absence of other means of communications with the engine, a Guard desiring to attract the Loco Pilots attention shall apply his hand brake sharply and as suddenly release it, and wherever possible, he shall reverse the side lamps to show red towards the engine. When the attention of the Loco Pilot has been attracted, the necessary hand signals shall be shown. If the train is fitted with continuous brake, the Guard may, in case of emergency, apply such brake gradually to stop the train. S.R. 4.45/1. Stopping oftrains between stations- Whenever a train has to be stopped benveen stations, the Loco Pilot and Guard must see to the extent feasible, that it is not stopped in an exposed position particularly on tunnels, bridges and high banks Gradient etc. 4.46. Assistance from Guard's hand brake-When the Loco Pilot requires the assistance of Guard's hand brake, he shall sound the prescribed, code of whistle, it necessary repeatedly, or, if a brake whistle is provided, sound such whistle, and shall also use other means of communication, if provided, between the loco Pilot and the Guard. S.R.4.46/1. (a) The Guard must promptly apply the hand brakes whenever a non-automatic brake train comes to a stand at a station or between stations on a steep gradient. (b) Should the Loco Pilot of a train require the assistance of the hand brakes o the brakevans, he will give three short whistles (to be continuously reputed) and the Guard must apply the brakes promptly. Loco Pilots, however, must not rely on assistance from Guard's in controlling their trains when approaching a stopping place, but must call for such assistance as an emergency measure only. 4.47. Application of Guard's hand brake- (1) When the Loco Pilot sounds the prescribed code of whistle or the brake whistle, the Guards shall immediately apply their hand brakes. (2) When a train is travelling down a steep incline, the Guard shall, if necessary to steady the trains, assist the Loco Pilot with their hand brakes. 4.48. Permission of Guard to detach engine from train-When a train has been brought to a stand outside station limits or any where on a grade, the Loco Pilot shall not detach his engine from the train without the permission of the Guard, who before giving such permission, shall satisfy himself that the van-brakes have been put on securely and take such other measures as may be necessary or prescribed by special instructions. Provided that detaching of engines from trains in such cases may be prohibited altogether under special instructions wherever considered necessary in the interest of safety. 124 34ü4T4-4 a-TFßT a-TFßT-a-TFßT I / \$1 æT8TZlrr \$1 a-TFßT 45 I (q) Tre @ g•zi 4.49. - "317" uT 4.50. (qi) (i) -ah-\$r (ii) @TT) crrzrere (iii) (iv) \$1 125 CHAPTER-IV WORKING OF TRAINS GENERALLY S.R. 4.48//1. The engine of the train carrying passengers must not be detached or the train divided in section except in an emergency i.e. for testing a bridge or for isolating burning coach/coaches on a train carrying passengers or when the engine is required to assist a disabled train in the section ahead. (a) (b) (c) (d) (f) Hand brakes in the Guard's brakevan at the rear and in the front brakevan, where provided, must be securely screwed on. Hand brakes ofany goods vehicles on the train must be securely pinned down. Hand brakes, if provided, on coaching vehicles must be securely applied. The wedges must be securely applied under the furthestmost wheels of the rake in the direction of falling gradient. Vacuum\air pressure must be created to the maximum extent possible, and an attempt made to lightly pull or push the load with the engine in the direction of the falling gradient. Only

after it had been ensured that the load is securely restrained against movement, will the vacuum/air pressure, be dropped and concerned angle cock is closed and the engine detached. The interval from, the time, the engine is detached to the time it is again attached to the train must not exceed 45 minutes. On the Ghat Section, Locomotives must not be detached from train between stations. when it is necessary to isolated a burning coach and where the precautions as in item (d) above cannot be undertaken in detail, the Guard and the Loco Pilot, of the train will be responsible for using the wedges to the best advantage in order to prevent parts of the train colliding against each other by running away.

4.49. Starting and stopping of train- The Loco Pilot shall start and stop his train carefully and without jerk. S.R. 4.49/1. Loco Pilots shall not depend on Guards to assist in pulling up trains. They should have their trains fully under control, so as to bring them to a dead stop at stop Signals in 'On' position, or engineering Stop indicators as necessary. Loco Pilots shall be careful not to overshoot the stop boards or Starting signals or the spot where a train is required to come to a stand. When working passenger trains they should ensure that the passenger bogies do not overshoot the platform, if possible.

4.50. Sounding of engine whistle- (1) Except under special instructions, the Loco Pilot shall always sound the whistle of the engine according to the prescribed code of whistle- (a) before putting an engine in motion; (b) when entering a tunnel; and (c) at such other times and places as may be prescribed by special instructions. (2) Engine whistle code shall be prescribed under special instructions. S.R. 4.50/1. (a) The following are the authorised engine whistle signals, which must be sounded by engine Loco Pilots: Whistle Code S.No. Code of Engine whistle (a) 125 Indication Before starting- (i) Indication to Loco Pilot of assisting / banking engine that the Loco Pilot of leading engine is ready to start. (ii) Acknowledgement by the Loco Pilot of assisting/banking engine to leading engine. (iii) Engine ready to leave loco yard or after completing loco work. (iv) Engine ready to go to loco yard. 2. 3. —0 4. 000 5. 0000 6. 0—0 8. (ii) -a-end I (24) (q) '3117' R-2. fi I crzrere (fit) I 0.60 2.0 0.3 ie 9/15 126 CHAPTER-IV S.N0. Code of Engine whistle 2. 3. -o 4. 000 5. 0000 6. 7. 0-0 8. 9(A) WHISTLE BOARDS (b) (a) (b) (c) (a) (b) (c) (a) (b) (a) (b) (a) (b) (c) (d) (a) (b) (c) (d) WORKING OF TRAINS GENERALLY Indication On run- (i) Assistance of other engine not required. (ii) Acknowledgement of Loco Pilot of assisting/ banking engine that assistance stopped. Call for Guard's signal. Signals not exchanged by Guard. Signals not exchanged by station staff. Guard to release brakes. Before starting engine or a train from station/ mid- section. Main line clear after backing into siding. Guard to apply brakes. Train is out of control, Guard to assist Train cannot proceed on account of accident/ failures, obstruction or other exceptional cause. Protect train in rear. Call for Guard to come to engine. Token not received. Token missed With wrong 'authority to proceed' Passing Stop signal at 'ON' on proper authority. Before Starting-Vacuum/pressure recreated on ghat section, remove sprag. Passing an automatic stop signal. Passing an intermediate block stop signal at 'On' when telephone provided on the signal posts in out of order and the Loco Pilot is thus unable to contact the station in rear. On run -Acknowledgment of Guard's signal. (a) (b) Whistle boards are provided with a view to pre warn the Loco Pilot about an approaching level crossing and for sounding the whistle/horn to warn the staff who may be working on the line, as well as the gateman and road users at level crossings about the approaching train. The Loco Pilot shall sound the whistle/horn intermittently upto the site of work from 'W' board. At unmanned level crossings, an intermittent whistle from W/L Board to RW/L Board and continuous whistle from RW/L Board upto level crossing and at manned level crossings an intermittent whistle from W/L board upto level crossing shall be sounded. Types of whistle boards- There are three types of whistle boards. The board shall consist of a 0.60 m. square board painted in yellow with appropriate letters in black and fixed on a post painted with 0.3 m. high bands of white and black keeping the underside of the board at a height of 2.0 m above rail level. The whistle boards should be bilingual as mentioned in Annexure-9/15 of IRPWM and erected along the track. The board shall not be illuminated at night. 126 (i) 800 0.3 "GQ4" (ii) fä4 (u) 600 0.25 q-g-å I 0.6M 0.6M 2.0M RAIL 0.6M 0.3 M 0.3 M 0.3M LEVEL 0.6 M 2.0 M 0.25 M 0.25 M 0.3 M 0.3 M FIG - A Whistle Board at Curves & Cuttings RAIL LEVEL FIG - B Whistle Board at Level Crossing 0.6M 0.2M 0.6 M 0.25 M 0.3 M 0.3 M 2.0 M RAIL LEVEL FIG - C Repeater Whistle Board at Level Crossing (iii) (0.2 0.25 em) 250 10. 11. 12. o 00 o (u) (q) (8) (u) €5) (u) 250 t), a-lër: I 127 CHAPTER-IV WORKING OF TRAINS GENERALLY (i) Whistle board as per fig (A) with the letter 'W' of size 0.3 m. high shall be provided on approaches of curves and cuttings at a point from where visibility of the line ahead is limited to 800 m or less on BG. (ii) Whistle boards as per fig (B) with the letter (W/L) of size 0.25 m. high shall be provided on the approaches of all level crossings at a distance of 600 meters

on either side of the 0.6M 2.0M level crossing. 0.6M 0.3 M 0.3 M 0.3 M 0.6M 2.0 M 0.6M 0.25M 0.25 M 0.3 M 0.3 M LEVEL RAIL FIG - A Whistle Board at Curves & Cuttings LEVEL RAIL FIG - B Whistle Board at Level Crossing 0.6M 0.2M 0.6M 0.25M 0.3 M 0.3 M 2.0M RAILT LEVEL FIG -C Repeater Whistle Board at Level Crossing (iii) Repeater whistle boards as per fig (C) with the letter "RW/L" (R&W of size 0.2 m high and 'L' of size 0.25 m high) shall be provided on the approaches of unmanned level crossings at a distance of 250 m. on either side followed by W/L boards. Note- If W/L ' board of one LC is located near the RW/L board or within the continuous whistling zone of another LC (i.e., within 250 m. of LC), then the whistling code of RW/L board shall be followed. Continuous 10. — 0—0 11. 00 12. (b) (c) (d) (e) (t) (g) (a) (b) (a) (b) (C) (d) Recall railway servant protecting train in rear, Material train ready to leave. Running through a station. Approaching a Stop signal at 'On' Detained at a Stop signal. When in consequence Off fog, storm or any other any other reason the view of signals is obstructed. Train parting. Train arriving incomplete Alarm Chain pulled Insufficient vacuum/air pressure in engine Guard applies vacuum/air brake Intercommunication apparatus used. Raise pantograph. To be acknowledged by the other engine. 127 13. 14. 15. 16. — ooooooooooooo 65) TROT I 'o' "-" EF•zrr I EF•zrr I crzrere 25 10 4.51. — 4.52. — ur a, trr*1. Rigg I 4.53. \$1 - 4.54. — 1 128 CHAPTER-IV 13. 14. 15. 16. -o 00000000000 (Frequently) WORKING OF TRAINS GENERALLY Lower pantograph. To be acknowledged by the other engine. (a) Signal arm lowered but light extinguished. (b) Signal arm improperly / insufficiently taken 'Off. (c) Defective signal.. Fouling mark not cleared. (a) (b) (c) (d) Apprehension of danger. Danger Signal to the Loco Pilot of an approaching train whose path is fouled or obstructed for any reason. While working on a single line section during total failure of communication or when single line working is introduced on a double line section. Moving in wrong direction on a double line or against the signalled direction in the automatic block signalling territory or against the established direction in the automatic block signalling territory on single line. Note : The signals above are illustrated by '0' for a short whistle and '—' for a long whistle. S.R. 4.50/2. In case of failure of horn/whistle of the driving cab of engine at originating station, the engine should be treated as failed and another engine should be provided. If the defect develops enroute, the Loco Pilot should stop at first approaching station and should inform the Station Master about the defect. The Station Master, on getting memo from the Loco Pilot, will advise controller who will arrange relief loco. If the same loco is allowed to work by Traction Loco Controller/Power Controller due to non availability of relief loco, the Loco Pilot will observe a speed restriction of 25 KMPH if view ahead is clear and a speed restriction of 10 KMPH when view ahead is not clear due to any reason. In such cases defective locomotive should be changed at first available opportunity. 4.51. Bell signals between Loco Pilot and Guard-When bell communication is provided between the Loco Pilot and the Guard of the train, bell signal code, as may be prescribed by special instructions, shall be used. 4.52. Throwing out water, fire or cinders-A Loco Pilot or Assistant Loco Pilot shall not throw out water, fire or cinders when passing through a station yard or tunnel, or when on a bridge. 4.53. Hose or water crane-After taking water from a tank or water column, the Loco Pilot shall see that the hose or arm is left clear of the line and, when it is provided with fastenings, properly secured. 4.54. Passengers - Every Guard shall give his best assistance to passengers entraining and detraining. 128 4.55. — \$1 q•err. \$1 4.56. — (€111) a-RN 3-11 I Ati a-FQ •311'* a-TIZFI g•zi a-rr 711* (EF'Q) (EFZIN) -q-a - ö-IT 129 CHAPTER-IV WORKING OF TRAINS GENERALLY G. Duties of staff on Arrival 4.55. Shutting off power-In stopping a train, the Loco Pilot shall determine where to shut off power by paying particular attention to the gradient, the state of the weather, the condition of the rails, the brake power and the length and weight of the train. 4.56. Guard to see that train is stopped clear of fouling marks-When a train comes to a stand at a station, the Guard shall see that, wherever possible, the last vehicle of his train has cleared the fouling marks of all points and crossings. If not, he shall inform the Station Master at once and exhibit Stop hand signal to prevent any movement on the fouled line. S.R. 4.56/1. Guard to see train clear of fouling marks- (a) (b) (c) Date (d) (f) The Guard of the train shall verify that the train is complete and is standing clear of the fouling marks. At a station where two or more cabins are provided, when a train comes to a stand, the duty of ascertaining that the train has arrived complete and standing clear of fouling mark will devolve jointly upon Cabin Master/Cabinman of reception end and Guard. At other stations where cabins are not provided this duty devolves with Station Master and Guard. In all cases where train has not arrived complete, or has not cleared the fouling marks, Guard shall display a hand danger signal to the Station Master or the Cabin staff of the cabin nearer to him. He shall proceed

exhibiting a danger signal towards the station or the cabin, to prevent movement on the fouled line. When the complete arrival of a train inside the fouling marks with tail lamp/tail board on the last vehicle cannot be ascertained by the Station Master/Cabin ASW Cabin Master/Cabinman either by personal observation or by observing indications for "section clear" provided on panel or with SM/Cabin Master, the Train Intact Register shall be sent by the Station Master/Cabin ASW Cabin Master to the Guard through a competent railway servant to certify the complete arrival of the train inside the fouling marks with tail lamp/tail board on the last vehicle. In case of poor visibility of obstructed view, Train Intact Register should be sent in advance. The Guard of the train after verifying that the last vehicle stands inside the fouling marks shall append his signature in appropriate column against the entry of his train in the Train Intact Register, which shall have the following columns- Train No. Line No. Time of arrival Guard's signature in token of the complete arrival of the train inside the fouling marks. The Pointsman/Porter shall then exchange 'all-right' signal with the station Master/Cabin ASM/Cabin Master/Cabinman, The 'Train out of section' signal may be given by the Station Master/Cabin ASM/Cabin Master after he receives the 'all-right' signal from the Pointsman/Porter. In case, the Pointsman/Porter exchanges all right signal with the Cabinman, the latter shall inform the Station Master about the complete arrival of the train supported by a Private Number on receipt of which the Station Master may give the 'Train out of section' signal. The Guard of a stopping train shall also see that all visible signals in rear protecting his train have been placed to the 'On' Position. At night this can be verified by looking at the back light of the signal in semaphore signaling territory. In the event of a signal bearing in the 'Off' position, the Guard must immediately inform the Station Master or the Cabin Assistant Station Master/Cabin Master/Cabinman and, if necessary, protect his train. If the fouling marks in the rear are not clear, the Station Master will take immediate steps to draw the train forward and get the fouling marks cleared. The Station Master shall not allow any movement on the adjacent lines, which are infringed until the fouling marks are cleared. 129 zrr 3-11 a rerr g•zi 4.57. 4.57 / 1. 4.58. (æ•rq) I 4.58 / 1. di ezrra Ati 4.59. 130 CHAPTER-IV WORKING OF TRAINS GENERALLY S .R. 4.56/2. Guard's duty when two or more trains cross or precede at a station- (a) At a non-interlocked station when two trains cross, or one precedes another, the Guard of the train arriving first, having personally verified that the complete train has arrived within the fouling marks, must proceed to the facing points leading to the line on which the other train is to be received and personally see that the points are correctly set and locked for that line. The Station Master must not take "Off" any signal for reception of the subsequent train until he has received an all-right signal from the Guard by waving his arm by day or white light by night, from the facing points for the other train, as well as from the Pointsman/Porter sent out to man the outermost facing points. (b) At modified non-interlocked stations, the Guard is exempted from proceeding to the Point to satisfy himself as to their setting. prior to the reception of another train, which is to cross or precede his train. Note: Provision to ascertain complete arrival of a train shall be dispensed in the normal working, where panel/RRI/SSI interlocking along with Block proving axle counter are installed. 4.57. Detaching engine-Whenever a train has been brought to a stand, and it is necessary for the engine, with or without vehicles, to be detached from the rest of the train, the Guard shall, before the train is uncoupled, satisfy himself that the van-brakes have been put on securely and take such other measures as may be prescribed by special instructions. S.R. 4.57/1. The Asstt. Loco Pilot is responsible for coupling/uncoupling of the engine- (a) At engine changing stations/Terminal stations, (b) At any other station, where station staff is not available and engine is required to be attached/detached. S.R. 4.57/2. Should shunting operations cause any part of a train to be left unattached to either engine or brakevans, the hand brakes must be applied. Loco Pilot to see that train is stopped clear of fouling marks-When a train comes to a stand 4.58. at a station, the Loco Pilot shall see that, wherever possible, his engine is clear of the fouling marks of all points and crossings. If not, he shall take steps to inform the Station Master at once and exhibit stop hand signal to prevent any movement on the fouled line. S.R. 4.58/1. When the train comes to a stand, if the Loco Pilot finds that his engine is not clear of fouling marks, he must at once sound his whistle and attract the attention of the Station/Cabin staff and take steps to inform the Station Master that the fouling marks are not clear. The Station Master shall get the fouling marks cleared. Till then the Station Master shall not allow any movement on the adjacent line, which are infringed. The Loco Pilot shall also remain alert to protect the infringement against any movement. 4.59. Moving of train carrying passengers after it has been stopped at a station - When a train carrying passengers has been brought to a stand at a station, whether along side, beyond, or short of the platform, the Loco Pilot shall not move it,

except under orders of the Guard or to avert an accident. S.R. 4.59/1 After a train carrying passengers has been brought to a stand, the Loco Pilot may move it only on receiving hand signals from the Guard, who shall not give the signal until he has warned the passengers by whistle and seen that no passengers are getting into or detraining from the train. 130 4.60. 4.61. (qfrr) (Q@F-gi0G) crrzrere 4.62. — \$1 (€fiFT) I --81-d -Gi -q-a -a-4i -a-m OT) 15 uT / qzrq -erg 15 10 131 CHAPTER-IV WORKING OF TRAINS GENERALLY 4.60. Guard not to leave train till handed over-No Guard shall leave his train until it has been properly handed over in accordance with special instructions. S.R.4.60/1.(a) No Guard shall leave the station at the end of his run without the S.M. 's/ Lobby Incharge's permission to do so. He shall also see that his train has been signed for by the out going Guard, or by the Trains Clerk. He shall further more have delivered all consignments Way Bills, dispatches etc. for that station and shall have made over those for station beyond. He shall sign his name on the roster before he leaves the station. (b) Every Guard shall also have over all journals and documents kept up by him, in connection with the running of his train to S.M. on duty or other authorized official before leaving the platform at the end of his run, or if a box is provided for the purpose such documents are to be placed there in. (c) In the event of a train running over two or more divisions the Guard shall submit separate train documents for each division. 4.61. Loco Pilot not to leave engine when on duty-No Loco Pilot shall leave his working locomotive or his self-propelled vehicle when on duty, whether at a station or on a running line, except in case of absolute necessity and after a competent railway servant has been placed in-charge of the locomotive or self-propelled vehicle. In the case of a self-propelled vehicle manned by a Loco Pilot only. A Loco Pilot may leave it when necessary. provided he has locked the cabs and has put the vehicle in low gear with the ignition switch in the off position and has screwed down and locked the hand brake. S.R. 4.61/1. The competent man referred to above in the case of running trains/shunting engine is the Assistant Loco Pilot. H. Working of Material Trains. 4.62. Working of a material train in a block section-A material train shall be worked only with the permission of the Station Masters on each side and in accordance with special instructions. S.R. 4.62/1. Ordering and Working- (a) On receipt of advice from the engineering department, the Divisional Operating Manager will order the train by letter to all concerned detailing the sections over which the material train will work, the date on which it will commence working, the Stations at which it will stable and the official who will be incharge of the train. (b) The engineering department must give adequate notice but not less than three days regarding the working of material trains. (c) If the working of a material train is suspended for more than a fortnight or the section over which it is to work is altered, a fresh 'all-concerned' letter or telephonic message must be issued. (d) Each material train must have at least one brakevan in rear, and where available, two brake vans, one in front and the other in rear. Vehicles with active automatic brakes/Air brake should be attached next to the engine and the vacuum/air pressure connected up with the engine. (e) The Engineering Supervisor in-charge of the material train must ensure that the rake is examined at least once in 15 days in case of Air Brake stock and once in 10 days in case of vacuum brake stock by Carriage & Wagon staff. The Brake Power Certificate issued by C & W Staff should be in possession of the Engineering Supervisor in charge before the material train is allowed to proceed. The responsibility that train is so examined shall devolve on the Engineering Supervisor in charge or the material train. 131 10 q.Et. 600 41-e-R 400 600 400 10 41-e-R \$iel (31) \$1 \$1 di q-lâ sri | crrzra•e (g) 4.63. (i) 25 10 (ii) crrzrere (iii) a-fi (iv) (ii) I I crrzrere (äQN) # , I 132 CHAPTER-IV WORKING OF TRAINS GENERALLY (f) A material train shall usually work between sunrise and sunset, in urgent cases the Divisional Railway Manager may authorise the working of material train after sunset. (g) The unloading and loading of material trains will be done under orders of the engineering official in-charge, who will be responsible for leaving the tracks, signal wire transmission, rodding and any other S & T apparatus close to the track clear of obstruction. No unloading will be done while the train is in motion except from specially constructed trucks and under orders of the engineering official in- charge and at a speed not exceeding 10 kilometers per hour. (h) When a material train is working between stations, the Guard will in consultation with the engineering official in-charge of the material train, depute adequate number of permanent competent engineering staff to protect the train by means of banner flags as follows: The person or persons deputed for protecting the train will proceed to the rear of the train on the double line, and both in rear and in front on the single line, 600 meters on broad gauge and 400 on meter and narrow gauge and will place a banner flag across the track or in the case of cutting or other obstruction, at such other places not less than 600 metres on broad gauge and 400 meters on metre gauge and narrow

gauge so that the banner flag is plainly visible to Loco Pilots of approaching trains. The person deputed to protect the train must place two detonators, 10 meters apart near the banner flag. He must shift the banner flag and the detonators when necessary, as the train moves. In Station yards banner flags must be placed at either end of the train standing on a line unprotected by signals. If banner flags are not available, men with hand signals should be posted for the protection of a train in emergency. (i) A material train must not be divided outside station limits. (j) A material train should work in forward direction only and clear the block section at station ahead. It should not be backed. In case a material train has to work in the block section in the rear, the line must be blocked back and the Loco Pilot must be given an authority on prescribed form for entering the section. At a station where Daido's lock and block instruments are installed, the Loco Pilot shall be given the occupation key for entering the rear block section. (k) When running between block stations with the engine leading, the speed of a material train must not exceed the prescribed speed for goods train. (l) When the engine is pushing the train or is placed in an emergency somewhere in the middle of the train, and the brakevan is leading- (i) the speed must not exceed 25 kilometers per hour on the straight line, and 10 Kilometers per hour over a turn-out. (ii) the Guard must travel in the leading brake-van and must exhibit hand signals to the Loco Pilot, (iii) the train crew must keep a good look-out especially in the direction in which the train is moving and must be prepared to stop short of any obstruction or level crossing. (iv) when approaching turn-outs, the Guard must stop the train and satisfy himself that the points are correctly set and all non-interlocked points are locked and manned. (m) When the engine is pushing the train and brake-van is not leading: (i) the speed must not exceed 10 kilometers per hour. (ii) the Guard must travel in the leading vehicle which is fitted with a vacuum/air brake valve or hand brake. If the leading vehicle is not so fitted, he will travel in nearest vehicle there to so fitted. He must exhibit hand signals to the Loco Pilot.

4.63. Workers on material train-The Guard of a material train shall, before giving the signal to start, see that all the workers are on the train, and warn them to sit down. S.R.4.63/1. Precautions before Guard starts a material train- Before giving the signal to start, the Guard shall satisfy himself that the engineering official in-charge has been advised that the train is ready to start and to ensure that no men are under the vehicles.

4.64. (QR-«) :— (QR•a) \$1 I ("Riu) *-- en-atr 2. («auq) (qiFe g , (4) QQ @1Rui (3) (ü1G) (q) (NT\$â) rref 1 (RIGG) 4.65. — 4.65/1. - (i) (ii) (iii) (iv) (vi) ft-Q.R EF•zrr I I sri I -#a-ft a-TIA?ZEFTTT 62 21 (vii) I (viii) / ertTTZIT I (ix) 3 ya-Ili 133

CHAPTER-IV 4.64. Protection of material train when stabled- WORKING OF TRAINS GENERALLY (1) A material train shall not be stabled on a running line at a station, except in unavoidable circumstances. (2) When a material train is stabled at a station, it shall be protected in the following manner and the Station Master shall ensure that- (a) the vehicles of the material train have been properly secured and are not fouling any points or crossings. (b) all necessary points have been set against the line on which the material train is stabled and such points have been secured with clamps or bolts and cotters and padlocks, and (c) the keys of such padlocks are kept in his personal custody until the material train is ready to leave the siding or line. (3) The Guard shall not relinquish charge until he has satisfied himself that the material train has been protected as prescribed in this rule. S.R.4.64/1. Stabling of Material train - (a) (b) (c) At an interlocked station, lever collars must be used, Switch/button collars must be placed on the switches/buttons pertaining to the blocked line at a station provided with route relay/panel interlocking. In loco sheds, the Loco Foreman on duty will be responsible for protection of the load when stable. Clamps are kept at each Guard's headquarter station and will be supplied to Guards detailed to work material train. Additional supplies may be obtained from the engineering department. 4.65. Working of Track Maintenance Machines- Track laying or on track tamping or maintenance machines shall be worked only with the permission of the Station Master and in accordance with special instructions. S.R. 4.65/1. Rules for Movement and Working of Track Laying and Track Maintenance Machines- (i) (ii) (iii) (iv) (v) (vi) (vii) Track laying machine are used for laying/replacing sleeper/rails. These are mounted on specially modified wagon for the purpose, coupled and run as a train, and propelled by a locomotive. The composition works as a train and is to be treated as single train for all operational purposes. During thick, foggy or tempestuous weather and total failure of communication, these machines are not permitted to work on line. Track Maintenance Machine are single unit self-propelled machine and are used for purpose of track maintenance. If there is no need for the purpose of track maintenance. These machines can run as single unit as a train or in convoy according to rules given herein. DMTs are not Track Maintenance Machines or Track Relaying Machines and shall be worked only as per GR 4.62. No track machine shall

work or move in the same block section along with a DMT. Track laying and Track Maintenance machines shall work only under Traffic Block. More than one track-laying machine cannot be permitted to work or run in the same block section. A maximum of 5 track maintenance machines can be permitted to work in the same block section. (Viii) When moving alone, Track Maintenance Machine shall display LV board/Tail lamp. (ix) For the purpose of through movement from one block station to another block station a maximum of 3 track maintenance machine can be permitted to run in convoy the following rules will be followed. (a) Whenever movement of more than one track maintenance machines required to be done the Station Master of the dispatching station shall be offered a requisition for the same in writing by the SSE/SE/JE (track machine) incharge of the movement, who shall be overall responsible for the safe running of the convoy. indicating the individual machines that are required to move. 133 g) (q) (8) (q) (31) (31) (e) (x) (xi) s:rrq AR' dii crfi•e" \$1 120 40 TROT / GT&TT I g•zi ya-TR (ii) 2000 (Qaw) -\$ (t.gq.) 134 CHAPTER-IV (b) (c) (d) (e) (f) (g) (h) (i) (j) (k) WORKING OF TRAINS GENERALLY The first machine will move on proper signals and the other 2 machines will follow in the authority of the Machine Following Permit, which shall be issued by the Station Master of the dispatching station to each of the operators. or the machines following the first machine. The machine operators of the machines will endorse on the Permit as token of acknowledgement that they are aware that more than one machine is in convoy and one/two machine is in front and rear as the case may be. These Permits shall be deposited with the Station Master at the receiving Station who will consider the line as closed only after the receipt of the permit. The operator of the first machine shall be given caution order in which shall also be indicated the number of machines following. This will be noted by the operators of the following machines. On sections where motor trolleys are not allowed to work on Motor Trolley Permit running of track maintenance machines on Machine Following Permit will also be prohibited. These sections are already indicated in the Station Working Rules of the station and the Working Time Table of the division. Gatemen at Level Crossing Gates enroute will be specifically advised about the number of machines entering the block section to ensure that the gates remain closed till the convoy has cleared the level crossing gate. Operators of the machines working on Machine Following Permit will exercise extra vigilance at level crossing gates. The machine operators will ensure that the distance between two machines is not less than 120 mts. When moving in convoy the speed of machine shall not exceed 40 kmph. While moving in a convoy, if any machine is required to slow down or stop due to any reason, the machine operator shall ensure that red hand signal is displayed by waving vigorously. (x) (xi) Attachment of another machine or camp coach/wagon is not permitted when machines are moving in a convoy. Such attachment can only be done if a machine breaks down/fails in the block section, and such movement is done to clear the block section only. When a machine or a camp coach/wagon is required for movement from one block station to another, such movement shall be done on line clear only. The requisition for such movement from the SSE/SE/JE (Track Machine) shall clearly specify that another machine/vehicle is attached with the track machine. This information will be conveyed to the Station Master in advance while taking line clear, and also the control. The last machine/camp coach shall display LV board/tail lamp. While moving from one block station to another block station to another block station on a double line section, the movement of track laying and track maintenance machines shall be on the proper line only. S.R. 4.65/2. (a) (i) Each machine shall be in the charge of SSE/SE/JE, herein after called the Operator. Whenever he is not available on the machine the senior most Track Machine Technician having competency certificate, can operate the machine. The complement of staff with each machine with normally be one Operator, one Machanic and one Khalasi. However, number of Railway staff on each Track Machine should not exceed five. The operator shall be a qualified person, competent to hold the charge of the machine on the main line and also certified to be qualified in the rules and actual driving and working of the unit efficiently. (ii) In case of MP-2000 Track Maintenance Machine, the complement of staff in each machine cab, may be operator machine maintenance staff and Section Engineer (P-Way) total Ten Staff. Other staff i.e. Gangman etc. When travelling with the machine will travel on the platform of the machine out side. The staff traveling in the Operator's cab will not in any way detract the attention of the operator, except in case of unusual situations. (b) The 'On' Track' Track Maintenance Machine shall work under the direct supervision of an Engineering official, not below the rank of JE, who will be responsible for taking the traffic block and for protection of the lines while the work is in progress. Herein after he will be called Incharge. S.R. 4.65/3. Competency Certificate- The operator of a Machine shall not use/operate the Track Maintenance Machines

unless: (a) He is in possession of a valid Track Maintenance Machines competency certificate for driving and working of the Machine in token of his being competent to operate the machine. The competency certificate will be issued by Dy CE Incharge of Track Machine, which will be valid for 3 years. 134 (ii) (iii) R.4.65/4. (q) (8) (31) (d) OTT-IA s.rrq (.31zra-a - 4.14 4.16 (Ä / ertTTZIT I (ii) (iii) GTVTT t121) \$1 zrr 135 CHAPTER-IV WORKING OF TRAINS GENERALLY (b) (i) He is fully conversant with the system of working, signalling of the section and has undergone road learning as prescribed for Loco Pilots and has recorded this fact in a competency book kept on the machine. This will be countersigned by SSE/Incharge. (ii) The Operators of the machines responsible for operating/running of the machines shall follow the schedule of initial training/refresher courses in train working rules as prescribed for train Loco Pilots. (iii) The Track Machine Operator as well as other Track Machine Staff must possess the medical certificate issued by the Railway Medical Officer as per the following classification: 1. Track Machine Operator-A3 2. Other Track Machine Staff-BI S.R. 4.65/4. EQUIPMENT- The Operator of the machine will be responsible to ensure that the following equipments complete in all respects and in working condition, are available on each Track Maintenance Machine before the machine is put on a running line: (a) (b) (c) (d) (e) (D) (h) (i) (j) (k) (l) (m) (n) (o) Two red and one green HS flag. Two tri-colour HS Lamps. Two chains with pad locks. Two clamps with pad locks. Ten fog signals. A copy of the working Time Table of the section where the machine is working. G & SR book with up to date amendment slips. One 4 cells flasher light One petromax lamp. One portable field telephone Two banner flags, One First Aid Box Skids-Two nos. One Watch. LV Board and Flashing Tail Lamp. NOTE : Each Track Maintenance Machine must be equipped with prescribed Head and Tail-Light, Marker lights and flasher lights as per GR 4.14 to 4.16 and the SR's there to. While moving in convoy the L.V. Board/Tail Lamp, should be fixed only on the last machine in the direction of movement. S.R.4.65/5. Rules for Operation- (i) No Track Maintenance Machine shall be brought on a running line from the siding/stabling line without the written permission of the Station Master on duty in the form of shunting order. (ii) When the Track Maintenance Machine is required to move from one Block station to another Block Station, the Operator should run the machine only with the proper authority to proceed. (iii) The following procedures shall be observed for working of Track Maintenance Machine between two Block Stations. (a) The Track Maintenance Machines shall work under line block. The Section engineer Incharge of all the Track Maintenance Machines shall give the requisition for block in duplicate to Station Master, indicating the number of Track maintenance Machines which will work, the specific location where the machines will work, the duration of block required and whether the machines will proceed to the next station or return back to the starting station after completion of the work. The Station Master shall then contact the control and ascertain the movement of trains before granting line block. Section Engineer incharge will accompany the machines to its work site. 135 "31115" *rrr I (i) / tate - q:rrr g*zi '3117' / 369 (30 3-111b / uhéq (Qaw) (ii) t/ 369 (30 \$1 I ya-Ili *TTT I t*rrr I Eri-q 136 CHAPTER-IV (b) (c) WORKING OF TRAINS GENERALLY After ascertaining from control, the duration of block that may be granted, Station Master shall return the original copy of the requisition to the Section Engineer incharge endorsing the duration of the block permitted and other special instructions, if any. Single line Section: WORK AND PROCEED- Station Master will obtain line clear from Station in advance, take off last stop signal, issue special caution order indicating the number of Maintenance Machines permitted to work within the block section which will be signed by all the Operators of Track Maintenance Machines and will be handed over to the Section Engineer incharge along with token if any, Section Engineer incharge shall travel on the last Track Maintenance Machine. On completion of the Work, machines will be received by taking off reception signals, a Pointsman should display green hand signal at the foot of first stop signal till the last machine enters the Station. On reaching the station in advance. Section Engineer incharge will hand over the token, if any as well as the special caution order only when the last machine clears the block section. He will also certify that the track is fit for train movement. Then only the SM will close the line. (d) Single Line Section : WORK AND RETURN: (i) With Token/Tablet instruments: Station Master will block back the section and issue special caution order indicating the number of Track Maintenance Machines permitted to work within the block section, the stations where they will return etc. Which will be signed by all the Operators of Track Maintenance Machines and will be handed over to the Section Engineer incharge along with token/tablet in addition to it T/369(3b) will also be issued for passing last stop signal at danger. Section Engineer incharge shall travel on the first track maintenance machine. On completion of the work the

machines will be received by taking off reception signals. Pointsman should display green flag/signals at the foot of first stop signal till the last machine enters the station. Section Engineer incharge shall hand over the token/tablet as well as special caution order to the Station Master on duty only when all track maintenance machines have cleared the block section. He will also issue a certificate to the station Master that track is fit for train movement. Then Only Station Master will cancel the block back and normalise the block instrument. (ii) With Token less instrument:- Station Master will block back the Section take off the Shunting key, issue a Special Caution Order indicating the number of track Maintenance Machines permitted to work within the Block Section, the station where they will return etc. which will be signed by all the Operators of Track Maintenance Machines and will be handed over to the Section Engineer Incharge alongwith the Shunting key. In addition to it, T/369/(3b) will also be issued for passing the last STOP Signal at danger. Section Engineer (Incharge) Shall travel on the first Track Maintenance Machine. On completion of the work the machines will be received by taking off reception signals. Station Pointsman should display Green Hand Signal at the foot of first Stop signal till the last machine enters the station. Section Engineer In charge shall hand over the Shunting Key as well as the Special Caution Order to Station Master on duty, only when all the Track Maintenance Machines have cleared the Block section. He will also issue a certificate to the SM that the Track is fit for train movement. Then only Station Master remove the 'Block Back'. 136 (q) errs•a - ÉT12.T) qí:rr (ii) cra arr&fi) di 4.44 (Qaw) Qiü I qí:rr I / 369 (341) zrr 137 CHAPTER-IV Double Line Section-WORKAND PROCEED: WORKING OF TRAINS GENERALLY (i) Via the right direction SM will obtain line clear from station in advance, take off last stop signal issue a special caution order indicating the number of Track Maintenance Machines permitted to work within the Block section which will be signed by all the Operators of Track Maintenance Machines and will be handed over to the Section Engineer Incharge. Section Engineer Incharge shall travel on the last Track Maintenance Machine. On completion of work, the Machines will be received by taking of reception signals. Station Pointsman should display green flag/signals at the foot of first stop signal till the last machine enters the station. On reaching the station in advance, Section Engineer incharge will hand over to the SM, the Special caution order only when the last machine clears the block section. He will also certiW that the track is fit for train movement. Then only the SM will close the line. (ii) Via Wrong Direction-Station Master will take the line clear from station in rear on block telephone indicating the number of Track Maintenance Machines which will work from that Station upto the next station prepare paper line Clear ticket issue special caution order clearly indicating the number of track machines to work, the Station to which the machines will go on completion of work, the line on which the machines will work. The paper line clear ticket and the special caution order should be signed by all the operators and then should be handed over to the Section Engineer Incharge who shall travel on the last machine. The machines shall be piloted out of the station on a WTitten authority issued by the SM after all the facing points have been correctly set and locked and trailing points correctly set over which the machines will pass. On approching the next station after completion of the work, the operators shall bring, their machines to stop opposite the first stop signal pertaining to the right line or at the last stop signal pertaining to the "Tong line (on which they are running) whichever they come across first. The SM at the other end of the block section shall depute a Railway staffin uniform at the foot of the signal (whichever the machines would encounter first) who shall stop these machines on danger hand signal and thereafter pilot them into the station on a WTitten authority issued by the SM. If the operators find that no Railway servant in uniform has been deputed at the foot of the signal to pilot the train into the station. GR 4.44 shall be observed. All the crossover points in the facing direction over which the machines shall proceed shall be clamped and pad locked. On reaching the station at the other end of the block section. Section Engineer Incharge will hand over the paper line clear ticket, special caution order to SM only when the last machine clears the block section. He will also certify that the track is fit for train movement. Then only the SM will close the line and normal train running may be resumed Double Line Section- WORKAND RETURN : (i) Via Right Direction : Station Master will block fomvard the section, take out the shunting key in case of 'Daido' Double line Block Instrument, issue special caution order indicating the number of track machines permitted to work within the block section, station where they will return etc. which will be signed by all the operators and will be handed over to the Section Engineer incharge alongwith the shunting key if any. Section Engineer incharge shall travel on the first Track Maintenance Machine. In addition, T/369(3b) will also be issued for passing the last stop signal atdanger. On completion of the work, the operators shall

bring their machines to stop opposite first stop signal pertaining to the right line or at the last stop signal pertaining to the line on which they are running which ever comes across first station Master shall depute a Railway servant in uniform at the foot of the signal (whichever the machine would encounter first) who shall stop the machines on danger signal and thereafter pilot them into the station on a written authority issued by the station Master. 137 q1t 4.44 GTFIT GTFT (ii) Qiü (Qaw) (Qaw) I GTTRTTT I a-fi -\$ -\$1 (ii) (iii) \$1 120 Rii 50 I (iv) (v) (Qaw) (3F±). 10 600 zrrerr 1200 I (vi) (vii) zrr EF•zrr 138 CHAPTER-IV WORKING OF TRAINS GENERALLY If the operators find that no railway servant has been deputed to pilot the train. G .R. 4.44 shall be observed. All the crossover points in the facing direction over which the machines shall proceed shall be clamped and pad locked. On reaching the Station, Section Engineer incharge will hand over the special caution order to the SM only when the last machine clears the block section. He will also certi5,' that the track is fit for train movement. Then only the station Master will close the line and normal working may resume. (ii) Via the "Tong direction:- Station Master will block back the section, take out the shunting key in case of 'Daido' double line block instrument, issue special caution order indicating the number of Track maintenance Machines, Station where they will return etc, which will be signed by the operators and then will be handed over to the Section Engineer incharge along with the shunting Key if any, Section Engineer incharge will travel on the first track machine. The machines shall be piloted out of the station on "Titten authority issued by the Station Master after all the facing points have been correctly set and locked and trailing points correctly set over which the machines will pass. On completion of the work the machines will be received by taking off reception signals. Station pointsman should display green hand signal at the foot of first stop signal till the last machine enters the station. Section Engineer incharge shall hand over the shunting key, if any, as well as the special caution order to the Station Master on duty. Only when all the Track Maintenance Machines have cleared the block section. He will also issue a certificate that the track is fit for train movement, and then only the Station Master will remove the block back. S.R. 4.65/6. Precautions- (i) The Section Engineer incharge of the machine is responsible for the protection of the site of work and also for protection of adjoining track in case of infringement, if any. He shall also be responsible for safety of track after the working of the machine. (ii) The Station Master on either side shall inform all the Level crossings equipped with telephones falling this block section about the total number of track machines permitted to work in the block section under exchange of Pri vate numbers. (iii) While the track machines are moving in the block section in convoy, it will be the responsibility of the operators of their machines to remain at a minimum distance of 120 meters from each other. However, while the working the minimum distance between two machine shall not be less than 50 meters. (iv) In course of working. when required to pass a manned or unmanned gate, each track machine shall stop short of the level crossing and pass only after ensuring the safety of the track machine and the road traffic. (v) The Section Engineer incharge shall always take four efficient flagmen equipped with banner flags, ten detonators and red hand flags each, to protect the machines. One flagman shall exhibit banner flag at a distance of 600 meters. On either side of the site of work and one flagman showing a stop hand signal at a distance of 1200 meteres on either of the site of work. (vi) Some machines tend to foul the adjacent lines, while working on double line sections or in the yard. BRM may foul the adjacent line when stretching out its blades, if any part of a machine is likely to foul the adjacent line while working, the Section Engineer incharge shall request station master in writing to block both the lines, and such work should only be undertaken, if blocking both the lines has been permitted by the control and the station master and both the lines have been protected. (vii) In case of CSW DUO or any other such machine where the operator is not in a position to get a view of front directly, he shall ensure by deployment of his assistants in the front/rear cab that any obstruction/infringement i.e. machine moving ahead of banner flag etc. is communicated to him verbally or by display of Hand signal etc., so that movement of the machine may be controlled accordingly. 138 (ii) (iii) arqfigrzi 5.23 (iv) I Qiü (ii) (iii) 6.03 I 10. — 15 4.66. — 139 CHAPTER-IV WORKING OF TRAINS GENERALLY S.R. 4.65/7. Protection of track machines when stabled at station- (i) The running and stabling of the track machines shall be arranged by the Station Master in Consultation with the section controller. In case, the control is not working, the Station Master shall consult the Station Master of the adjoining stations. (ii) The Track machine shall normally be stabled on non-running line. (iii) When the Track machine shall normally be stabled on a running line due to unavoidable circumstances, the mechanical hand brakes shall be applied and machine shall be securely chained to the rails in accordance

with GR 5.23 and SRs thereunder. Lever Collars shall be used on concerned signal levers and slide collar/Pins on the relevant slides in the office of the Station Master. (iv) When the machine is stabled, the Operator shall ensure that it is berthed clear of fouling marks and traps and without obstructing the adjacent line. He shall apply the brakes and skids to prevent movement. The concerned points shall be set against the line on which the track machine is stabled and such points shall be secured with clamps or bolts and cotters and pad locks. The keys of such pad locks shall be kept in the personal custody of SM until the machine is ready to leave from siding or running line. The machine operator shall not relinquish charge until he has satisfied himself that the machine has been properly secured and protected as prescribed. S.R.4.65/8. The Track Machine shall not move into or inside the Traffic Yard without the permission of the Station Master on Shunting order. No shunting of goods/passenger stock shall be permitted on the line where track maintenance machines are stabled nor shunting should be performed with the machines attached. S.R.4.65/9. Failures and Accidents- (i) Failures in Block sections of the Track Machine will be treated as accident. Accidents involving track machines shall be treated as train accidents under the appropriate class and action should be taken as per the rules in force. (ii) In the case of failure of Track Machine in block section the Section Engineer in charge may decide to push the disabled unit to the nearest station provided the brake power is in good condition. Otherwise intimation shall be sent to the nearest Station Master through a messenger and to Control through portable telephone asking for a light engine to tow the unit. (iii) In the event of brake down the machines shall be protected as per G.R.6.03 and S.R. their under S.R.4.65/10. Speed - Maximum permissible speed should be as approved by CRS on points & crossings, the speed shall however, be restricted to 15 KMPH.

1. Private Engines and Vehicles 4.66. Private engines and vehicles-No engine or other vehicle, which are the property of a private owner, shall be allowed to enter upon the railway, except in accordance with special instructions. S.R. 4.66/1. (a) Engines belonging to private firms shall not be run with their own wheels over this Railway, unless specially authorised by the Chief Operations Manager. (b) Before being attached to a train, must be examined and issued a fit certificate by the nearest Loco Foreman, which will be attached to the Wagon way Bill and a Assistant Loco Pilot must be on the foot-plate.

139 5 fizia•ur 5.01. - (1) *--emfi (2) "Riu) \$1 I Rqié, (3) (a-pr_) zrr g•zi \$1 EF•zrr I g•rrr I (q) g•zi g•zi a-T17TiF 140 CHAPTER-V CONTROL AND WORKING STATIONS CHAPTER-V CONTROL AND WORKING OF STATIONS 5.01. (1) (2) (3) (4) Responsibility of the Station Master for working- The Station Master shall be responsible for the efficient discharge of the duties devolving upon the staff employed, either permanently or temporarily, under his orders at the station or within the station limits and such staff shall be subject to his authority and direction in the working of the station. The Station Master shall see that all signals, points, gates of level crossings and the whole machinery of his station are in proper working order and shall immediately report all defects therein to the proper authority. The Station Master shall also be responsible to see that the working of the station is carried out in strict accordance with the rules and regulations for the time being in force. No person other than the Station Master shall ask for or give Line Clear, or give authority to proceed. S.R. 5.01/1. The Station Master in charge shall maintain his station with the appropriate standard and check that the staff are dressed in clean uniform in accordance with the extant rules, and that signal lamp, flags and other equipment are in proper order. S.R. 5.01/2. The Station Master will inspect the station fortnightly, which must include the inspection of cabins, signals, level crossing gates, lamps, weighing machines, goods and station yard and vehicles standing therein. The Yard Master will perform similar duties in the area under his charge. S.R. 5.01/3. The Station Master must also see that goods, parcels and other material must not be left scattered on the platform. Packages to be loaded should be neatly stacked at a safe distance from the edge of the platform. S.R. 5.01/4. Block Instruments. Panel and Route Relay Interlocking Operation- (a) (b) (c) No person is permitted to operate block instruments, Panel and Route Relay Installations unless he is in possession of the prescribed certificate of competency and has been detailed for the specific work. Station Masters on duty, and Cabin Master in independent charge of Block cabins and stations and who are in possession of certificates of competency are authorised to operate Block Instruments. If staff have been working for a year or more at stations where they are not required to operate block instruments, are posted to stations where they are required to operate Block Instruments or when they are required to operate new type of Block Instruments, they shall be tested locally by the Assistant Operations Manager and Assistant Divisional Signal & Telecommunications Engineer in the manipulation of Block Instruments and a fresh certificate of competency shall be issued. No member of the

station staff, particularly in the charge of points & signals or shunting, shall leave his duty without being relieved by some competent person. The Pointsman and Signaller shall remain on duty, if line clear is given for a train, until that train has been received and the conditions for granting permission to approach have been restored. 140 fizia•ur 5.02. 2.01 (a-FI) 2«) 5.03. - 5.04. 5.05. — 5.06. (ii) \$1 AR. sri g•zi sri I (ii) 141 CHAPTER-V CONTROL AND WORKING STATIONS 5.02. Supply of copies of rules and distribution or exhibition of other documents- The Station Master shall see- (a) (b) (c) (d) that every railway servant subordinate to him who should be supplied with a copy of authorised translation of these rules under Rule 2.01 duly receives the same; that the Working Time Table in force together with all correction slips and appendices, if any working rules and instructions, and other notices having reference to the working of the line, are properly distributed or exhibited in such manner as may be prescribed under special instructions; that both the sheet time table and fare lists are correctly exhibited at the station if it is open for the booking of traffic and that copies of the Act, and the Goods and Coaching Tariffs are available for inspection by the public. 5.03. Obedience to orders and keeping of books and returns The station Master shall see that all orders and instructions are duly conveyed to the staff concerned and are properly carried out, and that all books and returns are regularly written up and neatly kept. 5.04. (1) (2) (3) Signal Cabins The Station Master shall make himself thoroughly acquainted with the duties of the staff employed in the signal cabins, if any, at his station and shall satisfy himself that they perform their duties correctly, and in order to maintain an effective supervision over the said staff, frequently visit the signal cabins. The Station Master shall ensure that the prescribed equipment is readily available in signal cabins and maintained in good working order. Signal cabins shall kept neat and clean and no unauthorised person shall be permitted to enter such cabins. S.R. 5.04/1. The Station Master shall frequently test and counsel the staff under him in the knowledge of rules including the method of using lever collars, ferrules and conducting shunting in a safe manner. 5.05. Report of neglect of duty - The Station Master shall report, without delay, to his superiors, all neglect of duty on the part of any railway servant who is under his orders. 5.06. Station Working Rules- (i) In addition to the General Rules for Indian Railways and Subsidiary Rules of a Railway, each station shall be provided with Station Working Rules applicable to the station, issued under special instructions. (ii) A copy of the Station Working Rules or relevant extracts thereof shall be kept at cabins and level crossings concerned. S.R. 5.06/1. The Divisional Railway Managers are the authorised Officers for the purpose of this Rule. Power to issue working instructions are delegated to the Divisional Railway Managers within their own divisions and to their Sr. Divisional Operations Manager. Station Working Rules shall be framed jointly by the Sr. DOM and Sr. DSTE for interlocked stations and by the Sr. DOM for non-interlocked station. S.R. 5.06/2. Preparation, Revision and Issue of Station Working Rules- (a) (b) (i) Sr. DOM and Sr. DSTE will have the SWR and correction slips there to of all stations carefully checked on the spot, to see that they are correct and complete in all respects before they are finally signed, issued and brought in to force. The COM and the CSTE may be approached for any advice, if necessary. (ii) TWR is a part of station working and this should be signed Jointly by Sr. DOM, Sr. DEF/TRD. If the Working Rules and instructions to be issued for regulating safe working of traffic, in and between stations and in yards, involve matters, in which General Rules, require either issue of 'Approved Special Instructions, or exemption from a rule, Divisional Railway Manager shall take permission with the Commissioner of Railway Safety, if required. 141 5.07. (ii) 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 I -aft \$1 GTFT qfrl \$1 -a -e--zra fh-u-q I (1514) ByrfRa (15Pf) \$1 (15Pi) (lbßi) 8/351(W 8) (GldA) \$1 t:rruaz 142 / 369(1) / 369 3 â/g 409 8/81 409 81 /! 602 602 602 602 602 602 602 602 / 609 CHAPTER-V CONTROL AND WORKING STATIONS (c) The SWRs should be reviewed once in every five year, In case the view brings out the necessity of carrying out changes, the SWRs should be reissued. In the event of more than five correction slips having to be issued, the SWRs should be reissued without waiting for periodical review. 5.07. Forms- (i) (ii) 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19

20. All messages and written authorities mentioned in these rules shall be prepared on prescribed forms laid down in these rules or prescribed under special instructions and shall be stamped with the station stamp.If the authorised printed



form is not available for any reason or in exceptional circumstances a manuscript form containing all the particulars as contained in the prescribed form is issued as an emergency measure, reasons therefore shall be recorded in the station diary. Standardization of operating Forms on Indian Railways. Description Signal & disconnection/Reconnection note. Advance Authority to pass defective signals. Authority to signals in 'ON or defective position. Cution order RNL" Cution Reminder culfion&. Train Examination Ad Authority to receive a train in non-obstructed line. Authority to start from a Non signalled line. Authority to a line with common surter signl. Authority to proceed for Relief Enginenrain an occlQied Block Section. Authority for Operating Communication during of communication on single line Section. Authority for Working of Trains during Total Interruption of Communication on Single line Section. Authority for Working Single Line Working on Double Line Section. Line clear Inquiry Message asking Line Clear for Despatch of trains during Total Failure of Communication on Single line Section. Conditional Line Clear Message Conditional Line Clear Ticket (Up) Conditional Line Clear Ticket (Down) Message on Reformation Written Permission by Guard to Loco Pilot to Proceed to next Station from section. 142 Form No. T/351 (S & T) T/369(1) T/409 T/A409 TIB409 T/431 T/509 TIA 602 n 602 TIC 602 n 602 TIE 602 TIP 602 T/G602 T/H602 Tn 602 T/ 609 fizia•ur 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. gu•rrtl Rrg / 806 €1/ g 912 €1/ t 912 a / 912 a / g 1425 a / i 1425 1425 a / * 1425 a / 901 (4) EF•zrr I (ii) crrqg crrqg / qq / zrr I a-Tli117 Rql-é 5.09. (2) (IT) @Rirr) I e. aerfq a-ft) (*ZTII) qe-i (RBI) 143 CHAPTER-V CONTROL AND WORKING STATIONS 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33

34. Shun • Order. Authority to pass Automatic/Semi Automatic/Manually Operated/Gate Signals. Authority to proceed without line on Automatic Block Signalling Territory. Authority to proceed for Relief Enginenrain into an Automatic Block Signalling Section. Authority to proceed on Automatic Block System during prolong failure of signals. Train intact Arrival •sta. Line Clear Enquiry & Reply Message (Train Despatching Station) Line Clear Enquiry & Reply Message (Train Receiving Station) Papa Line Clear Ticket Papa Line Clear Ticket N) Trolley/Lorry/OHE Ladd" Trolley Notice. Motor Trolley Permit Authority to pass mid-section modified semi-automatic stop signal in on/defective position. Authority to receive a train on a non-signalled line T/806 TIA 912 TIB 912 TIC 912 TO 912 T/1410 TIA 1425 TIB 1425 TIC 1425 TD 1425 T/1518 T/ 1525 T/901 (4) 5.08. Access to and operation of equipment-No unauthorised person shall be permitted to have access to or operate signals, points electrical Block Instruments and electrical communication instruments or any other appliances connected with working of the Railway. S.R.5.08/ I. (i) For the operation of Section or Isolator Switches in emergencies, every Station Master and Cabin Master shall be trained in the operation of these switches. They shall open or close such switches when called upon to do so by the Traction Power Controller. (ii) No switch affecting the feed to main running line or loop line (s) shall be closed or opened without the previous consent of the Traction Power Controller. An exception to this rule is that these switches may be opened in times of emergency by trained Station Master/Cabin Master. All operation of section or isolating switches shall be reported to the Traction Power Controller in every case. 5.09. Reception of a train on an obstructed line- (1) (2) In case of reception of a train on an obstructed line, the Station Master shall. (a) whenever possible, intimate the Loco Pilot through the Station Master of the Station in rear that the train is to be received on an obstructed line; (b) ensure that the signal or signals controlling the reception of the train are not taken 'On and (c) ensure that all the points over which the train has to pass are correctly set and the facing points locked. After the train has been brought to a stand at the relevant stop signal, it may be received on the obstructed line by (a) (b) (c) authorising the Loco Pilot to pass the stop signal at 'on' by taking 'off the Calling-on signal, where provided or authorising the Loco Pilot on the signal post telephone, where provided, to pass the Stop signal at 'on', in accordance with special instruction or, authorising the Loco Pilot to pass the relevant signal or signals at 'on' through a written authority to be delivered by competent railway servant who shall pilot the train past such signal or signals. 143 5 (3) a (IBRÄ) (4) 45 (erq) I crrzrere / 509 5.10. : (q) @Riu) (u) (erq) '31M' 5.10/1 (1) @ 5.11. — (@PGTÄ•«) e, (IBRiu) e, rerrzrr (t / 511) 5.12. - @Riu) 5.13. 15 Eié 144 CHAPTER-V CONTROL AND WORKING STATIONS (3) The train shall be brought to a stand at the facing points leading to the reception line until hand signalled forward by a competent railway servant. (4) A Stop hand signal shall be exhibited at a distance of not less than 45 meters from the point of obstruction to indicate to the Loco Pilot as to where the train shall be brought to a stand. (S) The Loco Pilot shall keep his train well under his control and be prepared to stop short of any obstruction. If the block is cleared after a Loco Pilot has been advised that his train will be received on S.R.5.09/1. a blocked line

the Station Master may receive the train on signals, in such case he shall issue a written Memo instead of issuing Form T/509 to the Loco Pilot informing the Loco Pilot that the train is being received on signals as the block has been cleared.

5.10. Reception of a train on a non-signalled line- (1) Should it be necessary, in an emergency, to receive a train on a line which is not signalled for reception, the Station Master shall ensure that: (a) the train is brought to a stand at the first Stop signal; (b) the line on which it is intended to receive the train is clear upto the trailing points or upto the place at which the train is required to come to a stand; (c) all the points over which the train has to pass are correctly set and facing points locked; and (d) the Loco Pilot is authorised to pass the approach Stop signal at 'on' through a written authority to be delivered by a competent railway servant who shall pilot the train on to the non-signalled line. (2) The Loco Pilot, while entering a non-signalled line, shall proceed cautiously and be prepared to stop short of any obstruction. S.R. 5.10/1 The written authority as referred to sub-rule (1) (d), delivered by a competent Railway Servant to the Loco Pilot, shall be T/510.

5.11. Departure of a train from a non-signalled line- (1) In the event of a train having to be started from a line not provided with a Starter signal, the Loco Pilot shall be given a written permission to start; Provided that such permission may be dispensed with where a tangible authority to proceed is given to the Loco Pilot. (2) The written permission or the tangible authority to proceed referred to in sub-rule (1) shall not be given unless all the points for the departure of the train have been set and the facing points locked. S.R. 5.11/1. In case of a train having to be started from a line not provided with a Starter signal, an authority on the prescribed form T/511 shall be given in addition to the 'Authority to proceed'.

5.12. Departure of a train from a line provided with a common departure signal- (1) In the event of a train having to be started from a line out of a group of lines provided with a common departure signal, the Loco Pilot shall be given a written permission to start in addition to the authority to proceed under the system of working. (2) The written permission and the authority to proceed referred to in sub-rule (1) shall not be given unless all the points for the departure of the train have been set and facing points locked.

5.13. Control of shunting: (1) (2) (3) Shunting operation shall be controlled by fixed signals or hand signals or by verbal directions. The Loco Pilot shall not, however, depend entirely on signals and shall always be vigilant and cautious. The Speed during shunting operations shall not exceed 15 kilometers an hour unless otherwise authorised by special instructions.

144 5 €4) (U) (q) (\$1) (31) (e) (d) fizia•ur / 806 / 806 / 806 I @R.5.13 3\$1R) di \$1 8/806 (Qiü di ya-lli \$1 I .3T\$ elQ / 806 I (HL.Ä.3.56 uT sri 20 q-lâ uT R) \$1 10 q I 15 .3Fft•e zrr aft) \$1 — 8.05, 8.06, 8.08, 8.09, 8.10, 8.11, 8.12, 8.13 8.15 145 CHAPTER-V CONTROL AND WORKING STATIONS (a) (b) (c) (d) (g) (h) (i) (i) (k) (1) Shunting Operations - No shunting operations, which may foul or extend on to any of the running lines of a station must be permitted, unless the relevant approach signals applicable to those lines are at danger. Shunting order (T/806) shall be given when shunting is required to be done on a train. The Station Master shall issue form (T/806) which shall be signed by the Guard and the Loco Pilot of the Train. However for attaching and detaching of Loco for change of traction or for change of Loco or reversal, where such movements are of regular nature, T/806 is not required to be given. During shunting operations, a Loco Pilot is not to act on the fixed signals (as GR 5.13) until he has received a hand signal exhibited by the shunting staff. In Coaching or Goods yard, where shunting is of regular nature and shunting done by shunter, supervised by yard shunting staff, T/806 is not required to be given. At such places, the instructions can be issued by the SWY M in Writing or such instruction can be given orally as specified in the SWR of the station. At stations where shunting staff (Shunting Jamadar/Master) is not provided, shunting operation shall be conducted under the written order of the station Master and supervised by the Guard-in-charge of the train. In case of light engine the Loco Pilot himself be extra vigilant, being responsible. TTM & Tower wagon's shunting will be supervised by their Supervisors. Supervision of shunting of passenger trains should not vest with an official below the rank of a Shunting Jamadar. During Shunting if it is required to pass any stop signal in 'ON' position, it should be mentioned in Form T/806. When hand signals are used, only RED and GREEN Flags or lights must be shown (as GR. 3.56). A Loco Pilot during shunting operations will not move his engine, if signalled to do so by a White Light. Shunting supervision includes assurance that the points are correctly set and locked (as per rules) that correct hand signals are shown to the Loco Pilot the correct vehicle is attached or detached and sequence of marshalling and the safety rules are observed. When shunting to be done for attaching or detaching any vehicles or when an engine is to be coupled to a train, engine/vehicle must first be brought to stop 20 Mtrs away from train and then proceed very cautiously for being attached to the train. The speed during shunting

operations shall not exceed 15 Kilometers per hour except during shunting of vehicle containing passengers live stock, explosive, dangerous, inflammable goods and tank wagons when it shall not exceed 10 kilometers per hour. In case of sick, spring broken, hot axle or other unfit vehicle whether they are located or empty, Shunting should be performed with the walking speed only. At a class 'B' station shunting may be performed within the station section, provided the respective Outer (if any) and Home signals are maintained in the 'On' position. At a class 'B' Station on the signal line, shunting may be carried on between the first Stop signals, without 'blocking back' the line, provided 'Line Clear' has not been given for a train to approach. Shunting during stormy weather- When shunting has to be done in stormy weather, it must be confined to as few lines as possible. Each vehicle placed on a siding must be coupled to any other already there and brakes put down. When shunting on any one siding is finished, the vehicles must be coupled up and the end vehicle spraged or chained. Shunting Order shall only Indicate the Work to be done. The System of movement would adopted as per laid down rules of G & SR and SWR. Note : For other Rules on shunting, see General & Subsidiary' Rule No. 8.05, 8.06, 8.08, 8.09, 8.10, 14S 5 fizia•ur 5.14. - Qiü q-lâ \$1 ell-RI! (ii) (iii) ulé Qiü di GTTR g•zi s:rrv--q a--TQZI crzrere I (30 crzra•e (uR a) -q-n--,-r I // gzrq \$1 146 CHAPTER-V CONTROL AND WORKING STATIONS 5.14. Responsibility for shunting- The Station Master shall see that the shunting of train or vehicle is carried on only at such times and in such manner as will not involve danger. S.R. 5.14/1.(a) It is responsibility of the Shunting Supervisor to acquaint himself with shunting restrictions mentioned in SW R of the station before the commencement of shunting. (b) The person, who initially gives instructions for Shunting operations shall not change instructions and authorise the changing of points etc., unless he has satisfied himself that shunting operations have been stopped completely and the Staff conducting shunting have been advised of the changes contemplated. (c) The securing of vehicles after shunting should be done by station staff, such as, points men, Porters, or any other staff deputed for shunting, under personal supervision of the train Guard or the person in charge of shunting. (d)(i) At interlocked stations those facing Points which are equipped with track locks/lockbar shall be invariably locked by pulling the track lock/lock bar lever during shunting operations, if interlocking permits. (ii) Facing Points at interlocked stations which are neither equipped with track locks/lock bars nor key-locked and all points at non-interlocked stations shall be set & locked either by a clamp or by a through bolt (cotter bolt) with a padlock. However in case of points over which shunting moves are governed by Shunt signals or Starter signals which detect the locking of the points, shall be taken 'Off' to secure the facing points. (iii) In all other cases involving movement over running lines, the facing points shall be clamped/cotter bolted and padlocked. However, it will not be necessary to clamp in case of yard shunting involving use of non-running lines but defective points in non-interlocked yards, if set by any means must be clamped and pad locked. (e) Whenever any shunting is to be carried out across the main line over the emergency cross over points, all the relevant facing points must be properly set & locked with appropriate lock levers. In addition to such locking the facing of the emergency cross over must also be cotter bolted and padlocked by the person responsible to supervise such shunting. (D) Whenever any shunting operation involving running lines requiring co-operation of the Station Master with cabins is to be done, Private Numbers shall be exchanged between SM and Cabinman before the commencement and after accomplishment of shunting movement in token of assurance of occupation and clearance of the involved running lines. Proper entries, in this regard, shall be made in the Log Register. (g) Fixed signals except Outer, Home and last Stop signal may be taken 'Off' for Shunting purposes. (h) Hand signals should be shown in such a manner as to be clearly visible to the Loco pilot. If hand signals are shown from a Cabin, such signals must be repeated by the person in charge of shunting operation from the ground. The Loco Pilot shall act only on the latter's signals. (i) The person in charge of shunting operations must see that conflicting signals are not shown to the Loco Pilot. (i) When shunting has to be performed on a train with nvo engines, one engine only must be used to do the work except in case of two diesel or electric engines coupled together to form one multiple unit and when operated by one Loco Pilot only, subject to local restrictions. if any, imposed in sidings and elsewhere. (k) Screw couplings must not be allowed to hang down and drag, during shunting operations. Vacuum\air hose pipes must be placed on dummy plugs before the screw coupling is unhooked. (l) When vehicles are being moved by an engine for attaching to a passenger train, the vacuum/air brake should be connected up so that brake power will be available. In the case of shunting on goods trains at intermediate stations, the vacuum/air brake should, as far as possible, be connected with the engine. (m) Carriages occupied by passengers must not be

moved for shunting purpose without the personal instructions of the Station Master and also the Guard of the train concerned, who will jointly be responsible for taking all precautions, to warn passengers and to prevent accidents either to the passengers in the carriages or to those attempting to get into or out of them under the impression that the train is starting. The Guard shall have the vacuum/air brake connected up and see to the correct setting of points over which shunting is performed.

146 5 (a) zrr GTT u-lé ulé (ii) (iii) (iv) (vi) (vii) uT (viii) 3-FtT I zrr a-TINT--H zrr I 3F4 (ii) — Qiü (iii) (Rn•rq \$1 Qiü q-lâ \$1 \$1 .3TFT7T-a--TöTTT (iv) \$1 g•zi ft-Q.R \$1 \$1 crzrtq I 147 CHAPTER-V CONTROL AND WORKING STATIONS (n) When shunting is performed simultaneously from both ends in a yard, the person in charge of shunting operations, prior to shunting or backing a train or load which may foul a line or siding on which vehicles may be shunted from the other end, will instruct the Cabin Station Master/Cabin Master/ Cabinman at his end to inform the Cabin Station Master/Cabin Master/Cabinman at the other end to advise the person in charge of shunting operation at that end that he is about to do so, mentioning the line on which the shunt is to be performed. He will at the same time depute a man to proceed to the rear of the load to pin down wagon brakes or to apply the hand brakes of brake vans, if any, to prevent the points in rear being fouled. The man sent to the rear to pin down brakes must also be instructed to exhibit a danger signal when the fouling mark in rear is being reached. If the line is on a curve, staff should be posted at intervals to repeat this signal to the Loco Pilot to enable the train to be stopped and thus avoid a side collision. All Yard Masters, Yard Supervisors and Shunting Masters must make themselves acquainted with the capacity of each line in the yard. (o) No hand shunting by hamals employed by Contractors, traders or Station Master should be permitted except under the supervision of an operating official. (p) The following practices are prohibited- (i) (ii) (iii) (iv) (v) (vi) (vii) Uncoupling vehicles in motion. Riding on buffers or screw coupling of vehicles in motion. Getting between a vehicle and the front of an engine fitted with a cow catcher for purpose of coupling up, before the engine has come to a stop. Passing under vehicles during shunting operations. Sheltering under wagons. Sleeping in the Yard. Working on vehicles under repairs without the protection of special signals i.e. red flags or lights, banner flags, detonators, etc. (viii) Keeping slip coaches on a blocked line in rear of a passenger carrying train. (q) (i) Responsibility for warning staff and for the performance of careful shunting in and out of goods and other sidings where loading or unloading is in progress. The person supervising shunting shall be responsible for warning the Clerk or other official engaged in loading or unloading vehicles, before he commences shunting on to or with these vehicles. The permission of the Clerk or other official must be obtained, and he will be responsible, after receiving intimation, for seeing that everybody connected with the work is promptly warned. No hand shunting or loose shunting connected with those vehicles which are being dealt with, or which will foul the lines on which such work is going on, may be done, until permission has been obtained. (ii) Clear crossing during shunting operations-All staff connected with shunting duties are responsible for keeping rail crossing clear during shunting operation and for the passage of trains. The points of clearance is indicated by the fouling mark. (iii) No engine should be allowed on any running line at a station occupied by a train or vehicles carrying passengers, except the train engine or banking engine or shunting engine required to perform shunting on that train. The movement of such an engine should be permitted only under the control of the person in charge of shunting. However two trains may be placed on the same platform to start following or opposite direction. (iv) Shunting of wagons or other stock marked sick or damage labelled loaded with a part of the consignment protruding to a dangerous extent, on yard lines and fixed structure of the platform adjacent to passenger running lines should be regulated, as far as possible during the intervals between passenger train movements. In every case the staff should exercise utmost caution and while undertaking such shunting, take all necessary precautions as the situation so warrants. S.R. 5.14/2. Precautions against derailment during shunting at stations- (a) Hand signals for a shunting move shall be given only after the requisite points have been correctly set. (b) The Leverman/Cabinman/Cabin Master shall display a danger signal before changing points. 147 (ii) a-AT I Qiü di 400 5.15. : errqia) \$1 5.16 - (311\$î-aag) 148 CHAPTER-V (c) (i) (ii) CONTROL AND WORKING STATIONS The person in charge of shunting shall wave a hand by day, and a white light by night, across the body as signal to the Leverman/Cabinman/Cabin Master to set a point. The signal shall be exhibited from the point concerned. The person in charge of shunting shall wave a red flag by day and a red light by night across the body as a signal to the Leverman/Cabinman/Cabin Master that the shunting move over a point has been completed and that the point can be reset as required. The signal be displayed from the

point concerned. (d) No shunting move must take place while the points are being changed, this must be ensured before signalling a shunting move; (e) While a shunting move is under progress, no points must be changed by the Leverman/ Cabinman/Cabin Master even if signalled to do so, before displaying a danger hand signal and ensuring that the shunting move has come to stop. (f) No points must be moved or reversed while the leading wheels of an engine or other vehicles are so near that the points cannot be frilly thrown over before the engine or other vehicle come on the points. The point must not be operated until the engine and all the vehicles have passed and cleared them completely. S.R. 5.14/3. Shunting in face of an approaching train at a class 'B' single line station. (a) Shunting may be performed within the station section unless prohibited by the Station Working Rules. (b) No hand or loose shunting is permitted outside the Home signal in case of two-aspect signals and outside the outermost facing points in case of multiple aspect signals unless the approaching train has come to a stop at the first Stop signal and the Station Master has personally satisfied himself in this regard. (c) At stations where there is a gradient steeper than 1 in 400 falling away from the station within the station section towards the approaching train, shunting should be performed with the engine leading towards the falling gradient. (d) On the Narrow Gauge section shunting must not be performed at the station after Line Clear is given for a train to approach and until the train has arrived and come to stop at the outer signal and the Station Master has personally satisfied himself in this regard. At stations where shunting limit boards have been provided and the distance between the shunting limit board and the outer signal for the opposite direction is 400 meters or more, when Line Clear has been given to a train, shunting may be performed within the station section up to shunting limit board except where the Station Working Rules expressly prohibit shunting in the face of an approaching train. 5.15. Shunting at stations under centralised Traffic Control- (1) (2) 5.16. No shunting shall be performed at a station under Centralised Traffic Control without the permission of the Centralised Traffic Control operation or when Centralised Traffic Control is not in operation, without the permission of the Station Master. For the purpose of shunting, the Centralised Traffic Control Operator may, when required, hand over the local control of working of traffic at a station or part of a station to the Station Master who shall thereafter be responsible for the Shunting at the station or that part of the station for which the local control has been made over to him in the manner prescribed under special instructions. Shunting during reception of trains- When signals have been taken 'Off' for an incoming train on to a line which is not isolated, no shunting movement shall be carried out towards points over which the incoming train is to pass. S.R. 5.16/ I. Shunting during reception/dispatch of trains- Shunting movements supervised by a competent authorized shunting staff, shall be permitted at junction station and at stations having siding upto a shunt signal or short of the points/crossings over which the train being received/dispatched is scheduled to pass as there is no shunt signal overlap. 148 fizia•ur 50 g•zi mRi•r) — mrRiu) 5.17 5.18 — 5.19. a-ur (2) agqe) 'qufq a--1TQZ1A5 zrr a•rerr (ii) 149 CHAPTER-V CONTROL AND WORKING STATIONS This permission can also be given at interlocked stations having isolation in face of an approaching train. However, shunting in face of an approaching train shall not be permitted in thick foggy or tempestuous weather impairing visibility and also at non-isolated stations where trains run through at a speed of 50 KMPH or more. s

17. Shunting near level crossing- The railway servant in charge of shunting near or across a level crossing, before giving permission to the Loco Pilot to move his train across it, shall ensure that the level crossing gates have been closed and locked against road traffic. 5.18. Drawing of a train to an advanced position- (1) (2) 5.19. (1) (2) A train waiting for an authority to proceed shall not be allowed to draw out up to an Advanced Starter for despatch, except where track circuit or Axle Counter has been provided between the Starter and Advance Starter to indicate the presence of a train in advanced position. The provision of sub-rule (1) shall not apply in case of shunting of a train within a station section itself. Obstruction of running line- No railway servant shall commence any loading, shunting or any other operation by which a running line may be fouled or obstructed without obtaining the previous sanction of the Station Master or of other railway servant nominated in this behalf under special instructions, who shall see that all necessary steps are taken for the protection of traffic while such operation is being carried on and the necessary signals are kept at 'on' until the obstruction is removed. A sand hump or snag dead end shall not be obstructed for any purpose and when it has become obstructed, it shall cease to be a substitute for the adequate distance for the purpose of taking 'off' signals. S.R. 5.19/1. Obstruction of line- (a) When a train or any vehicle or vehicles have to be shunted so as to foul any running line, and should it

be necessary to detach or leave a vehicle or vehicles on or fouling the running line, the Station Master's permission must first be obtained. The person in charge of shunting operations must immediately advise the Station Master that a vehicle or vehicles are remaining on or fouling the running line. The Station Master must at once take steps to see that all the necessary points are set and locked to prevent any train going to the obstructed line and that lever, slide and button collars are used. In the ordinary course of events, vehicles should not be allowed to stand on running lines. Should it be necessary to detach a vehicle from a train and leave it standing on the running line, the Station Master on duty must advise the Cabins concerned, confirming this advice by exchange of Private Numbers. The line should be cleared as early as possible and when the block is removed, the cabins concerned must again be immediately advised, supporting this advice by exchange of Private Numbers. Suitable remarks should be made in the diary and in the Train Signal Register on both the occasions i.e. when a line is blocked and when it is cleared. (b) The loading or unloading of any loose vehicle on a running line is normally prohibited. In exceptional circumstances, wagons may be loaded or unloaded on a running line, subject to the following conditions-

(i) On controlled sections permission of the Controller must be obtained. (ii) When wagons are placed on a running line for loading or unloading, they must be placed as near the station office as possible so as to be under the direct supervision of the Station Master on duty whose permission must first be obtained; wagons so placed must be spragged/wedged, and the hand brakes firmly pinned down so as to secure them against escape or unauthorised movement. 149 (iii) (iv) (ii) g•zi '3117' I -\$ I \$1 «••cr•N-2.fi '31115' 5.20. - \$1 (üTGf) GGi 260 1 ur 400 1 I 400 400 1 400 400 1 CT). (q) @ 400 400 1 qei sri (u) (ii) 45 150

CHAPTER-V CONTROL AND WORKING STATIONS (c) (d) (iii) The person incharge who is supervising loading/unloading will be held responsible for seeing that before signals are taken 'Off for a train, no packages unloaded from or to be loaded into a vehicle are left fouling any running line and that all wagon doors are closed. Goods or parcels should be placed at a safe distance from the edge of the platform. (iv) Station Master will ensure that adequate lighting is provided. Whenever vehicles or trains have to be stabled on a running line, the following additional precautions must be taken- (i) At a non-interlocked station, all points leading to the line on which the vehicles are stabled must be set and locked against that line and keys of the points kept in the personal custody of the station Master on duty. (ii) At an interlocked station the Station Master must make use of the slide collars and the lever collars and personally satisfy himself that the signals for the admission of trains on the obstructed line are maintained in the 'on' position. All vehicles should be coupled together and one vehicle nearest the points at each end should be secured by the Safety Chain. The Safety Chains should be padlocked in the presence of the Guard/Shunting Supervisor or by the person authorised by Station Master on duty and keys retained in personal custody to the Station Master in duty who will ensure it. The Station Master on duty must record in his diary the position of running lines, both passenger and goods at the time of handing over charge. The incoming Station Master must sign the entry in the diary as a token of being aware of the condition of the running lines, both passenger and goods, within his jurisdiction at the time of taking over charge. This will, however, not absolve the Station Master on duty of his responsibility to ensure that the line on which a train is to be received is actually clear before authorising the taking 'off' of signals for the reception of the train. S.R.5.19/2. Closing of doors of Carriages and wagons- Doors of all carriages/wagons standing on siding adjacent to running lines must be securely closed. 5.20. Shunting on Gradients-When shunting is being performed on a gradient, the railway servant in-charge of the shunting shall ensure that- (a) sufficient number of brakes are put on, sprages are used, where necessary, slip siding points or traps, where provided, are set to ensure safety and that all precautions are taken to prevent vehicles getting out of control, and (b) in case of shunting over a portion of line on steep gradient, neither isolated nor protected by slip sidings, an engine is also attached towards the falling side of the gradient. Note : For purposes of this rule a steep gradient shall be 1 in 260 or steeper except in case of vehicles fitted with roller bearings, when it shall be 1 in 400 or steeper. S.R. 5.20/1. Hand and Loose shunting on gradients- (a) At stations where the gradient in the station or within 400 meters beyond the outermost facing points is steeper than 1 in 400 either at one end or at both ends of the station, no loose shunting of any vehicle is permitted on the main line or on a non-isolated loop. Hand shunting is, however, permitted at that end of the station, where the gradient is not steeper than 1 in 400 in the station yard or within 400 meters beyond the outermost points subject to the conditions laid down in (b), (c) and (d) below. (b) Where the gradient in the station yard or within 400 meters beyond the outermost facing points is not steeper than 1 in 400, hand and

loose shunting may be carried on, subject to the limits laid down below, and provisions of (d) below; (i) Single line - 45 meters beyond the outermost facing points. (ii) Double line- From the Home signal to the last Stop signal in each direction. 150 fizia•ur 5.21 . uT Qiü OT) 3F4 5.22. 5.23. (u) (ii) (iii) (iv) (qÄTT) qiu -a-Ifr-g -a-Idi a•rerr Eiz 151 CHAPTER-V CONTROL AND WORKING STATIONS (c) When line clear has been granted for a train to approach in either direction, no hand or loose shunting shall be performed on the main line or on a non-isolated loop. (d) Hand shunting of any vehicle fitted with roller bearings shall not be permitted except on sidings isolated from the running lines. 5.21. Loose shunting- Cranes, vehicles containing passengers, workers explosives, dangerous goods or live stock or any other vehicle that may be specified under special instructions, shall not be loose shunted and no loose shunting shall be made against them. S.R. 5.21/1. Loose shunting- (a) Loose shunting means vehicles being pushed by an engine and being allowed to run forward unattached. No vehicle shall be loose shunted unless provided with an efficient hand brake or unless the vehicle is attached to at least one other vehicle fitted with an efficient hand brake. A loose shunted vehicle must be attended by a man to pin down the hand brake when necessary. (b) Loose shunting of or against loaded or empty oil tank wagons, vehicles containing petrol or kerosene oil in tins, loaded or empty explosive vans, wagons loaded with live-stock or military and other consignments of explosive or dangerous goods whether labelled 'Not to be loose shunted' or not, an occupied or empty coaching vehicle, is forbidden. (c) Loose shunting of or against wagons loaded with heavy machinery, rails or timber, cranes, military consignments of other than explosive or dangerous goods, is also forbidden. Shunting restrictions- Shunting restrictions at each station are embodied in the Station S.R. 5.21/2. Working Rules and they must be rigidly adhered to. Staff must acquaint themselves with the orders in this respect before performing shunting operations at a station. 5.22. Leaving vehicles in sidings outside station limits-No railway servant shall leave any vehicle in a siding outside station limits, unless the vehicle is clear of all running lines and except under special instructions, unless the wheels there of are properly secured. 5.23. Securing of vehicles at station-The Station Master shall see that vehicles standing at the stations are properly secured in accordance with special instructions. S.R. 5.23/1. Precautions for securing of vehicles- (a) (b) (c) all vehicles standing at a station must be so placed and secured that they do not and cannot foul any running line. Each vehicle must have its brake on and must- (i) be within facing points so locked that it cannot escape or, (ii) be inside a locked Scotch Block or Derail or Traps or, (iii) be wedged or. (iv) be chained and padlocked or, (v) be coupled with other vehicles secured in the manner indicated above, as circumstances may require. When it is necessary to stable a vehicle on a running line, the brakes shall be put on and it shall be secured. Besides, the points must be set, clamped and locked against the line and the key kept with the station Master. When the engine of train is detached for shunting, the Guard of the train is responsible that the brake is adequately secured against any movement, which may foul the adjacent line. When owing to an accident or for any other reason, vehicles are left on a running line, or on a line from which they could escape so as to foul a running line, the brakes must be pinned down and one vehicle nearest the points of each end must be secured with a safety chain. The safety chain must be padlocked and the keys retained in Station Master's personal custody. Note : The safety chain must be passed twice through wagon body and rail then tied and locked, so that no strain falls on the padlocks. 151 fizia•ur (e) (8) -abN-q-r // 711* , -Q -\$ q-Ht a-TN a-fi ertTTZIT I a-TFßT EF•zrr *efi , // .3TtFITZIT (ii) (iii) 400 1 uT / zrré s:rrq (iii) (u) (q) zrr 6.03 g) (SA-9, A-9 te iT) 6 crrzrere I 51 54 152 CHAPTER-V S.R. 5.23/2. CONTROL AND WORKING STATIONS (i) (ii) (iii) (iv) (v) Action by Station Master/Traffic Staff When vehicles/load/train is to be stabled at a station - (a) (b) (c) (d) (f) (h) The vehicles/load/train be chained and padlocked using at least two chains one at either end; At least four sprags / wooden wedges be used, nvo each below the outermost pair of wheels at either end. Hand brakes of at least 6 wagons from either end must be frilly tightened by Asstt. Loco Pilot in the front and by Guard in the rear. In case coaching vehicles are stabled, Guard's hand brakes in SLR(s) must be applied; The vehicles of stabled load/train should be coupled together. In case this stabled load has to be split for any reason, each such split part should be treated as a separate load for the purpose of securing. The points must be set, clamped and padlocked against the blocked line and towards dead end of trap point(if available). Scotch blocks must be used. If available. Stop Collars must be placed on relevant signals and points buttons/slides/levers etc. Remarks should be made in TSR and /or SM diary in Red ink to the effect that 'Line No is blocked and all precautions for securing the load have been taken' as prescribed above. After any load/train/loco is stabled, the Station Master must inform the Section

Controller supported by private number that all laid down precautions for stabling and securing load/train/loco have been taken. Additional precautions to be taken while stabling vehicles/load/train at a station with gradient of 1 in 400 or steeper may have been prescribed under approved special instructions (by CRS) and mentioned in S WR of respective station. These should be followed scrupulously. In addition, following precautions must also be observed over and above those prescribed under approved special instructions-

- (a) Before vehicles are uncoupled, the hand brakes should be applied sprags/wooden wadges/ skids should also be used to prevent vehicles from rolling down;
- (b) As far as possible, the vehicles/load/train should be stabled on a line which is isolated from other lines, particularly running lines.

Action by Loco Pilot/Assistant Loco Pilot before leaving the Loco in case load /train is stabled with locomotive attached or light engine(s) is/are shut down or stabled-

- (a) (b) (c) (a) (b) Application of both SA-9 and A-9 brakes in loco; Application of hand brake and parking brake in loco and hand brakes of at least six wagons at either end of the train. Secure the loco with wooden wedges provided on the loco. Loco Pilot while on duty should not leave loco unmanned. In case he is required to leave the locomotive unmanned, he should do so only after receiving written authority from the Station Master and ensuring (iii) (a), (b) & (c) above Before leaving the station/yard, the Loco Pilot and Guard should jointly record in a register to be maintained with Station Master that the load and loco have been secured as prescribed above.

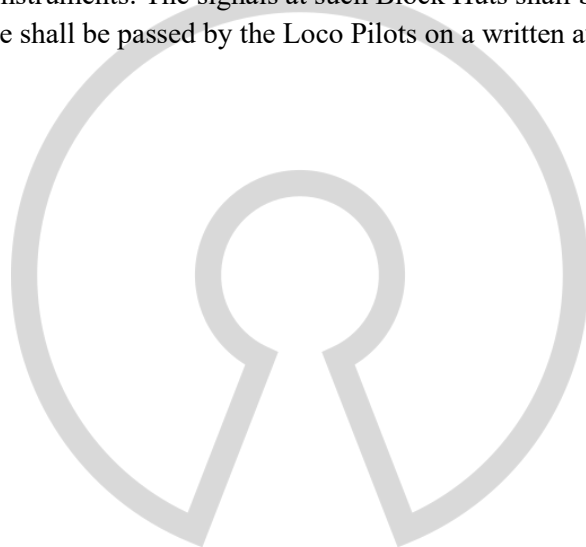
Action to be taken by Loco Pilot/Assistant Loco Pilot and Guard when the train is stalled in block section due to accident, failure, obstruction or any other reasons-

- (a) Loco Pilot/Assistant Loco Pilot and Guard should protect the train as per provisions of G&S Rs 6.03.
- (b) The train should be secured by applying loco brakes (SA-9, A-9 & hand brake) and hand brakes of at least six wagons at either end of the train. The hand brakes should be operated by Assistant Loco Pilot from leading end and by the Guard from the rear end. In case the train is being worked without Guard, the duties of the Guard shall devolve on the Assistant Loco Pilot. In case of coaching trains, the Guard should apply hand brakes of the SLR in addition to the application of Loco brakes by the Loco Pilot. Note : For Ghat section see SRG 51 to 54. 152 6.01 . GINT I 6.02. — R-erm (2) (3) (4) (5) (6) .3N-2.TTt1 3-«-emil uT g•vrrq-tra 24 ' (TOL) I GT&TT I uleu-i zrr a.rre•i I 24 ' (TOL) I a•rzrr 153

CHAPTER-VI ACCIDENTS AND UNUSUAL OCCURRENCES

CHAPTER-VI ACCIDENTS AND UNUSUAL OCCURRENCES 6.01. (1) (2) (3) Accident or obstruction When a report of any accident or obstruction is received by the Station Master, he shall see that all necessary precautions are taken by the most expeditious means possible, for the protection of traffic. If an accident happens to a train, the Station Master shall arrange for all necessary assistance to be sent to the train. The Station Master shall, as soon as practicable, report each accident in accordance with special instructions. 6.02. Working in case of accident or failure of communications-In case of accidents to the line or to any train, or of failure or interruption of communications, or in an emergency, trains shall be worked between stations in accordance with special instructions. S.R. 6.02/1. RULES AND REGULATIONS FOR SINGLE LINE WORKING ON A DOUBLE LINE SECTION WHEN ONE LINE IS OBSTRUCTED- 2. 3. 4. 5

6. Whenever an accident to a train or track or other obstruction precludes the use of one of the lines on a double line section the tramc may temporarily be worked over single line under one of the following systems- (a) **By obtaining 'Line clear' on electrical communication instruments.**(b) By the installation of Single line Block Instruments and "Shunting Limit Boards" demarcating the block section in the wrong direction. if the affected line is likely to remain out of use for a substantial period. When it is desired to introduce temporary single line working on double line, on electrical communication instruments, the Station master at one end of the affected section shall on receipt of reliable information in writing that one line is clear take steps to introduce temporary single line working on that line in consultation with the Section Controller and the Station Master of the Station at the other end of the section. If there is reason to suspect that line over which temporary single line working is to be introduced, is also fouled or damaged, temporary single line working must not be introduced until a responsible engineering official of the rank not less than that of a JE (P.way) has inspected that section and certified that the road is safe for the passage of trains. Single line working shall be introduced between the nearest stations provided with cross-over between up and Down lines on either side of the obstruction. If there is an intermediate Block Hut between the above two stations, the same shall be treated as closed and the commutators of the Block instruments at such block Huts shall be kept locked in 'Train On Line' position throughout the period single line working is in force. The commutators shall be locked also in that position with SMS key, wherever possible. In cases where it is not possible to keep the commutators in "Train on Line" position, as in Daido instruments, the Block instruments shall be put out of use and Caution Indicator hung on the handle of the Block instruments. The signals at such Block Huts shall be kept in the 'On' position throughout and these shall be passed by the Loco Pilots on a written authority in the prescribed



form issued by the Station Master of the adjoining block Station in operation. All trains will be worked in accordance with the rules for the use of electrical communication instruments on single line and 'Line Clear' shall be obtained on the telephone attached to Block Instruments or control telephone or Railway auto phone or BSNL phones. At all stations on the portion of the section on which single line working has been introduced, the commutators of the Block instruments pertaining to both obstructed and un-obstructed lines shall be kept in 'Train on Line' position throughout the period single line working is in force. The commutators shall be locked also in that position with SM's key, wherever possible. In cases where it is not possible to keep the commutators in 'Train on line' position, as in Daido instruments, the block instruments shall be put out of use and Caution Indicator hung on the handle of the Block instruments. At the stations, if the train is running on the wrong line all fixed signals shall be kept in the 'On' position. 153 (7) (8) (9) (O) (u) (€5) (q) (3) -er--åuq R-2.fi .3P.ßT (€1 / 81 602) (ii) (iii) (iv) I a-fi (10) I crrzra•est (11) 25 q.Et. (12) 6.03 (13) @ 9(V) '34TH' 154 CHAPTER-VI ACCIDENTS AND [JNUSUAL OCCURRENCES 7. 8. 9. IO. 11. 12

13. After ascertaining that one of the lines is clear for the passage of traffic, the Station Master proposing single line working shall issue a message containing the following information under exchange of private numbers, to the Station Master at the other end of the affected section.(a) (b) (c) (d) (f) (h) (i) cause of introduction of single line working; the line by which single line working is proposed, source of information that the said line is clear, place (Kilometrage) of obstruction, restriction of speed, if any, on the line, names of intermediate stations if any, which would be out of use, assurance that the trap points, if any, have been spiked or clamped and padlocked. assurance that if the train is running on the right line, the last stop signal shall be kept in the 'On' position. In case the train is running on the wrong line, all fixed signals shall be kept in the 'On' position, and the number and timings of the last train which arrived or left the block station issuing the message. On receipt of acknowledgment from the Station Master, confirmed by a Private Number single line working may be introduced. 'Line Clear ' will be obtained on telephone attached to Block instruments or Control Telephone or Railway auto phone or BSNL phone any two way communication system set, and trains run on Paper Line Clear Ticket in accordance with the instructions contained in this book and Block Working Manual. Loco Pilot of each train shall be handed over an authority for TSL (T/D 602) working on Double Line section indicating:- (i) (ii) (iii) (iv) (v) the line on which the train or light engine is to run; the kilometrage between which the obstruction exists; any restriction of speed which may have been imposed by way and works staff and an assurance of the effect that any trap points on the line in question have been spiked or clamped. authority to pass the last stop signal in the 'ON' position in case the last stop signal is the starter in addition to the written authority, green hand signals shall also be shown at the foot of this signal. An endorsement will also be made on the Caution Order given to the Loco Pilot of the first train to inform all Gatemen and Gangmen on the way about the introduction of temporary single line working and specifying the road on which the trains will run. This information shall be conveyed through the Loco Pilot of a subsequent train also, if necessary. The speed of the first train passing over the temporary single line will be restricted to 25 KMPH. Subsequent trains may run at their booked speed, subject to observance of other speed restrictions imposed by way and works Staff. When a train is stopped between stations on account of accident, failure obstruction or other exceptional cause and the Loco Pilot finds that it cannot proceed, it shall be protected as per Rule 6.03. In the case of a train proceeding on the right line- (a) (b) The last Stop signal of the station in rear of the affected section may be passed in the 'On' position on a Written authority issued by the Station Master in the prescribed form referred to in para 9 (v). In case the last Stop signal is the starter, in addition to the written authority, hand signals shall also be shown at the foot of this signal. The approach Stop signals, if any of the station in advance of the affected section may be taken off. 154 (14) crrzrere I (t•qe) (tqe) ft-a-q 444 (15) (16) : _ (17) -#q-ra--q 25 AEt. I (18) 3-11Fi1 Rulé trrera 155 CHAPTER-VI ACCIDENTS AND [JNUSUAL OCCURRENCES 14. 15. 16. 17

18. In the case of a train proceeding on the wrong line- (a) (b) (c) (d) (i) (ii) The train shall be piloted out of the station on a written authority issued by the station Master after all the facing points have been correctly set & locked and trailing points correctly set, over which the trains will pass.The Loco Pilot should switch "On" the flasher light of the train engine while running on the wrong line on proper authority to proceed. In case the train engine running on the wrong line without switching "ON" the flasher light is noticed by the station staff, Gatemen and Gangmen, they shall stop the train immediately. " On

approaching the next station the Loco Pilot shall bring his train to a stop opposite the first stop signal pertaining to the right line or at the last stop signal pertaining to the wrong line (on which he is running), whichever, he comes across first. The Station Master of the station in advance shall depute railway servant in uniform at the foot of the signal (whichever the train would encounter first) who shall stop the train on hand danger signal and thereafter pilot it into the station on a written authority issued by the Station Master. If the Loco Pilot finds that no railway servant in uniform has been deputed at the foot of the signal to pilot the train into the station, Rule 4.44 shall be observed. All the cross over points over which the train shall proceed, while temporary single line working is in force, shall be clamped and pad-locked as per SR 3.39/1. Resumption of normal working - (a) (b) certificate from a responsible Engineering Official that the obstructed track is free and safe for passage of trains, the station Master will issue a message to the other station or stations, as the case may be, under exchange of Private numbers and decide, in consultation with Section Controller, the train after passage of which, normal working has to be introduced. When double line working is introduced the Block instruments and all fixed signals, including those of intermediate block huts which were treated as closed, shall be brought into use immediately. An entry shall also be made in the Train signal Register of all stations concerned showing the time double line working was suspended, time single line working was introduced and the time normal working was resumed. The Loco Pilot of the first train entering the section after normal working is resumed shall inform all Gatemen and Gangmen on the way about the resumption of normal working, Its speed will also be restricted to 25 KMPH. All the records in connection with the temporary single line working shall be retained at the station and the Traffic Inspector of the section must scrutinize them and submit his report to the Sr. Divisional Operations Manager within seven days of the resumption of normal working. S.R. 6.02/2. RULES AND REGULATIONS FOR SINGLE LINE WORKING ON DOUBLE LINE DURING TOTAL INTERRUPTION OF COMMUNICATIONS- The following rules must, in addition to the rules prescribed in 'Rules and Regulations for working of trains during total interruption of communications on single line' , (S.R. 6.02/4) be observed by the staff. I. Whenever an accident to a train or track obstruction, precludes the use of one line on double line section during total interruption of communications, single line working shall be introduced only after a responsible official of the Engineering Department, not less than JE in rank, has certified that the other line on which single line working is to be introduced is free and safe for passage of trains. Such an engineering official shall give the certificate only to the station Master of the station at that end of the affected section for which the unobstructed line shall be the right line for dispatching trains. On receipt of this certificate the Station Master will follow the rules prescribed for opening of communications. 155 (2) (3) (4) (5) (6) (t) (€111) crea•rq 341Se) I a-FQ \$7) I "tFIT s:R-2.TT7 zrr crzrere I (u) 156 CHAPTER-VI ACCIDENTS AND UNUSUAL OCCURRENCES 2. 3. 4. 5. 6

7. Loco Pilot of trains, including light engines, shall be given a Caution Order on which, and shall be stated clearly.(a) the line on which the train is to run; (b) Kilometerage where the obstruction exists; (c) any restriction of speed which may be imposed by Way & Works staff, (d) an assurance to the effect that any trap points on the line in question have been spiked and clamped. All the crossover points over which the train shall proceed, while temporary single line working is in force, shall be clamped and padlocked as per SR 3.39/ I. In the case of a train proceeding on the right line- (a) The last stop signal of the station in rear of the affected section may be passed in the 'On' position on a written authority issued by the Station Master in the prescribed form. In case the last Stop Signal is the Starter, in addition to the written authority, hand signals shall also be shown at the foot of this signal. (b) The approach Stop signals, if any, of the station in advance of the affected section, may be taken 'Off In the case of a train proceeding on the wrong line- (a) The train shall be piloted out of the station on a written authority issued by the Station Master after all the facing points have been correctly set and locked and trailing points correctly set over which the train will pass. (b) On reaching the next station, the Loco Pilot shall bring his train to a stop opposite the first stop signal pertaining to the right line or at the last Stop signal pertaining to the wrong line (on which his train is running). whichever he comes across first. (c) The Station Master of the Station in advance shall depute a railway servant in uniform at the foot of the signal (whichever the train would encounter first) who shall stop the train on hand danger signal and thereafter pilot it into the station on a written authority issued by the Station Master. It will be the responsibility of the person in charge of the first engine or self-propelled vehicle or other vehicle, sent under 'Authority to proceed Without Line Clear' to inform all the Gateman and Gangmen enroute about the introduction of temporary single line working as

also the line on which it is proposed to run the train. This information shall be conveyed through the Loco Pilot of a subsequent train also, if necessary. Resumption of normal working- (a) (b) S.R. 6.02/3. If after the introduction of single line working, communications are restored between the two affected stations, the trains will continue to run under special rules until action is taken in accordance with the instructions contained in these rules for the cancellation of the procedure. Thereafter, trains will be run in accordance with the instructions for the movement of traffic during temporary single line working on double line. If, however, before communications are restored, the other line is released for the passage of traffic, trains shall be worked, in accordance with the instructions for running of trains on double line section during total interruption of communications. RULES AND REGULATIONS FOR WORKING OF TRAINS DURING TOTAL INTERRUPTION OF COMMUNICATIONS ON DOUBLE LINE SECTION- In the event of total interruption of communications occurring between two stations on a double line section, i.e. when 'Line Clear' cannot be obtained by any one of the following means stated in the order of preference viz; (a) Block instruments; Track circuits or Axle Counters; (b) Telephones attached to the Block Instruments; (c) Station to station fixed telephones wherever available; (d) Fixed telephone such as Railway autophones and BSNL phones (e) Control Phone (f) VHF sets The following procedure shall be adopted for train passing. 156 6 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. crzrere (€1 / €1602) OT) 25 a-Tm 10 u Ei. zrr \$1 \$1 an-err 30 *--ZIITI '31115' zrr 250 500 10 2 10 \$1 \$1 I 250 2--2117 500 (GGi crzrere (QT 10 *ieiâl 7 3-i« Rqhé 157 CHAPTER-VI ACCIDENTS AND [UNUSUAL OCCURRENCES 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12

13. Before any train allowed to enter a block section in advance, it shall be brought to a stop and the Loco Pilot and the Guard of the train shall be advised of the circumstances by the Station Master on duty. The Station Master shall give an authority (T/C602) for working of trains during total interruptions of communication on Double Line Section to the Loco Pilot of each train which shall include; (a) An Authority to proceed without Line Clear. (b) An authority to pass the last Stop signal in the 'On' position. (c) A Caution order restricting the speed to 25 kilometers per hour over the straight and to 10 kilometers per hour when approaching or passing any portion of the line where the view ahead is not clear due to curve, obstruction, rain, fog, or any other cause and other SRs enforced in the Block Section in advance, If any will also be mentioned; In the event of a Loco Pilot approaching or passing any portion of the line where the view ahead is not clear, a railway employee with hand signals must be sent in advance to guide the further movement of the train. A sharp look out ahead should be kept and the engine whistle freely used. No train shall be allowed to enter the block section until there is clear interval of 30 minutes between the train about to leave and the train which has immediately proceeded. Fixed signals with the exception of the last Stop signal may be taken 'Off for the reception and departure of trains. The first stop signal shall however, be taken 'Off. only after the train has been brought to a stand outside it. A tunnel should be entered only after it has been ascertained that it is clear. If there is any doubt on this point, the train should be piloted by a railway employee equipped with hand signals and detonators. The Guard shall keep a sharp look out in the rear and be prepared to exhibit a hand danger signal to prevent the approach of a train from the rear and to protect it, if necessary. When a train is stopped in the block section the Guard shall immediately exhibit a hand danger signal towards the rear and checkup that the tail board or the tail light is correctly exhibited. If the stoppage is on account of accident, failure obstruction or other exceptional cause and the train can not proceed the Loco Pilot shall sound the prescribed code of whistle to apprise the Guard of the fact. Where upon the Guard shall protect the train by placing one detonator at 250 meters from the train on the way out and 2 detonators 10 meters apart, at 500 meters from the train, irrespective of the gauge. When train is detained outside signals and if the detention exceeds or is likely to exceed 10 minutes it shall also be protected accordingly. In the absence of the Guard the duty of protecting the train shall devolve on the Assistant Loco Pilot. No train shall be backed. In exceptional circumstances when it may be unavoidable to back a train, the train shall be backed only after providing protection by placing one detonator at 250 meters and two detonators, 10 meters apart, at 500 meters in rear of the point upto, which the train is to be backed. Before entering a tunnel, the head lights, side and tail lights and other lights (Where provided) shall also be lit. When approaching the Station ahead, the Loco Pilot must bring his train to a stop outside first stop signal and sound continuous whistle, if no one from the station turns up within 10 minutes, the train shall be protected as per para 9 above. The Loco Pilot may send his Assistant Loco Pilot immediately thereafter, to the station or the cabin to inform the Station Master or Cabinman, of the

fact that the train is waiting of the signal for its admission in to the station. In the absence of the Assistant Loco Pilot, the Guard after protecting the trains shall give this information. The Loco Pilots of all trains shall make over the 'Authority for working of trains during Total Interruption of Communication on Double Line section' to the Station Master of the station at the other end of the affected section. These shall be kept by the Station Master in his safe custody for inspection by the Traffic Inspector of the section who shall prepare a report on the working of trains and shall forward the same along with his report to the Sr. Divisional Operations Manager, within seven days of resumption of communication. 157 14. 15. 16 (17) -#q-rq -e-e-l-d g•rq crrq•å q,-fa-g I 3-11 I \$1 frzrr I (16) 3-11 -eff \$1 -#q-rq *iei4 158 CHAPTER-VI ACCIDENTS AND [JNUSUAL OCCURRENCES From Station Master To Station Master be obtained by means f Acknowledge. Private No. (in words) (in figures) 14. 15. 16

17. A record of all trains passed over the block section on 'Authority for working of trains during Total Interruption of Communication on Double Line section' shall be maintained on the Train Signal Registers at both the stations concerned. Trains must continue to work on this system until any one of the means of communication, mentioned in rule (I) is restored by the competent authority. As soon as any one of the means of communication has been restored the Station Master must send a message to the Station Master at the other end of the section on the following form; Train (Number and description) . Message No ., arrived complete at... hrs minutes Last train... (number and description) dispatched to your station n. At Hrs. .. Minutes. Cancel the present method of working the trains. Line Clear must Private No (in words) (in figures). On receipt of the above message the Station Master at the other end of the section must acknowledge in the following fom From Station Master To Station Master . Message No. . Your Message No. (number and description) .

understand that rain which was the last train to leave my station has arrived complete at your station. Train No complete at my station at . . . hours . which left your station has arrived minutes/not arrived. Present system of train working is being/will be cancelled immediately after the complete arrival of train number . Line Clear for the next train will be obtained by means of Line clear shall not be obtained or given by means of communications restored until both the Stations are satisfied that all trains and engines etc. despatched from their stations have anived complete at the other station. When the trains referred to in para (16) above arrive complete at the stations, after restoration of 'communication' their No. and their arrival time will be communicated to the other Station Master concerned under exchange of Private Numbers, Thereafter intimation about this shall be given to Section Controller also, on controlled sections, if communication with the Section Controller has also got restored, and normal working resumed. If however, communication with Section Controller has not got restored along with restoration of communications benveen two stations, the Section Controller shall be advised of the position immediately on restoration of communication with him. S.R. 6.02/4. RULES AND REGULATIONS FOR WORKING OF TRAINS DURING TOTAL INTERRUPTION OF COMMUNICATIONS ON SINGLE LINE-

(l) In the event of total interruption of communications occurring benveen two block stations i.e. when Line Clear cannot be obtained by any one of the following means stated in order of preference viz. (a) (b) (c) (d) Block Instruments; Track circuits or Axle Counters; Telephones attached to the Block Instruments; Station to station fixed telephones wherever available; Fixed telephone such as Railway autophones and BSNLphones; Control Phone VHF sets 158 6 (2) (3) (4) s:rrq GT&TT I 3F-u (ii) (iii) q-lå 3-RI -e--?IA (iv) (v) (\$gq.q.) / 4181 (4. crrzra-e/qi-e•g crrzrere (g.gq.q) (8 / 602) (ii) (iii) a-TF R-2.fi (iv) 159 CHAPTER-VI ACCIDENTS AND [JNUSUAL OCCURRENCES (2) (3) (4) The instructions laid down in succeeding paragraph, shall be followed for working trains between block stations. Note: These instructions shall also be followed whenever during total interruption of communications, an accident to a train or track or other obstruction precludes the use of one of the lines on a double line section, or whenever total interruption of communications occurs during single line working on a double line section. The Station Master who has a train to dispatch through the affected block section shall open communications by establishing contact with the Station Master of the bock Station at the other end of the affected block section by sending an engine or self propelled vehicle or any other vehicle, enumerated below, in the order of preference laid down- (i) Light engine; (ii) Train engine, after it is detached from the train by the Loco Pilot on instructions from the Station Master on duty; (iii) Motor trolley/ Tower wagon duly accompanied by a Guard or by a Station Master other than the Station Master on duty; (iv) Trolley/Cycle Trolley/Moped trolley duly accompanied by a Guard or by a Station Master other than the Station Master on duty; (v)

Diesel car/Rail Motor Car/EMU/ Rake after ensuring that all passengers have detrained. (vi) RRV Before the light engine/train engine/Motor Trolley/ Tower Wagon/ Trolley/Cycle trolley/Moped trolley [Diesel car/Rail motor car/EMU rake/RRV is sent into the affected block sections to open communications, the Loco Pilot/Motorman/Guard/Station Master being sent to do so shall be advised by the station Master on duty of the circumstances in which and the purpose for which he is being sent. The Station Master on duty shall also satisfy himself that the Loco Pilot/Motorman/ Guard/Station Master being sent to open communication, thoroughly understands the rules for working of trains during total failure of communications on the single line. If the Loco Pilot/Motorman/Guard/Station Master who is being sent to open communication, is not conversant with the Rules, the Station Master on duty shall explain these rules to such staff. The Station Master on duty shall also obtain the signature of the Loco Pilot/Motorman/Guard/Station Master on authority for opening communication during total interruptions of communication on single line section, in token of such staff having fully understood the circumstances in which and the purposes for which he is being sent and the Rules for Working of Trains during total failure of communication on single line. Before dispatching the light engine/train engine Motor Trolley/Tower Wagon/Trolley/Cycle Trolley/Moped Trolley/Diesel Car/ Rail Motor Car/EMU rake/RRV, the Station Master on duty shall hand over 'Authority for opening of communications during total interruption of communication on single line section' (T/B 602) to the Loco Pilot/motorman/Guard/Station Master who is being sent to open communication which includes : (i) An 'Authority to Proceed Without Line Clear' (ii) A Caution Order, specifying the speed upto, which the engine or self-propelled vehicle or other vehicle referred to in para 2, may run to the affected block section. (iii) An Authority to pass the Last Stop Signal in the 'On' position in case the Last Stop signal is the starter, in addition to written authority, green hand signal shall also be shown at the foot of his signal. (iv) A Line Clear Enquiry message addressed to the Station Master of the block station at the other end of the affected block section asking for a Line Clear for the train waiting to be dispatched to his station - 159 2. 3. 4. (v) (i) (ii) 3-11 zrr litre zb1R' (4.144) 4181 / 4181 GIVIT) zrrerr s:rrq 4.1 (iv) (v) I 4.1 (i). (ii) (iii) 30 160 CHAPTER-VI ACCIDENTS AND UNUSUAL OCCURRENCES (v) A conditional Line Clear Message to the Station Master of the block station at the other end of 2. 3. 4. the affected block section permitting him - (a) to return the light engine/train engine, either light or attached to a train waiting to be dispatched from his station, or attached with another engine; or (b) to return Tower wagon/Diesel car/Rail Motor Car/EMU rake/RRV running by itself, or (c) to return Motor trolley/Cycle trolley/Moped trolley either running by itself or loaded in a train waiting to be dispatched from his station. The Line Clear Enquiry Message asking Line Clear for the trains to be dispatched through the affected block section, and the Conditional Line Clear Message for the return journey of the engine or self-propelled vehicle or other vehicle referred to in para 2, as the case may be, shall be written out, on prescribed forms for being sent through the Loco Pilot/Motorman/ Guard/Station Master going to open communication, and these messages shall also be entered in the Line Clear Books. (i) (ii) The Line Clear Enquiry Message shall be worded as follows- Message No . . . , on return of *will line be clear and kept clear for Train No — waiting to proceed? *The particulars of the engine either returning in light or attached to a train or attached to another engine/Tower wagon/Diesel Car/Rail Motor Car/EMURake/Motor Trolley or trolley or Cycle Trolley or Moped Trolley running by itself or loaded in a train, as may be, applicable shall be correctly filled in while preparing the message. The conditional Line Clear message for return journey of the engine or self-propelled vehicle or other vehicle referred to in Para 2, as the case may be, shall be worded as follows- Message No On arrival of . *at yours, line will be clear and kept clear for... .. \$ Engine to return with/without attached to a train or another engine or self propelled vehicle/trolley etc (complete particulars)..... ., (in figures) . private Number (in words) * The particulars of Engine/Tower wagon/Diesel car/Rail Motor Car/EMU rake/Motor Trolley or Trolley or Cycle trolley or Moped trolley running by itself or loaded in a train, as may be, shall be correctly filled in. The particulars of the engine either returning light or attached to a train or attached to another Engine/Tower wagon/Diesel car/Rail Motor Car/EMU rake/Motor Trolley or Trolley or Cycle Trolley or Moped Trolley running by itself or loaded in a train, as may be applicable, shall be correctly filled in while preparing the message. The Loco Pilot/Motorman/Guard/Station Master going to open communication shall, on receipt of 'Authority for opening communication during total interruption of communication on single line section' and sign on its original and carbon copy in token of his having understood its contents. In case a light engine or an engine

and brake van is to be despatched to proceed to the next block station and then continue its journey onward after arrival at the next station and is not meant for opening communication, the Loco Pilot of engine or the engine and brakevan shall be given with the 'Authority for opening communication during total interruption of communication and the items "Line Clear Enquiry Message and conditional Line Clear Message" shall be striked out in fom such Engines or engine and brake van shall be issued only the "Authority to proceed without Line Clear" the caution order and the authority to pass the last stop signal in the ON position referred to in para4. I (i), (ii) and (iii) were necessary. Should it be necessary to dispatch another light engine or another engine and brakevan in the same direction an interval of at least 30 minutes shall be allowed to elapse before it is dispatched. 160 (5) (6) t) zrr zrr 3F-u *iQ-r' zrr .3TT?TZI di 3-+441 errg•e 15 10 zrrerr qōT11 cre•rur I qqzi zrr 3F-u 3NT\$1 / Tllé *iei4 GTFIT I (4.W4) / a-rr I // OF-ZI quale/Hle@q/né I / aaT (\$gq.q) (g.qq.q) 161 CHAPTER-VI ACCIDENTS AND [JNUSUAL OCCURRENCES 5. The Last Stop Signal shall not be taken 'OFF', while permitting an engine or self propelled vehicle or other vehicle to proceed to next station on 'Authority for opening communication during total interruption of communication on single line section. (5) After an engine or self-propelled vehicle or other vehicle is despatched to the next station to open communication with Line Clear Enquiry Message, and a Conditional Line Clear Message to the next station for the returnjourney ofthe engine or self-propelled vehicle or other vehicle, no other train or engine or self-propelled vehicle or other vehicle shall be allowed to leave the station and proceed in the same direction until the engine or self-propelled vehicle or other vehicle sent to open communicationretums. This does not, however, prevent an engineering official going into the section on his push trolley for his work on a section on which push trolleys do not run on Line Clear. (6) (a) The engine or self-propelled vehicle or other vehicle proceeding on 'Authority for opening communication during total interruption of communication on single line section shall switch on the flasher light, where ever provided and shall proceed at a speed not exceeding 15 kilometers per hour by day and when the view is clear and 10 K Ms per hour during night or when the view is obstructed making free use of engine whistle or horn of the self propelled vehicle, where provided. In thick, foggy or tempestuous weather or in dust storm etc. when visibility is impaired the engine or self propelled vehicle, or other vehicle proceeding on 'Authority to proceed without Line Clear' shall proceed at walking speed only making repeated use of the engine whistle or horn of self-propelled vehicle, where provided, preceded at on adequate distance by two men on foot, one displaying a red light and the other carry'ing fog signals ready for immediate use. Normally one of these men will be provided by the Station Master from his class IV staff and the other from the crew of the engine or the person whose Motor trolley/ Trolley/Cycle trolley/Moped trolley is being used. In case of single manned self propelled vehicle, both these men shall be provided by the station Master. The Station Master on duty shall explain to both of them their duties, in the presence of the Loco Pilot/ Motorman/ Guard/Station Master them their duties, in the presence of the Loco Pilot/ Motorman/ Guard/ Station Master in charge of the self propelled vehicle or other vehicle being sent to the next station and satisfy himselfthat they understand the same. (b) Both by day and night, a tunnel must not be entered until the Loco Pilot/Motorman/Station Master/Guard has ascertained that it is clear. Should there be any doubt on this point, the engine or other vehicle etc. should be piloted by a railway servant equipped with hand signal and detonators. Before entering the tunnel the head lights, side and tail lights and other lights (where provided) shall also be lit. (c) No obstruction of the line beyond the outermost facing points shall be allowed until theretum of the Engine/Tower wagonfDiesel car/Rail Motor Car/EMU rake/Motor Trolley or Trolley or Cycle trolley or Moped trolley. (7) In the event of an engine Self propelled vehicle/other vehicle, proceeding on 'Authority for opening communication during total interruption of communication on single line section meeting in the mid-section with an engine/self-propelled vehicle/other vehicle sent from the other end, the Loco Pilots/ Motonnen/Guards/Station Masters, as the case may be, shall taking into consideration the importance of the train for which they are proceeding to get line clear, the distance from the nearest station, gradients to be encountered, the presence of catch sidings etc. decide to which of the two stations, the engines/self-propelled vehicle/vehicles should proceed. Before proceeding, the engines or self-propelled vehicles shall, ifpossible, be coupled up. Ifthe engines/self-propelled vehicles cannot be coupled up they should run at a safe speed and adequate distance apart. In the case of Motor Trolley/Push Trolley/Cycle trolley/Moped trolley, meeting an engine and brake van/Diesel Car/Rail Moto Car/EMU rake, the Motor trolley/push trolley/cycle trolley/moped trolley shall, if possible, be loaded in the brake van/van/Diesel Car/Rail Motor

Car/EMU rake. 161 (8) (9) zrrerr tlü) zrr zrr *iQ-r' crgrere e,rrzrr 241 | (10) a-TT (11) crzrere / (12) arrq•\$l (i) (ii) (iii) (iv) A51-e | 13. a-iT zrr zrr (q:gzn) 162 CHAPTER-VI ACCIDENTS AND [JNUSUAL OCCURRENCES (8) On sighting the station to which the engine/selfpropelled vehicle/other vehicle running by itself or with another similar unit coupled together or separately, to which it is/they are proceeding, the leading engine/self-propelled vehicle/other vehicle shall stop out-side (i.e. in rear of) the first Stop signal of the station. The engine or self-propelled vehicle or other vehicle following the leading engine/self propelled vehicle/other vehicle, shall stop at a safe distance behind the leading engine/self propelled vehicle/other vehicle. The Station Master shall be advised of the stoppage outside the first stop signal either by using the engine whistle/hom of the self-propelled vehicle, if provided, or by sending a man if necessary. They shall not enter the station till permitted by the Station Master to do so either by taking 'Off the relevant signals or otherwise. (9) When the engine or engines/self-propelled vehicle or self-propelled vehicles/other vehicle or vehicles have been admitted into the station the 'Authority for opening communication during total interruption of communication on single line section with the Line clear Enquiry Message and the Conditional Line Clear message giving the Line Clear for the return journey shall be delivered to the Station Master on duty who shall keep these documents in his safe custody and also post the Line Clear Enquiry Message and the Conditional Line Clear Message in his Line Clear Books. On the authority of the Conditional Line Clear Message for the return journey the Station Master on duty shall make out a conditional Line Clear Ticket and hand over it to the Loco Pilot/MotonnaW Guard/Station Master to return to the block station from where he came with his engine (either light or attached to a train or another engine or a self-propelled vehicle if one is waiting to proceed in that direction)/self-propelled vehicle/other vehicles. (10) In case of the engine or self-propel led vehicle or other vehicle returning to the station from which he was sent without reaching the next station, the 'Authority for opening communication during total interruption of communication on single line section shall be taken back by the station Master on duty of the station from which this was issued and cancelled. The original entries shall also be cancelled. (11) The station Master on duty before dispatching the engine either light or attached to a train/self- propelled vehicle/other vehicle, on the return journey shall hand over to the Loco Pilot/Motorman/ Guard/Station Master, 'Conditional line clear Reply Message' for the 'Line Clear Enquiry Message'. giving Line clear for the train waiting at the other station, thereby authorizing the station Master at that station to start the train waiting there on complete arrival of the engine, either light or attached to train sel f-propelled vehicle/other vehicle at this end. (12) The Conditional Line clear Reply Message shall be worded as follows- Private No. (in words) (in Message No your message No. vehicle/other vehicle No. (i)TrainN0..... (ii) Train No... (W) Train .on anival of Engine with/without train/self propelled * at yours line will be clear and kept clear for following trains :- — Private No. (in words) . (iii) Train No..... Private No. (in words).....(in figures) . Private No. (in words)..... (in figures)..... (in figures) . * Strike out which ever is not applicable. * The Particulars of the engine either returning light or attached to a train or attached to another Engine/Tower wagonfDiesel car/Rail Motor Car/EMU rake/Motor Trolley or Trolley or Cycle trolley or Moped trolley running by itself or loaded in a train as may be applicable shall be correctly filled in while preparing the message. (13) On the return journey, engine either light or attached to a TrainfDiesel Car/Rail Motor Car/EMU rake/Train loaded with Motor trolley/push trolley Cycle trolley/Moped trolley may run at booked speed observing speed limits in the working Time Table and other relevant rules. The Motor trolley/Push trolley cycle Moped trolley returning by itself may run at their normal speed observing the rules governing their running on Line Clear. 162 14. 15. 16. 17. 19. 20. 21. 22. zrr AT87/3FE1 (312Tfq #TB) s:rrq \$1 *iQ-r• vrra•r zrr s:rrq 30 æTrtF 25 zrr 10 q. tire-UT cre•rur 500 2 crel@ 10 10 \$1 \$1 250 500 41-e-R 2 10 71ltzrt 1 163 CHAPTER-VI ACCIDENTS AND [JNUSUAL OCCURRENCES (14) On reaching the station, the engine either light or attached to a Train/Self-propelled vehicle/other vehicles shall again stop outside (i.e. in rear of) the first stop signal of the station and thereafter be guided by the instructions from the Station Master, Who may arrange to receive it by taking off the relevant signals or otherwise. (IS) On arrival at the station the 'Conditional Line Clear Reply Message' Shall be handed over to the station Master who shall record in the Line Clear Message Book and on its auth0lity issue a conditional Line Clear Ticket for the waiting train. (16) If there be an even flow of trains in both directions, Enquiry and Conditional Line Clear Messages for each succeeding train may be sent through the Guard of the preceding train. (17) The arrival and departure time of all trains, engines, trolleys etc. which are passed under the above rules must be

carefully recorded in the Line Clear Enquiry and Reply Books, and also in the counterfoil of the 'Authority to proceed without Line Clear' and in the Train Signal Register. (18) If the Station Master at one end of the interrupted sections has more than one train to dispatch in the same direction before another train is normally expected from the opposite direction, he shall, in such cases, send the first available engine of a train to obtain 'Line Clear' not only for that train but also for the following trains which may be waiting or expected at his station. In the Line Clear Enquiry Message it shall be stated that these latter trains will be dispatched after the first train at intervals of 30 minutes. After the Loco Pilot returns with the Line Clear for the required number of trains to the stations at which he had left the train, the Station Master shall dispatch the first train on the authority of the line clear for the trains and shall also endorse on that line clear that a particular train (giving its number and description in full) shall follow at a specified interval. The station Master shall give similar information to the Guard also in writing. The Loco Pilots of the second and subsequent following trains shall be given a caution order restricting the speed to 25 Kilometers per hour over the straight when the view ahead is clear and to 10 kilometers per hour when approaching or passing any portion of the line where the view ahead is not clear due to curve, obstruction, rain, fog or any other cause. When dispatching a second and subsequent trains, the particulars of the last preceding train along with its time of departure will be endorsed on the line clear as also the particulars of the train which would follow. The line clear for the last train of the series should be endorsed with the particulars of the preceding train together with its time of departure. While adopting this procedure, the Guard and the Loco Pilot should be instructed to keep a sharp look out and be prepared to stop short of any obstruction. (19) When a train is stopped in the block section the Guard shall immediately exhibit a hand danger signal towards the rear and check up that the tail board or the tail light is correctly exhibited. If the stoppage on account of accident, failure, obstructions or other exceptional cause and the train cannot proceed, the Loco Pilot shall sound the prescribed code of whistle to apprise the Guard of the fact, where upon the Guard shall protect the train by placing one detonator at 250 meters from the train on the way out and 2 detonators, 10 meters apart, at 500 meters from the train, irrespective of the gauge. When a train is detained outside signals and if the detention exceeds or is likely to exceed 10 minutes it shall also be protected accordingly. In the absence of the Guard the duty of protecting the train shall devolve on the Assistant Loco Pilot. (20) When trains follow one another no train shall be backed. In exceptional circumstances when it may be unavoidable to back a train the train shall be backed only after providing protection by placing one detonator at 250 meters and two detonators, 10 meters apart, at 500 meters from the point up to which the train is to be backed. (21) Trains must continue to work on this system until anyone of the means of communication, mentioned in rule 1 is restored by the competent authority. (22) As soon as any one of the means of communication has been restored, the Station Master must send a message to the station Master at the other end of the section, on the following: From Station Master „ „ To Station Master „ „ „(in figures).. • Time.... „ . at.... „ to your station . Hours . Minutes..... „ Message No... „ „ „ Train (Number and description) . arrived complete minutes Last train (number and description) dispatched „ . „ At..... Hrs clear working of trains Line Clear must be obtained by means of m. .. Minutes Cancel the conditional line Acknowledge. Private No (in words) . 163 23. 24. -e-e-l-d / ZbT Rch•é I 6.03. ur GINT '31Td' I \$1 (éa aid) (éa are) \$1 \$1 600 10 1200 I *--enq 400 800 GINT e. 10 I 164

CHAPTER-VI ACCIDENTS AND UNUSUAL OCCURRENCES On receipt of the above message the Station Master at the other end of the section must acknowledge in the following form:- From Station Master To Station Master Message No . (number and description) Your Message No . Understand that train arrived complete at your station Train No . complete at my station at . Clear working of trains is being/ will be cancelled immediately after the complete arrival of train number Line Clear of the next train will be obtained by means of Private No.(in words) . (in figures) . (23) Line Clear shall not be obtained or given by means of communication restored until both the station Masters are satisfied that all trains and engines etc. dispatched from their stations have arrived complete at the other station. Even if the communication is restored immediately after the departure of the light engine/self-propelled vehicle/any other vehicle referred to in rule 2, sent under 'Authority for opening communication during total interruption of Communication on single line section normal working should not be resumed until the light engine/self-propelled vehicle/any other vehicle reaches the next station and both the Station Masters are satisfied under exchange of Private Numbers that no light engine/self-propelled vehicle/any other vehicle is on the section. Thereafter an intimation about this shall be given to Section Controller also on controlled

section, if communication with Section Controller has also got restored, and normal working resumed. If, however, communication with Section Controller has not got restored along with restoration of communications between two stations, the Section Controller shall be advised of the position immediately on restoration of communication with him. (24) On the section where total interruption of communications occurs, the Traffic Inspector of the section, must scrutinize the train passing records of the Station and submit his report to the Sr. Divisional Operations Manager within seven days of the resumption of communication.

6.03. Train Stopped between stations- (1) When a train is stopped between stations on account of accident, failure, obstruction or other exceptional cause, and the Loco Pilot finds that his train cannot proceed, he shall apprise the Guard of the fact by sounding the prescribed code of whistle or through walkie talkie or other means and exchange hand danger signals with him. The Loco Pilot shall switch on flasher light of his locomotive immediately to warn on coming train. Thereafter the guard shall immediately exhibit a hand danger signal towards the rear and checkup that the tail board or tail light is correctly exhibited and switch On flasher light if provided. In the rear of the brakevan. The Guard and Loco pilot shall then immediately take the following action in the rear and the front. (i) On a single line section or a section of double or multiple lines when temporarily worked as a single line section: (a) The Guard shall either himself go back or send a competent person back to protect the train; If the Guard has deputed a competent person to protect the train, he shall confirm from the Loco Pilot for the protection of the train in front through walkie- talkie or other means of communications between the Loco Pilot and the Guard. In absence of communication system between them the Guard shall go to the Loco Pilot personally to confirm the protection of train in front. (b) The person going back to protect the train shall continuously show his hand danger signal to stop any approaching train and in addition to his hand signal, shall take detonators and place them upon the line on which the stoppage has occurred, as follows One detonator at 600 meters from his train on way out and three detonators, 1200 meters about 10 meters apart from the place where the train has stopped. Provided that on the Meter and Narrow gauge the first detonator shall be placed at 400 meters and the three detonators about 10 meters apart not less than 800 meters from his train or at such distance as has been fixed by special instructions from the place where the train has stopped.

164 which was the last train to leave my station has . which left your station has arrived hours — minutes/not arrived. Conditional Line (IT) (u) (IT) (ii) \$1 / 600 400 1200 800 Gi) - '3TB' *lea (ii) 165

CHAPTER-VI (c) (d) (e) (f) (g) (h) ACCIDENTS AND UNUSUAL OCCURRENCES If a person other than the Guard has gone back to protect the train, he shall after taking action as per sub-clause (b) continue to show his hand danger signal to stop any approaching train, until he is recalled; When the Guard has himself gone back to protect the train, he shall after taking action as in sub-clause (b) depute a competent person, if available, to show a hand danger signal to stop any approaching train until he is recalled and shall himself return to his train to ascertain the cause; Unless the Guard has succeeded in getting another competent person to show a hand danger signal, as in sub-clause (d) he shall after consultation with the Loco Pilot, once again return to the place at which he placed three detonators, showing his hand danger signal to any approaching train and continue to do so until he is recalled; When the Guard or the person deputed by him is recalled he shall leave down the three detonators, and on his way back pick up the intermediate detonator; On a section of double or multiple lines, when the Loco Pilot comes to know that; (I) During the course of run of the train being driven by him the Loco Pilot shall switch "ON" the flasher light and dim the head light on all or any such occurrences as stipulated hereunder :- (A) Sudden jerk with drag and/or drop in air pressure or vacuum of the train; (B) Sudden increase in airflow indicator reading; (C) Train Parting/derailment of the train; and (D) Any situation warranting protection of the adjoining track, (11) In case of an accident or if assistance has been asked for or on a single line section or during temporary single line working on a section of double or multiple lines, the Loco Pilot shall in all cases switch 'On' the flasher light and dim the head light at once and show a danger signal to the front and proceed to protect the train in front in the manner prescribed in sub clauses (b) and (0 either by going himself or by sending his Assistant Loco Pilot or some other competent person; and Should any train be seen approaching the person going to protect the train shall immediately place one detonator on the line, as far away from the train disabled train as possible and will continue to show his hand danger signal to stop any approaching train if the person has already placed one detonator on 600 or 400 meters in BG or MG/NG respectively and he is not in a position to reach a distance of 1200 meters and 800 meters in BG or MG/NG respectively he shall again place one detonator as far away from the train as possible which has

met the accident. (ii) On a double line section where trains on the two lines run in the opposite direction. (a) As soon as the Loco Pilot comes to know that (I) During the course of run of train being driven by him, the Loco Pilot shall 'switch on' the flasher light and dim the head light on all or any such occurrences as stipulated here under:- (A) Sudden jerk with drag and/or drop in air pressure or vacuum of the train. (B) Sudden increase in airflow indicator reading. (C) Train parting/derailment of the train, and (D) Any situation warranting protection of the adjoining track. (11) In case of an accident or if Assistance has been asked for the Loco Pilot shall in all cases switch On the flasher light and dim the head light at once and show a danger signal to the front to protect the adjacent line in front in the manner prescribed in clause (I) above either by going himself or by sending assistant Loco Pilot or some other competent person. The guard shall himself first immediately proceed ahead to assist to ensure protection of the adjacent line in front in the manner prescribed in clause-(I) above and if a competent person is available send him to protect the train in the rear in manner prescribed in clause-(I) above. 165 (iii) (i) GINT (ii) (agene) (ii) 166 CHAPTER-VI ACCIDENTS AND [JNUSUAL OCCURRENCES (b) In case it is not known whether the adjacent line is obstructed or not. The Loco Pilot shall take action to protect the adjacent line in the manner prescribed in clause-(I) above. The Guard shall confirm from the Loco Pilot on the available means of communication for protection of train of the adjacent line as mentioned above and proceed towards the locomotive watching the train carefully. If the Guard finds that the adjacent line is obstructed he shall proceed ahead to assist and ensure protection of the adjacent line as mentioned above. In case he finds that the adjacent line is not obstructed he shall after consultation with the Loco Pilot go back to protect the train in the rear in the manner prescribed in clause (I) as above. If he has not already sent another competent person for the purpose. (iii) On a multiple line section with uni-directional traffic on the nominated line:- (a) as soon as the Loco Pilot comes to know that:- (I) During the course of run of the train being driven by him the Loco Pilot shall switch On the flasher light and dim the head light on all or any such occurrence as stipulated here under:- (A) Sudden jerk with brake and/or drop in air pressure or vacuum of the train. (B) Sudden increases in airflow indicator reading. (C) Train parting/derailment of the train and (D) Any situation warranting protection of the adjoining track. (11) In case of an accident or if assistance has been asked for, the Loco Pilot shall in all cases switch On the Flasher light and dim the head light at once and show a danger signal to the front and he shall at once take action to protect the adjacent line or lines in the manner prescribed in clause-(I) above. (b) As soon as the Guard comes to know that the train has met with an accident he shall at once protect such adjacent line or lines in the manner prescribed in clause-(I) above. When it is obvious that an adjacent line on which trains normally runs in the opposite direction is obstructed or when it is not known whether any such line is obstructed or not the Loco Pilot shall at once take action to protect the adjacent line/Lines in the manner prescribed in clause-(II) above. If it is obvious that an adjacent line on which the trains normally runs in the direction of the affected train is obstructed or when it is not known whether any such line is obstructed or not, the Guard shall immediately protect such adjacent line/lines in the manner prescribed in clause (I) above. If it is obvious that an adjacent line/lines on which trains normally run in the opposite direction is obstructed and no line on which trains run in the direction of the affected train is obstructed, he shall proceed ahead to assist and ensure protection of the adjacent line/lines, on which trains run in the opposite direction as per clause-II above. If in addition to the line on which train run in the direction of the affected train any other line on which train normally run in the opposite direction is also obstructed the primary duty of the Guard shall be to protect the line on which train normally run in the direction of the affected train in the rear in the manner prescribed in clause-I above. Only after taking this action he shall proceed ahead to assist and ensure protection of the obstructed adjacent line/lines in front on which trains normally run in the opposite direction. 166 (ii) g;) TROT TROT \$1 errg•e \$1 ezrra (0000) QIN-AIR q-r\$1-er\$1 crzrere crzrere QIN-AIR zrr zrr TROT crzrere 6.03 1 zrr \$1 zrr \$148 s:rrv--QT GTFIT crzrere 6.03 I crzrere a--TAN-QIT zrr t, QIN-AIR q•errzrr gg:rrzrr I I / q•ré crzrere \$1 a-RN I (g) zrr crzrere ga: di I \$iel 167 CHAPTER-VI ACCIDENTS AND [JNUSUAL OCCURRENCES (2) (i) In the case of train without a Guard, the duties of the Guard, as laid down in this rule shall devolve on the Loco Pilot or on a Railway servant deputed by him. (ii) In the event of any disability of the Loco Pilot, the duties devolving on the Loco Pilot as laid down in these rules shall devolve on the Guard or on a Railway servant deputed by him. S.R. 6.03/1. Protection of trains- (a) (b) (c) (d) (e) When a train comes to stop in a block section on account of an accident or any other cause which is not immediately obvious, and the Loco Pilot finds that his train cannot proceed, he shall immediately switch

'On' the flasher light keeping the head light 'Off' to attract the attention of a train approaching from the opposite direction and sound four short sharp whistles (0000) repeatedly or through walkie-talkie to apprise the Guard of his inability to proceed and display a red hand signal. The Guard on hearing the Loco Pilot's whistle shall acknowledge it by waving a red hand signal up and down. The Loco Pilot will acknowledge the Guard's signal by a long whistle. The Guard shall then fix a red flag by day at such a place on the brake van which can easily be seen by the Loco Pilot and at night reverse the side lamps of his brake van, where provided, to show red towards the Loco Pilot. The Guard shall also ensure that during day the tailboard is in position and at night the tail lamp and the side lamps where provided, are burning brightly. The Loco Pilot shall also whistle repeatedly so as to attract the attention of the Loco Pilot of a train approaching from the opposite direction. If the stoppage has occurred on a section of double or multiple lines, during night or in thick and foggy weather when visibility is impaired the Loco Pilot and the Guard shall light a fusee also immediately and fix it on the ground near the adjacent track on which trains normally run so as to be clearly visible to the Loco Pilot of an approaching train. The Loco Pilot and the Guard shall then take action regarding protection of adjacent line and of the train in accordance with G.R. 6.03. When the Loco Pilot of an approaching train sees the light of the flasher or the light of a fusee, he shall at once take action to stop his train short of obstruction just as he would act when he sees a danger hand signal or hears the distressed whistle code of another engine or explodes a detonator and render all possible assistance to the affected train. He will continue his journey at normal speed only after ascertaining that the line on which he is proceeding is free from any obstruction. If however, he finds that the line on which he is to proceed is obstructed the Loco Pilot and Guard of the train will protect their train in accordance with G.R. 6.03. The Loco Pilot of the train proceeding on the adjacent track must stop at the next station and report the occurrence immediately. The flasher light shall be switched off only when the Loco Pilot finds that his train is in a position to proceed or after he has ascertained that the adjacent line is free from obstruction and it is not necessary to stop any approaching train to obtain assistance. In case the flasher light is not provided or it fails the head light may be switched 'On' and 'Off' repeatedly to attract the attention of the approaching train. Flasher, light units have been provided on diesel and electric locomotives, the unit when switched 'On' flash amber colored lights. When taking over charge of the diesel/electric locomotives from the shed/yard the Loco Pilot shall test the working of the unit and make appropriate entry in the shed engine book. When the train is able to go forward the Loco Pilot will sound one continuous long whistle to recall the Guard or the person, deputed to protect the train in rear, who will immediately return leaving the 3 detonators on the line and picking up the intermediate detonator. The Loco Pilot must not start his train after it has been brought to a stand until the Guard has signalled to him from the brake van to proceed. The Guard shall remove the red flag reverse the side light, where provided to show white light towards the Loco Pilot when the train is ready to start. The Guard will show hand danger signal and keep a good look out, towards the rear until his train arrives at the station in advance.

167 (U) 6.03. 6.04. (1) Q, 10 20 AGi I crrzrere g•zi AT\$!-ZT* (ii) (iii) (iv) 10 rrrei ærrq•ra t, gâeAT (2) (3) (4) (O) (u) a-Tli117 q-lâ 10 a-Ild 5 (000) (0000) 168 CHAPTER-VI ACCIDENTS AND [JNUSUAL OCCURRENCES (f) If the train has also been protected in front, the Loco Pilot will, when the train goes forward, endeavor to stop short of detonators and pick up the three detonators. (g) In the case of light engine or coupled engines the Loco Pilot or both the Loco Pilots are responsible for the protection of the engine or engines in accordance with G.R. 6.03. 6.04. Trains unusually delayed- (1) If a train carrying passengers does not arrive within 10 minutes or if goods train does not arrive within 20 minutes after allowing for its normal running time from the station in rear, the Station Master at the station in advance shall immediately advise the station in rear and the control of this fact. Thereafter on double or multiple lines, the Station Masters at either end of the block section shall immediately stop all trains proceeding into the block section on adjacent line or lines in either direction and warn the Loco Pilots and Guards of such trains by issue of suitable caution orders and shall also ascertain the whereabouts and the condition of the delayed train. (2) The action mentioned above shall be taken earlier, should the circumstances so require. S.R. 6.04/1. The Station Master shall take immediate action in the following manner when a train is delayed in the block section. (a) (b) (i) The Station Master shall talk to Loco Pilot/Guard of such train on VHF Set whereas the Loco Pilot and Guard shall apprise the Station Master of nearest station through Walkie-Talkie, reporting the cause of unusually delayed train. (ii) If Station Master fails to talk he shall arrange to send a railway employee into the block section to fetch information regarding the whereabouts

of the train; and in case of mishap the nature of assistance required. (iii) On a double line section the Station Master must stop the first train proceeding in the opposite direction and inform the Loco Pilot of the circumstances and instruct him to proceed cautiously. (iv) The Guards of trains carrying passengers which are provided with a set of portable field telephone, when delayed in the block section over 10 minutes will also inform the Section controller the cause and probable duration of the delay. The Controller on receipt of such advice shall immediately warn the station where a medical van or first aid chests are located so that they would be kept in readiness for dispatch to the site of the accident, on receipt of further information. He shall also issue preliminary warning to the Loco Foreman and Station Master to get the Break Down Train ready, and will also arrange for an engine to be made available immediately for taking the medical Van to the site of the accident if necessary. S.R.604/2. If for any reason a train is brought to a stand on a gradient the following precautions should be taken by the train crew- 2. 3

4. Loco Pilot should immediately put on the flasher light. Loco Pilot should apply loco brakes in addition to the application of train brake i.e. vacuum/air brake. Train brake must not be released. Loco Pilot should not normally leave locomotive. If required to leave in an emergency, he will ensure that Assistant Loco Pilot is present on the locomotive. When the train is not likely to start within 15 minutes, Loco Pilot should- (a) (b) (c) (d) Apply locomotive hand brakes. Direct Assistant Loco Pilot to pin down the hand brakes of IO wagons in case of 4 wheeler or 5 wagons in case of 8 wheeler load behind the loco and put wedges under the loco wheels. Draw the attention of Guard by sounding 3 short whistle (0 0 0) for applying brake followed by 4 short (0000) whistles for protection in rear. Direct Assistant Loco Pilot in single line section for protection of train in front. 168 (5) (6) t (8) (9) 6.05. g) (q) (q) (8) (\$1) 10 8 ft--trq I (aft) \$1 crrzrere a-TIRT7 I crrzrere I -\$ -a-rr;it 400 1 crrqg 400 I I Rulé AT-\$l—er\$1 q-lâ GTT -\$ 169 CHAPTER-VI ACCIDENTS AND UNUSUAL OCCURRENCES 5. 6. 7. 8

9. The Guard of the train will apply hand brake of brakevan and pin down hand brakes of IO wagons in case of 4 wheelers load or 5 wagons in case of 8 wheelers load, In case of passenger carrying trains he will put wedges to the wheels of two vehicles nearer to the brakevan. After it he will protect train in rear. Guard after protecting train in rear, should meet Loco Pilot and will take action for advising control to arrange assisting engine or other sort of assistance. The following procedure should be adopted to restart the train- (a) (b) (c) (d) (f) (g) (h) (i) Loco Pilot to recreate adequate vacuum/air pressure gradually. Release train brakes fully with loco brake 'On' Notch up the loco by a few notches in forward direction in case of up gradient or reverse direction in case of down gradient. Release the wagons hand brakes and remove wooden wedges both in front and in rear. Guard to release hand brake of his brakevan. Exchange 'All Right' signal with Guard. Release hand brake of locomotive. Gradually release loco brake and start. Re-check brake power at the first opportunity. The Loco Pilot himself or, on his direction, the Assistant Loco Pilot shall be responsible for application and release of the hand brakes of wagons behind the engine. The Guard shall be responsible for the similar action in regard to the wagons inside the brakevan. Considering the condition of brake power on train, the Loco Pilot may take additional precautions during the stoppage of his train on section steeper than 1 in 400 to avoid run away. 6.05.

Sending advice of accident or breakdown - If the engine is for any reason unable to proceed the Guard or in his absence the Loco Pilot, shall convey, by the most expeditious means advice to the nearest station, stating the location nature and cause of the accident, and if assistance has been asked for, the train shall not be moved until such assistance arrives, provided that if the train is subsequently able to move, it may do so at walking pace, but not unless a competent railway servant has been sent with hand signals and detonators to protect the train, such railway servant keeping at least 400 meters in advance of the train, the other end of the train being protected in a similar manner. S. R. 6.05/1. Sending advice of accident or breakdown- (a) (i) When owing to an accident or breakdown, a train is stopped outside station limits, the Guard must first protect the train and then consult the Loco Pilot and immediately report the accident or break down on the field telephone to the Section Controller. Guard/Loco Pilot should apprise the nearest Station Master through Walkie-Talkie or any Other means of communications available in the area. This report must detail the nature of the accident or breakdown, the site and the relief required. On the double line sections, in case the field telephone is inoperative and a train is passing on the other line, it should be stopped and the Guard of the affected train should hand over a "Titten report to the Loco Pilot or Guard of the opposite direction train indicating the details of the accident or breakdown as stated above for communication to the next station in the direction in which the train is proceeding. In all other cases, On the single and double line sections a written report of the accident or breakdown as stated above must immediately be sent with the Assistant Loco Pilot to the Station Master of the nearest station. 169 (ii) (1) Rch^é a-TF^{BT} / 1 \$1 (ii) (iii) Ati uT '317 dii @ crrzrere crrzrere 30 \$1 +.6.05/1 3-11 GTFT crrzrere zrr I 6.06. - (2) 6.03 I 170

CHAPTER-VI ACCIDENTS AND UNUSUAL OCCURRENCES (b) (c) (ii) In the event of a serious accident, when prompt assistance is required and information cannot be conveyed promptly in the manner prescribed in clause (i) above, the Guard will arrange for the train engine of the disabled train, if it is able to proceed to be detached and sent light to the next station with the report of the accident or breakdown through the Loco Pilot to be handed over to the Station Master of that station. Before detaching the engine, the provisions laid down in S.R. 6.09/1. must be completed with. The Station master receiving the information that the train is disabled must at once inform the section Controller and other Officers concerned. On uncontrolled areas, the Station Master will arrange for the requisite assistance and if the engine is disabled, utilise the engine of a less important train to work the disabled train forward and advise the terminal Station Master of having done so. When an assisting engine is sent out, the Station Master who admits the assisting engine into the section occupied by the disabled train shall issue to the Loco Pilot of an assisting engine. (1) an authority to proceed without line clear. (2) An authority to pass last stop signal in 'On' except on double line when he is moving on among direction and (3) A caution order on which shall be stated:- (i) the kilometrage of both, the train engine as also the Brake Van/Last Vehicle of the disabled train standing in the sections; (ii) the station to which the disabled train shall be taken; and (iii) a warning that the train, which is going to assist, shall be brought to a stand at the first stop signal of the station to which it is being taken and on Double line when it is moving in the among direction, it shall come to a stand opposite the first stop signal of the opposite line or the last stop signal of the same line which ever comes first and shall remain there unless the Station Master authorizes its admission either by

taking off the signals or by issue of an authority to pass in 'ON' position. Note: In the absence of the Guard or if the Guard is incapacitated, the duties of the Guard will devolve upon the Assistant Loco Pilot.

S.R. 6.05/2. Assistance to disabled engine - (a) (b) (c) (d) When an engine is disabled, the Guard shall ascertain from the Loco Pilot if it is necessary to requisition for a relief engine. Should the Loco Pilot expect to be able to put the engine in working order within 30 minutes, he shall inform the Guard. If the time is likely to be exceeded, the Guard must send advice to the nearest station and call for relief engine. After having asked for assisting engine, if subsequently the Loco Pilot is able to repair the damage and is in a position to restart the train, Loco Pilot will ask permission of the Section Controller/ Station Master. The Section Controller/Station Master, in case assisting engine has not entered in the block section, will regulate the assisting engine and will advise the Loco Pilot to start his train supported by Train notice/Private number, Loco Pilot will work his train cautiously up to next block station. Loco Pilot shall not restart his train unless he receives Train notice/Private number from Section Controller/Station Master.

In such case he will wait till arrival of assisting engine. When there is likelihood of an engine failing to reach its destination, the Loco Pilot must at once ask for a relief engine. If the engine of a passenger train fails in a section, the train must not be divided. After protecting the train a relief engine must be requisitioned. The train must be detained with the engine coupled to the train till the assistance arrives. The

train must then be worked forward with the assisting engine coupled up to the next block station ahead, where the Loco Pilot will decide whether he is in a position to haul the load forward alone with his engine or double headed with an assisting engine. 6.06. Train in a block section without authority to proceed- (1)

When the Loco Pilot becomes aware in a block section that he does not have an authority to proceed or a proper authority to proceed, he shall immediately stop the train. (2) The train shall be treated as an obstruction in the block section and protected as such, in accordance with Rule 6.03. 170 (3) GINT GINT I R. 6.06/1. (ii) GTFT 10 (iii) 5.09 (iv) (v) (i) g. 2i g. 2i 10 3 R. 5.09 (vi) 6.07. R. 6.07/1. zrr (ZIR Tre-TN) a-Tm t, @ql-é ilFTT 171 CHAPTER-VI ACCIDENTS AND [UNUSUAL OCCURRENCES

(3) The Guard, or in his absence the Loco Pilot, shall convey the report of the occurrence to the nearest block station by the most expeditious means and the train shall thereafter move only in accordance with the instructions which may be issued by the Station Master to whom the occurrence has been reported:

Provided that when a proper tangible authority to proceed is lost on the run, the Loco Pilot may proceed to the next station and report the occurrence to the Station Master. S.R. 6.06/1. (i) When a train enters in the

block section without Authority to proceed Station Master will advise the station in advance by giving prescribed bell code and on block phone. "Train running without Authority to proceed" specially asking the station in advance to keep both reception and departure signals in 'ON' the Section Controller should also be advised. The gateman enroute should be informed to stop the train. (ii) The station in advance will immediately ensure that all signals are in 'ON' and the route must be set and locked for the clear line preferably main line and arrange to place three detonators 10 meters apart before the Starter signal. (iii) If train stops outside first stop signal reception of the train should be done as per GR 5.09. (iv) In case the

Loco Pilot fails to stop and runs through after exploding detonators and disregarding approach and departure signals, the station staff should try to attract the attention of the Guard. The guard on receiving danger signal from the station staff, will stop the train, In electrified section, OHE should be switched off.

(v) If the train fails to stop, the same bell code and advise as stated in item (i) to be repeated to the next station. The gateman enroute is to be informed also for stopping the train. The next station should keep all signals in "ON" position and arrange to place three detonator 10 meters apart before the Home signal and put the ballast on the track if possible. In case train stops, reception should be arranged as per G.R. 5.09.

(vi) Train shall not be turned into dead end siding or derailed, unless it is necessary to do so to avoid a more serious accident. 6.07. Report of conditions likely to affect running of trains to Controller or Centralized Traffic Control Operator- (1) Loco Pilots, Guards and Station Masters shall advise the Controller or the Centralized Traffic Control Operator of any known conditions or unusual circumstances likely to affect the safe and proper working of trains. (2) The Controller or the Centralized traffic Control Operator, on becoming aware of such defect or failure shall inform the same to the railway servant responsible for the maintenance of the equipment and other railway servants concerned. S.R. 6.07/1. Whenever danger is suspected to the track, bridges or other fixed installations from sabotage and the location remains vague, the Station Master who becomes aware of it, in consultation with the Section Controller, should arrange for stoppage of train movement over the section and also arrange for inspection

and testing of the line. For the purpose of testing the line, a light engine (by detaching engine if necessary) shall be used and the Loco Pilot of the light engine shall be instructed through a special caution order to proceed at a very low speed as would enable him to stop short of any obstruction or unsafe condition on the track. The Loco Pilot will also stop the engine short of any bridge and he himself or a railway servant accompanying him shall visually examine the portion of the track over the bridge for making sure that there are no visible signs of any damage to any portion of the structure. In case any visible damage is noticed, he will return with the light engine to the station from where he started for giving a report of what he has seen. Action thereafter would be taken by the Engineering officials concerned about restoration of track. In case the visual inspection reveals no apparent damage to the structure the Loco Pilot shall proceed very cautiously over the bridge for proving that the track is safe for passage of trains. After the entire section has been covered in this manner the light engine shall return at normal speed to the station from where it started where after the section shall be treated as safe for passage of trains and normal train services shall be resumed. 171 / 2 crzrere crzrere .3TT-T4 crzrere zrrerr g•rq tq 2--2113 / 3T\$üT *rrr I R-2.fi crzrere .3TT?TZl 10 \$1 crzrere 10 .3TT-T4 crgrere 6.07 / 1 @ crzrere \$1 6.07 / 3 atg-*e \$1 s:rrq / 1 (q) zrr ælfi.6.07/4 zrr CT) 3.62 -\$ 172 CHAPTER-VI ACCIDENTS AND [JNUSUAL

OCCURRENCES S.R. 6.07/2. In the event of the Loco Pilot and/or Guard experiencing any abnormal condition in the track over which his train has passed and he considers that the portion of the track over which his train has passed is detrimental for safe running of subsequent trains will take action as under:- (a) (b) (c) (d) (f) Stop his train at next block station without clearing the block section and inform the Station Master through available means of communication not to permit any train from either end of the affected block section in case of single line and from the rear in case of double line. In case of IBS and Automatic Block Territories, the Loco Pilot must inform the Station Master and Loco Pilot of trains already left station in rear through available means of communications to stop movement of trains; proceed further, only after satisfying himself that Station Master has clearly understood so as not to permit further movement over the line until a written memo indicating the details of the occurrence is received by Station Master from the Loco Pilot. He will then again stop at the station at a convenient place so as to deliver the written memo to the Station Master; the Station Masters on receipt of such a memo must issue a message addressed to the Station Master of the block station at the other end of the block section, and junior Engineer/Section Engineer (P.Way), Assistant Engineer, Divisional Engineer, Chief Controller and Divisional Operations Manager. arrange to dispatch by rail maintenance machine/tower wagon/light engine or in their absence a train accompanied by an engineering official with a caution order to the effect to 'Stop Dead' sufficiently short of the expected portion of the track. The engineering official accompanying will inspect the track and shall allow the train to pass only after satisfying that the track is safe for the passage of train. Advise the condition of the track and any restriction of speed to be imposed to the station Master personally or through written memo which may be sent through the Loco Pilot. in the absence of engineering officials the train with a caution order instructing the Loco Pilot to 'Stop Dead' before the affected kilometers and after satisfying himself about the condition of track pass over the track in question at 10 kilometers per hour or if he finds the line unsafe to pass, return to station in rear if the Loco Pilot is not able to detect any thing doubtful, subsequent trains shall be dispatched with a speed restriction of 10 Kilometers per hour till the track is certified to be safe by engineering officials. If the condition as reported earlier is confirmed by the Loco Pilot, no train movement shall be allowed till certified to be safe by engineering officials; Note : In case the Guard of the train experiences any abnormal occurrence in the track while working his train, he must inform the Loco Pilot of his train through walkie-talkie or other available means of communication between the Loco Pilot and the Guard about the occurrence, after which the Loco Pilot shall take action as mentioned in SR 6.07/1 (a). In the event of Guard unable to contact the Loco Pilot, he should take action to stop the train and inform the Loco Pilot. S.R. 6.07/3 As soon as information of sabotage or likely sabotage, bomb blast, explosion etc. to the track, bridges or other fixed installation is received, the Station Master who becomes aware of it, will stop movement of trains in the affected block section as well as on adjacent lines on double/multiple line sections and will take action as per SR 6.07/1 (d) in consultation with the Section controller except that only rail maintenance machine/tower wagon/light engine shall be sent to ascertain for the line to be safe for the movement of the train. SR 6.07/4 In the event of the Loco Pilot and /or Guard experiencing any obstruction or any other unsafe condition, on or near the track adjacent to the line over which his train has

passed and which in his opinion is detrimental to safe train running, will take the following remedial action:- (a) Immediately switch on the flasher light of his loco; (b) Inform the Station Master (s) concerned/control through the available means communication, and concurrently (c) Stop his train and proceed with danger hand signals to protect the line in question in terms of GR 3.62; 172 (g) zrr*-e'r\$1 āzrrg I (U) 6.07/1 OT) (q) 6.08. - (2) (3) (4) (5) (6) (ii) 6.03 ByrfR•a e. (ü) a-TFT crrzra•est -0-0 a-Tm — 0—0 \$1 a-Tm 173 CHAPTER-VI ACCIDENTS AND [JNUSUAL OCCURRENCES (d) (f) (g) thereafter, he will continue journey to the next station cautiously keeping flasher light on; and Be prepared to stop any incoming train approaching on the affected section by communication on walkie-talkie or other available means of communication and exhibiting danger hand signal; On arrival at the next station he shall inform the station Master through a written memo about the occurrence; On receipt of such information the Station Master must take action as per SR 6.07/1 (c) to (f). 6.08. Train Parting- (1) (2) (3) (4) (5) (6) If any portion of a train should, while in motion, become detached. (a) (b) (c) the Loco Pilot shall use his judgement to keep the front portion in motion, if possible, until the rear portion has been brought to a stand so as to avoid the chance of a collision between the two portions, and sound the prescribed code of whistle to inform the Guard of the parting. the Guard in the rear portion shall- (i) do all they can to prevent a collision with the front portion, and (ii) Promptly apply their hand-brakes, where provided, and the Loco Pilot of a banking engine, if any, shall bring the rear portion to a stand and sound the prescribed code of whistle to attract the attention of the Loco Pilot in the front portion. As soon as the rear portion of a train has been brought to a stand, the Guard of the train shall protect that portion in accordance with Rule 6.03 both in the front and the rear, and take steps to secure the vehicles in stationary position by pinning down hand brakes and wherever necessary and prescribed by special instructions by use of sprags and chains also. The Guard shall indicate the parting of the train, by waving in repeated motions a green flag by day, or a white light by night, up and down vertically as high and as low as possible. When both portions of a parted train are brought to a stand within sight of each other and it is possible and safe to couple them, the train shall be coupled with due caution under hand signals from the Guard provided necessary precautions have been taken to secure the rear portion in the manner described in sub rule (2). If the Loco Pilot of the parted train has already reached the block station in advance before he could bring the front portion to a stop, he shall instantly warn the Station Master of the parting as also the railway servant in charge of a cabin, if passed on the way, and shall not give up the tangible authority to proceed, if any, till the block section is cleared of all the vehicles of his train. The duties of the Guard specified in this rule shall devolve on the Loco Pilot in the absence of the guard. S.R. 6.08/1. parting of trains- (a) (b) When any portion of a train in motion becomes detached, the Guard on realising the situation shall promptly apply his hand brake and then signal to the Loco Pilot by waving up and down a green hand signal by day and white light by night. The Loco Pilot must acknowledge this signal with -0-0 whistles and use his judgement to keep the front portion in motion until the rear portion has come to a stand. If the Loco Pilot comes to know that the train has parted, he should put on flasher light and give -0-0, whistle repeatedly to attract attention of the Guard till acknowledged by Guard (by waving green hand signal up and down by day and white light by night). Loco Pilot should keep the front portion of the train moving until the rear portion has come to a stand. 173 —0—0 a-Tm a-r 3F4 -0-0 ezrra 6.03 I crrzrere (F) ælfi.6.04/2 (31) (30 \$1 R.qt-é -\$1 6.09. 6.03 I a-ur I 6.03 174 CHAPTER-VI ACCIDENTS AND [JNUSUAL OCCURRENCES (c) (d) (f) (g) (h) (i) (j) If the Loco Pilot finds it necessary to proceed to the station ahead, he must, on approaching the station, give -0-0 whistle repeatedly to warn the station staff. The Station Master must promptly admit the train into the station on a vacant line, and immediately inform the station in rear that the train has parted and that the rear portion may roll back towards the latter. If however, the rear portion is following the front portion, the Station Master must attract the Guard's attention to apply wagon brakes and endeavor to bring it to a stand by the application of wagon brakes or by heaping up earth on the rails or other suitable means or divert it, if possible, to a vacant loop or siding line. If there is a banking engine in the rear, the Loco Pilot of which discovers the parting, he must bring the rear portion to a stand at the same time repeatedly give -0-0 whistle to attract the attention of the leading engine Loco Pilot. If the Station staff notice a train running in two or more portions, they will endeavor to attract the attention of the Loco Pilot and the Guard by waving up and down a green hand signal by day and white light by night. As soon as the rear portion has come to a stand in the section, the guard must protect it, both in rear and in front, or if the front portion is out of sight, in accordance with

G.R. 6.03. If there is a banking engine, the Loco Pilot of the banking engine will protect the rear and the Guard will protect in front of the train. If both the portions have come to a stand on a single line section, the train Loco Pilot will depute Assistant Loco Pilot to protect in front and the guard will protect in rear. On a double line, if the adjacent line is fouled, that line must also be protected in accordance with the rules.

If portion of the parted loads stops on a gradient then Loco Pilot and Guard will also take action according to S.R. 6.04/2. When both the portions of the parted train are brought to a stand and it is possible to couple them up, the Guard will be responsible for bringing the two portions together in a safe and proper manner.

Do not attempt to recouple the parted load if the number of wagons in rear portion is 10 or less in four-wheeler stock and 5 or less in eight wheeler bogie stock. In such case, clear the load in two portions. In case where there is banking loco in rear, the load can be recoupled. When a train parts on its journey, the tonnage and number of vehicles/wagons of the train must be jointly checked by the guard and the Loco Pilot and also by the Station Master where the train is taken in two portions. This information must be embodied in the joint report.

6.09. Portion of train left in a block section- (1) (2) (3) (4) (5) When a train stopped in a block section has to be divided in consequence of an accident or the inability of the engine to take the whole train forward, the Guard of the Train shall immediately take steps to protect the rear portion of his train in accordance with Rule 6.03. If the engine is capable of proceeding either with or without vehicles, the Guard shall, after taking action as provided for in sub-rule (1) and before uncoupling, put down the brakes and shall, if necessary, otherwise carefully secure the rear portion of the train to ensure its remaining stationary. When the Guard has taken action as provided for in sub-rule (2), he shall give a written permission to the Loco Pilot to uncouple and proceed to the next station and may, if he thinks fit, give him written instructions to return on the same line. On sections of the single line where token working is in force, the Loco Pilot shall, before leaving any portion of his train in a block section, hand over the token to the Guard from whom he shall obtain a written receipt. The guard shall retain the token until the

block section has been cleared of all vehicles of his train. At night or in thick, foggy or tempestuous weather impairing visibility, as soon as the engine, whether with or without vehicles is drawn forward, the Guard shall- (a) Protect his train in the front also in accordance with Rule 6.03, and (b) also see that a red light is shown on the front vehicle of the rear portion of the train.

(11) G.T.T. (0000) 6.03 g (ii) (ii) q-lå 50 10 a-fi a-ITTt a-TFßT I g•zi a-TFßT crzrere (t / 609) cra \$1 crq•å I -q-rå I 6.03 175 CHAPTER-VI ACCIDENTS AND UNUSUAL OCCURRENCES (6) (7) (8) (9) When the front portion of the train is taken forward, no tail lamp or tail board shall be placed on the rear vehicle of that portion of the train but the guard shall give its number in full in the written permission referred to in sub-rule (3). On entering a station with the knowledge that the block section in rear is obstructed, the first duty of the Loco Pilot is instantly to warn the station Master of this fact. If a cabin is passed on the way to the station, the railway servant in charge of the cabin shall also be informed of the fact. When, under written instructions referred to in sub-rule (3), the engine is to be brought back, Guard shall, until the arrival of the engine, continue to remain in rear of the portion of the train left in the block section and shall not permit a following train, if any, to move any of the vehicles under his charge. (a) The Loco Pilot shall not bring his engine, with or without vehicles back on the same line unless he has received written instructions under sub-rule (3) from the Guard to do so. (b) In addition, on a multiple line section, the Loco Pilot shall also have a written authority from the Station Master, who shall ensure that no train is diverted on to or crossing the same line on that portion of the track over which the said Loco Pilot would be returning. (c) The Station Master, before giving such written authority, shall obtain necessary

assurances as prescribed by special instructions from the Station Master having diversion facilities and also inform the Controller of the circumstances. (10) On double or multiple line sections, the Loco Pilot may, under instructions from the Station Master, take the train back on the proper line, according to the system of working, until he can cross on to the line on which he has left the rest of his train and may then proceed by that line and after attaching the engine shall work the train to the station to which he is directed. (11) When moving under written instructions against the direction of traffic on a double line, or

against the established direction of traffic on a single line, the Loco Pilot shall proceed cautiously and make frequent use of the prescribed code of whistle. S.R. 6.09/1 Working of trains in two or more parts- (a) (b) (c) When a train stops in a block section in consequence of an accident or the inability of the engine to take the whole train forward, the Loco Pilot of the train will give four short (0000) whistles repeatedly and the Guard will take immediate steps to protect the train in rear in accordance with G.R. 6.03. (i) (ii) (i) (ii)

After the train has been protected, the Guard will consult the Loco Pilot and if the engine, is capable of proceeding either light or with part of the load, the Guard will take immediate steps to pin down firmly hand brakes of at least 50% wagons of remaining load or IO wagons (whichever is more) and also apply the hand brake in the brakevan. This must be done before the train is divided or the engine is uncoupled from the train. The Loco Pilot must ensure that hand brakes on an adequate number of wagons have been pinned down. In air braked load close the angle cock of both the wagons/coaches from where the load is to be divided. The Guard will give a WTitten authority on the prescribed form (T/609) to the Loco Pilot to proceed to the next station, clearly stating the number of vehicles and also the painted number and the coming railway of the last vehicle of the load attached to the engine. On a single line section the Loco

Pilot shall hand over the 'token' or the Line Clear Ticket, whichever in use, to the Guard and obtain a receipt from him. The Guard shall retain the token or the line Clear Ticket until the block section has been cleared of all the vehicles of his train. As soon as the engine with/without vehicles is drawn forward, the Guard will place his red hand signal in front of the remaining load and then will protect load in front in accordance with G .R. 6.03. 175 (ii) —0—0 crzrere (ii) @ crzrere 25 Et. I / uh-éq cr#l / q-lå a-TFBT I 6.10. (2) 3TPT ur (3) \$1 \$1 R•qié 176 CHAPTER-VI (d) (D (g) (i) (i) (k) (m) (i) (ii) (i) (ii) ACCIDENTS AND [JNUSUAL OCCURRENCES The Loco Pilot will send his Assistant Loco Pilot to the Guard who will depute him with hand signals to protect the remaining load in rear. The Loco Pilot while working part load, without Assistant Loco Pilot on engine should proceed cautiously up to the next block station. On approaching the Station ahead with the knowledge that the block section behind is obstructed, the Loco

Pilot must stop at the outermost facing points and give (-0-0) whistles repeatedly to warn the station staff that only a part of load has arrived and that the section behind is obstructed. At stations where there are no facing points, the Loco Pilot shall stop opposite station/Cabin without clearing the block section in rear and give the prescribed whistle code. The Station Master after understanding the situation will take immediate steps to ensure that the block section in rear is not cleared and advise the Station Master at the other end of the obstructed block section and the Section Controller. He should then exhibit 'All- Right' hand signal from the platform/Cabin for the train to be admitted into the station. On arrival at the station, the Loco Pilot and the Station Master must jointly check load to see that it has arrived complete. When returning to pick up the load left in section, the Loco Pilot must keep a sharp lookout and proceed cautiously at a speed not exceeding 25 kilometers per hour making frequent use of the engine whistle.

Station Master will depute one Pointsman/Porter with the Loco Pilot of the train engine, while returning to pick up remaining portion of the load. Loco Pilot will immediately stop his engine at the site where the Guard is displaying the red signal. After stopping of engine, Guard will pick up detonators and pilot the engine by riding on it towards the load. As soon as the portion of the load left in the section is either sighted by the Guard or Loco Pilot, the engine will be brought to a halt. The guard will get down from the engine and pilot the engine onto the load walking at a safe distance ahead of the engine. The Assistant Loco Pilot deputed to protect the train in rear will be recalled. He will return leaving 3 detonators on the line and picking up the intermediate detonator. If the same Loco Pilot could not be returned, another engine will be sent by Station Master under authority to proceed without line clear. On multiple line section, the Station Master, before giving WTitten permission to the Loco Pilot authorising him to proceed in the obstructed section, shall advise the station Master of the stations having diversion facilities, not to permit any train or engine on the obstructed line. This assurance shall be under the exchange of messages with such station Masters having diversion facilities. This message will be supported by private number.

If the engine of a passenger train is unable to haul the full load, it will not be detached but will remain coupled up to the train until an assisting engine arrives. After the train has been protected in rear in accordance with G.R. 6.03, and if information cannot be conveyed to the Section Controller on the Field Telephone, the Assistant Loco Pilot will be sent to the nearest block station with a written message for assistance. Before clearing back section the Station Master will confirm in "Titing with the Guard that complete load has arrived. 6.10. Fire- (1) A railway servant noticing a fire, likely to result in loss of life or cause damage to property, shall take all possible steps to save life and property, to prevent it from spreading and to extinguish it. (2) In case the fire is on or adjacent to any electrical equipment, the railway servant shall, if he is competent in handling electrical equipment and specially trained for the purpose, have the affected part immediately isolated from its source of supply of electrical energy. (3) The occurrence of a fire shall, in every case, be reported to the nearest Station Master by the most expeditious means and

Station Master shall take such action as may be prescribed by special instructions. 176 (2) (3) g) g) (e) a-TFBT uT a-IPT a-Tm dii a-rm \$1 a-IPT zrr 10 I a-rm -\$1-31R 3-11QT gem* crrzrere a-rm \$1 s:rrv--q I 177 CHAPTER-VI S.R. 6.10/1. Fire on trains- ACCIDENTS AND [JNUSUAL OCCURRENCES (a) (b) (c) Should any portion of a train be discovered to be on fire, it should be brought to a stand and burning vehicle or vehicles separated from the rest of the train, and every exertion made to put out the fire with the least possible delay. Should it be known that water is procurable within a short distance from the place where the fire is discovered and it is considered safe to run the burning vehicle on to that spot, this may be done. A burning vehicle as far as possible should not be moved unless the rear portion is detached. Much, however, would depend upon the nature of the contents of the vehicle, the extent of the fire, and the liability of other vehicles being also set on fire; the Guard and Loco Pilot of the train must exercise their discretion in such cases. When a fire is discovered in a Passenger train, the safety of passengers must first be attended to; and when a postal van or carriage is on fire every effort must be made to save the mails.

S.R.6.10/2. Fire on Electric Engines- (I) (a) In the event of a fire on any part of any traction electrical equipment, the affected part shall first be completely isolated from the distribution system, if this has not been done automatically. If arising continues due to a feed from adjacent supply control posts, it shall be got interrupted either by remote or local operation of switches. The Traction Power Controller shall be informed immediately of the nature of the fire and the extent to which it has affected supply. (b) If any person notices a fire on or adjacent to traction electrical equipment, he shall make an attempt to extinguish the fire and shall report the occurrence to the Traction Power Controller by means of emergency telephone or the nearest Station/Cabin immediately. In the event of a Gangmate/Gangman noticing fire on or adjacent to traction electrical equipment he shall, in addition, inform any passing train or trolley. The Guard and/or Loco Pilot of the train or the occupant of the trolley shall then take action in accordance with General Rule 6.10 as the case may be. If there be more than one Gangman, the occurrence shall be reported to the Station Master on either side. A station Master, on receipt of such information, shall immediately inform the Traction Power Controller. The Traction Power Controller shall arrange for isolation of the affected portion of the equipment and for extinguishing the fire in accordance with these rules. If necessary, the Station Master should prevent the movement of trains towards the affected Section. (2) (3) (a) (b) (c) (d) In the event of fire on an electric engine, the Loco Pilot shall immediately switch 'Off' the circuit breaker and lower the pantograph. The train shall then be brought to a stop at once. After cutting off electric supply to the affected circuits the Loco Pilot shall take necessary action to put out the fire. If fire cannot be extinguished by the above means, the Loco Pilot shall advise the Traction Power Controller through the emergency telephone to arrange for the affected section of the overhead equipment to be made dead. The Guard shall give all possible assistance to the Loco Pilot in putting out the fire. Fire extinguisher of an approved type for use on electrical fires shall be provided on each electric engine and the Loco Pilot shall make himself familiar with the location and use of these extinguishers. During the periodical inspection of locomotive the extinguishers shall be examined by the locomotive inspection staff. Ordinary fire extinguishers or water from a hose pipe or bucket shall on no account be used to extinguish fires on live electrical equipment. If the services of the fire brigade are required, the brigade shall not be allowed to commence operations until all electrical equipment in the vicinity of the fire has been made dead. 177 (4) (5) 6.11. — g) (1) (ii) (iii) (i) (ii) (iii) (v) (vi) (vii) a-fi \$1 '3117' qfi a-ITTI? cre.Rt cret a-ft -aB \$1 a--TTTFIT zrr a-TPTT 178 CHAPTER-VI ACCIDENTS AND [JNUSUAL OCCURRENCES (4) Fire extinguisher which have been used shall be replaced or recharged with the least delay. (5) Stand-bins are provided at switching stations, stations and signal cabins. The supervisory official in charge must see that the sand is kept dry and clear of rubbish, and is not used for any other purpose. 6.11. Vehicles escaping from station-If any vehicle escapes from a station, the Station Master shall take immediate steps to warn the other stations or persons concerned, as far as practicable, to prevent an accident. S.R. 6.11/1. Vehicles escaping- (a) (b) (c) In the event of a vehicle escaping from a station. the Station Master must- (i) Immediately advise the station in the direction in which the vehicle has escaped by sending the prescribed signals on the block instruments, where provided, and also advise him on the telephone, the Section Controller must also be advised immediately. (ii) Put back all signals to 'On' stop any train proceeding in that direction until it has been ascertained that the road is clear. (iii) on a double line section, if the vehicle has escaped on the wrong road stop trains proceeding in that direction on the right road, until it has been ascertained that the escaped vehicle is not fouling the adjacent road. The Station Master who has received

the signal must act promptly as follows- (i) (iii) (iv) (v) (vi) He must immediately place all signals at 'On' to stop any train proceeding in the direction from which the vehicle has escaped, until it has been ascertained that the road is clear. If there is an approaching train in the section in front of the runaway vehicle, he should admit the train in front immediately, if a line is clear, and then take steps to stop or divert the runaway vehicle. On a double line section, if the escaped vehicle is approaching on the wrong road, he must detain trains proceeding in that direction until it has been ascertained that the runaway vehicle is not fouling the adjacent road. He must also take such measures as may be most expedient under the circumstances for stopping the escaping vehicle by covering the rails heavily with earth or small stones for as great a distance as possible or turning the runaway vehicle into a clear loop or siding or derailling it by placing a sleeper in its path. As far as possible, the vehicle containing passengers should not be derailed or turned into a derailling siding. If the block section ahead is clear and the line is not on a falling gradient, the vehicle may be allowed to pass through the station and the 'Vehicle running away' signal must be given to the station ahead. If the Station Master is unable to stop the runaway vehicle, he must repeat the 'Vehicle running away' signal to the next station in the direction in which the vehicle is escaping. (vii) If a portion of a train or a brakevan has run away, the Station Master must place three detonators on the track to attract the attention of the Guard. The Station Master at both ends of the section will depute competent railway servants to make a search for the vehicle and after it is ascertained that the vehicle has come to a stand and has been secured, send assistance into the section to bring the vehicle back or to the nearest station in consultation with each other. 178 7.01. - (q) (s) (q) tram, 7.02. - 179 CHAPTER-VII 7.01

Systems of working- SYSTEMS OF WORKING CHAPTER-VII SYSTEMS OF WORKING (1) All trains working between stations shall be worked on one of the following systems, namely- (a) the Absolute Block System, (b) the Automatic Block System, (c) the Following Trains System, (d) the Pilot Guard System, (e) the Train-Staff and Ticket System, or (D) the One Train Only System. (2) The Absolute Block and the Automatic Block Systems alone shall be used on every railway, except any railway or portion of a railway on which the use of any other system of working mentioned in sub rule (i) may be sanctioned under special instructions subject to the conditions applicable to each system as described in these rules.

7.02 Applicability of General Rules referring to the working of signals and trains- All rules referring to the working of signals and trains also apply to the system of working detailed in these rules, except where otherwise provided. S.R. 7.02/1. All subsidiary Rules referring to the working of signals and trains also apply to the system of working detailed in these rules except where otherwise provided. 179 8.01. VT (2) (€111) (*T115) I (IT) (m•ra) (*ZTII) GINT # , (1) (u) amx--en 400 180 I (#GT) (Qfr 8.02. 'N' Qld— (g) 8.03.'81' (1) (ea•a) 180 CHAPTER-VIII THE ABSOLUTE BLOCK SYSTEM CHAPTER-VIII THE

ABSOLUTE BLOCK SYSTEM A. Essentials 8.01 Essentials of the Absolute Block System- (1) (2) where trains are worked on the Absolute Block system- (a) (b) (c) No train shall be allowed to leave a Block Station unless Line Clear has been received from the block station in advance, and On double lines such Line Clear shall not be given unless the line is clear, not only up to the first stop signal at the block Station at which such Line Clear is given, but also for an adequate distance beyond it; On single line such Line Clear shall not be given unless the line is clear of trains running in the same direction, not only up to the first Stop signal at the Block Station at which such Line Clear is given, but also for an adequate distance beyond it, and is clear of trains running in the direction towards the block station to which such Line Clear is given. Unless otherwise directed by approved special instructions, the adequate distance referred to in clause (b) & (c) not be less than- (a) 400 meters in case of two-aspect lower quadrant signalling or two-aspect colour light signalling, and (b) 180 meters in case of multiple-aspect signalling or modified lower quadrant S.R.8.01/1. block system- signalling. Essentials of the Lock & Block system- The following are the essentials of the Lock & (a) It shall not be possible to take 'Off last Stop signal until 'Line Clear' has been received from the Block station in advance. (b) The last stop signal should immediately be replaced at 'On' automatically as soon as the train enters the Block section. (c) It shall not be possible to grant line clear by the Block station in advance unless the last preceding train has passed the block overlap complete and relevant reception signals have been replaced to "On". Note- Lock and Block system is a system of signalling in absolute block System, wherein the passage of trains electrically controls the block instrument, which in turn electrically controls the signals. B. Conditions for Granting Line Clear 8.02. Conditions for granting Line clear at a class 'A' station-At a class 'At station on single line or double line, the line shall not be considered cleared and Line Clear shall not be given, unless (a) the whole of the last

preceding train has arrived complete; (b) all signals have been put back to 'On' behind the said train; (c) the line on which it is intended to receive the incoming train is clear up to the Starter; and (d) all points have been correctly set and all facing points have been locked for the admission of the train on the said line.

8.03. Conditions for granting Line clear at a class 'B' station- (1) At a class 'B' station on double line, the line shall not be considered clear and Line Clear shall not be given, unless- (a) the whole of the last preceding train has arrived complete; (b) all necessary signals have been put back to 'On' behind the said train; and (c) the line is clear- (i) at stations equipped with two-aspect signalling-up to the Home signal, or 180 (ii)

(IT) (ii) 8.01 3.40 uaT 3.32 (1) I 8.04. - (8b') 400 e, (Rilla) Be 8.05. — 181 CHAPTER-VIII THE ABSOLUTE BLOCK SYSTEM (2) (ii) at stations equipped with multiple aspect signalling or modified lower quadrant signalling up to the outermost facing point or the Block Section Limit Board (if any). At a class 'B' station on single line, the line shall not be considered clear and Line Clear shall not be given, unless- (i) (ii) (a) the whole of the last preceding train has arrived complete; (b) all necessary signals have been put back to 'On' behind the said train; and (c) the line is clear- at stations equipped with two-aspect signalling-up to the Shunting Limit Board or Advanced Starter (if any) at the end of the station nearest to the expected train, or up to the home signal if there is no Shunting Limit Board or Advanced Starter, or up to the outermost facing point if there is no Shunting Limit Board or Advanced Starter or Home signal; at stations equipped with multiple-aspect signalling or modified lower quadrant signalling-up to the Shunting Limit Board or Advanced Starter (if any) at the end of the Station nearest to the expected train, or up to the outermost facing point if there is no Shunting Limit Board or Advanced Starter. Note : At a class 'B' single line station, this rule does not forbid direct reception of a train from one side, when Line Clear has been given to the block station on the other side provided the distance between the Outer signal and outermost facing points in two-aspect signalling, and between the Home signal and outermost facing point in multiple-aspect signalling, or modified lower quadrant signalling is not less than the sum total of the adequate distances prescribed in Rule 8.01 in regard to conditions for granting Line Clear and Rule 3.40 in regard to conditions for taking 'Off Home signal for the admission of a train even where Shunting Limit

Boards or Advanced Starter have not been provided as prescribed in sub-rule (1) of Rule 3.32. See illustrative diagrams at the end of this chapter. 8.04. Conditions for granting Line clear at a class 'C' station-At a class 'C' station on single line or double line in two aspect, multiple aspect or modified lower quadrant signalling the line shall not be considered clear and Line Clear shall not be given, unless- (a) the whole of the last preceding train has passed complete at least 400 meters beyond the Home signal and is continuing its journey; and (b) all signals taken 'Off' for the preceding train have been put back to 'On' behind the said train; provided that on a single line, the line is also clear of trains running in the opposite direction towards the Block Hut from the Block stations at the other end. (C) Obstruction-Double Line

8.05. Obstruction on double line at a block station when a train is approaching- (1) (2) (3) Class 'A' station - When Line Clear has been given, no obstruction shall be permitted outside the Home signal, or, on the line on which it is intended to admit the train up to the starter pertaining to the said line. Class 'B' station - When Line Clear has been given, no obstruction shall be permitted outside the station section but shunting within the station section may go on continuously, provided the necessary signals are kept at 'On' When signals have been taken 'Off' for an approaching train on a line, which is not isolated, no shunting movement shall be carried on towards the points over which the incoming train will pass. 181 1 g•zi

aMTfi.8.05(2) 8.05\$1 3 +8.05/3. 5.16/1 8.06. (eaa) : 8.14 (t/ 806) cra €1 / 806 8.07. (A «N) — (8b1) ux-- enq (€1&) qruQT11 8.08. 'T (ATaT*T) - 182 CHAPTER-VIII THE ABSOLUTE BLOCK SYSTEM

S.R.8.05/1 . Obstruction when train is approaching - Shunting under G.R. 8.05/2 is not permitted during thick, foggy, tempestuous weather and impaired visibility. S.R. 8.05/2. The points referred in 3 of G.R.

8.05 also include the far end points. S.R. 8.05/3. See SR 5.16/1. 8.06. Obstruction on double line in the block section- (1) When Line Clear has been given, no obstruction shall be permitted in the block section in rear, (2) Shunting or obstruction for any other purpose shall not be permitted in the block section in rear unless it is clear and is blocked back. (3) Shunting or obstruction for any other purpose shall not be permitted in the block section in advance unless it is clear and is blocked forward; Provided that when the block section in advance is occupied by a train travelling away from the Station, shunting or obstruction may be permitted behind the train under special instructions taking into consideration the speed, weight and brake power of trains and the gradients on the section, and as soon as intimation has been received that the train has arrived at the block station in advance, the line shall be blocked forward if it is still

obstructed. Note: See Rule 8.14 also. S.R. 8.06/1. (a) Whenever shunting is permitted in block section, either in rear or advance, the Station Master, after blocking back/forward the line, as the case may be, shall issue an authority on prescribed form (T/806) authorising the Loco Pilot to enter the Block section for shunting purposes. After the shunting has been completed in the block section the Loco Pilot shall return this authority to the Station Master, who shall paste it along with the original foil. (b) The authority for performing shunting (T/806) Shall also be given, when such shunting is permitted in the block section occupied by a train travelling away from the station. This authority need not be issued, when a shunt signal provided below the Last Stop signal, has been taken 'Off for shunting purposes. D. Obstruction - Single

Line DI. Class 'A' stations 8.07. Obstruction on single line at a class 'A' Station when a train in approaching - When Line Clear has been given, no obstruction shall be permitted outside the Home signal, or, on the line on which it is intended to admit the train, up to the Starter which controls the train. 8.08.

Obstructing the block section at a Class 'A' station on single line- The block section shall not be obstructed for shunting purpose, unless- (a) The Station Master has received Line Clear from the Station Master at the

other end of the block section, or (b) The Block section is blocked back, or (c) is occupied by a train travelling away from the block station at which the shunting is to be performed which shunting may be permitted under special instructions taking into consideration the speed, weight and brake power of trains and the gradients on the section. As soon as intimation has been received that the train has arrived, the block section shall be blocked back, and (d) The Loco Pilot or other person in charge of the shunting

operations has received distinct orders from the Station Master to shunt in a manner directed by special instructions. 182 8.09. a' - +8.09/1. 8.09 zrr zrr Adi \$1 rrRQ-11N. +8.09/3. 8.10. a' (B Ta-r*1) - 8.11. (B «N) — t" a-fi 183 CHAPTER-VIII D2. Class 'B' Stations THE ABSOLUTE BLOCK SYSTEM 8.09.

Obstruction in the face of an approaching train a class 'B' station on single line - The line outside the Home signal in two-aspect signalling territory or outermost facing point in multiple aspect or modified lower quadrant signalling territory in the direction of a train for which line Clear has been given, shall only be obstructed when a Shunting Limit Board or an Advanced Starter is provided and under special instructions which take into consideration the speed, weight and brake power of trains, the gradients, the position of the first Stop Signal and the distance from which that signal can be seen by the Loco Pilot of an approaching train. S.R. 8.09/1. Where is terms of GR 8.09 shunting is permitted out side the home signal in two aspects signalling territory or outside outermost facing points in multiple aspect or modified lower quadrant signal

ling territory up to Shunting Limit Board or Advanced starter in the face of an approaching train, the Station Working Rules shall include a specific mention to this effect. While permitting such shunting, the work, load, speed, weight and brake power of trains, the gradients, the position of the first stop signal and the distance from which that signal can be seen by the Loco Pilot of an approaching train, shall be taken

into consideration. S.R. 8.09/2. Where shunting is permitted under G.R. 8.09 it should be specifically recorded on Form. No. T/806. S.R. 8.09/3. Shunting under G.R. 8.09 is not permitted during thick foggy, tempestuous weather and impaired visibility. 8.10. Obstructions within station section at a class B station on single line- (1) (2) If the necessary signals are kept at on shunting may be carried on within the station section, provided the provisions of Rule 8.09 are complied with for shunting up to Shunting Limit Board or Advanced Starter, where provided. When signals have been taken off for an incoming train on to a line,

which is not isolated, no shunting movement shall be carried on towards the points over which the incoming train will pass. S.R. 8.10/1. The points referred to in para (2) of G.R. 8.10 also include the far-end points. S.R. 8.10/2. Shunting under 8.10 (1) is not permitted during thick foggy, tempestuous weather and impaired visibility. 8.11. Obstructions outside station section at a class B single line station equipped with

two aspect signals- The line outside the station section and up to the Outer signal shall not be obstructed unless a railway servant specially appointed in this behalf by the Station Master is in charge of the operations, and unless- (a) The block section into which the shunting is to take place is clear of an

approaching train and all relevant and necessary signals are at on position, or (b) If an approaching train has arrived at the Outer signal, the Station Master has personally satisfied himself that the train has been brought to a dead stand at the signal; Provided that the line shall not be obstructed under clause (b) in thick, foggy or tempestuous weather impairing visibility, or, in any case unless authorised by special instructions. S.R. 8.11/1. At a class B station on single line equipped with two-aspect signals, shunting

may be performed between the Outer signals without blocking back the section, provided 'Line Clear' has not been granted for a train to approach. In the event of receipt of 'Is line clear' signals from the other end

of the section, and if the section is still occupied, the line should be immediately 'blocked back'. 8.12. (B «TH) 8.13. (B - 8.14. ur - ur 8.15. — ælf8.15/1. / 806 (ii) -qat uT uT Qiü Qiü / 806 184 CHAPTER-VIII THE ABSOLUTE BLOCK SYSTEM At stations where token less block instruments are installed, such shunting out side the station section up to the outer signal shall be performed only after the section has been 'blocked back' and the shunt/ occupation key handed over to the Loco Pilot. 8.12. Obstructions outside station section at a class 'B' single line station equipped with manually operated multiple-aspect signals-The line outside the station section and up to the first Stop signal shall not be obstructed unless a railway servant specially appointed in this behalf by the Station Master is in charge of the operation, and unless the block section in to which the shunting is to take place is clear of an approaching train.

S.R.8.12/1. At a class B station on single line equipped with manually operated multiple aspect signals, shunting may be performed between the Home signals without 'blocking back' the section, provided 'Line Clear' has not been granted for a train to approach. In the event of receipt of 'Is Line Clear' signal from the other end of the section and if the section is still occupied, line should be immediately 'blocked back'. At stations where token less Block Instruments are installed, such shunting outside the station section up to the Home signal shall be performed only after the section has been 'blocked back' and the shunt/ occupation key handed over to the Loco Pilot. 8.13. Obstruction outside the first Stop signal at a class 'B' station on single line- The line outside the first Stop signal shall not be obstructed unless the line has been blocked back. E. General provisions. 8.14. Block back or Block forward - Block back or block forward shall be done only in accordance with the procedure prescribed by special instructions. S.R. 8.14/1. The detailed procedure for block back and block forward is given in Block Working Manual. 8.15. Authority for shunting or obstruction in block section - While permitting shunting or obstruction in the block section, the Loco Pilot shall be given authority for shunting in the block section as prescribed under special instructions which authority may be- (a) either a shunting arm of prescribed size and design on the same post as and under the Last Stop signal, or (b) a token of prescribed design, or (c) a written permission to shunt. S.R. 8.15/1. Whenever shunting is permitted in the block section, the Loco Pilot shall be given an authority as detailed below in addition to Blocking Back and Blocking forward which shall be:- (i) Both on double and single line- By taking off shunt signal provided as per clause (a) of G.R. 8.15 when the Loco Pilot has to pass Last stop signal both on double line and single line and specific written authority on shunting order (Form T/806). (ii) On single line- By handing over the concerned token or tablet where Neal's Ball token or tablet instruments are provided for shunting occupation key in token less block territory' to the Loco Pilot as authority to shunt in the Block section and a specific written authority on shunting order (Form T/806). 184 (iii) / 806 ajT ATfÄqj1X I / 806 (iv) \$1 frFTfäfürr gg / 806 (v) \$1 fifte-uä 8.16. 185 CHAPTER-VIII THE ABSOLUTE BLOCK SYSTEM (iii) On double line- By handing over occupation key where Daido's Block Instruments are in use by issuing specific written authority to shunt on Form (T/806) to the Loco Pilot. In case of other instrument, specific instructions on (T/806) should be issued. (iv) When shunting is permitted Form T/806 must be issued to the Guard and the Loco Pilot of the Train specifically mentioning the following points on this form and acknowledgement of both obtained. (a) Limits of shunting. (b) Details of work to be done. (C) Running line/lines and other line/lines involved in the movement. (d) Approximate time up to which shunting is to be completed. (v) When shunting of a train is permitted suitable entries in this regard should be made in the Train Signal Register and Log Book of ASM and Cabinmaster and Log Book of the cabin man. S.R.8.15/2. The Station Master will recover the token/tablets/shunting occupation keys and/or written authority before giving line clear for a train to approach from the direction referred to thereon. S.R. 8.15/3. When in terms of G.R. 8.15 shunting is permitted in Block Section the Station Working Rules shall contain suitable instructions governing such movement. 8.16 Illustrative diagrams - Class 'A', 'B' and 'C' stations on single line and double line are illustrated in the following diagrams, which are not drawn to scale. CLASS 'A' DOUBLE LINE STATION IN TWO ASPECT SIGNALLING TERRITORY WITH WARNER, HOME, STARTER AND ADVANCED STARTER SIGNALS HOME WARNER ADVANCED STARTER STARTER STARTER ADVANCED STARTER WARNER HOME BLOCK SECTION 185 •g' (ft-firer) fä-*iibifl (Rill-Qi) 186 CHAPTER-VIII THE ABSOLUTE BLOCK SYSTEM CLASS 'A' SINGLE LINE STATION IN TWO ASPECT SIGNALLING TERRITORY WITH WARNER, HOME AND STARTER SIGNALS STARTER HOME WARNER STARTER WARNER HOME BLOCK SECTION CLASS 'B' DOUBLE LINE STATION IN TWO ASPECT SIGNALLING TERRITORY WITH WARNER, OUTER, HOME,

STARTER AND ADVANCED STARTER SIGNALS HOME OUTER WARNER ADVANCED STARTER STARTER STARTER BLOCK SECTION ADVANCED STARTER OUTER WARNER HOME STATION SECTION CLASS 'B' SINGLE LINE STATION IN TWO ASPECT SIGNALLING TERRITORY WITH OUTER, AND HOME SIGNALS OUTER HOME BLOCK SECTION 186 HOME STATION SECTION OUTER zif&r fäÄe eié zif&r fäÄe ftqme 187 CHAPTER-VIII THE ABSOLUTE BLOCK SYSTEM CLASS 'B' SINGLE LINE STATION IN TWO ASPECT SIGNALLING TERRITORY WITH WARNER, OUTER, HOME, STARTER AND ADVANCED STARTER SIGNALS 1 SHUNTING LIMIT BOARDS HOME OUTER WARNER ADVANCED STARTER OR SHUNTING LIMIT BOARD STARTER BLOCK SECTION STARTER ADVANCED STARTER OR SHUNTING LIMIT BOARD OR OUTER WARNER HOME STATION SECTION CLASS 'B' DOUBLE LINE STATION IN MULTIPLE ASPECT SIGNALLING TERRITORY WITH DISTANT, HOME, STARTER, ADVANCED STARTER SIGNALS AND BLOCK SECTION LIMIT BOARD HOME DISTANT ADVANCED STARTER STARTER BLOCK SECTION STARTER ADVANCED STARTER BLOCK SECTION LIMIT BOARD DISTANT HOME STATION SECTION CLASS 'B' DOUBLE LINE STATION IN MODIFIED LOWER QUADRANT SIGNALLING TERRITORY WITH DISTANT, WARNER, HOME, STARTER, ADVANCED STARTER SIGNALS AND BLOCK SECTION LIMIT BOARD WARNER HOME DISTANT BLOCK SECTION LIMIT BOARD ADVANCED STARTER STARTER BLOCK SECTION 187 STARTER ADVANCED STARTER DISTANT WARNER HOME STATION SECTION eif&T fäÄe zifäT ftrfire (Ri•Ø frq;-e. fäfire (Riq«) / eif&T Rrme eif&r fäfie 188 CHAPTER-VIII THE ABSOLUTE BLOCK SYSTEM CLASS 'B' SINGLE LINE STATION IN MULTIPLE ASPECT SIGNALLING TERRITORY WITH DISTANT, HOME, STARTER AND ADVANCED STARTER SIGNALS 1 SHUNTING LIMIT BOARDS HOME DISTANT OR STARTER ADVANCED STARTER OR SHUNTING LIMIT BOARD BLOCK SECTION STARTER ADVANCED STARTER OR SHUNTING LIMIT BOARD OR DISTANT HOME STATION SECTION CLASS 'B' SINGLE LINE STATION IN MODIFIED LOWER QUADRANT SIGNALLING TERRITORY WITH DISTANT, WARNER, HOME, WARNER, STARTER AND ADVANCED STARTER SIGNALS I SHUNTING LIMIT BOARD WARNER HOME DISTANT OR ADVANCED STARTER OR SHUNTING LIMIT BOARD STARTER STARTER BLOCK SECTION ADVANCED STARTER OR SHUNTING LIMIT BOARD OR DISTANT WARNER HOME STATION SECTION CLASS 'C' DOUBLE LINE STATION IN TWO ASPECT SIGNALLING TERRITORY WARNER WITH WARNER AND HOME SIGNALS HOME HOME BLOCK SECTION 188 WARNER ft--«je 400 (fti71Q1) (Ri'1Q0 8.03 180 189 180 400 CHAPTER-VIII THE ABSOLUTE BLOCK SYSTEM CLASS 'C' DOUBLE LINE STATION IN MULTIPLE ASPECT SIGNALLING TERRITORY DISTANT WITH DISTANT AND HOME SIGNALS HOME HOME BLOCK SECTION DISTANT CLASS 'C' SINGLE LINE STATION IN TWO ASPECT SIGNALLING TERRITORY WARNER WITH WARNER AND HOME SIGNALS HOME HOME WARNER CLASS •C' SINGLE LINE STATION IN MULTIPLE ASPECT SIGNALLING TERRITORY WITH DISTANT AND HOME SIGNALS DISTANT HOME HOME BLOCK SECTION DISTANT CLASS 'B' SINGLE LINE STATION IN TWO ASPECT SIGNALLING TERRITORY WITH OUTER AND HOME SIGNALS HOME OUTER 400 M 180 M HOME STATION SECTION 400 M OUTER 180 M BLOCK SECTION 189 180 180 120 (Rill@ (frgrq 8.03 Q) (Rixra) (Äuq 8.03 120 190 CHAPTER-VIII THE ABSOLUTE BLOCK SYSTEM CLASS 'B' SINGLE LINE STATION IN MULTIPLE ASPECT SIGNALLING TERRITORY WITH DISTANT, HOME AND STARTER SIGNALS DISTANT 180M HOME 120 M STARTER BLOCK SECTION STARTER 120 M HOME STATION SECTION 180 M DISTANT CLASS 'B' SINGLE LINE STATION IN MODIFIED LOWER QUADRANT SIGNALLING TERRITORY WITH DISTANT, WARNER, HOME AND STARTER SIGNALS DISTANT 180 M HOME WARNER 120 M STARTER 120 M HOME WARNER STATION SECTION 180 M DISTANT STARTER BLOCK SECTION 190 9.01. (2) (3) (4) (gqa) - («rq) (æ•rq) GINT (IT) ur (€111) (ii) '31M' I (q) (i) 'INfQ 120 I GINT (e.) (IT) (2) 191 CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM A Rules applicable to double line 9.01. Essentials of the Automatic Block System on double line. (1) (2) (3) (4) Where trains on a double line are worked on the Automatic block system- (a) (b) (c) the line shall be provided with continuous track circuiting or axle counters, the line between Ovo adjacent Block Stations may when required be divided into a series of automatic block signalling sections each of

which is the portion of the running line between two consecutive stop signals, and the entry into each of which is governed by a stop signal, and the track circuits or axle counters shall so control the stop signal governing the entry into an automatic block signalling section that- the signal shall not assume an 'Off' aspect unless the line is clear not only upto the next stop signal in advance but also for an adequate distance beyond it, and (ii) the signal is automatically placed to 'On' as soon as it is passed by the train. unless otherwise directed by approved special instructions, the adequate distance referred to in sub-clause (i) of clause (c) of sub-rule (1) shall not be less than 120 meters. (a) (b) (c) (d) (e) (O) (a) Under special instructions, one of the automatic stop signals between two stations in the automatic block signalling territory in each direction may be made as modified semi-automatic stop signal; the mid-section modified semi-automatic stop signal so provided shall be interlocked with the signals of the station ahead through track circuits or axle counters or both and shall be controlled by the Station Master of the station ahead, the relevant indications whether the signal is in normal automatic mode or modified semi-automatic mode shall be available to the Station Masters at both the ends; Advanced starter signal of the station in rear shall be interlocked with the mid- section modified semi-automatic stop signal in such a way that when working with 'A' marker extinguished, the Advanced starter signal shall assume 'Off aspect or be taken 'Off only when the line is clear upto an adequate distance beyond the mid- section modified semi-automatic stop signal; similarly the mid-section modified semi-automatic stop signal shall assume 'Off aspect automatically or be taken 'Off only when the line is clear upto an adequate distance beyond the Home Signal of the station ahead. during abnormal conditions like fog, bad weather impairing visibility, the mid-section modified semi-automatic stop signal may be worked by extinguishing 'At marker in the manner prescribed under special instructions and this action shall also ensure that the 'At marker of the Advanced Starter Signal of the station in rear and Home signal of the station in advance shall also be extinguished; the adequate distance mentioned under clause (c) shall not be less than as prescribed under sub-rule (2); during normal conditions, mid-section modified semi-automatic stop signal shall work as normal automatic stop signal. When the Loco Pilot finds mid-section modified semi-automatic stop signal with 'At marker extinguished in 'On' position, he shall stop his train in the rear of the signal and inform this fact to the Station Master of the station ahead on approved means of communication as prescribed under special instructions; 191 Rui-é 1 9.01 / 1 (.3frli-e) æ•rq EF•zrr 'R' 'A' 'AG' I / a-eq 9.01 / 2 l' a-TIRT7 æré•q g•zi 'R' (âQIT I 9.01 / 3 9.01 / 4 €TéR *TIT I 9.01 / 5 .3TT7F1-RT7 'R' I æré•q 'R' \$1 192 CHAPTER-IX (b) (c) (d) THE AUTOMATIC BLOCK SYSTEM the station Master of the station ahead may authorize the Loco Pilot to pass the mid- section modified semi-automatic stop signal working with 'A' marker extinguished in 'On' position through approved means of communication after ensuring conditions and procedure prescribed under special instructions; in case the Loco Pilot is unable to contact the Station Master of station ahead, he shall pass the signal at 'On' after waiting for five minutes at the signal and proceed cautiously and be prepared to stop short of any obstruction, at a speed not exceeding ten kilometers an hour upto the next Signal and act as per aspect of this signal; and the Loco Pilot shall report the failure of mid-section modified semi-automatic stop signal to the Station Master of the station ahead. SR.9.01/1 The mid-section modified semi-automatic stop signal will be operated by the Station Masters at both ends by operation of a set of fog switch/buttons provided and this signal can be operated as normal automatic stop signal or as semi-automatic stop signal with 'A' marker distinguished. Relevant indications are available to Station Masters of the stations at both ends to indicate whether the signal is in automatic or modified semi-automatic mode. Note :- Such gate signal, which has been converted as mid-section modified Semi-Automatic Signal, is provided with 'A' & 'AG' markers. During modified Automatic Signalling working, these markers will extinguish when fog switch/button is operated. In normal circumstances, the specified signal works in the auto mode with 'A' marker of the SR.9.01/2 semi-automatic signal lit. In abnormal circumstances, like fog, bad weather impairing visibility, when the modified system is to be introduced, the Station Master of train dispatching station will talk to the Station Master of the receiving station and exchange private numbers; thereafter both the SMS shall operate the fog switch/button. By this action of both Station Masters, the 'A' marker of all the three signals is extinguished i.e. Advanced starter signal of the dispatching station, mid-section modified semi-automatic stop signal and Home Signal of receiving station. Then train working shall start under the new modified system in either direction. The indication of aspect of mid-section modified semi-automatic stop signal (i.e. 'On'/'Off aspect and 'A' marker lit or extinguished) shall be depicted on the VDU/Panel of both the

stations, along with the aspect of Advanced starter signal or Home signal, as the case may be. SR9.01/3 Thus, after introduction of this system, interlocking will be such that when the mid-section modified semi-automatic stop signal is working with 'A' marker extinguished, not more than two trains, one on either side of this modified stop signal, will be ensured by the signalling system between two stations in any given direction at any given point of time. The mid-section modified semi-automatic stop signal shall when 'Off' depict the aspect (Green or Double Yellow etc.) based on the aspects and number of Automatic signals (including any other signal) between this signal and the Home signal of the receiving station. SR9.01/4 Once this system is introduced by the two Station Masters of the dispatching and receiving stations at a nominated time after taking action simultaneously and train working is started as per new modified system, it will continue to operate automatically in the manner prescribed above and the process of taking 'Off' Advanced starter signal and mid-section modified semi-automatic stop signal need not be repeated for every train by the Station Masters of respective stations. Facility shall however exist to work the Advanced starter signal and Home signal as manual signal as and when considered necessary by the controlling Station Master. However, during the time modified system is in force, Home signal shall work in manual mode only. SR 9.01/5 To restore the normal automatic signalling system at a pre-fixed nominated time, the Station Masters of the train dispatching and train receiving stations will talk to each other under exchange of private numbers and will re-introduce the normal system by operating the fog switch/button which will restore the 'A' marker on the mid-section modified semi-automatic stop signal to lit condition. The condition of 'A' marker of Home signal and Advanced starter signal will continue to be determined by the Station Masters of the controlling stations based on local conditions. 192 9.01 / 6 (i) a-ÄFTT I (ii) gel I R-2. fi qfrl 10 crrzrere 9.01 // 7 9.01 / 8 / aeq €1éR \$1 R-2. fi €TéR I 10 9.02 3.61 / 2 (a) a-Tütrrerq (i) (ii) '34TH' I crrzrere 10 9.02 3. 61 / 2(a) I 9.02 sri 3.61 /2(a) AT\$1—e1t1 u-l@e 193 CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM SR9.01/6 (i) At the time of introducing the modified automatic signalling, the Station Master concerned controlling the mid-section modified semi-automatic stop signal should, as far possible, take care that the aspect of this signal is 'On' to avoid sudden braking by the Loco Pilot of the approaching train. In addition, the Advanced starter signal and Home signal shall normally be put in manual mode before introducing the changeover. (ii) During the change-over from normal automatic signaling to modified automatic signalling, it may so happen that a Loco Pilot may encounter a situation when the 'A' marker gets extinguished and aspect of the signal turns into 'On' aspect while approaching the mid-section modified semi-automatic stop signal. In such a situation, the Loco Pilot will stop his train and, if this signal does not assume 'Off' aspect within 5 minutes, contact the Station Master of the station ahead on MTRC/SP and after obtaining SM's verbal authority with private number proceed ahead at a speed not exceeding 10 kmph till the foot of the next automatic signal and be guided by the aspect of this signal. In case the Loco Pilot has passed the signal, he shall stop and proceed cautiously so as to be prepared to stop short of any obstruction until next automatic stop signal is reached and shall act upon its indication. SR 9.01/7 Even with the change in the signalling arrangement, for the Loco Pilot, all existing rules/instructions for train passing in automatic signalling will be applicable. Thus all automatic signals in the sections shall work normally and Loco Pilot will follow existing GRs/SRs while passing these signals. SR9.01/8 System of working during failure of signals and fog switch/button. (a) (b) Failure of Advanced Starter Signal : When 'A' marker is extinguished, and the Advanced starter signal of the train dispatching station has failed, the Station Master shall issue written authority T/369(3b), dispensing with endorsement of private number, to the Loco Pilot to pass the signal at 'On' after ensuring that the last preceding train has passed the mid-section modified semi-automatic stop signal and adequate distance beyond it. If the clearance of section between Advanced starter signal and mid-section modified semi-automatic stop signal cannot be ascertained by the dispatching Station Master, he will talk to the Station Master of the receiving station and after confirming under exchange of private numbers that the last preceding train has arrived complete at the station ahead, he will authorize the Loco Pilot on T/369 (3b) to pass the defective Advanced starter signal in 'On' position. In both the above cases, the Loco Pilot shall proceed at a speed not exceeding 10 kmph till the foot of the next automatic signal and thereafter be guided by the aspect of this signal observing GR 9.02 and SR 3.61/2(a). Failure of Mid-section Modified Semi-Automatic Stop Signal. (ii) If the mid-section modified semi-automatic stop signal becomes defective and/or shows 'On' aspect due to any reason, the Loco Pilot will contact the Station Master of the receiving station on Mobile Train Radio Communication (MTRC)/Signal Post Telephone (SPT) provided on mid-section modified

semi-automatic stop signal, and inform him about the same. The Station Master shall authorize the Loco Pilot with private number to proceed ahead only after the last preceding train has arrived complete at his station. The Loco Pilot shall proceed at a speed not exceeding 10 kmph till the foot of the next automatic signal and thereafter be guided by the aspect of this signal observing GR 9.02 and SR 3.61/2(a) after recording the private number in his working diary'. In case telephone is not available or defective and Loco Pilot is not able to contact the Station Master concerned and the signal remains in 'On' position, he shall wait for 5 minutes and, if the signal remains 'On', will proceed ahead as per, GR 9.02 and SR 3.61/2(a) and report the same to the SM of the station ahead on Walkie-talkie or by written memo. On becoming aware that the mid-section modified semi-automatic stop signal with 'A' marker extinguished has failed, the Station Master of the train receiving station shall inform the Station Master of the train dispatching station about the same who shall, before dispatching a train, treat the entire section upto the block station ahead as one block section and obtain 'Line Clear' from the Station Master of the train receiving station under exchange of private numbers. 193 €1/ 901 (4) I u-l@e 9.02 3.61 /2(a) / 369(341) \$1 20 31 2000 0800 g•zi g•zi rref 9.01 / 9 gsw '34TH' di I u-l@e 9.02 I dii dii AT I '34TH' 9.02 194 CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM The receiving Station Master will grant 'Line Clear' only after the last preceding train has arrived complete at his station. The dispatching SM shall then issue a written authority T/9.01 (4) to the Loco Pilot to pass the defective mid-section semi-automatic stop signal at 'On' without stopping at the signal. An endorsement shall be made on such an authority that the 'Line Clear' for the block section upto the next station has been obtained under private number, quoting the same on this authority. The Loco Pilot shall proceed following GR 9.02 and SR 3.61/2(a) in respect of all other automatic signals in the section. If, however, the mid-section modified semi-automatic stop signal is protecting a level crossing, the controlling Station Master shall ensure that the level crossing gate is closed to road traffic before granting 'Line Clear' or permitting the train to enter the block section, as the case may be. This system of dispatching only one train in the block section shall continue till the mid-section modified semi-automatic stop signal is rectified. (C) Failure of Home Signal: If the Home Signal becomes defective, the Station Master of the receiving station will admit the train by taking Off Calling On signal (if provided) or, if the Calling On signal is also defective, by issuing written authority T/369 (3b). (d) Failure of Fog Switch/Button: If by operation of fog switch/button, 'A' marker on mid-section modified semi-automatic stop signal of a particular section does not get extinguished, the fog signaling system shall be treated as failed in between the two adjacent stations in relevant direction. The Station Masters will then extinguish the 'A' marker of Advanced starter signal and Home signal by means of facility available on the VDU/Panel to convert these signals in manual mode. Moreover, the modified automatic signalling system between any two adjacent stations may fail any time due to any reason after the same has been introduced and working successfully for some time. In both the cases above, the Station Master of the train dispatching station of the affected section will not dispatch a train in the section until the last preceding train has arrived complete at the receiving station, which shall be confirmed by the exchange of private numbers between the two Station Masters. Note: (1) The Loco Pilots and LIS concerned will be informed through shed notice well in advance about the likely period of introduction of modified automatic signalling system, which normally shall be

from 20th December to 31st January and from 2000 hrs to 0800 hrs which may get shifted as per prevalence of fog. A register will be maintained at the stations by the Station Masters to record the time at which the modified automatic signalling system is introduced and when the same is cancelled. A decision to continue or discontinue the system will be taken by the Sr. DOM of the division and will be advised to the Station Masters and the Section Controllers through control message and Loco Pilots/Guards through Crew/Guard Lobbies. (2) The Modified system will be introduced and cancelled depending upon abnormal conditions like fog, bad weather impairing visibility under the direction of Sr. D.O.M. SR 9.01/9 During clear weather, when the Loco Pilot finds the 'A' marker of mid-section modified semi-automatic stop signal extinguished and the aspect of the signal remains 'On', he shall bring his train to stop at the foot of this modified semi-automatic stop signal and shall contact the Station Master ahead on MTRC/SPT and inform him about the same. The Station Master shall, after ascertaining that the system of modified semi-automatic signalling is not in operation, give a private number to the Loco Pilot who shall record it on his diary. After receiving the private number, the Loco Pilot will proceed ahead as per GR 9.02. In case telephone is not available or defective and Loco Pilot is not able to contact the Station Master concerned and the signal remains in 'On' position, he shall wait for 5 minutes and, if the signal remains 'On', will proceed ahead as per GR 9.02 and report the same to the SM of the station ahead on Walkie-talkie or by written memo.

194 901/10 (i) €1-é-q (RN:frEfi-r (ii) (iii) (iv) 30 9.02. (eqa) (æe•rq) - (2) (3) (4) (5) ByrfR•a (4) (æe•rq) Qi ur GINT 10 Eid 3TT (æe•rq) I '31115' ag-i I (A) '34M 15 zrr .3-7#\$1 9.02 10 AEt. \$1 di "00—00" Eitl (ii) (GA (i) "000—000" 4.45 195 CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM SR. 9.01/10(i) In automatic block signalling sections, where modified semi-automatic stop signal cannot be provided between the two adjacent stations for any reason, only one train shall be permitted to enter the section at a time by means of suitable interlocking of Advanced starter signal of the train dispatching station and Home signal of the station ahead in such a way that the Advanced starter signal cannot assume 'Off' aspect unless and until the last preceding train has arrived complete at the station ahead. This shall be ensured by operation of fog switch/button by adjacent Station Masters. (ii) In Juhi-Panki block section, where twin single line working is in force on North and South lines, working similar to conventional double line shall be introduced during fog. (iii) In Chandari-Kanpur Loco cabin section, last stop signal of both stations shall be kept in manual mode during fog. (iv) In Chandari-Kanpur Central block section, train operation shall continue to be in normal automatic signalling mode, but maximum speed will be restricted to 30 kmph during day and night during fog. 9.02. Duties of Loco Pilot and Guard when an Automatic Stop Signal on double line is to be passed at 'On' (1) (2) (3) (4) (5) When a Loco Pilot finds an Automatic Stop signal with an 'At' marker at 'On', he shall bring his train to a stop in rear of the signal. After bringing his train to a stop in the rear of the signal, the Loco Pilot shall wait there for one minute by day and two minutes by night, If after waiting for this period, the signal continues to remain at 'On', he shall give the prescribed code of whistle and exchange signals with the guard and then proceed ahead, as far as the line is clear, towards the next stop signal in advance exercising great caution so as to stop short of any obstruction. The guard shall show a stop hand signal towards the rear when the train has been so stopped at an Automatic stop signal, except as provided for in sub-rule (4). Where owing to the curvature of the line, fog, rain or dust storm, engine working the train pushing it, or other causes, the line ahead cannot be seen clearly, the Loco Pilot shall proceed at a very slow speed, which shall under no circumstances exceed 10 kilometers an hour. Under these circumstances, the Loco Pilot, when not accompanied by Assistant Loco Pilot, and if he considers necessary, may seek the assistance of the Guard by giving the prescribed code of whistle. When so sent by the Loco Pilot, the Guard shall accompany him on the engine cab, before he moves forward, to assist the Loco Pilot in keeping a sharp look-out. When an Automatic stop signal has been passed at 'On' the Loco Pilot shall proceed with great caution until the next stop signal is reached. Even if this signal is 'Off' the Loco Pilot shall continue to look out for any possible obstruction short of the same. He shall proceed cautiously upto that signal and shall act upon its indication only after he has reached it. S.R. 9.02/1. (a) The 'ON' position of an Automatic signal maybe due to a train in the Automatic signalling section ahead including the overlap or due to an obstruction on the track or broken or displaced rail or any other cause. When a Loco Pilot/Motorman passes an Automatic Signal with an 'A' marker at 'ON' he shall proceed exercising great caution to be able to stop short of any obstruction and at a speed, which shall not exceed 15 KMPH on a straight road when visibility is good. Where due to curvature of the line, fog, dust storm, or other causes line ahead cannot be seen clearly, the Loco

Pilot/Motorman shall observe, the speed, which shall not exceed 10 KMPH. In case of Electric Multiple Units, the Motorman shall give 2 pause 2 rings and the same will be acknowledged by the Guard through same code of beats. (b) (i) The Guard of a train shall watch that the Loco Pilot does not exceed the speed prescribed in item (a) above. (ii) In case of EMU trains if the Motorman exceeds the speed prescribed the

Guard (when not travelling with the Motorman) shall give 3 pause 3 rings on the bell code to warn the Motorman and take action as prescribed in Rule-4.45. 195 (iii) 4.45 -as-till I OT) (4.W4) ooo ooo crgrere ezrra // zrr +9.02/2. (— — 00) Eifr-ui (000) +9.02/3. sri 1 "34Ä' zrra•r) zrra•r) crzrrere ft-Q.R 9.02/1. 3- +481 3.74 @ ATFTT) (Rp-rq•a) I / afrirr 150 uT 75 I / 10 (é.NH.4) I 196 CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM (c) (d) (iii) In case of other trains also if the Loco Pilot exceeds speed prescribed the Guard shall take action as per rule 4.45. The Guard of an EMU train shall watch that the Motorman does not exceed the speed prescribed in item (a) above. He shall give 000-000 rings on the bell code to warn the Motorman, if the prescribed speed limit is exceeded and if the Motorman continues to run

in excess of the prescribed speed the Guard shall arrange to stop the train. In case of trains hauled by electric locomotive, if the Loco Pilot exceeds the speed prescribed in item (a) above Guard shall attract the attention of the Loco Pilot by the application of vacuum/air brake and releasing it intermittently till such time the Loco Pilot observes the prescribed speed. Loco Pilot/Motorman to stop close to signals at 'On' -

When a Loco Pilot/ Motorman has to stop his train at the automatic, Semi-automatic or a Gate Signal which is in the 'On' position, he should bring the train to a halt as close to the signal as possible in rear of the signal. S.R.9.02/2. The Loco Pilot shall give two long and two short whistles (— - 00) when the Guard is required to be called to the engine. In case of Electric Multiple unit trains, the Motorman shall give three rings (000) to call the Guard, which shall be acknowledged by the Guard. S.R.9.02/3. The indication of an Automatic signal applies to the track beyond the signal and there is possibility of a train or obstruction on being inside the signal when it is showing 'Off. A Loco Pilot having passed an Automatic signal at 'On' must not act on the indication of the signal ahead until he has actually reached it. S.R.9.02/4.

(a) Whenever an Automatic or a semi-Automatic signal changes its aspect from green/yellow to red and again to green/yellow or from red to red in succession, it shall be treated as a bobbing/flickering signal and shall be considered as showing the most restrictive aspect. On seeing a bobbing/flickering signal, the Loco Pilot/Motorman shall bring his train to stop in rear of the signal and pass the same only when it assumes a steady aspect and remains so for one minute. (b) (c) (d) If the signal continues to bob/flicker and does not assume a steady aspect it should be considered displaying the 'On' position and pass only after observing

the stipulations contained in S.R.9.02/1. The Loco Pilot/Motorman shall report the defect to Station Master at the first reporting station. Whenever a manual stop signal shows more than one aspect or a misleading aspect, it should be treated as showing the most restrictive aspect and should be passed by observing instructions contained in Rule 3.74 and subsidiary rules appended thereunder. The Station Master, on receipt of information of flickering/bobbing signal, shall record the defect in the signal Failure Register and advise SE (Signal) or Electric Signal Maintainer immediately to rectify the defect, All cases of failures bobbing, or flickering signal should also be reported to Section Controller who shall record the

defect in the Signal Failure Register kept for the purpose. S.R.9.02/5. Distance between two train in Automatic Signalling territories after passing an Automatic Signal at 'On'- (a) (b) After passing automatic signal at 'on', the Loco Pilot of a following train shall ensure that minimum distance of 150 meters or two clear OHE masts is maintained between his train and the preceding train (in clear weather), if any, or any obstruction on the line ahead. However, in case of EMU trains the minimum distance of 75 meters or one OHE mast shall be maintained between EMU train and a preceding train, if any, or any obstructions on line ahead. However, during dense fog, after passing an Automatic Stop Signal at 'On' (Red), the Loco Pilot/Motorman of train hauled by any Locomotive including EMU train shall, while moving at a speed not exceeding 10 kmph should ensure that he maintains a reasonable distance at which he is able to

observe tail lamp/tail board of the train ahead or the obstruction as the case may be In special circumstances like flood etc., or if necessary to assist a disabled EMU train the following EMU train may be drawn closer to the preceding EMU train, exercising great caution. 196 9.03. (q) (s) (q) (H) (m•ra) e, afi

\$1 (æ•rq) (æ•rq) (€111) — (RBI) (æ•rq) e. (RBI) I (2) (3) (4) GINT e. (1) (q) (q) 180 I (IT) æ-réq ggqi+-s 'N' 197 CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM B. Rules applicable to Single Line 9.03. Essentials of the Automatic Block system on single line- (1) (2) (3) (4) Where trains on a single line are worked on the Automatic Block System - (a) (b) (c) (d) (e) (f) (g) the line shall be provided with

continuous track circuiting or axle counters. the direction of traffic shall be established only after Line Clear has been obtained from the block station in advance. a train shall be started from one Block station to another only after the direction of traffic has been established. it shall not be possible to obtain Line clear unless the line is clear, at the Block Station from which Line clear is obtained, not only upto the first stop signal but also for an adequate distance beyond it, the line between two adjacent Block stations may, where required, be divided into two or more Automatic Block signalling sections by provision of stop signals, after the direction of traffic has been established movement of trains into, through and out of each Automatic Block signalling section shall be controlled by the concerned Automatic Stop signal and the said Automatic stop signal shall not assume 'OT' position unless the line is clear upto the next automatic Stop signal: Provided further that where the next stop signal is a manual stop signal, the line is clear for an adequate distance beyond it, and all stop signals against the direction of traffic shall be at 'On Unless otherwise directed by approved special instructions, the adequate distance referred to in clauses (d) and (f) of sub-rule (1) shall not be less than 180 meters. (a) (b) (c) (d) (e) (f) (a) under special instructions, one of the automatic stop signals between two stations in the automatic block signaling territory in each direction may be made as modified semi automatic stop signal; the mid-section modified semi-automatic stop signal so provided shall be interlocked with the signals of the station ahead through track circuits or axle counters or both and shall be controlled by the station Master of the station ahead, the relevant indications whether the signal is in normal automatic mode or modified semi-automatic mode shall be available to the Station Masters at both the ends; Advanced starter signal of the station in rear shall be interlocked with the mid-section modified semi-automatic stop signal in such a way that when working with 'At marker extinguished, the Advanced starter signal shall assume 'OT' aspect or be taken 'Off' only when the line is clear upto an adequate distance beyond the mid-section modified semi-automatic stop signal; similarly the mid-section modified semi automatic stop signal shall assume 'Off' aspect automatically or be taken 'Off' only when the line is clear upto an adequate distance beyond the Home signal of the station ahead; during abnormal conditions like fog, bad weather impairing visibility, the mid-section modified semi-automatic stop signal may be worked by extinguishing 'A' marker in the manner prescribed under special instructions and this action shall also ensure that the 'A' marker of the Advanced starter signal of the station in rear and Home signal of the station in advance shall also be extinguished; the adequate distance mentioned under clause (c) shall not be less than as prescribed under sub-rule (2); during normal conditions, mid-section modified semi-automatic stop signal shall work as normal automatic stop signal. When the Loco Pilot finds mid-section modified semi-automatic stop signal with 'A' marker extinguished in 'On' position, he shall stop his train in the rear of the signal and inform this fact to the station master of the station ahead on approved means of communication as prescribed under special instructions; 197 (IT) R. 9.04. (Riu«0 — 3TQ-rfq - (i) (Giq) (ii) (€1&) (i•q) (*ZTII) I - (æ•rq) I 9.05. (Rilla) - (1) 9.04 9.06. (mq•a) \$1 (1) (GirI) — (e-mqa) (OH) (2) (erq) — (€111) (eTq) 120 180 1 9.07. (mq•a) (1) 'A' (qrfi) (æ•rq) (2) •e.lß' ag-i 3TTQe•q) 31TQe•q) e, Rum 198 CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM (b) (c) (d) The Station Master of the station ahead may authorize the Loco Pilot to pass the mid-section modified semi-automatic stop signal working with 'A' marker extinguished in 'On' position through approved means of communication after ensuring conditions and procedure prescribed under special instructions; In case the Loco Pilot is unable to contact the Station Master of station ahead, he shall pass the signal at 'On' after waiting for five minutes at the signal and proceed cautiously and be prepared to stop short of any obstruction, at a speed not exceeding ten kilometers an hour upto the next signal and act per aspect of this signal; and The Loco Pilot shall report the failure of mid-section modified semi-automatic stop signal to the Station Master of the Station ahead. Note : During unusual incidences, action shall be taken as per chapter VI and NX. 9.04 Minimum equipment of fixed signals in Automatic Block territory on single line- The Minimum equipment of fixed signals to be provided for each direction shall be as follows- (a) Manual stop signals at a station- (i) a Home, (ii) a Starter, (b) An Automatic stop signal in rear of the Home signal of the station. Note : Under approved special instructions, the Automatic stop signal may be dispensed with. 9.05. Additional fixed signals in Automatic Block territory on single line- (1) Besides the minimum equipment prescribed in Rule 9.04, one or more additional Automatic stop signals, as are considered necessary, in between Block Stations, may be provided. (2) In addition, such other fixed signals as may be necessary for the safe working of trains may be provided. 9.06. Conditions for taking 'Off Manual Stop signals in Automatic Block territory on single line (1) (2) (3) Home signal - When a train is approaching a

Home signal, otherwise than at a terminal station, the signal shall not be taken 'Off' unless the line is clear not only upto the Starter but also for an Adequate distance beyond it. Last stop signal - the last stop signal shall not be taken 'Off' for a train unless the direction of traffic has been established and the line is clear upto the next Automatic stop signal, or when the next stop signal is manual stop signal for an adequate distance beyond it. The adequate distance referred to in sub rules (1) and (2) shall never be less than 120 meters and 180 meters respectively unless otherwise directed by approved special instructions. A sand hump of approved design, or subject to the sanction of the commissioner of Railway Safety, a derailing switch shall be deemed to be an efficient substitute for the adequate distance referred to sub-rule (1) 9.07.

Duties of Loco Pilot and Guard when an Automatic Stop signal on single line is to be passed at 'On'- (1) (2) When a Loco Pilot finds an Automatic Stop signal with an 'A' marker at 'On' he shall bring his train to a stop in rear of that signal and wait there for one minute by day and two minutes by night. If after waiting for this period the signal continues to remain at 'On' and if telephone communication is provided near the signal, the Loco Pilot shall contact the Station Master of the next block station or the Centralised Traffic Control Operator of the section where Centralised Traffic control is provided, and obtain his instructions. The Station Master or the Centralised Traffic Control Operator, as the case may be, shall, after ascertaining that there is no train ahead upto the next signal and that it is otherwise safe for the Loco Pilot to proceed so far as is known, give permission to the Loco Pilot to pass the signal in the 'On' position and proceed upto the next signal, as may be provided under special instructions. 198 (€111) qe-i 2. (4) (erq) (6) \$1 (æ•rq) 10 Ete I (7) (RBI) (*ZTII) / 1. EF•zrr — '34TH' 9.02 9.08. (mq•a) - GINT •r. (gØ (Riu«0 9.09. 9.10. (erq) q-iq q•ruere PT4f•Ra #121 6.03. \$1 \$1 go 180 \$1 10 I 199 CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM (3) (4) (5) (6) (7) If no telephone communication is provided near the signal or if the telephone communication provided near the signal is out of order and can not be made use of, the Loco Pilot shall give the prescribed code of whistle and exchange signals with the Guard and then proceed past the signal as far as the line is clear, upto the next stop signal in advance, exercising great caution so as to stop short of any obstruction. The Guard shall show a stop hand signal towards the rear when the train has been so stopped at an Automatic stop signal, except, as provided for under sub-rule (6). Where owing to the curvature of the line, fog rain or dust storm, engine working the train pushing it, or other causes, the line ahead cannot be seen clearly, the Loco Pilot shall proceed at a very slow speed, which shall under no circumstances exceed 10 kilometers an hour. Under these circumstances. the Loco Pilot when not accompanied by Assistant Loco Pilot, and if he considers it necessary, may seek the assistance of the Guard by giving the prescribed code of whistle. When so sent for by the Loco Pilot, the Guard shall accompany him on the engine cab, before he moves forward, to assist the Loco Pilot in keeping a sharp look out. When an Automatic stop signal has been passed at 'On', the Loco Pilot shall proceed with great caution until the next Stop signal is reached. Even if this signal is 'Off', the Loco Pilot shall continue to look out for any possible obstruction short of the same. He shall proceed cautiously upto that signal and shall act upon its indication only after he has reached it. S.R.9.07/1 . Duties of Loco Pilot and Guard when an Automatic signal on single line is to be passed at 'On' - When an Automatic signal is to be passed at 'On' on single line, the instructions contained in G.R. 9.02 and S.Rs., there under, should be complied with.

9.08. Person in charge of working trains in Automatic Block System on single line- (1) (2) (3) Except where Centralised Traffic Control is in operation, the Station Master shall be responsible for the working of trains at and between stations. On a section where Centralised Traffic Control is in operation, the Centralised Traffic Control Operator shall be responsible for the working of trains on the entire section except as provided for in sub rule (3). On a section where Centralised Traffic Control is in operation, the working of trains at a station or part of a station may be taken over by or handed over to the Station Master during emergency or as prescribed by special instructions. When such emergency control is transferred, the Station Master shall be the person in charge of working trains at the Station or part of the Station and the station shall be worked in accordance with sub-rule (1). C. Rules applicable to both Double and Single Lines 9.09. Working of trains on Centralised traffic Control territory-On a section where Centralised Traffic Control is in operation, the working of trains shall be governed and by special instructions. 9.10. Protection of a train stopped in an Automatic Block Signalling section- (1) (2) When a train is stopped in an automatic Block Signalling section, the Guard shall immediately exhibit a stop hand signal towards the rear and check up that the tail board or tail light is correctly exhibited. If the stoppage is on account of accident, failure, or obstruction and the train cannot proceed, the Loco Pilot shall sound the prescribed

code of whistle and the train shall be protected immediately as per Rule 6.03 except that for the protection of the occupied line one detonator shall be placed at 90 meters from the train on the way out and similarly two detonators, 10 meters apart, not less than 180 meters from the train or at such distance as has been fixed by special instructions. 199 9.10/1. 6.03/1 (q) 9.11. (1) (*ZTII) GINT Qe•rq, ur (€111) Rui-é +9.11 /

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CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM S.R.9.10/1. When a train comes to a stand in an

Automatic signalling section and cannot proceed further due to an accident, failure or obstruction, the Loco Pilot/Motorman and Guard shall follow all the rules under S.R. 6.03/1 .(a) to (g) and the occupied line shall be protected with detonators in rear as specified in General Rule 9.10. 9.11. Loco Pilot to report failures- (1) When Loco Pilot has to pass an Automatic stop signal at 'On', he shall stop his train at the next

reporting station or cabin as prescribed by special instructions and report particulars of Automatic stop signals passed at 'On' by him. (2) The Station Master or person in charge of the reporting station or cabin shall promptly report the fact to the signal and operating officials concerned. S.R.09.11/1. Next reporting

station/cabin will be next stopping station for the purpose of reporting such failures. 9.12. Procedure during failure of Automatic signalling- When a failure of Automatic signalling is likely to last for some time or cause serious delay, trains shall be worked from station to station over the section or section concerned under special instructions. S.R.9.12/1. Failures of all signals on double or single line likely to last for some time and cause serious delay when means of communications are available- In the event of failure of all signals occupying in an area consisting of two or more stations worked under Automatic Block

System, the officials concerned of the Signalling Department shall take immediate steps to inform all concerned and the following procedure shall be adopted for train passing. (1) (2) (3) (4) (5) The section between the two block stations will be treated as a block section and the movement on the block section will be controlled by the Station Master on either side. Before any train is allowed to enter the affected section, it shall be brought to a stand and the Loco Pilot of the train advised of the circumstances by the

Station Master and the Guard of the train advised through a copy of the 'Authority to proceed' as prescribed in Rule 5 (a) below, The Controller and the Station Master concerned ahead of the affected section shall also be informed. The Station Master on duty at the station in rear of the affected section shall obtain 'Line Clear' for the train by one of the following in the order of preference of means of

communications, viz. (a) (b) (c) (d) (f) Block Instruments, Track Circuiting or Axle Counters Telephone attached to Block Instruments Station to station fixed telephone wherever available Fixed telephone such as Railway autophones & BSNL Phones Control telephone VHF sets The Station Master on duty at the station in advance shall not give such 'Line Clear' (as per clause 2 above) unless- (i) (ii) (iii) (a) the whole of the last preceding train has arrived, the line on which it is intended to receive the incoming train is clear at least 180 meters beyond the Platform starter or the Place at which the trains usually come to a stand, and all points have been correctly set and all facing points locked as per rules for the admission of the train on the said line. The Loco Pilot of the first train entering the affected section on 'Authority to Proceed', shall proceed with utmost caution and must not run at a speed exceeding 25 kilometers per hour under any

circumstances, subject to other speed restrictions in force. The Loco Pilot shall continue to look out for any obstruction until he reaches the station ahead. 200 (6) (7) (8) (9) (10) (11) (12) (2) (3) quale/Hle@q *lei I

3-+441 (eque) 3-11Fi1 Rulé crqg (fØ crzrere / \$1 201 CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM (6) (7) (8) (9) (b) After ensuring that the first train has arrived safely at the station ahead of the affected section, the Loco Pilots of all subsequent trains shall also proceed with great caution, subject to other speed restrictions in force and must continue to look out for any possible obstruction. The S.M. shall

give the Loco Pilot/Motorman of each train- (a) An 'Authority to proceed on Automatic Block System during prolonged failure of signals' on prescribed form, the individual distinguishing number/numbers of each Automatic, Semi-automatic, manually operated and gate signal/signals shall be indicated on this authority. (b) A Caution Order restricting the speed of all train as per clause 5 (A) above. Before handing

over the 'Authority to Proceed' all the points over which the train will pass, shall be correctly set and locked as per rules. Whenever any power operated points have to be operated for diverting trains, these may be released and operated locally under the written instructions of the Station Master on duty by the Signal Maintainers at station where Signal Maintainers are available. When approaching the next station, the Loco Pilot shall bring his train to a stand outside the first Stop signal and sound one long whistle. The station Master after satisfying himself that all is safe shall arrange for a man in uniform to pilot the train

from this signal, who shall obey hand signals, if any, relayed from the station platform. Clearance of the section by each train shall be intimated to the station, in rear under exchange of Private Numbers. (IO) Train Signal Register shall be brought into use and all entries regarding train working recorded there in. The Controller shall be kept advised of all train movements taking place in the affected section, if possible.

(11) As soon as signals are put right by competent authority, normal working of trains on Automatic Block

System may be resumed after exchanging messages with Private Numbers by the Station Masters concerned, assuring that the section is clear. Controller's permission, if possible, should be obtained before resumption of normal working. (12) All the records in connection with train working on this system shall be retained at the station and the Traffic Inspector of the section must scrutinise them and submit his report to the Divisional Railway Manager within seven days of the resumption of normal working. S.R.9.12/2.

Failure of all signals on double line likely to last for sometime and cause serious delay when no means of communication are available - In the event of failure of all signals occurring in an area consisting of two or more stations worked under Automatic Block System and when trains can not be worked by any of the

following in the order of preference of means of communication viz. (a) Block Instruments, Track Circuiting or Axle Counters (b) Telephones attached to Block Instruments (c) Station to station fixed telephones wherever available (d) Fixed telephone such as Railway autophones & BSNL phones (e) Control telephone (f) VHF sets The following procedure shall be adopted for train passing- (2) (3) The movement of trains on the affected section shall be controlled by such stations and on such lines as are prescribed by special instructions. All points over which the train will run within the affected area shall be correctly set and locked before the movement of any train is authorised over them. Whenever any power operated points have to be operated for diverting trains, these may be released and operated locally under the written instructions of the Station Master on duty by the Signal Maintainers at stations where the Signal Maintainers are available Before any train is allowed to leave the station as prescribed in clause (1) above, it shall be brought to a stand and the Loco Pilot Motorman and the Guard of the train shall be advised of the circumstances by the Station Master. 201 (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100) (101) (102) (103) (104) 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(9) The Station Master shall give the Loco Pilot/Motorman of each train- (a) (b) (c) An "Authority to Proceed without Line Clear" on the prescribed form. The counterfoil shall be retained by the Station Master and the foil shall be given to the Loco Pilot. A Caution Order restricting the speed to 25 kilometers per hour over the Straight with clear view and to 10 kilometers per hour when approaching or passing any portion of line where the view ahead is not clear due to curve, obstruction, rain fog or any other cause, Subject to the observance of other speed restriction imposed and speed over facing points being restricted to 15 kilometers per hour, the Loco Pilot shall ensure that the speed is kept at the limit prescribed above and is not exceeded or, without any reason reduced. An authority on the prescribed form authorising the Loco Pilot/Motorman to pass the automatic signals intervening the two nominated stations at 'On', the semi Automatic signals and manually operated signals on being signalled past by a Pointsman/Porter or any other railway servant in uniform deputed for the purpose and the Gate signals cautiously upto the level crossing where he must ascertain that the gates are locked and the hand signals are displayed by the Gateman before he proceeds further. The individual distinguishing number/ numbers of each Automatic, Semi-Automatic, Manually operated and Gate Signal/signals shall be indicated on this authority. No train shall be allowed to enter an affected section until there is a clear interval of 15 minutes between the train about to leave and the train which has immediately proceeded, unless a shorter interval has been prescribed under special instructions. In the event of a Loco Pilot approaching or passing any portion of a line where view ahead is not clear, Assistant Loco Pilot or Guard with hand signals must be sent in advance to guide the further movement of the train. A sharp lookout ahead should be kept and the engine whistle freely used. The Guard shall keep a sharp lookout in the rear and be prepared to exhibit a danger signal to prevent the approach of a train from the rear and to protect it, if the detention is likely to exceed 5 minutes. When approaching the next station under special instructions under clause (1) above, the Loco Pilot shall bring his train to a stand outside the first Stop signal and sound one long whistle. The Station Master after satisfying himself that all points have been correctly set and locked, shall arrange for a man in uniform, before the train arrives at the signal, to pilot the train from the signal without any delay. The Loco Pilot of all trains shall make over the 'Authority to proceed without Line Clear' to the Station Master of the

nominated station at the end of the section. These shall be kept by the station Master in his personal custody for inspection by the Traffic Inspector of the Section, who shall prepare a report on the working of trains and shall forward the same along with his report to the Divisional Railway Manager within 7 days of resumption of communication. (10) A record of all trains passed over the affected section on 'Authority to proceed without Line clear' during the course of total interruption of communications, shall be maintained in the Train Signal Registers to be opened at all the specially nominated stations under clause I above. (11) Trains must continue to work on this system until either the signals are put right or any one of the means of communications is restored by the competent authority. (12) As soon as the signals are put right, normal working of trains shall be resumed, but where signals continue to remain inoperative and any of the means of communications is restored, the Station Master shall immediately send a message to the Station Master at the other end of the affected section on the following proforma- From Station Master (Number and Description) . . to Station Master Train arrived complete at hours. Last train ...at . (Number and Description) despatched to your station hours. Cancel the present method of working of trains. Line Clear shall be obtained by means of Private Number 202 Acknowledge. Station Master g•rq - 341-q-\$l (13) +9.12/3. (2) (3) (4) (5) zrr EF•zrr GT&fi I 180 41-e-R a-TT frzrr *era) 203 CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM On receipt of the above message, the Station Master at the other end of the affected section shall acknowledge in the following form- From Station Master . Your No. station at to station Master . Understand that train (Number and Description) which was the last train to leave my station has arrived complete at your station. Train No.....which left your station has arrived complete at my hours/not arrived. Present system of train working is being/will be cancelled immediately after the complete arrival of train No....., Clear for the next train will be obtained by means of Private Number . Line Station Master (13) Line Clear shall not be obtained or given by any means of communication which has been restored until both the Station Master are satisfied that all trains and engines etc. despatched from their stations have arrived complete at the other station. When the trains referred to in clause I above arrived complete at the stations, their number and their arrival time will be communicated to the other Station Master concerned under exchange of Private Numbers. Thereafter an intimation out this shall be given to the Section Controller, if possible. S.R.9.12/3. Rules and Regulations for working of trains under the Automatic Block System during obstruction of one or more lines, when signals are operative and communication are available- In the event of obstruction of one or more lines in an area consisting of two or more stations worked under the Automatic Block System when signals are operative and communications are available, the following procedure shall be adopted- On the Double line section when one line is obstructed- (1) (2) (3) (4) When it is desired to introduce temporary single line working on double line on electric communication instruments, the Station Master at one end of the affected section shall, on receipt of reliable information in writing that one line is clear, take steps to introduce temporary single line working on that line in consultation with the Section Controller and the Station Master of the Station at the other end of the section. If there is reason to suspect that the line over which temporary single line working is to be introduced is also fouled or damaged temporary single line working shall not be introduced until a responsible engineering official not below the rank of an JE/P. Way has inspected that section and certified that the road is safe for the passage of trains. The movement of trains on the affected section shall be controlled by such stations and on such lines as are prescribed by special instructions. All trains running in the wrong direction shall be worked in accordance with the rules for the use of electric communication instruments on single line and Line Clear shall be obtained by the means of communications provided at the station. Line Clear shall not be given unless the line on which the train is to be received is clear at least 180 meters beyond the first Stop signal pertaining to the correct line or the last stop signal pertaining to the wrong line whichever is earlier. For each first train running in the "Tong direction. Line clear shall neither be asked for nor given unless the two station Masters have assured under exchange of Private Numbers that all the trains running in the right direction have already arrived complete at the station in advance. Except for each first train running in the right direction for which the procedure laid down for the trains running in the wrong direction shall be followed subsequent trains running in the right direction may be allowed to follow each other on Automatic Signal indications, provided the station in rear has intimated the station in advance of the fact that he is permitting particular train/trains to follow and has ascertained the latter's readiness to receive it/them. Private Numbers shall be exchanged for this transaction. (5) Train signal Register shall be introduced at the stations on affected section. 203 (6) t) (8)

Traffic Inspector of the section must scrutinise them and submit his report to the Divisional Railway Manager within seven days of the resumption of normal working. S.R. 9.12/4. Rules and Regulations for working of trains under the Automatic Block System during obstruction of one or more lines when no communications are available and signals have also failed - The following procedure shall be adopted for train passing- On a double line section when one line is obstructed - In the event of total interruption of communications occurring on a section worked under Automatic Block System and when trains cannot be worked by any one of the following means. (a) Block Instruments, track Circuiting or Axle Counters (b) Telephones attached to Block Instruments (c) Station to station fixed telephones wherever available (d) Fixed telephone such as Railway autophones & BSNL phones (e) Control telephone (f) VHF sets (I) The movement of trains on the affected section shall be controlled by such stations and on such (2) (3) (4) lines as are prescribed by special instructions. Before any train is allowed to leave the first controlling station prescribed under clause I above to enter the affected area, it shall be brought to a stand and the Loco Pilot and the Guard of the train shall be advised of the circumstances by the Station Master. The Station Master shall satisfy himself that the Guard and the Loco Pilot thoroughly understand the rules under which the trains are to be run during total failure of communications on single line. He will also obtain the signatures of the Loco Pilot and the Guard on the counterfoil of the form 'Authority to proceed without Line Clear' referred to in clause 6-(i) a record of this kept on the foil and counter foil of the Authority to proceed without Line Clear'. Communications shall be opened by an empty train, train engine, light engine, and Motor trolley or Tower wagon to be sent on the unobstructed line. In case a train consisting of EMU stock Diesel car has to be sent to open communications all passengers must be detrained before the train is despatched. The relevant provisions of the rules for single line working on double line during total failure of communication shall be adhered to. 20S (5) (6) (7) (8) (9) (10) 1 GINT, (ii) 25 zrr 10 I 15 Ati a-fifi - (iii) zrrerr zrr (iv) crrzrere EF•zrr (\$gq.q.) a--q-q uT (\$qq.q) a-iT 25 \$1 10 QIN-QI* 1 I crrzrere (m) 206

CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM (5) (6) (7) (8) (9) Loco Pilots of all trains approaching the affected area must be advised in writing by the first controlling station prescribed under clause 1 above about the station between which and the line on which temporary single line working has been introduced. In addition, the Loco Pilots of trains which will run on the right road on temporary single line shall stop at the station immediately in rear of the effected section and proceed further only on receipt of the prescribed authority to proceed. The Station Master will handover to the Loco Pilot opening the communication the following documents- (i) "An Authority to proceed without Line Clear" on prescribed form. (ii) A Caution Order restricting the speed to 25 kilometers per hour over the straight with clear view and to 10 Kilometers per hour when approaching or passing any portion of the line where the view ahead is not clear due to curve, obstruction, rain, fog or any other cause, subject to the observance of other speed restrictions imposed and speed over facing points being restricted to 15 kilometers per hour. The Caution Order shall contain : the line on which the train or light engine is to run. (a) (b) the kilometers between which the obstruction exists. (iii) An authority on the prescribed form authorising the Loco Pilot/Motorman to pass the Automatic signals intervening the nominated stations at 'On' the Semi-Automatic signals and Manually operated signals on being signalled past by a Pointsman or any other railway servant in uniform deputed for the purpose and Gate signals cautiously upto the level crossing where he must ascertain that the gates are locked and the hand signals are displayed by the Gateman before he proceeds further. The Individual distinguishing number/numbers of each Automatic, Semi-Automatic, Manually operated, and Gate signal/signals shall be indicated on this authority. (iv) A conditional line clear message for a train to enter the affected section from the other end. (v) An enquiry message addressed to the Station Master of the nominated station in advance seeking line clear for the next train to proceed to his station. An endorsement shall also be made on the Caution Order given to the Loco Pilot of the first train to stop and inform all Gatemen and Gangmen on the way about the introduction of temporary single line working. the road on which the trains will run shall also be specified. All the points over which the trains will run within the affected area shall be correctly set and locked as per rules before the movement of any train is authorised over them. Whenever any power operated points have to be operated for diverting trains, these may be released and operated locally under the written instructions of the station Master on duty by the signal Maintainer at stations where signals Maintainers are available. (a) After sending forward a train engine/empty EMU train/light engine/Motor trolley/Tower wagon with enquiry and line clear messages, no other train or engine shall on any account be allowed to leave in the same

direction until the return of that engine/empty EMU train/Motor trolley/Tower wagon. (b) No obstruction of the line at the station shall be allowed until the return of that engine/motor trolley or Tower wagon or empty EMU train. (IO) The Loco Pilot of such an engine/empty EMU train/motor trolley/ Tower wagon proceeding to open communications shall proceed at a speed not exceeding 25 kilometers per hour over the straight with a clear view and 10 kilometers per hour when approaching or passing any portion of the line by night or when the view ahead is not clear making free use of the engine whistle. In thick or foggy weather, the Loco Pilot must proceed at walking speed, whistling repeatedly, preceded by two men on foot at an adequate distance, one displaying a red light and the other carrying fog signals ready for immediate use. One of these men will be provided by the Station Master from his class IV staff and the other will be Asstt. Loco Pilot. Both these men will have their duties clearly explained to them by the station Master who would satisfy himself that they thoroughly understand the same in the presence of the Loco Pilot. 206 (11) (#8144.) (12) 1 (13) crrzrere - (i) 1425(1) (ii) (iii) (14) 1 a•rerr ertTTZIT trrerq \$1778 (15) (16) 25 siEi. 3F4 15 A.Ei. (17) crrzrere I (18) - (19) 15 zrr I 207 CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM (11) In the event of an engine or Tower Wagon or Motor trolley or empty EMU train meeting any other engine, Tower wagon etc. sent from the other end in the mid section, the two Loco Pilots shall, taking into consideration the importance of the trains waiting, the distance from the nearest station, gradients to be encountered, the presence of catch siding etc., decide which engine/unit etc. should push back so as to allow the other to go through. (12) On arrival of the train etc. at the next station nominated under special instructions, under clause I above, the Loco Pilot shall hand over the Conditional Line Clear and Line Enquiry Message to the Station Master who shall record it in the Line Clear Message book. (13) The Station Master on the authority of the Conditional Line Clear shall despatch the waiting train from his station. The Loco Pilot shall be given the following documents- (i) Conditional Line Clear ticket as per G.R. 14.25 (1) (ii) Conditional Line Clear Message for a train to leave from the station waiting at the other end of the affected section. (iii) A Caution Order on which shall be clearly stated- (a) The line on which train is to run. (b) The kilometers between which the obstruction exists. (c) Any temporary restriction of speed, which may have been imposed. (d) An enquiry message addressed to the Station Master of the nominated station in advance seeking Line Clear for the next train to proceed to his station. (14) When approaching the next station nominated under special instructions, under clause I above, the Loco Pilot shall bring his train to a stand outside the first stop signal pertaining to the correct line or opposite the last stop signal pertaining to the wrong line on which he is running, whichever he comes across first, and sound one long whistle. The Station Master, after satisfying himself that all points have been correctly set and facing points locked shall arrange for a man in uniform to pilot the train from this signal who shall obey hand signals, if any, relayed from the Station Platform. Manual signals (including Semi- Automatic, signals working as Manual signals) if any, shall be, however, passed on a written authority on the prescribed form to be issued by the Station Master. (15) On arrival at the station, the Loco Pilot shall hand over the Line Clear Reply Message to the Station Master who shall record it in the Line Clear Message Book on its authority issue a conditional Line Clear Ticket for the waiting train. (16) The speed of all trains passing over the temporary single line shall be restricted to 25 kilometers per hour subject to observance of other speed restrictions imposed and speed over facing points being restricted to 15 Kilometers per hour. (17) If there be an even flow of trains in both directions, Enquiry and Line Clear Messages for each succeeding train may be sent with the Loco Pilot of the preceding train. (18) The arrival and departure time of all trains must be carefully recorded in- (a) Line Clear Enquiry and Reply Books, (b) Counter foil of the "Authority to proceed without Line Clear" (this applies to the first train only), and (c) the Train Signal Register. (19) If the Station Master, at one end has more than one train to despatch in the same direction before another train is normally expected from the opposite direction, shall mention in the Line Enquiry Message the numbers of trains he wants to send and also state therein that the latter trains will be despatched after the first train at interval of 15 minutes of full running time whichever is more. After the receipt of Line Clear for the required number of trains the Station Master while despatching the first train shall endorse on the Line Clear for the required number of trains the Station Master while despatching the first train shall endorse on the Line Clear ticket that a particular train (Giving its number and description in full) shall follow at a specified interval. 207 uT 3F4 10 Eb.41.!!Ei. a-rr GTTi I (20) _ - arj---åtlfi--ai I färfi-(i) (ii) zrr 9.12/3(1) (21) 3-+481 Rqié 9.13. - ælfi.9.13/1. (T) g•zi I (u) (q) 9.14. (2) (3) 4.12/2 @ (U) (\$.gq.q) (81-8 crrzrere / QIN-AIR I (RI-q) '31Td' (€111) (RBI) 9.02 9.07 I (e-rq) (æ•rq)

3 afbf-« (e-rq) uen-R-erm. 9.02 9.07 I 208 CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM While adopting this procedure the Guard and the Loco Pilot shall be instructed to keep a sharp look out and be prepared to stop short of any obstruction and if the view is restricted because of fog, curve or any other reason, speed shall not exceed 10 kilometers per hour. Note: If Line Clear is granted for a train or trains, no other train should be despatched from the opposite end until the arrival of the train or trains or the cancellation of the Line clear. (20) Resumption of normal working - The normal working shall not be resumed unless; (a) the Station Master has received a written certificate from a responsible engineering official that the obstructed track is free for passage of trains, and (b) Either the signals are put right or any one of the means of communications as listed above in Rule I is restored by the competent authority. Note : (i) In case when obstruction is removed but signals continue to remain inoperative and none of the means of communications is available, the train shall be worked in accordance with the instructions prescribed in S.R. 9.12/2. (ii) In case where either signals are put right or any one of the means of communications is available, but the obstruction continues, the instructions as prescribed in S.R. 9.12/3 (1) Shall be observed (c) An entry shall also be made in the Train Signal Registers of all stations concerned showing the time when normal working was suspended and the time when normal working was resumed. (21) All the records in connection with the train working under this system shall be retained at the station and the Traffic Inspector of the section must scrutinise them and submit his report to the Divisional Railway Manager within 7 days of the resumption of the normal working. 9.13. Movement of trains against the direction of traffic on the Automatic Block System-In Automatic signalling territory, trains shall run in the established direction of traffic only. Movement of trains against the established direction of traffic is not permitted. When in an emergency it becomes unavoidably necessary to move a train against the established direction of traffic, this shall be done only under special instructions, which shall ensure that the line behind the said train up to the station in rear is clear and free from obstruction. S.R. 9.13/1. (a) The Guard of the train in consultation with the Loco Pilot/Motorman shall send written advice to the Station Master of the rear station explaining the circumstances necessitating the train to push back. (b) (c) (d) (e) the Station Master, after ensuring that the line in rear of the said train is clear up to his station shall send a written message authorising the Loco Pilot/Motorman to push back to his station. He shall also advise the station Master of the station in advance and the Section Controller about the pushing back of the train. The Station Master shall ensure that there is no train on the same line between his station and the train to be pushed back. The Loco Pilot/Motorman and Guard shall observe provisions contained in S.R. 4.12/2 (b) (g) and (h) while the train is pushing back. In case of an EMU train, the Motorman shall drive the train from the leading motor coach/ driving cab. the Loco Pilot/Motorman shall whistle frequently by giving prescribed code of whistle (short whistles). 9.14. Procedure when Semi-Automatic Stop signal is 'On' (1) When a Semi-Automatic stop signal is worked as an Automatic Stop signal, Rule 9.02 or 9.07 shall apply as the case may be. (2) When a Semi-Automatic Stop signal is working as a Manual Stop signal and becomes defective, it may only be passed under relevant rules detailed in Chapter III, Section 'H', (3) When a Loco Pilot is authorised to pass a Semi-Automatic Stop signal at 'On' by taking 'OT the Calling-on signal fixed below it, he shall follow the precautions stipulated in Rule 9.02 or 9.07 as the case may be. S.R. 9.14/1. When a Loco Pilot passes a semi-automatic signal under the authority of calling on signal fixed below the Stop signal, which is at 'ON' he, shall follow the instructions laid down in G.R. 3.79. 208 (37ErÅEA5) 9.15. (€1D e-i4 (€1A) R-Q4fä e— •g' (q•r\$g) 9.02 9.07 (u) (i) 'A' (HI-aft) (ii) fiF1e (iii) (iv) 1bTeib fira 9.02 9.07 (erg) RTfr.9.15/1. 9.15/2 'A' 'AG' (m) UR 'A' 9.02 @ 9.15 (JT) 'A' 'AG' 9.15 (u) 9.01 / 8 @ 9.16. vrw m) — •n-f*ui Train Train Train xrrfæui 1-0000 209 '-0000 CHAPTER-IX THE AUTOMATIC BLOCK SYSTEM 9.15. Passing a gate stop signal at 'On' in Automatic signalling territory-if the Loco Pilot finds a gate Stop signal at 'On' in an Automatic signalling territory- (a) he shall comply with the provisions of Rule 9.02 or 9.07 as the case may be, if the 'A' marker is illuminated, or (b) (i) if the 'A' marker light is extinguished, he shall sound the prescribed code of whistle to warn the Gateman and bring his train to a stop in rear of the signal, and (ii) If after waiting for one minute by day two minutes by night, the signal is not taken 'Off' he shall draw his train ahead cautiously up to the level crossing, and (iii) if the Gateman is available and exhibiting hand signals, proceed further past the level crossing gate cautiously, or (iv) if the Gateman is not available, or, is available but not exhibiting hand signals stop in rear of the level crossing and after ascertaining that the gates are closed against the road traffic and on getting hand signals from the Gateman, and in his absence from the Assistant Loco Pilot, the

Loco Pilot shall sound the prescribed code of whistle and cautiously proceed up to the next stop signal complying with the rule 9.02 or 9.07 as the case may be. S.R.9.15/1.(a) the Loco Pilot shall sound one continuous long whistle when the train comes to a stop at a gate signal and one long and one short whistle before passing the gate signal and also the level crossing gate. (b) In case of EMU trains the Motormen shall give 2 pause 2 rings before passing the Gate signal in the 'On' position, and 2 rings before passing the level crossing gate, which shall be acknowledged by the Guard. S.R.9.15/2 Passing a semi-automatic gate stop signal provided with illuminated 'A' marker and illuminated 'AG' marker at 'ON' in automatic signalling territory- (a) (b) (c) If the 'A' marker is lit but the 'AG' marker is extinguished, the Loco Pilot shall comply with the provisions of GR 9.02. If the 'A' marker is extinguished but the 'AG' marker is lit, he shall comply with the provisions laid down in GR 9.15(b) If both 'A' and 'AG' markers are extinguished, he shall comply with the provisions of GR 9.15 (b) Moreover, if the signal protects the points, where exist, in addition to the level crossing, the Loco Pilot shall proceed after ascertaining correct setting and locking of points. If it is mid section modified semi-automatic signal, SR 9.01/8(b) to be followed. 9.16. Illustrative diagrams-

Automatic change of sequence of aspects being behind the train in three aspects and found aspects signalling is illustrated in the following diagrams which are not drawn to scale. AUTOMATIC CHANGE OF SEQUENCE OF ASPECTS BEHIND THE TRAIN IN THREE ASPECT SIGNALLING

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SYSTEM 10.01. Essentials of the Following Trains Systems- (1) (2) Where trains are worked on the Following Trains system, they may be despatched from one station to the next, following each other in succession in the same direction on the same line in such manner and at such intervals of time as may be prescribed by special instructions. Trains shall not be worked on the Following Trains system unless the Station Master of the block station in advance has exchanged messages regarding his readiness to receive the train and has, in addition, given his assurance that no train will be allowed to leave his station for the station from which the following trains are to be despatched, until the latter have all arrived at his station and until he has received permission to despatch trains in the opposite direction. S.R. 10.01/1. The Following Trains System' shall be introduced with the express sanction of Chief Operations Manager in terms of GR 7.01 and only when due to certain exceptional circumstances the running time in the Block Section concerned becomes abnormally long, resulting in or likely to cause serious difficulties in operation if the trains are run under the normal system of working on the section. 10.02. Report to the Commissioner of Railway Safety - When the Following Trains System is introduced on any portion of a railway under Rule 7.01, a report shall be sent to the Commissioner of Railway Safety. 10.03. Conditions to be observed in Working Trains on the Following Trains System When the Following Trains System is adopted, the following conditions shall be observed, namely (a) (b) (c) (d) (e) (D) (g) no train shall start until the Loco Pilot has been given written authority to proceed in the form prescribed for the purpose and a written acknowledgement there of has been obtained from him, the train being stopped for the purpose, if not booked to stop. the authority to proceed shall state the station at which the train is next to stop, the speed at which it is to run and the actual time of departure of the preceding train, the Loco Pilot and Guard of each preceding train shall have been informed of the fact that a train will follow, and of the probable period which will elapse before the following train shall start. a train shall not follow another from a station unless there has elapsed since the departure of the previous train, an interval of not less than 15 minutes, or such shorter interval as may be fixed by special instructions. all the trains following the first train shall be timed to run at the same speed and such speed shall not exceed 25 kilometers an hour except under special instructions. the actual time of the departure of each train shall at once be intimated to the block station in advance and the actual time of arrival of each train shall at once be intimated to the block station in rear, and the number of following trains running at the same time between any two Block Stations shall not be more than one for each 5 kilometers of station interval; and unless permitted by special instructions, shall never exceed four, whatever may be length of the station interval. S.R. 10.03/1. "The Following Trains System" shall not be adopted in respect of the movement of passenger carrying train. S.R. 10.03/2. Before introducing 'The Following Trains System' the relevant rules and precautions must be carefully explained by Supervisory staff to the running staff as well as to the station Staff concerned. 210 HR.10.03/3. 10.03 (g)

25 si.Ei. 15 Y.Ei. 10.04. 2. 3. 4. 10.05. GINT I 3TT (lbßi) : (IFRi\$R) Eid a-ur) I 211 CHAPTER-X THE FOLLOWING TRAINS SYSTEM S.R. 10.03/3. The speed of the in terms of GR 10.03 (e) shall be restricted to 25 KMPH during the day and 15 KMPH at night or in poor visibility conditions and will be further subjected to speed restrictions in force. 10.04. Delivery of authority to proceed to Loco Pilot or Guard on the Following Trains System (1) Every authority to proceed shall be delivered to the Guard or Loco Pilot by the Station Master, or by some railway servant appointed in this behalf under special instructions. (2) When such authority to proceed is delivered to the Loco Pilot under sub-rule(1), a duplicate shall be given to the Guard. (3) When an authority to proceed is delivered to the Guard under sub-rule (1), It shall be either (a) handed personally by the Guard to the Loco Pilot, or (b) Countersigned by the Guard and then handed to the Loco Pilot either by the Station Master or by some railway servant appointed in this behalf by special instructions. (4) An authority to proceed shall not be handed to the Loco Pilot under sub-rule (2) or (3) (a) until the train is ready to start, and (b) If the train is waiting to pass another train until the whole of the later train has come in and is clear of the running line for the former train. 10.05. Authority to proceed on the Following Train System - The written authority to proceed for use on the following Trains System shall be in the following form- S. No. Train No. Time From To Loco Pilot and Guard The Following Trains System Authority to Proceed (Up or Down) Up or Down Hours Station, to Date (1) You are hereby authorised to proceed with your train from Railway Minutes. Station. station to *(2) Train no hours Train No. hour's station ahead of your train left this station at minutes. shall follow your train from this Station at minutes. (4) You are required to observe a speed restriction of kilometers and hour. Signed Station Master at (Station stamp) Signature of Guard at *strike out whichever is inapplicable. station. This ticket shall be given up by the Loco Pilot immediately on arrival to the Station Master or other person authorised to receive it and such person shall immediately cancel it and place it on record. 211 10.06. (2) (3) 10.04 (1) (lbßi) 10.04 (1) (IFPi) 10.04 (3) 10.07. — e. @Ri7T) 10.08. — 10.09.

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Responsibility as to proper preparation of authority to proceed on the Following Trains System- (1) When an authority to proceed is delivered to the Loco Pilot under sub-rule (1) of Rule 10.04, the Station Master shall see- (a) that it is properly filled up in the form prescribed for the purpose, and (b) that it is signed in full and in ink. (2) When the authority to proceed is delivered to the Loco Pilot under sub-rule (1) of Rule 10.04, he shall satisfy himself that the authority to proceed delivered to him has been correctly and completely prepared in the form prescribed for the purpose and he shall not proceed with his train until he has done so and the mistake, or omission, if any, has been rectified. (3) When an authority to proceed is delivered to the Guard of the train under sub-rule (3) of Rule 10.04, he shall, before it is handed to the Loco Pilot, satisfy himself similarly. 10.07. Obstruction in face of approaching trains or train or trains on the Following Trains System - The line shall not be obstructed outside the outermost facing points in face of an approaching train as long as this system of working is in force. 10.07. Obstruction in face of approaching train or trains on the Following Trains System- The line shall not be obstructed outside the outermost facing points in face of an approaching train as long as this system of working is in force. 10.08. Cessation of working on the Following Trains System - When it is intended that no more following trains shall be despatched in the same direction, the Station Master shall intimate such intention by a message to the block station in advance, after which no more trains in either direction shall be despatched between the two stations until the last train has arrived at the block station in advance and the line has been cleared between the two stations. 10.09. Protection of trains on the following Trains System- (1) When a train is stopped between stations and if the detention exceeds or is likely to exceed five minutes, it shall be protected in accordance with the provisions of Rule 6.03, except that the Guard going back to protect the train shall place one detonator, at 250 meters from the train on the way out, and two detonators, 10 meters apart, at 500 meters from the train, irrespective of gauge. (2) In case the train stopped between stations, is unable to proceed on account of accident, failure, obstruction or any other exceptional cause, the Loco Pilot shall also arrange to protect the train in the front in the manner laid down for the Guard. 212 3m•rq-11 .MU.IIU—11 11.01. \$1 - 11.02. - 25 11.04. 1 1.03. 11.05. (IFPf) (3) (üTGi) 11.06. — 10.09 213 CHAPTER-X1 THE PILOT GUARD SYSTEM CHAPTER-X1 THE PILOT GUARD SYSTEM 11.01. Essentials of the Pilot Guard System- Where trains are worked on the Pilot Guard System- (a) a railway servant (hereinafter called a Pilot Guard) shall be specially deputed to pilot trains; and (b) no train shall leave a station except under the personal authority of the Pilot Guard. 11.02. Conditions to be observed for

the following trains on the pilot Guard system- Trains shall not follow one another in the same direction between stations, unless- (a) the Loco Pilot has been properly warned of the time of departure of the preceding train and of the place at which it will next stop; (b) all the trains are timed to run at the same speed, and such speed shall not exceed 25 kilometers an hour except under special instructions; and (c) an interval of fifteen minutes has elapsed since the departure of the preceding train. 11.03. Pilot Guard's dress or badge-The Pilot Guard shall be distinguished by red dress or badge. 11.04. Pilot Guard to accompany train or give authority to proceed- (1) (2) (3) No train shall be started from a station unless the Loco Pilot sees that it is accompanied by, or that the authority to proceed is given personally by the Pilot Guard wearing the dress or badge prescribed in Rule 11.03. The Pilot Guard shall accompany every train: "Provided that when it is necessary to start two or more trains from one end of the section before a train has to be started from the other end, the Pilot Guard shall accompany only the last of such trains, and shall personally give the authority to proceed for the preceding trains." When accompanying a train, the Pilot Guard shall ride on the footplate of the engine. 11.05. Pilot Guard's Tickets - (1) (2) (3) (4) when the Pilot Guard does not accompany a train, he shall deliver to the Guard (or, if there be no Guard, to the Loco Pilot) a Pilot Guard's ticket on a printed form properly filled up and signed in ink, as the authority to proceed. Every such ticket shall apply only to the single journey to the station named on it. If the train is in charge of a Guard, he shall, before the train is started, deliver the ticket to the Loco Pilot. Immediately on the arrival of the train, the Loco Pilot shall deliver the ticket to the Station Master who shall at once cancel it. 11.06. Protection of trains on the Pilot Guard System - In the event of a train, which is followed by another train, stopping on the line between station, the Guard and the Loco Pilot shall take action to protect the train in accordance with the provisions of Rule 10.09. 213 .MU.IIU—12 12.01. -a-err I 12.02. - (Ri)"k0 GINT I 12.03. *-24M 2. 25 Eid 12.04. — 12.05. — 12.06. :— 214 CHAPTER-XII THE 'TRAIN STAFF AND TICKET SYSTEM CHAPTER-XII THE TRAIN STAFF AND TICKET SYSTEM 12.01. Essentials of the Train Staff and Ticket System - Where trains are worked between two stations on the Train Staff and Ticket System- (a) a single Train-Staff shall be kept at one of such stations, and (b) no train shall start from either of such stations to the other unless the said Train staff is at the station from which the train starts and has either been handed to or shown to the Loco Pilot by the Station Master when giving such permission. 12.02. System where applicable - Trains may be worked on the Train Staff and Ticket system only when the line is single and only between such stations as have been declared by special instructions to be Train staff stations. 12.03. Conditions to be observed for following trains on the Train Staff and Ticket System - Trains shall not follow one another in the same direction between Train staff stations, unless- (a) the Loco Pilot has been properly warned of the time of departure of the preceding train and of the place at which it will next stop; (b) all the trains are timed to run at the same speed, and such speed shall not exceed 25 kilometers an hour except under special instructions; and (c) an interval of fifteen minutes has elapsed since the departure of the preceding train. 12.04. Loco Pilot to have Train staff or Train- staff Ticket-No train shall be started from a station unless the Loco Pilot has in his possession to be carried with him on the journey, either the Trains staff or a Train staff Ticket, for the section of the line over which the train is about to travel. 12.05. Train - staff or Train - staff Ticket - by whom to be delivered to Loco Pilot - The Train staff or Train Staff Ticket shall be delivered to the Loco Pilot by the Station Master or by some railway servant appointed in this behalf by special instructions. 12.06. Train staff or Train staff Ticket - when to be delivered to Loco Pilot - (1) (2) (3) (4) When no other train is intended to follow before the Train staff will be required for a train running in the opposite direction, then subject to the provisions of sub-rule (3), the Train staff shall be delivered to the Loco Pilot. When other trains are intended to follow before the Train staff can be returned, then, subject to the provisions of sub-rule (3), a Train staff Ticket indicating that the Train staff is following, shall be delivered to the Loco Pilot of each train except the last; and the Train staff shall be delivered to the Loco Pilot of the last train. When a train is assisted by a second engine in the rear, a Train staff Ticket shall be delivered to the Loco Pilot of the front engine and the Train staff shall be delivered to the Loco Pilot of the rear engine: Provided that if both the engines attached to the train travel over the entire length of line to which the Train staff applies, and the train is to be followed by other trains, a Train staff Ticket shall be delivered to the Loco Pilot of each of the engines attached to the first mentioned train. When a train is assisted by a second engine in the front, the Train staff or a Train staff Ticket, as the case may be, shall be delivered to the Loco Pilot of the leading engine. When a material train has to stop between stations, the Train staff shall be delivered to the Loco Pilot. 2 14 12.07. 12.08.

12.09. (2) 12.10. (2) (3) 12.12. (2) (3) 21S CHAPTER-XII THE 'TRAIN STAFF AND TICKET SYSTEM

(6) The Train staff or a Train staff Ticket shall not be delivered to the Loco Pilot of any train until the train is ready to start. (7) The Loco Pilot shall not accept a train staff Ticket unless he sees the Train staff at the same time in the possession of the person who delivers the Train staff Ticket to him. 12.07. Train-staff to

be kept on engine-When the Train-staff is delivered to the Loco Pilot of a train, he shall place it in a conspicuous place provided for the purpose on the engine. 12.08. Trains not to be started until Train staff returned - When the Train staff has been taken away from a station by the Loco Pilot of a train, no other train shall be started from that station to follow the first mentioned train until the Train staff has been returned to the station. 12.09. Train staff Ticket to be given up and Ticket to be cancelled on arrival of train- (1) (2) 12.10. (1) (2) (3) 12.11. Upon the arrival of a train at the station to which the Train staff or a Train staff Ticket extends, the Loco Pilot shall immediately give the Train staff or Train staff Ticket to the Station Master, or to some railway servant appointed by special instructions to receive it. The person to whom any such Train staff Ticket is so delivered shall immediately cancel the same. Procedure when engine is disabled on the Train Staff and Ticket System- If an engine, which carried the Train staff, breaks down between two stations, the Assistant Loco Pilot shall take the Train staff to the staff station in the direction when assistance can best be obtained, in order that the Train staff may be available at that station for delivery to the Loco Pilot of the assisting engine. If an engine which carries a Train staff ticket breaks down between two stations, assistance shall ordinarily be obtained only from the station at which the Train-staff has been left; but if assistance can more readily be obtained from another station in the opposite direction, immediate steps shall be taken to have the Train staff transferred to the other end or the

section. Whenever an engine has broken down between two stations the Assistant Loco Pilot shall accompany the assisting engine to the spot. Train staff Tickets : how kept - Train staff Tickets shall be kept in a ticket box provided for the purpose and fastened by an inside spring, the key to open the box being the Train staff to which the tickets apply. 12.12. Train staff: how kept-The Train staff when at a station, shall not be left in the box but shall be kept by the Station Master in safe custody. 12.13. (1) (2) (3)

Distinguishing marks on Train staff Tickets and boxes - Each Train staff shall have shown upon it the name of the Train staff station at each end of the portion of line to which it applies. The Train staff and Train staff Tickets and boxes for the different portions of the line shall be distinguished by different colours. 'UP' and 'DOWN' Train staff Ticket shall also have distinguishing marks. 21S (15M) — (t51i) 8FIT, ft) 12.15. — 12.16. (Giq) - (Bbl) \$1 12.17. 10.09 216 CHAPTER-XII THE 'TRAIN STAFF AND TICKET SYSTEM 12.14. Form of train staff Ticket-Every Train staff Ticket shall be in the following form- Ticket No Train No. From To Loco Pilot and Guard. Train -Staff Ticket (Up or Down) Time Hours To You are authorised to proceed from Railway Minutes station to Train No. station and the Train staff will follow. in front left hours Signed Station Master at (Station stamp) Date : minutes (Back of Ticket) The Loco Pilot shall not accept this ticket unless he sees the Train staff for the portion of line, which he is about to enter. This ticket shall be given up by the Loco Pilot, immediately on arrival, to the Station Master or other person authorised to receive it, and such person shall immediately cancel it. 12.15. Record of Train staff Tickets issued-The Station Master shall keep a record in a book of each Train staff Ticket issued, showing the number of each ticket and the particular train for which it was issued. 12.16.

Obstruction outside the Home signal - The line outside the Home signal shall not be obstructed unless the Train staff of the portion of the line to be obstructed is at the station. 12.17. Protection of trains on the Train

Staff of the Train Staff and Ticket System - In the event of a train, which is followed by another train, stopping on the line between stations, the Guard and the Loco Pilot shall take action to protect the train in accordance with the provisions of Rule 10.09. 216 3m•rq-13 — 13 13.01. — (mq•a) \$1 I +.13.01 / 1.

13.02. — gas 13.03. — a (u) 13.04. Gi) \$1 13.04. : 6.03 a-ur I 217 CHAPTER-XIII THE ONE TRAIN ONLY SYSTEM Chapter-XIII THE ONE TRAIN ONLY SYSTEM 13.01. Use of the One Train Only System - Trains may be worked on the One Train Only System, only on short terminal branches on the single line. S.R. 13.01/1. Information regarding the branches of the North Central Railway worked on the One Train Only System is given in the Working Time Table of the division. 13.02. Essentials of the One Train Only System - Where trains are worked on the One Train Only System, only one train shall be on the section on which this system is in force, at one and the same time. 13.03. Authority to enter the section-A Loco Pilot shall not take his train into the section unless he is in possession of the authority to proceed as prescribed by special instructions. S.R. 13.03/1. Authority to proceed- (a) A single metal token/a wooden

staff bearing the inscription 'Authority to proceed on section' and 'One Train only' system on the reverse shall be supplied to each junction station with the Main Line. (b) (c) (d) Except as provided in G.R. 13.04 (2). (i) The token/wooden staff prescribed in para (a) above shall be the sole authority for a train to enter the section and the Loco Pilot of a train shall not enter the section until he has this authority in his possession. (ii) The Station Master shall, before allowing a train to enter the section, handover the token to the Loco Pilot of the train. The token/wooden staff shall be kept locked in a case especially provided for the purpose and the key of the case shall be kept by the Station Master in his personal custody. On arrival of the train the Loco Pilot shall personally handover the token/wooden staff to the Station Master who will immediately secure it in the case. When the token/wooden staff is lost, the Station Master will at once report the matter to the Divisional Railway Manager for replacement and until the token/wooden staff is replaced, he shall issue an authority on a manuscript form to the Loco Pilot. 13.04. Procedure in case of accident or disablement on the One Train Only System - (b) If the train becomes disabled and requires assistance or if an accident occurs which renders it possible for the train to proceed, the train shall be protected in accordance with the provisions of Rule 6.03 in the direction from which assistance, if necessary, is being obtained. The Guard of the train shall convey advice of the circumstances under which the train has become disabled and is not able to proceed, to the Station Master of the station from which assistance can best be obtained, and if it is necessary for such Guard to proceed to such station, he shall instruct the Loco Pilot in writing to keep the train stationary until his return, and obtain his written acknowledgement. 217 3m•rq-13 (2) rrre•g. Q*fi 4.20 1. crgrere a-Tre-rr 6.03 / 2. zrr a-fi 218 CHAPTER-XIII (2) (3) (4) (a) (b) THE ONE TRAIN ONLY SYSTEM Such Station Master, if he is not the Station Master of the base station, shall communicate this information to the Section Master of the base station. On receipt of such information, the Station Master of the base station may allow another engine to enter the line. The engine so sent shall either be accompanied by the Guard of the disabled train, who shall explain to the Loco Pilot where and under what circumstances the disabled train is situated, or the Loco Pilot of the engine so sent shall be given a written authority, containing such instructions as to where and under what circumstances the disabled train is situated and such other particulars as may be necessary to enter the line unaccompanied by the Guard of the disabled train. The Guard of the disabled trains shall be responsible for the safe and proper working of the line until the disabled train has been moved and any other engine sent to the assistance of the disabled train has been returned to the base station. If there is no Guard of disabled train, the Assistant Loco Pilot or, if necessary the Loco Pilot shall perform the duties imposed by this rule on the Guard, provided that the engine is not left unmanned in terms of Rule 4.20. S.R. 13.04/1. If it is necessary for the Guard to remain with his train, he will send the advice to the nearest station through the Assistant Loco Pilot stating the nature and cause of the breakdown and at once protect the train in accordance with G.R. 6.03 in the direction from which relief is expected. If assistance has been asked for, he shall not allow the engine or any portion of his train to be moved until such time assistance arrives. S.R. 13.04/2. The Loco Pilot of the engine sent out to assist a disabled engine or train, must also receive a caution order. 218 14 14.01. GINT 3T2Tfq— +.14.01 / 1. (u) 14.02. (2) 14.03. Qian) Ati s:rrq 219 CHAPTER-XIV BLOCK WORKING CHAPTER-XIV BLOCK WORKING A. General Provisions. 14.01. Means of granting or obtaining Line Clear -The running of every train shall, in its progress from one block station to another, be regulated by means of any one of or a combination of the following- (a) Electrical Block Instruments of Token or Tokenless type, (b) Track circuits, (c) Axle counters, or (d) Electrical Communication instruments. S.R. 14.01/1. The following order of preference of the means of communication may be as under- (a) (b) (c) (d) Block Instruments, Track Circuiting or Axle Counters Telephones attached to Block Instruments Station to station fixed telephones wherever available Fixed telephone such as Rai Iway auto phone & BSNL phones Control telephone VHF sets 14.02. Provision of instruments- (1) Electrical communication instruments shall be provided at every station, except at class 'D' stations where they may be provided under special instructions. (a) The Electrical Block Instruments, where provided, and electrical communication (2) instruments at any station shall be of a type approved by the Commissioner of Railway Safety and shall not be brought into use in the first instance unless they have been passed by him. (b) The person in charge of the maintenance of Electrical Block Instruments or electrical communication instruments shall not without the approval of the Commissioner of Railway Safety, permit the substitution, for the instruments and installation brought into use in the first instance, of any instruments or installation which do or does not satisfy the conditions prescribed in clause (a). 14.03.

Consent required before interfering with Block Working equipment - No railway servant shall interfere with the Block Working equipment, or their fittings for the purpose of effecting repairs, or for any other purpose, except with the previous consent of the Station Master. S.R. 14.03/1. Whenever Block

Instruments or their fittings are to be interfered with for testing, repairs or replacement, the competent S&T staff shall issue a Disconnection Memo on the prescribed form S&T (T/351) to Station Master clearly specifying the various signals which shall be affected during such repairs or replacement of Block

Instruments, The Station Master shall not give his consent for this purpose unless the block section is clear of trains and the Block Instruments, where provided, have been brought to Line Closed position. If a train is waiting at station to proceed, the block Instruments or signals shall not be tested by S&T staff, unless it has been so authorised in writing by the Station Master, who, before giving such permission, shall inform the Loco Pilot of the waiting train in writing to treat signal/signals as defective. After the testing of the block instruments and signals has been completed and the Reconnection Memo received from S&T staff, the block instruments and signals shall be brought in use and normal working resumed. The Loco Pilot of the waiting train shall also then be advised to this effect. 219 14 t) GTFT 2. 3. 4. 5. 6. 7. 8. 10. 12.

13. 14. 15. q-ä --ö-e--o, +.14.03 / 2. g) (q) (8) (q) (\$1) ertTTZIT q-r\$l-er\$l a-T17F-RT7 -.gfr-æ-q -G 220
CHAPTER-XIV BLOCK WORKING The Disconnection Memo should be prepared and offered by the Maintainer/Inspector who is authorised to maintain the equipment under his control. In case of emergency to prevent a possible accident, a disconnection memo may be issued by any staff authorised to issue disconnection memos but the reconnection portion of the memo will be issued only by the proper staff authorised to maintain the equipment. Some important situations where disconnection memo issued by S&T department and got accepted by operating department are given below- 1. Repairs and replacement of facing points, locks and SLM Mechanism along with rod transmission and fittings including lock bar and connecting rod for points and locks. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14

15. Repairs and replacement of detectors and their fittings both Mechanical and Electrical. Changing of signal, point motor, reversers including their controls, cables etc. Alterations in the Station Masters slide, control frames, station Master key locking box. Alterations in locking of lever frames of all types.

Changing of signal ling cables. Repairs to lever locks, circuit controllers, HKTs and other electromechanical apparatus. Addition and alterations to wiring of signalling circuits. Change of signal arms in semaphore signalling territories. Removal of any relay or control of any signal, point or any other signalling circuit. Alterations to Axle Counters. In case of route relay panel interlocked installations conducting of various safety checks by simulating condition. Replacement of any parts in the Block Instruments. Annual testing of signalling cables. Conducting of broken wire test. The above list is not exhaustive but only a few of the examples have been tabulated. S.R. 14.03/2. Precautions to be observed by staff during such above working- (a) (b) (c) (d) (f) (g) (h) (i) Ensure that traffic staff is properly drilled in the work when S&T gears have been disconnected. Permission of Section Controller to be always obtained before accepting disconnection memo. Ensure that a telephone at the site is installed by S&T staff and connected with SM/ASMs and walkie-talkie should also be provided. Date, time, probable duration,

Signals & Points which shall be affected, is clearly indicated on the disconnection memo. Cabin ASM/Cabinmaster/Cabinman on either side are advised under exchange of private number. All concerned are also advised for issue of Caution Order. Necessary entries are made in the Disconnection Register. Before permitting any movement the Station Master must advise in writing to S&T staff or the incharge of the work and ensure that the points are set, clamped & pad locked for the correct route. Resume normal working only after reconnection memo is received. Entries in the register must be made for all

disconnection memo offered by S&T staff, including those, which are rejected, giving reasons for the rejection of the disconnection memo in each case. S.R. 14.03/3. Opening of Cabin Basement/Relay Room by S&T Staff- Whenever any Cabin Basements/Relay Room is required to be opened for maintenance/attending failures etc., the following procedure shall be observed:- 220 14 (1) (2) (3) (4) (5) (6) (7) (8) Eie Ett g•zi GTFIT ærtF 14.04. ByrfR•a I ælfi. 14.04/1. geTF1@TZi, \$1 crat 14.05. titr — 221 CHAPTER-XIV BLOCK WORKING (1) (2) (3) (4) (5) (6) (7) (8) At stations where S&T maintenance staff are posted round the clock in the relay rooms, attached to the cabin/stations, the relay rooms/cabin basements may be provided with a lock whose key shall be kept by the authorised S&T staff on duty.

Double locking of such Relay Rooms is not considered necessary. At station where Cabin Basement/Relay Room is not manned by the S&T round the clock, the cabin basement/relay room shall be kept locked with a double lock, i.e. one padlock of Station Master and other of an authorised S&T staff. Such keys of the SMS padlocks must be kept with SM on duty and shall be given to the authorised S&T staff when required. The transaction of handing over the key shall be recorded in the Cabin Basement/Relay Room register and the entries should be signed both by the S&T staff and Station Master on duty. Key of each location should be kept single with proper label for identification. All keys should not be kept in a bunch. Before parting with the keys of Cabin Basement, the Station Master on duty will inform the concerned cabin under exchange of private numbers. The entries in this regard should be made in the TSR Register and Cabin Log Book. On return of the Station Master's Padlock Key by S&T staff, Station Master on duty should ensure personally or through the concerned cabin that the Cabin basements and relay rooms are properly locked. For the Cabin Basements the Station Master shall get it ensured through the respective Cabinmaster under exchange of Private numbers. During the period when the key of the Cabin Basement/Relay Rooms is with the S&T /Staff, the cabin staff concerned should pre-warn the S&T officials regarding the movement of trains. S&T staff while carrying out maintenance work/inspection etc. in the Cabin Basement/Relay Room will be personally responsible to ensure that no unsafe practices are adopted. When the key of Cabin Basement/Relay Room is handed over to S&T staff at the time of any failure of signal/S & T gear the Station Master should remain extra vigilant and in case of the failure of any S&T gear, the rules prescribed for reception/despatch of trains at the time of failure of signal/points should be strictly followed. At the time of inspection the inspecting officials should check that these instructions are rigidly followed by the field staff. B. Block stations at which

Electrical Block Instruments, Track Circuits or Axle Counters are provided. 14.04. Certificate of competency : (1) No person shall operate the electrical block instruments until he has passed a test in the operation of block instruments and unless he holds a certificate of competency granted by a railway servant appointed in this behalf by the Railway Administration. (2) The certificate of competency referred

to in sub-rule (1) shall only be valid for a period of three years or such longer period as may be laid down by special instruments. S.R. 14.04/1. Issue of Certificate of Competency- The principal of Zonal Railway Training Institute in case of group 'C' staff and Instructor Incharge of Divisional Traffic Training School in case of group 'D' staff, are authorised to examine, issue and renew the certificate of competency valid for a period of three years only. However, in exceptional circumstances, the validity of Competency Certificate issued by the Principal, Zonal Railway Training Institute, Chandausi to Group Transportation staff may be extended locally by an officer not below the rank of AOM/ATM. Such extension will be valid for a period

of one year and in no case shall the validity be so extended more than once. 14.05. Bell code : For the signalling of trains, the prescribed code of bell signals as detailed below, shall be used, and a copy thereof shall exhibited in each Block Station near the place of operation of the block working equipment: 221 2. 3. 4. 5. 6. 7. 14 31&F) I (*TIEITVT) (IT) (ea. arq) ur (éa aid) (e.) (eaa) ur (m•ra) (2Rür) oo ooo 0000 00000 000000 000000-0 000000-00 000000-000 000000-0000 000000—00000 000000000000000000 e, Orr 14.06. Eta - (2) Eta (4) 20 14.07. (2) (3) (4) GINT I Gi-er 222 CHAPTER-XIV No. 1 2 3 4 5 6 7 Note : Indication

Call attention, or attend telephone Is line clear, or line clear enquiry Train entering block section (a) Train out of block section (b) Obstruction removed (a) Cancel last signal (b) Signal given in error (a) Obstruction danger signal (general) (b) Stop and examine train (c) Train passed without tail lamp or fail board (d) Train divided (e) Vehicles running away in wrong direction on double line or into the block section on single line (f) Vehicles running away in right direction on double line Testing Code ooo 0000 00000 000000 000000--0 000000--00 000000-000 000000-0000 How Signalled One stroke or beat Two Three Four Six Six pause One Six pause Two Six pause Three Six pause Four 000000—00000 Six pause Five BLOCK WORKING How Acknowledged One stroke or beat Two Three Four Six Six pause One Six pause Two Six Pause Three Six pause Four Six pause Five Sixteen 00000000 00000000 Sixteen (1) (2) (3) 'O' indicates a stroke or a beat and '—' indicates a pause. Each signal shall be given slowly and distinctly.

Exchange of bell codes under reference numbers 3 & 4 are not required in a section provided with block proving axle counter or track circuit having complete track circuiting of station yard excluding non-running lines on either end. 14.06. Acknowledgement of signals : (1) Each Signal received shall be acknowledged by sending its authorised acknowledgement. (2) No signal shall be acknowledged until it is clearly understood. (3) A signal shall not be deemed to be complete until it is acknowledged. (4) If the station to which a signal is sent does not reply, the signal shall be repeated at intervals of not less than 20 seconds until reply is received. 14.07. Train Signal Register : (1) (2) (3) (4) A Train Signal Register shall

be kept by the Station Master or under his orders. All signals received or sent on the electrical Block Instrument and the timings of receipt and despatch shall be entered therein immediately after acknowledgement, by the person operation the Block Instrument. The timings entered in the register shall

be the actual timings, except that any fraction of a minute shall be counted as one. All entries in the register shall be made in ink. 222 14 14.08. (RBI) (ii) (iii) (iv) ur (i) (iii) (RBI) I 14.09. (2) 14.10. (2) (3) (4) 14.10/1 GINT ge•rg 'k' m•rRi7T (2) @ m-föra I zrr 02/3.1 223 CHAPTER-XIV BLOCK WORKING (5) No erasure shall be made in the register, but if any entry is found to be incorrect, a line shall be drawn through it, so that it may be read at any time and the correct entry shall be made above it. (6) The person who keeps the register for the time being shall be responsible for all entries made therein and for correctly filling in each column thereof. 14.08. Authority to proceed : The Loco Pilot shall not take his train from a block station unless he has been given an authority to proceed: (a) on double line, by the taking 'Off of the

last stop signal, and (b) on the single line, either- (i) by a token for the block section, taken from an electrical Block Instrument, or (ii) by a Line Clear Ticket duly signed by the Station Master, or (iii) by any document prescribed in this behalf by special instructions, or (iv) by the taking 'Off of the last Stop signal

in lieu of tangible authority as mentioned in sub-clauses (i) to (iii) on section provided with electrical Block Instruments of tokenless type or track circuits or axle counters. S.R. 14.08/1. Should the last Stop signal fail to function, the Station Master after obtaining 'Line Clear' from the station ahead shall give the Loco Pilot an authority to pass the last Stop signal at 'ON' on form T/369(3b), on which an endorsement should be made that 'Line Clear' has been received from the station in advance, quoting the private number received in the space provided for the purpose. 14.09. (1) (2) 14.10. (1) (2) (3) (4) Loco Pilot to examine authority to proceed : The Loco Pilot shall ensure that the authority to proceed given to him is the proper authority under the system of working and refers to the block section he is about to enter, and if the said authority is in writing that it is complete and duly signed in full and in ink. If the conditions mentioned in

sub-rule (1) are not complied with, the Loco Pilot shall not take his train past or start from the station until the mistake or the omission is rectified. Conditions for closing the block section : When the block section has been cleared by the arrival of the train or by the removal of the cause of blocking, the block section shall be closed by the block station in advance by giving the prescribed bell code signal. Before such signal is given the Station Master shall satisfy himself as per the prescribed special instructions. (a) that the train has arrived complete, or the cause of blocking the section has been removed, and (b) that the conditions under which Line Clear can be given, are complied with. The provision of clause (b) of sub-rule (2) may be relaxed at class 'A' single line crossing stations. In such cases, the Station Master shall satisfy himself that the train is standing at its Starter signal clear of the line on which the second train is to run. Where in a section, a block proving axle counter or continuous track circuiting between block stations and complete track circuiting of station section excluding non running lines of the receiving station is installed and is functioning and there is a clear indication of clearance of block section as well as complete arrival of the train as per indication given, it would be taken as assurance for complete arrival of a train to the Station Master. SRI 4.10/1 When the clearance of block section cannot be ascertained by the instrument provided for the purpose due to failure or any other reason, the same shall be ascertained through one of the electrical communication equipments as laid down in SR 6.02/3. I under exchange of private numbers between the receiving end Station Master and dispatching end Station Master, if the block section is clear.

223 14 (2) (3) (4) (5) Ruf-R« (Lofa: +.14.11 / 1. (u) gel crrq•å ælf. 14.11/3. 14.12. @ titr ziai GINT 224 CHAPTER-XIV 14.11. Responsibility of Station Master as to authority to proceed : BLOCK WORKING (1) (2) (3) (4) An authority to proceed shall not be given to the Loco Pilot until the procedure prescribed for the purpose, so far as it is applicable in the particular case, has been followed. An authority to proceed shall not be given to the Loco Pilot except by the Station Master or by some railway servant appointed in this behalf by special instructions. The Station Master shall see that the authority to proceed given to a Loco Pilot is accurate and that, when it is in writing, it is complete and is signed in full and in ink. If the train stops at the station and is waiting to cross another train, the authority to proceed shall not be given to the Loco Pilot until the whole of the latter train has arrived and is clear of the running line for the former train. If two engines are coupled together or if one engine is line front and another in rear of the train, the authority to proceed shall be given to the Loco Pilot of the leading engine. S.R. 14.11/1. Token not applicable to the Section or over carried: (a) (b) (c) If a Loco Pilot who has entered the block section with correct token or Line Clear Ticket or authority to proceed without Line Clear loses the same on the run, he shall proceed to the next station and report the matter to the Station Master. Should a Loco Pilot enter a block section without a token not applicable for that section, he shall at once bring the train to a stop and advise the Guard and take immediate steps to protect the train in front. The Assistant Loco Pilot shall be deputed to take the token with a note explaining the circumstances to the nearest station. If the token is sent to the station immediately in the rear, the Station Master shall deliver to the Assistant Loco Pilot a correct token for the train to proceed to the next station. Should the token be sent to the station ahead, the Station Masters shall immediately inform the station at the other end of the block section of the circumstance and hand over to the Assistant Loco Pilot an 'Authority to proceed without Line Clear' to enable the train to come to his station. On arrival of the train, the Station Master shall inform the station at the other end of the Block Section by a message, supported by a private number, of the complete arrival of the train at his station. Before starting forward with the correct token or 'Authority to proceed, without Line Clear, the Loco Pilot and the Guard should remove the detonators placed on the line for protecting the train. If the Loco Pilot over carries a token beyond the section to which it applies and is in possession of the correct token for the section, he should proceed with his train to the station ahead and hand over the wrong token to the Station Master and obtain a receipt for it. The Station Master shall return the token to the station concerned with the Guard of the first train in that direction and obtain a receipt from him. S.R. 14.11/2. Surrender of Token by Loco Pilot : On arrival of the train at the Block Station in advance, the Loco Pilot of a stopping train shall throw out the token with the pouch on the platform cautiously near the station office. If the train runs through the station without stopping, the token with the pouch must be dropped by the Loco Pilot into the net provided for the purpose. S.R. 14.11/3. The authority to proceed may be given to the Loco Pilot by the on duty railway servant deputed by the Station Master on duty. 14.12. Special responsibility as to electrical token instruments and to the token : (1) The Station Master shall be responsible to ensure that : (a) no one but himself operates the electrical Block Instruments, (b) the

procedure regarding bell signals and in addition any communication made by electrical communication instruments including the use of a private number, as laid down under special instructions, is correctly carried out. 224 14 (2) 14.13. (2) (4) GINT GINT I ælf. 14.13/1. e-bF7 14.14. - •T. zia 14.15. - \$1 14.16. — ag-i 14.07 I 14.17. (2) 14.18. (lbßi) (lbßi) I (wrrf) 225 CHAPTER-XIV (2) 14.13. (1) (2) (c) (d) (e) (a) (b) (c) BLOCK WORKING in the case of stopping trains, the incoming token is surrendered by the Loco Pilot before an outgoing token is delivered to him, when he receives the token of an incoming train, it is put in the electrical Block Instrument immediately, and no one except the person authorised by special instructions opens the electrical Block Instruments. A token shall not be taken out of an electrical Block Instrument earlier than necessary and when taken out, its number shall be recorded in the Train Signal Register, and it shall be kept in the personal custody of the Station Master till issued to a Loco Pilot or returned to the instrument. On arrival of the train at the block station in advance, the Loco Pilot shall give up the token in accordance with special instructions, and this token shall then be placed in the electrical Block Instrument at that station. If the train has to return to the block section from which it started, the token shall, on such return, be replaced in the electrical Block Instrument from which it was extracted.

Failure of electrical Block Instruments or Track circuits or Axle counters : If the electrical Block instruments, Track circuits or Axle counters or their electric connections fail. Line Clear shall be obtained through the electrical communication instruments. When Line Clear has been so obtained, an entry to that effect shall be made in the Train Signal Register, and the train may be allowed to proceed on the issue of a written authority to proceed, which shall also bear a remark to that effect. S.R. 14.13/1. Instructions for working of trains during failure of Block Instruments and abnormal conditions are given in Block Working Manual. 14.14. Closing of Intermediate Block Post : If the electrical Block Instruments provided at the

Stations on either side of an Intermediate Block Post or the track circuiting provided beyond the Last Stop signal, or the axle counters provided at either end of block section fail, the Intermediate Block Stop signal shall be treated as defective and the Intermediate Block Post shall be deemed to be closed and the section between the stations on either side of the Intermediate Block Post shall be treated as one block section. C. Block Station at which Electrical Blocks Instruments are not provided. 14.15. Transmission of signals :

For the working of trains at such stations where electrical block instruments are not provided, signals as prescribed under special instructions shall be transmitted, as occasion may require, on the electrical communication instruments. 14.16. Train Signal Register : The Train Signal Register referred to in Rule 14.07 shall also be maintained at block stations where Block Instruments are not provided. 14.17. Forms

for messages and written authority to proceed : (1) All messages despatched in connection with the working of trains, and all written authorities to proceed, shall be written on forms specially provided for the purpose by the Railway Administration. (2) Such forms shall be bound up in books and kept at each Block Station by the Station Master, or by some railway servant appointed in this behalf by special instructions. 14.18. Distinction of messages : (1) Every message despatched in connection with the

working of a train shall distinctly describe the train to which it relates. (2) For every train a separate inquiry and reply shall be sent. 225 14 14.19. — 14.20. 14.21. @GQ-em — 14.22. - (mq•a) 14.23. 14.24. — 14.25. (2) (3) 14.26. are•q (fiq 226 CHAPTER-XIV BLOCK WORKING 14.19. (1) (2) 14.20. Writings

and signing of messages and written authorities to proceed : All messages dispatched in connection with the working of trains, and all written authorities to proceed, shall be written up in ink and signed by the person authorised to despatch or issue the same. No messages or written authority to proceed shall be written out, either in full or in part, or signed, until necessary. Completion of messages : No part of any message shall be despatched or acted upon until the whole message has been written out except with a view to the prevention of an accident, or in some other case of emergency. 14.21. Preservation of messages and written authorities to proceed : Messages and written authorities to proceed shall be destroyed at such time after issue as may be prescribed by special instructions : Provided that no message or written authority to proceed shall be destroyed before one month after issue. 14.22. Cancellation of Line Clear :

On a single line when a Line clear has been cancelled, no train shall be allowed to leave in the opposite direction until a message has been received acknowledging such cancellation and stating that the train for which the Line Clear has been given is and shall be detained. Loco Pilot to have authority to proceed - The Loco Pilot shall not take his train from a 14.23. station unless he has in his possession, as his authority to proceed, a Line Clear Ticket duly signed by the Station Master. 14.24. Authority to proceed : When to be given to Loco Pilot : An authority to proceed shall not be given to the Loco Pilot until the procedure

prescribed for the purpose, so far as it is applicable in the particular case, has been followed. 14.25. (1) (2) (3) D. Line Clear Tickets. Line Clear Tickets : When owing to failure or non-provision of electrical Block

Instruments the authority to proceed is a Line Clear Ticket, it shall be in prescribed format. Each such ticket shall bear a serial number which shall be recorded in the Train Signal Register, the numbers for the Down direction being clearly distinguished from those for the UP direction. The ticket referred to in sub-rules (1) and (2) shall be printed on white paper with blue font to distinguish paper line clear ticket for UP

& Down direction, water mark arrow pointing UP & Down will be printed on the ticket. E. Use and Operation of Block Working Equipment. 14.26. Use and operation of block working equipment : The use and operation of electrical Block Instruments shall be governed by special instructions to be issued with the prior approval of the Railway Board. 226 — 15 15.01. \$1 - 15.02. — 15.03. — \$1 ærrrrrq i-e zrr 15.04.

- GINT (2) 3ia-qf-uq 15.05. - (1) 15.04 ag-f. 227 CHAPTER-XV PERMANENT WAY AND WORKS CHAPTER-XV PERMANENT WAY AND WORKS A. Railway Servants Employed on the Permanent Way or Works. 15.01. Condition of Permanent Way and Works : Each Inspector of Way or Works shall be responsible for the condition of the permanent way and works under his charge. 15.02. (a) (b) Maintenance

of line : Each Inspector of Way or Works shall : see that his length of line or works in his charge are efficiently maintained, and promptly report to the Engineer-in-charge all accidents to or defects in the way

or works, which he considers likely to interfere with the safe running of trains, at the same time taking such actions as may be necessary to prevent accidents. S.R. 15.02/1. A Sectional Engineer (P. Way), who

receives a report that a locomotive has received a lurch, shall immediately inspect the track and take all possible measures to remove the defect. Until the repairs are completed, he shall take such precautions for

protection as are necessary. 15.03. Keeping of material : Each Inspector of Way or Works shall see to the

security of all rails, chairs, sleepers, and other material in his charge, and ensure that such of the said articles as are not actually in use are properly stacked clear of the line so as not to interfere with the safe

running of trains. S.R. 15.03/1. Permanent Way Materials and Tools : Loose permanent way material, tools, etc. must not be left by the side of the line where they might be made use of by ill-disposed persons

to

form dangerous obstructions, Such material must be collected at gate lodges or gang huts and subsequently taken into station at the earliest opportunity. This does not apply in the case of remodelling of yards doubling and relaying where special watchman are engaged. (1) (2) Inspection of Permanent Way and Works - Every portion of the permanent way shall be inspected daily on foot by some railway servant appointed in this behalf by special instructions: Provided that the interval between such inspections may, under approved special instructions, be increased to once in two days in the case of lines with light and infrequent traffic. All bridges and works including signals, signal wires, interlocking gear, points and crossings, overhead equipment and any other equipment affecting the safety and working of trains shall be inspected regularly in accordance with special instruction. S.R. 15.04/1. Inspection of Permanent Way - The Keyman of each gang must walk daily over his length starting at sunrise and when necessary, more frequently than once daily. He must tighten or replace any loose keys or fastenings. On lines with light and infrequent traffic this patrolling by Key man may be once in two days under approved special instructions. Patrolling of lines : (1) In addition to the inspection referred to in Rule 15.04, Whenever any portion of a railway is likely to be endangered by abnormal conditions such as heavy rains, breaches, floods, storms and civil disturbances, the line shall be patrolled in accordance with special instructions. 227 (2) (3) (4) 3.62 I errs•a @ (t3fr%T) 1 31 (u) āzrrg ūlé) (ii) til-eT ufiui sri g•zi \$1 1 zrn•r €4) 15 di (ii) \$1 228

CHAPTER-XV PERMANENT WAY AND WORKS (2) When a railway servant deputed to patrol the line, notices any condition likely to affect the safety of trains or otherwise apprehends danger, he shall take action in accordance with special instructions prescribed for the purpose to protect the obstruction on line and thereafter inform the nearest Station Master by the most expeditious means. See also Rule 3.62. S.R. 15.05/1. (1) (2) (3) (4) Patrolling of line during the monsoon months : (a) (b) The line is to be patrolled at night from the commencement until the close of the monsoon, ordinarily from June 1st until October 31st but the exact date of commencement and termination will be decided by the Assistant Engineer of the section. Patrolling should not be started until the monsoons actually arrive on any section. Patrol charts, prepared by Divisional Engineers for the different sections, will be distributed to the Assistant Engineers, Sectional Engineer (P. Way) and Section Controller and a copy of the relevant portion of the chart will be supplied to each Station Master with instructions to : (i) record timings of arrival and departure of Patrolmen in the patrol books and initial them, and (ii) record timings of arrival and departure of patrolmen and their names in the station diary. Copies of the patrol charts shall be sent to the loco shed Foreman by the Divisional Engineer. (a) (b) (c) (d) (a) (b) The Patrolman, whose beat commences at Station A, will present the patrol book in his possession to the Station Master. A who will enter there-in the date and time of arrival and departure of the patrolman and sign the book and return it to him. He will then walk over his beat and handover the patrol book to the patrolman of the next beat, and so on, until the book from station A continues its journey to Station 'B' In a similar manner, a patrol book from Station B will be transmitted to station 'A' . The Station Master at A is to enter the date and time of arrival of patrolman in the book from Station B, sign it and hand it back to the patrolman for re-transmission to Station B. The Station Master at Station B will enter the date and time of arrival of the patrolman in the book from station A, sign it and hand it back to the patrolman for re-transmission to station A. In this manner, each patrol book makes one journey in each direction per night. If a Patrolman, on arrival at the end of the beat, does not find the next Patrolman waiting to take over his book, he must not wait, but must walk on until he meets him and should report the absence of any man from his beat, to the Gangmate in the morning. Where stations are close together, the patrol books may be passed through one or more intermediate stations before it is returned to the original station. The Station Master of each intermediate station will enter the date and actual time of arrival and departure of the Patrolman and sign the book. In order that the movement of the Patrolman can be checked accurately, it is essential that the Station Master on duty should record in the patrol book, the actual timings of the arrival at and the departure from the station. He should also record in his station diary the name of the Patrolman and the actual time of his arrival and departure from the station. Station Masters will see that the Patrolman come on duty sober. if a Patrolman does not turn up within 15 minutes of his scheduled arrival, the Station Master on duty will take the following action : (i) he must stop run through trains Proceeding into the block section. (ii) he must advise the Station Master at the other end of the section to take similar action and also advise the Section Controller. 228 (5) (6) (iii) 40 15 EF•zrr (iv) EF•zrr R•qté 600 41-e-R 400 41-e-R 1200 800 (ii) (iii) (ii) (ii) \$1 600 400 41-e-R 1200 41-e-R 800 41-e-R (iii) zrrerr \$1 Adi (5) anil-IA Rqi•é (ii) (iii) I 229 CHAPTER-XV PERMANENT WAY AND

WORKS (iii) he must issue a Caution Order to all trains Proceeding into the block section advising the Loco Pilot to be on the alert and specify a speed restriction of 40 kilometers per hour during the day when the visibility is clear, and 15 kilometers per hour during the night or during the day when visibility is not clear. (iv) he shall also initiate action to ascertain the reason for the Patrolman not turning up by sending a Gangman, if available, in the concerned section. The Caution Orders will be issued until the Patrolman has arrived and reported that the line is safe for passage of trains. Immediately danger is apprehended or when damage is observed, the Patrolman should protect the line, as indicated below :

(5) (6) (a) (b) (c) In case where one Patrolman is employed on a single line section - (i) Place a red light in a prominent position to warn a train which may be approaching from one direction ; then run in the opposite and fix one detonator at 600 metres in case of Broad Gauge and 400 metres in case of Narrow Gauge/Metre Gauge and 3 detonators, 10 meters apart at 1200 metres in case of Broad Gauge and at 800 metres in case of Narrow Gauge/Metre Gauge from the affected point. If, while on his way to fix detonators, the Patrolman finds a train approaching the affected point, he should immediately place detonators on the line and stop the train by showing a danger signal (ii) return to the affected point and protect the other side with detonators similarly. (iii) in the event of it being impossible to get to the other side or the affected point (as in a wash away), place a red light so that it can be seen from as great a distance as possible, and also display the flare signal. In cases where one Patrolman is employed on a double-line section - (i) Place the red light in a prominent position, so as to warn an approaching train on one track, then run along the other track towards a possible approaching train and place detonators, as in sub para (a) (i) above; displaying the ignited flare signal. (ii) run back and protect with detonators the other line on which the red light is shown; displaying ignited flare signal. In cases where two Patrolmen are employed - (i) the second light should be lit and danger signals shown at once in both directions ; (ii) the two Patrolmen should then proceed in opposite directions, showing hand danger signals and displaying ignited flare signals and when at 600 metres in case of Broad Gauge and 400 metres in case of Narrow Gauge/metre Gauge from the point of danger each should clip one detonator on the rail; they should then proceed to a distance of 1200 metres in case of Broad Gauge and 800 metres in case of Narrow Gauge Metre Gauge from the Point of danger and fix 3 more detonators on the rail, 10 meters apart. On the double line, the detonators must be placed on each line so that the approaching trains on both the directions are protected. (iii) should the nature of the obstruction be such as to render it impossible for either of the Patrolman to get across the gap, as for instance, wash away with a strong flood, one of them should show a danger signal and displaying ignited flare signal and endeavour to stop trains approaching the gap from the other side, while the other man should act as per para (6) below. After protecting the line, as described above in para (5), in places where two Patrolmen are employed, one of the Patrolman shall act as follows : (a) Proceed with all haste away from the affected point in the direction of the nearest station or if cut off by an impassable obstruction, to the station in the opposite direction and report occurrence to the Station Master who will: (i) stop trains entering the block section. (ii) advise the station Master at the other end of the block section, and (iii) advise the Controller and all concerned. 229 Adi +.15.05 / 2. 15.06. — GINT 15.09 I 15.09 I sri (A'<FT) (ii) — (NG) (iii) - g•zi (iv) 'El' - g•zi (2) (ii) CPJ) zrr 4.09/1 4.08/1 (iii) 230

CHAPTER-XV PERMANENT WAY AND WORKS (b) If on his way to the station, he passes gang quarters, report the occurrence to the Gangmate, who should proceed with his gang to the kilometreage and ensure proper protection and attend to repairs as necessary. Where a single Patrolman is employed, the Patrolman shall remain at the place where he has fixed three detonators and send word about the danger through the first Railway employee or other person, he is able to contact the spot itself. S .R. 15.05/2. Sectional Engineer (P. Way) of the section shall ensure that Patrolman deputed are conversant with the use of flare signals. Each Patrolman should have one flare signal with him before proceeding for patrolling duties. 15.06. Work involving danger to trains or traffic : A gang shall not commence or carry on any work which will involve danger to trains or to traffic without the previous permission of the Inspector of way or works, or of some competent railway servant appointed in this behalf by special instructions; and the railway servant who give such permission shall himself be present to superintend such work, and shall see that the provision of Rules 15.08 and 15.09 are observed: Provided that, in case of emergency, when the requirements of safety warrant the commencement of any such work before the said railway servant can arrive, the Gangmate may commence the work at once and shall himself ensure that provisions of rule 15.09 are observed. S.R. 15.06/ I. Works involving interference with Traffic - (a) (b) For the Purpose of

these rules, Engineering and Signal and Interlocking Works are classified under the following categories :

(i) Category A: Works of normal routine, maintenance, such as lifting and packing, renewals of keys and bolts, isolated renewals of a chair, pot or sleeper, etc. (ii) Category B : Works such as scattered renewals of pots or sleepers, oiling of bolts and greasing of fishplates, or painting of bridges or other works necessitating observance of hand signals or 'Stop' or Proceed with Caution' signals etc. (iii) Category C : Works such as shifting and erection of signals, over-hauling of signal and interlocking frames, etc. which require the issue of a Green Notice but not blocking a running line. Note: Works normally falling under this category but requiring power block on electrified sections would be treated as falling under category D below. (iv) (1) (2) Category D : Works involving breaking of the road, interference with signals and interlocking arrangements, temporary diversions, relaying or other works causing interference with traffic.

Category A : Works of a normal routine nature etc. no special precautions are necessary and no advice need be given to any Operating Official. Category B - (i) Works under category (B) will be carried out according to programme of which all concerned will be advised and notices of speed restrictions, if any, or cautions to be observed will be advised to all concerned. (ii) The Sectional Engineer (P. Way) or the Official-in-charge of the work will issue message to all the authorities mentioned in S.R. 4.09/1. (ii) The message will detail the nature of the work, the kilometreages, the speed restriction and any other precautions required to be observed by the Loco Pilot and will also state if Engineering Speed Restriction indicators in accordance with S.R. 4.08- I have been provided. (iii) The Station Masters will acknowledge the message to the Official-in-charge direct, copy to the Section Controller, who will also advise the station concerned by a notice and obtain their acknowledgment. Before the work is taken in hand, the Sectional Engineer (P. Way) or the Official-in-charge will personally satisfy himself that all concerned have acknowledged the message. If acknowledgments are not received, the Work should not be taken in hand. 230 (3) (iv) 4.09/1 (v) 15.09/1 (vi) \$1 eh--öTT •TZIT QT 1 Adi (ii) (i) 3 g•rv--q (iii) \$1 g•zi (iv) ülé g•zi EF•zrr I (vi) (vii) 4.09/1 (ii) 4.09 / 1 (iii) (iv) (ix) R. 4.09/1 I (x) 15.09/1 231 CHAPTER-XV PERMANENT WAY AND WORKS (3) (iv) Caution Orders will be issued to Loco Pilot Guards of all trains in accordance with S.R.4.09/1. (v) The site of work will be protected in accordance with S.R. 15.09/1. (vi) On completion of the work, the Official-in-charge will issue a message advising all concerned, included in the Original message of the completion of the work, and at the same time advise the Section Controller on the phone personally. On receipt of this message the issue of Caution Order will be discontinued unless otherwise specifically instructed. Categories (C) & (D) : (i) (ii) (iii) (iv) (v) (vi) In all cases of Engineering or Signal and Interlocking works which involve the breaking of the open line or interference with signal and interlocking arrangements or observance of any other restrictions in normal working, the Engineering/Signal Department will arrange with the Sr. DOM for the issuing of a Green Notice in accordance with standing instructions. The Green Notice referred to in sub-para (i) shall be valid for 3 months from the date of issue, i.e. the work notified must be taken in hand within 3 months. If the work cannot be commenced within 3 months, a fresh Notice must be issued. Once the work is taken in hand the Notice will be effective as long as the work is in progress. The Sr. Divisional Engineer or the Sr. Divisional Signal & Telecommunication Engineer will be responsible for obtaining the sanction of the Commissioner of Railway Safety where necessary and sending to him the safety certificates on the completion of the works in accordance with standing orders. Temporary Working Instructions for each phase of work shall be prepared jointly by Sr. DOM and Sr. DSTE/Sr. DEN and a "Level pull chart/route setting chart" shall be prepared by department. On receipt of advice from the Official-in-charge of the work, and before the work is taken in hand, the Sr. Divisional Operations Manager will issue an all concerned message to the Officials mentioned in the aforesaid Green Notice and will arrange for the blocking of the line on the date and time specified. This message will be issued so as to give not less than 3 days clear notice. In the case of daily work on relaying, the message may cover a period of seven days, on the expiry of which a fresh message must be issued. (vii) The Official Incharge of the work will issue message to all the authorities as per SR.4.09/1 (ii) The message will detail the nature of the work, the Km, the Speed restriction. Speed restriction indicator Should also be provided. The work must not be taken in hand until acknowledgments have been received from the all concerned. (viii) Before the line is blocked for the work to commenced, the Official-in-charge of the work will consult the Section Controller in regard to the movement of trains on the section, Section Controller after verifying that the Station Masters on either side of the block section on the single line and the Station Master of the block station in rear on the double

line and Notice stations for issuing caution Orders for the Block section where the work is to undertaken as indicated in S.R. 4.09/1 (iii) have received and acknowledged the message referred to in sub- para (iv) above, will issue a Train Notice to the Station Master concerned authorising him to block the line. On receipt of the message from the Section Controller, the Station Master will block the line and hand over a written memo to Official-in-charge of the work that the line has been blocked, and specify there in the duration of the block. (ix) Caution Orders will be issued by the Station Masters concerned in accordance with S.R. 4.09/1 to Loco Pilots/ Guards of all trains proceedings towards the affected area. (x) The Official-in-charge will also arrange for the Protection of the affected area in accordance with S.R. 15.09/1. 231 (xi) "RAT (xii) a-TIA?ZEFTTT .3TT?TZI 4 Ett 1 (xv) 4.09 / 1 (ii) (vii) (Naxo•r) 72 \$1 (ii) eiu (qig) 15.06 / 2. — \$1 ælfi.15.06/1 g) (3) (vii) (ii) 232 CHAPTER-XV PERMANENT WAY AND WORKS (c) (xi) A material lorry may be allowed to work in the block section for which the line has been blocked, but the Engineering Official-in-charge must ensure that before the line is declared safe for traffic, the lorry is removed off the track. Only when specially mentioned in the Green Notice, material train will be allowed to work in the block section during the period of the block This train will be given and Authority to proceed without Line Clear' and will be piloted by a responsible Engineering official not below the rank of a JE (P. Way) and will work under his personal supervision. (xii) When Special Working Rules have to issued, the Sr. DOM will arrange for their issue in good time. He will also be responsible for obtaining the approval of the Chief Operations Manager where necessary. (xiii) On completion of the work, the Official-in-charge will hand over to the Station Master a safety certificate for resumption of normal tramc and speci5,' therein whether any speed restriction is to be observed or Caution Order to be issued. On receipt of this certificate, the Station Master will advise the Section Controller who will advise all concerned specified in the Green Notice, cancel the block and resume normal working. In addition, if necessary. the Officer-in-charge will also hand over a certificate Stating that the block section has been cleared of the material train. (xiv) In the case of urgent repairs or renewals when previous notice can not be given for the issue of a Green Notice. for any other reason, special precautions at short notice are necessary, the Sectional Engineer (P. Way) or other Official-in-charge of the work must advise the Controller and issue a WTitten message to the Station Master giving not less than 4 hours notice before the work is to be taken in hand. (xv) On receipt of this advice, the Station Master will obtain permission from the Section Controller and at the same time advise the Station Master at the other end of the block section and also the Notice Stations for issuing Caution Orders for that block section as indicated in S.R. 4.09/1 (ii) and obtain their acknowledgment, on receipt of which the Station Master will block the line in accordance with sub-para (vii) above, and advise the Engineering Official-in-charge in writing to take the work in hand. The Station Master will also stop all trains and issue Caution Orders where necessary until acknowledgment from Station Masters of Notice stations are received. General : (i) (ii) On the electrified area before any slewing alterations to super elevation, excavation or levelling of tracks are commenced, 72 hours previous notice shall be given to the Traction Engineer (Distribution so that the overhead equipment may be adjusted to confirm to the new conditions if necessary. [fit is necessary to carry out any work, which involves risk of coming in contact with the overhead equipment, a permit must be obtained from the Traction Engineer (Distribution) Rail Bonds - Any deficiency or defect noticed in Rail Bonds including cross bonds, connections to impedance bonds, structure bonds and Traction Substation negative feeders shall be reported immediately to the Traction Engineer (Distribution) and Sr. DSTE. All bonds removed by the staff of the Engineering Deparfinent shall be replaced by the staff of the Engineering Deparfinent and all such removals and replacements shall be reported, to the Traction Engineer (Distribution) and Sr. DSTE without delay. S.R. 15.06/2. Blocking the line on the field telephone - When for the special reasons it is decided to permit blocking of the line on the field-telephone the following procedure will be followed in line of that laid down in para (vii) of S.R. 15.06. I (b) (3). This procedure is permissible on Controlled Sections only. (i) The name of the Engineering Official-in-charge of the work, who shall not below the rank of a Section Engineer (P.Way) must be mentioned in the Green Notice. The Railway Official so nominated and no other person will be authorised to obtain blocks on the field telephone. (ii) The all concerned message issued by the Sr. DOM will mention the name of the Engineering Official-in-charge of the work and will also state that the block will be allowed on advice from the section on the field telephone. 232 (iii) I cra errzrr (iv) (v) +.15.09/1 (vi) (vii) (viii) 'T' Tia-Ili 3fizi<T qu) (ix) qré -e-e-l-d (xi) QTIT 233 CHAPTER-XV PERMANENT WAY AND WORKS (iii) On an application to the Sr. DOM

the Official-in-charge of the work will be issued a Privates Number sheet to be used as follows. On completion of the work the Private Number sheet must be returned to the Sr. DOM. (iv) Before leaving the station for the site of the work, the Engineering Official-in-charge will consult the Section Controller who will advise him the approximate time and nominate the last train after which the block will be allowed. (v)

After the passage of the nominated train the Engineering Official-in-charge will arrange to protect the place of obstruction in accordance with S.R. 15.09/1 and after having satisfied himself that the obstructed area is properly protected, will call the Section Controller on the field telephone, give his name and designation and also reference number of the Green Notice under which the work is being carried out. (vi)

The controller will then call the Station Master at each end of the block section and ascertain from them if the block section is clear of all trains. (vii) The Engineering Official-in-charge will then issue a message on the field telephone as follows: Section controller Message No. S.Ms.AandBN0. of Ref. D.R.M.'s Line (Up or Down line in the case of double line) between sections A and B will be blocked from to Private No. hrs. Name Designation (viii) The Section Controller will then issue a message to the Station Masters A and B and also to the Engineering Official-in-charge as follows : S.Ms.AandBcopy-S.E. (P. way). T.N.N0. .

You are authorised to block the line (Up or Down line in the case of double line) between stations A and B from to Section Controller (Name) hrs. (ix) (x) (xi) The Station Master concerned will acknowledge the Controller's message supported by a Private Number. The Controller will make a note his chart in the 'Remarks' column and record the name of the Engineering Official-in-Charge and the private Numbers received from the Engineering Official and the Station Masters. On receipt of the above message from the

Controller the Station Master concerned will block the line in accordance with the rules and issue a message to the Engineering Official-in-charge, copy to the Section Controller, on the telephone as follows : From S.M. To-S.E. (P.Way) No blocked from Private No. Line (Up or Down line in the case of double line) has been to hours. S.M. (Name) The Engineering Official-in-charge will then commence the work.

He will keep himself in constant touch with the Section Controller. 233 (xii) -e--uq (xiii) (xiv) (vii) 15 15.07. 15.08. (2) (3) cret (3) ælf. 15.08/1. Eiel a-TN '316' 20 1 234 CHAPTER-XV PERMANENT WAY AND WORKS (xii) On completion of the work and after the track is made safe for the passage of trains, the Engineering Official-in-charge will contact the Section Controller on the field telephone again and advise him of the completion of the work. The Section Controller will call the Station Masters at both ends

of the block section and the Engineering Official-in-charge will then issue a message in the following form: S .Ms. A and B copy - Section Controller No. YourN0. Track safe for traffic aaa Train working may now be resumed (speed restriction, if any to be mentioned) aaa Private No. Designation Name (xiii) On

receipt of the above message the Station Controller will issue a Train Notice to the Station Masters concerned and authorise them to cancel the block and resume normal working, and obtain their acknowledgments. (xiv) When the Control Phone is interrupted or where the control is not in operation, the procedure laid down in para (vii) or S.R. 16.06/1 (b) (3) must be complied with strictly. 15.07. Work in

thick, foggy or tempestuous weather impairing visibility - In thick, foggy or tempestuous weather impairing visibility, no rail shall be displaced and no other work which is likely to cause obstruction to the passage of trains shall be performed, except in cases of emergency. 15.08 (1) (2) (3) Precautions before commencing operations which would obstruct the line : No person employed on the way or works shall change or turn a rail, disconnect points or signals, or commence any other operation which would obstruct the line until Stop signals have been exhibited and where prescribed detonators used; and if within station

limits, he has also obtained the written permission of the Station Master and all necessary signals have been placed at 'On': Provided that the exhibition of Stop signals may be dispensed with, if such operations are performed or carried out after the necessary signals, other than Automatic Stop Signals, have, in addition to being placed in the 'On' position, been disconnected, so that such signals cannot be taken 'Off' again until it is safe to do so and the corresponding adequate distance beyond such signals is kept clear :

Provided further that when the area of work is controlled by Automatic signals, the railway servant in charge of the work shall post a competent railway servant at an adequate distance in rear of the site of the work to stop and warn any train approaching the affected area. No work involving removal of any rail from the track shall be undertaking without traffic block, except as provided in sub-rule (3). In emergent cases, the engineering official not below the rank of permanent way inspector grade III undertaking such operations shall first bring the train to stop and advise the Loco Pilot of the train about the need to stop the train through a written memorandum. The engineering official shall simultaneously arrange to send a

message to the Station Master for the need to block the track and obtain a written confirmation of the same. In such emergent cases, works shall be commenced only after advising the Loco Pilot and bringing the train to stop. S.R.15.08/1. If the line where Automatic signalling is in use has to be blocked against traffic, the Official-in-charge will clamp the special short circuiting device across the two outer copper wires of the impedance bond at the entering end of the track where the work is in progress. This will put the Automatic signal to 'On'. In addition to this a railway servant with detonators and hand signals must be stationed not less than 20 meters outside the signal concerned. He shall place one detonator on the line and display a red hand signal. 234 ueRui g•rv-q-T a-TIAITT a-TINT--H (u) 3F4 (341\$hâe) di \$1 30 g•rv--q GTT g•zi 2--2113 I a-TINT--H 15.09. - Ruf-R« 600 400 1200 800 gas 10 I 30 45 \$1 I *-24M 30 \$1 1200 \$1 800 | 235 CHAPTER-XV PERMANENT WAY AND WORKS S.R. 15.08/2.(a) Working involving the removal of rails, renewal of switches, crossing or sleepers or anywork will affect the safe working of trains

in station limits, must not be commenced by the Engineering officials-in-charge of the work without previous advice in "Titing to the Station Master on duty and except in an emergency in the case of interlocked points, to the Section Engineer (S&T) as well. Acknowledgement of the Station Master must be received before commencement of work. Such acknowledgement shall not be given until the relevant signals have been placed at 'ON'. (b) Before commencing work on a line, which cannot be isolated from other running lines, the Engineering officials should provide the prescribed hand signals, detonators and banner flags, at point not less than 30 meters on both sides ofthe work. (c) On completion of the work, the Sectional engineer (P.Way) shall issue a notice of cancellation in writing to the Station Master and, where necessary, to the Section Engineer (S&T) as well. (d) If it becomes necessary to pass a train during the time the works is in progress or when points are disconnected, the engineering official in charge of the work will be responsible for restoring the track to a condition to ensure the safe passage of the train and will give a written assurance to the Station Master that he has done so. The Station Master will then be responsible to ensure that the points are correctly set and locked as required by rules for the passage of the train. The engineering officials shall not again interfere with the track until he has received a written intimation from the Station Master that work may be resumed. If, in an emergency, it becomes necessary to cany such work, after sunset the provision for protection of the site as detailed above must be complied with except that red lights must be exhibited in the direction ofthe approaching trains. S.R. 15.08/3. In an

emergency, when it is necessary on consideration of safety, the authorised Engineering official may commence such work after protecting the lines before issuing notice to the Station Master concerned, if the work is likely to be prolonged, he shall notify to the Station Master concerned as soon as possible. The location of banner flags, detonators and hand signals must be selected so as to avoid stopping oftrains as far as possible on continuous steep rising gradient. 15.09. Showing of signals- (1) Whenever due to lines being under repair or due to any other obstruction it is necessary to indicate to the Loco Pilot that he has to

stop or proceed at a restricted speed, the following signals shall be shown and, where prescribed, detonators used, if on a double line in the direction from which trains approach, and if on a single line in each direction. (a) (b) When the train is required to stop and the restriction is likely to last only for a day or less -A banner flag shall be exhibited at a distance of600 meters on the Broad Gauge and 400 meters on the Metre Gauge and the Narrow Gauge and three detonators shall be placed, 10 meters apart, at a distance of 1200 meters on the Broad Gauge and 800 meters on the metre Gauge and Narrow Gauge from the place of obstruction. In addition, Stop hand signal shall be shown at a distance of 30 meters from the place of obstruction, at the banner nag. and at a distance of 45 meters from the three detonators, The railway servant at the place of obstruction shall give proceed hand signal to indicate to the Loco Pilot when he may resume normal speed after the train has been hand-signalled past the place of obstruction. When the train is required to stop and the restriction is likely to last for more than a day - A stop indicator shall be exhibited at a distance of 30 meters from the place of obstruction and a caution indicator at 1200 meters on the Broad Gauge and 800 meters on the metre Gauge and the Narrow Gauge from the place of the obstruction. In addition, termination indicators shall be provided at the place of the obstruction. In addition, termination indicators shall be provided at the place where a Loco Pilot may resume normal speed. 235 (IT) 30 \$1 800

I a, 800 fi. \$1 30 \$1 800 \$1 I e. 800 R--u-l 1200 800 (1) go 180 (1) (q) ge•rur I GINT I 15.09 / 1. — 15.09(1) (i) 30 'QA' (ii) 800 'T' (iii) 600 400 (4%) Q" ' (iv) 2--2113 *It-a / \$ (u) S%1fiZIN7T 1509 (1) @ (.3TN•u 236 CHAPTER-XV (c) (d) PERMANENT WAY AND WORKS When the train is not required to stop and the restriction is likely to last only for a day or less Proceed with caution hand signals shall be

exhibited at a distance of 30 meters and again at a distance of at least 800 meters from the place of obstruction. The distance of 800 meters shall be suitably increased by special instruction, where required. The railway servant at the place of obstruction shall give proceed hand signal to indicate to the Loco Pilot when he may resume normal speed after the train has been hand-signalled past the place of obstruction.

When the train is not required to stop and the restriction is likely to last for more than a day -A speed indicator shall be exhibited at a distance of 30 meters from the place of obstruction and again a caution indicator at a distance of at least 800 meters from the place of obstruction. The distance of 800 meters shall be suitably increased by special instruction, where required. In addition, termination indicators shall be provided at the place where a Loco Pilot may resume normal speed. (2) (3) (4) In case the place of obstruction is within station limits- (a) The provision of sub-rule (1) may be dispensed with if the affected line has been isolated by setting and securing of points or by securing at 'On' the necessary manually controlled Stop Signal or signals, and (b) approach signals shall not be taken 'Off' for a train unless the train has been brought to a stop at the first Stop signal, except in cases where the Loco Pilot has been issued with a Caution Order at a station in rear, informing him of the obstruction and the details thereof. If the place of work is situated in Automatic Signalling territory, and if the distance between the place of obstruction and the Automatic signal controlling the entry of train in the signalling section concerned is less than 1200 metres on the Broad Gauge and 800 meters on the Metre Gauge and provided the Automatic Signal had been secured at 'On' (a) The banner flag and three detonators referred to in clause (a) sub-rule (1) may be provided at 90 and 180 meters respectively; and (b) The caution indicator referred to in clause (b) of sub-rule (1) may be dispensed with. The shapes and sizes of the indicators referred to in clauses (b) and (d) of sub-rule (1) may be prescribed by special instructions. S.R. 15.09/1. Hand signalling arrangements for Engineering works on Open Line- (a) (b) Proceed with caution hand signals - When proceed with caution hand signal has to be shown in terms of G.R. 15.09 (I) (c), these signals will be exhibited as follows, in the direction of approaching train on the double line and on both sides of the cautious driving area on the single line (see sketch). (i) At a minimum distance of 30 meter (Position B) from the nearest point of the affected area, a Railway servant with 'Proceed with Caution' hand signal. (ii) At a distance of 800 meters (Position A) beyond the nearest point of the cautious driving area, a Railway servant with 'Proceed with Caution' hand signal. (iii) At a distance of 600 meters on Broad Gauge and 400 meters on Narrow Gauge/Metre Gauge (Position C) beyond the farthest point of the Cautious driving area a Railway servant with 'Proceed' hand signal. (iv) if an occasion arises for the train to be brought to a dead stop short of the affected area before passing over at dead slow speed, the railway servant at position B will display a red hand signal and after the train comes to a stand he will permit the train to proceed after obtaining instruction from the Engineering Official at the site not below the rank of Gangmate/Keyman and will then give 'Proceed with Caution' hand signals as necessary. (v) If the view from the direction of approaching train is not clear, additional Flagman will be posted to exhibit 'Proceed with Caution' hand signals as necessary. Hand signals for Engineering obstruction - When danger signals have to be shown short of and obstruction in terms of G.R. 15.09/(1)(a), following hand signals have to be shown in the direction of approaching train on the double line and on both sides of obstruction on the single line. (see sketch). 236 5 (u) (i) 30 (Refi ÄT) I (ii) 600 400 \$téi stél (iii) 600 \$1 400 45 (füf?T 'T) ad 'R•-lfä •r all (V) 15.09/1 'a-IG' ft-24fä I q-g-å R.15.09/1 (u) qeTü I aFtpftT él I (m) afrg (G) \$1 \$1 fiuf?r toey t" LI'ORN.G. PRC n eco CAO not' 237 CHAPTER-XV (i) (ii) (iii) (iv) (v) PERMANENT WAY AND WORKS At a distance of 30 meters from the obstruction, a hand danger signal (Position C) At a distance of 600 meters for Broad Gauge and 400 meters for Narrow Gauge/ Metre Guage from the place of obstruction one banner flag (position B). A Railway servant equipped with hand danger signal shall also be posted at the banner flag. At a distance of 600 meters in case of Broad Gauge and 400 meters in case of Narrow Gauge/Metre Gauge from the banner flag 3 detonators 10 metres apart on line. A Railway servant showing hand danger signal shall be posted 45 metres ahead from the nearest detonator (Position A). On receiving orders from the official-in-charge of the work to allow the approaching train to pass, the railway servant at position A shall remove the three detonators and allow the train to proceed cautiously. The person at position B shall also remove the banner flag and exhibit 'Proceed with Caution' hand signal. The last person at position 'C' will continue exhibition the danger hand signal to an approaching train until it has come to a stand, and the signature of the Loco Pilot of the train obtained in the restriction book maintained for the purpose. After satisfying from the official in charge of the work that the train can be allowed to

pass, he shall exhibit- 'Proceed with Caution' signal and shall allow train to proceed. When the train has passed, the banner flag, detonators and the hand signals will be replaced. In case of double or quadruple lines 'Proceed with Caution' signals as in S.IU5.09/1(a) above, must also be shown on the adjoining line or lines. In the case of relaying work in progress Loco Pilots of trains while approaching the zone of obstruction on the adjoining line or lines shall whistle continuously to warn the staff at work spot. In the case of other major works like regirdering, the official in-charge of the work shall specify the speed restriction to be observed by Loco Pilots to trains on the adjoining line or lines in the zone of obstruction. The prescribed engineering speed restriction indicators shall also be provided. (c) (d) (e) Obstruction in the vicinity Of or inside station limits - When an obstruction is in the vicinity_ of or inside station limits and the engineering signals overlap the fixed signals, the Operating and Engineering OfTl cials on the spot will decide how best to protect the point of obstruction. It is not sufflientto maintain signals governing the approach oftrain towards the obstruction in the 'On' position. A banner flag and detonators must also be placed on the line in accordance with S.R. 15.09/1 (b) whenever necessary, preceding the point of obstruction. All trains proceeding towards the obstruction must be brought to a stand at the first Stop signal or banner flag. The banner flag and detonators may than be removed, signals taken 'Off and the train then hand signalled or piloted past the obstruction as necessary. This must be done only under the personal instruction ofthe Engineering official in charge, After the train has passed complete, the banner flag and detonators must be replaced. The Engineering official in charge of the work is personally responsible for satisfying himself that instructions in regard to the protection of the line are strictly carried out, No person other than Engineering official in charge ofthe work shall give signals for removal ofthe banner flag and this work must not be delegated to any of his subordinates. Diagrams explaining the method of protection on single and double lines as laid down in clauses (a) and (b) are shown in Diagrams I, 11, III and I V.

DIAGRAM ILLUSTRATING THE POSITION OF PROCEED WITH CAUTION' SIGNALS 1. SINGLE LINE P*OCEED "r H CAV PRCX::EEO VhTH G.AVTtor% FOR a 237 •00M ror€N. n. BCO CAO "ON •."rr-4 alun-q-15 PROCEED WITH CAUTION PROCEEC CAL r 11 PROCEED WITH CAUTION loc uFORe.G. Eac "FORLIG. •C FOR NG. roc ror n, 3 FDR M.G. cAurvor•• PROCEED 00 ww PROCEED H 'uvR[" ft-uf?r æG_ am0b•. 238 FOR «a u FOR A cat" M FOR FOR FOR R6. THE TRACK ecNstc.ERED as SINGLE ANO 'Kou H ENDS. wrTH R - REO CHAPTER-XV PERMANENT WAY AND WORKS

DIAGRAM ILLUSTRATING THE POSTION OF 'PROCEED WITH CAUTION' SIGNALS 11

DOUBLE LINE PROCEED WITH CAUTION PROCEED WITH CAUTION SOC n FOR M.C. CAurtorq PROCEED DOWN roc eG. Eat MG. peoeäEC

DIAGRAM ILLUSTRATING THE POSTION OF DANGER SIGNALS 111 SINGLE LINE iG.UOOV_ ra FOR

DIAGRAM ILLUSTRATING THE POSITION OF DANGER SIGNALS lv DOUBLE LINE FCR 238 03 FOR TRACK AS SINGLE UUE 'Kou H ENOS. R - RED 5 R.15.09/2. ft. 15.06/1 e-F3TR (1) 800 I 800 1200 f>4Ä l\$rå 1400 400 al-é 2.0 (qeü \$1 300 q \$1 xrm FIVrruT fäg *ft-of (2) 30 239 CHAPTER-XV PERMANENT WAY AND WORKS

S.R.15.09/2. Temporary Egnineering Indicators- In the case of such works which cannot be completed on the day on which they are taken in hand and which necessitate cautions driving during both day and night, the Engineering official responsible under S.R. 15.06/1 shall arrange to display following indicators. S .R,15.09/3. Temporary Engineering Indicators - (1) (2) The first indicator shall be fixed 800 meters from the point where restriction of speed has actually commenced. Provided that on the Broad Gauge when the trains are required to stop dead, this distance should be increased to 1200 meters instead of 800 meters. This indicator shall be in accordance with the diagram shown and shall consist of a horizontal board 1400 mm. long and 400 mm. wide, fish tailed at one end pointed at the other, and painted yellow and black. This broad shall be fixed on a 2.0 mtr. high post (from the rail level to the bottom oftheBoard) painted with 300 mm. high bands of white and black. CAUTION INDICATOR 11 11 RAIL LEVEL This indicators shall be provided both for the permanent and temporary restriction and the indicator, when used for temporary restrictionss shall display at night two horizontal yellow lights to approaching trains or shall be provided with luminous paint/fluorescent tape. The second indicator shall be either a speed indicator or a stop indicator and shall be fixed 30 meters from the point of commencementofrestriction. 239 5 (i) (ii) 10 10 300 2.0 (wet \$1 300 i 400 400 #rex 2 (qeü a-TPT «m) 300 O O 240 CHAPTER-XV PERMANENT WAY AND WORKS SPEED INDICATOR RAIL OIL LAMP FOR ILLUMINATING THE BOARD LEVEL

(i) (ii) In the case of restrictions without 'Stop Dead' speed indicator shall be provided. This speed indicator shall be in accordance with the diagram shown above and shall consist of a yellow equilateral triangular

boards with 1 mtr. sides and 300 mm. high and 40 mm thick black figures indicating the speed at which the train may proceed. The Board shall be fixed on a 2.0 mtr. high post (from the rail level to the bottom of the board) painted with 300 mm. high bands of white and black. This indicator shall be illuminated at night by fixing a hand signal lamp in front of it as shown in the diagram or provided with luminous paint/fluorescent tape. In the case of restriction with 'stop dead' a stop indicator in accordance with the diagram shown below should be provided. This indicator shall consist of a horizontal board 1400 mm. long and 400 mm. wide and painted with red and white vertical strips. The board shall be fixed on a post 2.0 mtr. High (from the Rail level to the bottom of the board) painted with 300 mm. high bands of white and black. This indicator shall display two red lights at night or provided with fluorescent paint/luminous tape.

T PINDI AT R O RAIL O LEVEL 240 aqqrq-15 t) füq gruefe G (3) (€1/ O (81 /\$r) (€1/\$r) 670 7181.0 \$1 250 40 (€1) q (\$1) a-THQ 1650 300 ulu-ere Vlfä ftivreT 241 CHAPTER-XV PERMANENT WAY AND WORKS A signalman shall be provided for signalling. As soon as the train stops the signalman shall obtain signature of the Loco Pilot on the 'restriction book' (specimen given below) and allow the train to proceed by showing green hand signal light at night and green hand signal flag during the day. The restriction book shall be in the following form

Engineering stop indicator at km. DATE TRAIN No.

Restricted speed TIME SIGNATURE OF LOCO PILOT Note The above will be filled up by the Loco Pilot of the train.

TERMINATION INDICATOR FOR PASSENGER TRAINS p RAIL LEVEL

TERMINATION INDICATOR FOR GOOD TRAINS RAIL LEVEL (3) The third indicator shall be termination indicator (TIP) for passenger trains and fourth indicator shall be a termination indicator (T/G) for Goods trains. These indicators shall be fixed at a distance equal to the length of the longest passenger/goods train running on the section concerned beyond the end of the portion of line under restriction. (T/G) shall be fixed normally 670 meter beyond the point up to which restriction is so observed which is considered adequate to cover all the goods trains of average length. The indicators shall be in accordance with the diagram shown above and shall consist of one meter diameter disc painted yellow bearing 250 mm high and 40 mm thick letter 'T' and 'G' in black. The board shall be fixed on a post 1650 mm (from the rail level to the bottom of the disc) and shall be painted with 300 mm high bands of white and black. The termination indicators should be illuminated at night by a fixed hand signal lamp as in case of speed indicator or should be provided with luminous paint/fluorescent tape. The guard of a Passenger/Goods trains shorter than the longest Passenger/Goods train, will signal to the Loco Pilot as brake van has passed over the restricted length and then the Loco Pilot may resume normal speed after receiving this signal. In the case of light engines or single unit Cars the Loco Pilots Will resume normal speed after clearing the restricted length.

241 5 (4) (5) (6) t) LNE UNDER BE PREPARED SPEED TO BE TO REOUCE REOUCA3 TO 10 KM 800 m. LINE UNDER REPAIR FOR REDUCED SPEED LXE uNrfr REPAR BE PREPARED FOR A STOP BOARD AND PROCEED AFTER AUTHORISATION BY SIGNAL MAR 1200 m. (B.GJ 800m. ON (M.GJN.G.) LINE LJNOER REPAIR 10 BE LOCATED AT A DISTANCE EQUA1 TO THE LENGTH OF THE LONGEST TRAN' ON SECTION CONCERNED TO BE LOCATED AT A EQUA1 TO THE LENGTH OF THE LONGEST GOODS TRAIN OPERATING ON THE SECTION CONCERNED EQUAL TO OF THE LONGEST PASSENGER TRAIN OPERATXG 0K THE SECTION CCRNERED ro BE LOCATE) AT A DISTANCE EQUAL TO LENGTH LONGEST GOODS TRAN OPERATING ON THE SECTION CONCERNED FOR STOP • DEAD RESTRICTION Ait I Q; 300 R. 15.09 / 4. ufü xr11Zui 15.09 / 5. —

•Tfä (i) (iii) (iv) (v) 242 CHAPTER-XV PERMANENT WAY AND WORKS (4) (5) (6) (7) The details of fixtures of Engineering indicator for reduced speed shall be as under. **UNDER REPMs BE PREPARED ro REOUCAj SPEED TO BE TO 10 KM PH. 800 m. LINE UNDER REPAIR FOR REDUCED SPEED TO BE LCXATEDAT A DISTANCE EQUAL ro THE LENGTHOF LONGEST PA sæNGER TRAN" OPERATmG ON SECTION CONCERNED TO BE LOCATED AT A DISTANCE EQUA1 TO THE OF THE LONGEST GOODS TRAIN OPERATING ON SECTION CONCERNED** The details of fixtures of Engineering indicator for stop dead restriction shall be as under. **LXE UNDER REPAIRS BE PREPARED FOR A STOP BOARD AND PROCEED AFTER AUTHORISATION BY SIGNAL MAR 1200 m. (B.GJ 800m. ON (M.GJN.G.) LINE LJNOER REPAIR EQUAL TO OF THE LONGEST PASSENGER TRAIN OPERATXG 0K THE SECTION CCRNERED ro BE LOCATE) AT A DISTANCE EQUAL TO LENGTH LONGEST GOODS TRAN OPERATING ON THE SECTION CONCERNED FOR STOP • DEAD RESTRICTION** All indicators shall be placed on lefthand side as

seen by the Loco Pilot, For intermediate track, triple or multiple linesy engineering indicators should be fixed between tracks to within 300 mm from rail level to avoid infringement of the standard dimensions. S.R. 15.09/4. In an emergency, when it is necessary on consideration of safety, the authorised Engineering Official may commence such work after protecting the lines before issuing notice to the Station Masters concerned, if the work is likely to be prolonged, he shall notify to the Station Master concerned as soon as possible. The location of banner flags, detonators and hand signals must be selected so as to avoid stopping

of trains as far as possible on continuous steep rising gradient. S.R. 15.09/5. Permanent speed restriction indicators :- (a) (b) for permanent speed restriction in force as notified in the working time table, indicators

are to be erected, in the same manner and at sites as temporary engineering indicators to indicate to Loco Pilots where such restrictions are to be observed. These indicators should not be lit at night. Where the speed over the facing points at a station is less than the speed sanctioned at other stations on the same section, a permanent speed indicator should be fixed on the post of the first approach signal of the station.

S.R.15.09/6. Periodical notice of Engineering restriction:- For works involving restrictions of speed of trains the Sr. DEN will arrange publication in the periodical gazette of the Railway, furnishing the following details : (i) (ii) (iii) (iv) (v) Names of block stations on either side of the site of work for the purpose of the issue of caution orders; Kilometrage of the site or work ; The restricted speed limit and/or stops to be observed by the Loco Pilots; Nature of the work being under taken or reasons for the restriction. Probable duration of the restriction. 242 15.10. — 15.12. 15.13. (2) 15.14. (g.) 15.15. GINT 15.12 tn•Rirr)

15.09 zrr 15.16. — 243 CHAPTER-XV PERMANENT WAY AND WORKS 15.10 Assistance in Protection of Trains - Every railway servant employed on way or works shall, on the requisition of the Guard of a train or the Loco Pilot thereof, render assistance for the protection of the train. 15.11. Gangmate in each gang - Each Inspector of way of Works shall see that in every gang employed in his length of line there is a competent Gangmate. 15.12. Knowledge of signals and equipment of gang Each Inspector of Way of Works shall see - (a) (b) (1) (2) 15.14. (a) (b) (c) (d) (e) that every Gangman and Gangmate employed under him has a correct knowledge of hand signals and detonating signals; and that every gang. employed in his length of line is supplied with a permanent way gauge, two sets of flag signals, two hand signals lamps and twelve detonators, in addition to such other tools or implements as may be prescribed by special instructions. Inspection of gauges, signals, tools and implements - Each Inspector of Way or Works shall at least once in every month inspect the permanent way gauges, nags, signal lamps, detonators, tools and implements supplied to the gangs under clause (b) of Rule 15.12 and ascertain whether the above equipment is complete and in good order. He shall also see that any defective or missing articles are replaced. Responsibility of Gangmate as to safety of line - Each Gangmate shall - see that his length of line is kept safe for the passage of trains; that the signals supplied to him under clause (b) of Rule 15.12, are kept in proper order and ready for use; that the men in his gang each have a correct knowledge of hand signals and detonating signals; endeavour to prevent any trespassing by persons or cattle on his length of line or within the fences there of, and when repairing, lifting or lowering the line or when performing any other operation which shall make it necessary for a train to proceed cautiously, himself be present at the spot and be responsible that the caution signals prescribed in Rule 15.09 are shown. Blasting - No railway servant employed on the way or on any works shall carry on any blasting operation on or near the railway except as permitted by special instructions. S.R.15.15/1. In normal circumstances, blasting operations, the effect of which may cause danger to the line or trains thereon, shall only be carried out with the prior sanction of Sr. DEN who will be responsible for ensuring that instructions for protective measures are issued before the work is commenced. In emergent circumstances where such works have to be carried out immediately for the urgent restoration of traffic, or to prevent an accident, Section Engineer (P.Way) may commence operations without prior sanction, and shall himself be responsible for taking such measures as may be necessary for the protection of trains. 15.16. Putting in or removing points or crossings - Except in cases of emergency, no railway servant shall put in or remove any points or crossings otherwise than as permitted by special instructions. S.R. 15.16/1. Alterations or additions in Transportation Yards - (a) Except in cases of emergency, no alteration or addition or connection whether permanent or temporary shall be made to a transportation yard, without first obtaining the approval of the Divisional Railway Manager. 243 (Efi#T) (RITIT), g•zi 1.02(47) Ati 15.17. — Rui-é | 10 I a-TINT--H EF•zrr 15.18. : (ii) - (iii) — sri (i) - zrr 31 244 CHAPTER-XV PERMANENT WAY AND WORKS (b) (c) (d) When in an emergency, any points, crossings or signals are interfered within

station limits, without previous notice to the Divisional Railway Manager, the Station Master must be immediately informed. If at an interlocked station any running line is affected, the Station Master will treat the line controlled by the such points, crossings or signals which are interfered with as non-interlocked. An advice must be sent at once to the section Engineer (S&T), Assistant Signal and Telecommunication Engineer and the Sr. DOM. When extensive alterations are to be made in a station yard, special working rules must be drawn up by the Sr. DOM for the working of the yard during the progress of the work.

Alteration to running line : No alteration shall be made to a running line as defined in general rules 1.02 (47) or to any track or other points protecting a running line without the previous permission of the Commissioner of Railway Safety except in case of emergency. IS.17. Duties of Gangmate and Gangman when apprehending danger - If a Gangmate or Gangman considers that the line is likely to be rendered unsafe, or that any train is likely to be endangered in consequence of any defect in the way or works or of abnormal rain or floods or any other occurrence, he shall take immediate steps for securing the stability of the line and the safety of trains, by using the prescribed signals for trains to proceed with caution or to stop, as necessity may require; and shall as soon as possible report the circumstances to the nearest Station Master and the Inspector of Way or Works. S.R. 15.17/1. In the event of a rail/weld failure, the keyman/Gangmate/P. Way Supervisor or cold Weather Patrolman, shall, after protecting the line, make necessary emergency repairs to the track and pass traffic at the speed 10KMPH (Maximum). The temporary/permanent repairs to track shall be done by the Sectional Engineer (P. Way) As soon as possible and restored traffic at normal speed. 15.18. (1) (2) (3) B. The working of Lorries, Trollies and Motor Trollies. Distinction between trolley, lorry and motor trolley - A vehicle which can be lifted bodily off the line by four men shall be deemed to be a trolley and any similar but heavier vehicle shall be deemed to be a lorry. Any trolley which self-propelled, by means of a motor is a motor trolley. A trolley shall not, except in cases of emergency, be used for the carriage of permanent way or other heavy material; and when a trolley is so loaded, it shall be deemed, for the purposes of these rules, to be a lorry. S.R. 15.18/1. RULES FOR WORKING OF A TROLLEY/MOTOR TROLLEY/LORRY- (1) (2) Subject to their being certified competent, the following officials and staff are permitted to use trollies/motor trollies/lorries. (i) Trollies- All officers and Section Engineer of the Engineering and Signal and Telecommunication departments and such Officers and staff of the Operating, Commercial and OHE departments as may be required. (ii) Lorries- All Section Engineer of the Engineering and Signal and Telecommunication department. (iii) Motor Trollies - All officers of the Engineering, Signal & Telecommunication, Operating and Commercial Departments and such Inspectors, as may be prescribed and Motor Trolley Loco Pilots. (i) No Railway servant is permitted to work a trolley/Motor trolley or lorry unless he is certified to do so by the authorised officer. Each certificate of competency issued shall be valid up to 31st December from the date of issue. Certificate issued from June to December may be made valid for the next calendar year also. 244 (ii) CR 31 . ATH . GTFIT (iii) - 31 I (iv) (ii) (iii) q1 245 CHAPTER-XV Shri.....S/o..... Station • PERMANENT WAY AND WORKS (ii) The authorised officer for issue of a competency certificate for push trolley/lorry as also to hold necessary examination in the relevant rules shall be not lower than an Assistant Officer of the Engineering, signal or operating department for all staff of his department. The authorised officer for issuing competency certificates to Officers shall not be lower than a Sr. Scale officer of the department. The authorised officer shall grant a competency certificate in the following form. (Designation) ...at station. is found fully conversant with the sections on which he has to use a push trolley/Lorry and also with all the relevant rules in respect of use of push trolley/Lorry' as well as the latest changes made in them and is authorised to work a Push Trolley/Lorry on .Section (each section to be separately mentioned) This certificate is valid up to 31st December Dated . Signature (Authorised Officer) Designation The competency certificate referred to above should be renewed for each calendar year. (iii) The authority to the Loco Pilot of Motor Trolley shall be granted according to rules quoted below: - Officer or staff requiring the permission to drive a Motor Trolley will apply in writing to the DRM. In case of Divisional Officers or to the COW Chief Engineer/CSTE in case of Hd./Qrs. Office with the following certificates "I (name) working in the capacity of (Designation) at station hereby certify that I am fully conversant with all the sections on which I have to use the motor trolley and also conversant with all the rules in respect of driving motor trollies as well as the latest changes made in them and undertaken to confirm strictly to these rules. In case of my failure to comply with these rules I shall alone be held responsible. " Signature . Date The applicant will then be given an oral test by the Sr. DOM/DOM/DRM in

the Division and by COM/ Dy. COM in the Head Quarters Office. The competency certificate shall be made valid up to 31st December from the date of issue. Certificate issued from June to December may make valid for the next Calendar year also. (iv) The Competency certificate referred to sub paras (ii) and (iii) for trolley/motor lorry or lorry may be further renewed for one calendar year, at each time, on receipt of the following certificate. 245 (3) (4) (5) (6) (7) (8) 6TH (vi) f*-a-qi a-lüfi GTF I amerr-tra a*rerr 1 @ zrr (i) (iii) (iv) (v) erra -RIB \$1 15.20 @ 3 3 (u) 1 \$iel 15.21 (i) 15.20 15.21 (ii) \$1 I 246 CHAPTER-XV "I (name) (Designation) PERMANENT WAY AND WORKS working in the capacity of at Station (3) (4) (5) (6) (7) (8) hereby certify that I am fully conversant with all the section on which I had to use my trolley/motor lorry/lorry and also with all the rules in respect of driving trollies/motor trollies/lorries as well as the latest changes made in them and undertake to confirm to these rules. In the event of my failure to comply with these rules, I shall alone be held responsible. Signature... .. Date . (v) Supervising officers and official should test the permit holders in their knowledge relating to driving or trollies/motor trollies/lorries as often as possible. (vi) In the event of an officer or staff getting transferred from one station to another it is necessary for him to acquaint himself with all the rules in regard to any special conditions obtaining on any of the sections within his jurisdiction and to furnish the required certificate to the DRM. The permit will only be issued after the person, in whose name this issued, has been examined and declared to be conversant with the rules for running or trollies/motor trollies/lorries. The permit shall be valid for a period of one year from the date of issue. It shall, therefore, be renewed annually after the person holding it has been examined as mentioned above. Each trolley/Motor trolley/lorry must have marked on it the number, designation, and code initials of the Headquarters station of the official, to whom it is allotted, painted in white letters conspicuously. Whenever a trolley/motor trolley/lorry be placed on the platform for being loaded on a train or for any other purpose, it should be placed parallel to the track, properly locked and in charge of a railway servant. It should be so placed as not to come in the way of passengers and railway staff. (a) Trollies or Lorries shall always be pushed and not pulled. Use of sails or any other unauthorised aid for their propulsion is strictly prohibited. (b) The official in charge of the lorry/trolley/motor trolley, while approaching a level crossing, should look out for road traffic and ensure safe passage of his lorry/trolley/motor trolley. EQUIPMENT OF TROLLIES/LORRIES - The following equipment must be provided on a trolley/lorry when placed on running line : (i) (ii) (iii) (iv) (v) During the day a red flag fixed to a staff not less than 180 CMs in height placed on the trolley frame so as to be clearly visible. During the night, a light shall be placed to show conspicuously, on the double line, white to the front and red to the rear, and on single line, red both to the front and the rear. In addition to the equipment prescribed in Rule No. 15.20 each trolley/lorry shall be provided with (a) 3 red flags and 3 Hand Signal lamps for single line. (b) 1 Hand signal lamp and one red flag, for double line. Every trolley and lorry must be fitted with an efficient hand brake in terms of Rule No. 15.21. A portable field telephone in working order must be provided on each material lorry. Note : Lorries are not permitted to work in ghat sections. EQUIPMENT OF MOTOR TROLLIES - A motor trolley must be provided with- (i) A motor trolley must be provided with equipment as given in Rule No. 15.20 and 15.21. (ii) A head light which will throw a white light towards the front. A red light must also be shown conspicuously towards the rear. When there is no head light, during the night, a light showing conspicuously, on the double line white to the front and red to the rear, and on the single line, red both to the front and the rear, should be exhibited. 246 10 di 6 crrqg \$1 I (10) (ii) <rtl (iii) 5 q-lå R-u-qi GI-q--å -E I (11) (12) : _ (2) 1200 \$1 15.27 15.27 / 1 ülftrl) arqN- 2TT I (2) (3) 247 CHAPTER-XV PERMANENT WAY AND WORKS (9) MAXIMUM NUMBER OF PERSONS ON A TROLLEY AND MOTOR TROLLEY - The total number of persons including trollymen, which can be carried on a trolley, must not exceed 10. On a motor trolley, the total number of persons including trollymen must not exceed 7 in the case of 4 HP and 10 in the case of 6 HP motor trollies. (10) MINIMUM NUMBER OF TROLLYMEN - (a) (b) (c) On a trolley. (i) When a trolley is run under block protection, it must be accompanied by not less than 4 trollymen. (ii) When running without block protection, a trolley must be accompanied by 4 trollymen on double or single line. On such part of the line where, on account of curves, cuttings or tunnels the view is obstructed, or on length where there are frequent train services, extra men must be taken from the gangs, for pushing the trolley. One or more of the regular trollymen, who have passed the vision test, will be used for protecting the trolley in the rear on the double line, and on either side on single line. (iii) On electrified sections, 5 trollymen must accompany a trolley. On a motor trolley - A motor trolley must, in all cases, be manned by not less than 4 able bodied trollymen. On a lorry - the

minimum number of men accompanying a lorry must be 8 exclusive of flagmen. It should be increased as required by the official accompanying lorry depending on the type of material loaded, nature of gradient, curves, cutting etc. The official incharge of the lorry shall ensure that the men deputed for protection of the lorry are permanent employees who are well conversed with the rules for protection of material lorry. (11)

When a motor trolley is running, there shall be at least 2 persons seated in front. (12) **WORKING OF TROLRIES** - (a) (b) (c) At night time - During night, all trollies must work under block protection except in a grave emergency. Working without block protection. (1) (2) (3) When it is proposed to work a trolley outside station limits without block protection, the official-in-charge of the trolley shall ascertain the whereabouts of trains that he is likely to encounter on the section before he places the trolley on the line. Where due to curves, cuttings, or gradients, a clear view is not available for a distance of 1200 meters; the trolley must be protected in accordance with G.R. 15.27. and S.R. 15.27/1. When the nature of the line is such that the Flagmen cannot be seen by the person in charge of the trolley, the latter must arrange, before entering the section, to take with him sufficient Gangmen with hand signals and banner flag so that the required number of Flagmen can be provided for repeating the signals of the person in charge of the trolley. Special precautions should be taken while working trollies without block protection due to sharp curves, cuttings, tunnels etc. are as under. (1) (2) (3) The official in charge of the trolley shall advise in writing to the Station Master on duty, where he intends to place the trolley on line, specifying the period the trolley will work in the block section. On receipt of this advice, the Station Master will advise the official-in-charge of the trolley about the particulars of running of trains, and will also issue a message to the Station Master at the other end of the block section and also to the coaching train stopping stations, on either side, to this effect. On the double line, the message need only be issued to the stations in rear according to the line on which the trolley is working. The Station Master receiving the message will acknowledge receipt. The Station Master at the station at either end of the block section where the trolley is working, or the last stopping station in the case of coaching train must issue Caution Orders to the Loco Pilots of all trains proceeding into the block section where the trolley is working, until the trolley clears the block section. (13) (g) (2) (1) (100) (180) (2) (13) (8) (R-2) (i) (3F4) (ii) (I-n-4) (S:rrq - 248) **CHAPTER-XV PERMANENT WAY AND WORKS** (d) (4) Immediately the trolley has cleared the block section the Station Master on duty at the station where the trolley has arrived, will cancel the message referred to in sub clause (2) above after which the issue of Caution orders to Loco Pilots will

be discontinued. **Trollies Running Together** - When two trollies are running together in the same direction, they must be kept at a sufficient distance apart so that the rear trolley may be stopped within a safe distance if a trollyman should slip from the front trolley or if the front trolley should be stopped suddenly. On the level, or on an uphill gradient the distance between light trollies should not be less than 100 meters and on a down grade or with a strong wind behind, it should not be less than 180 meters. (13)

WORKING OF MOTOR TROLRIES - (a) (b) (c) A Motor trolley must run under block protection and should be treated and signalled as a train. A motor trolley/trollies, however, is/are permitted to follow a train/motor trolley at an adequate distance after advising the Station Master concerned, in accordance with the procedure laid down in para 14 (g) below. The official in charge of the motor trolley may, during day light and if visibility is good, pass the Outer signal at danger, after coming to a stop, and proceed with caution and stop at the next stop signal (facing points) until hand signalled by a member of the station staff in uniform into a vacant line. A motor trolley may also be received, after stopping the same, on an occupied line, on hand signals from the cabin or facing points, as convenient. **BREAKDOWN OF MOTOR**

TROLLEY - (i) (ii) In the event of a complete breakdown of a motor trolley in the section, the trolley must be removed clear of the tracks and the Station Master of the nearest Station advised in writing to clear the section. The token or line clear Ticket, if any, must also be sent with the memo. The same procedure must be observed if, for any other reason, a motor trolley is removed from the tracks while in the section, Once a motor trolley has been removed from the line, it must not be replaced on the line unless the line has been blocked for it. Before a motor trolley is replaced on the line, intimation in writing must be sent to the nearest Station Master stating in which direction the trolley will proceed. The Station Master will, when the train service permits, arrange to block the line between the two requisite stations from a specified hour or after the passage of a named coaching or goods train. A manuscript authority to proceed will then be sent of the officer in charge of the motor trolley in the following form. "Line will be blocked for your motor trolley, from hours minutes after the passage of train until the arrival of your trolley at A carbon copy of this

message should be kept by the issuing Station Master. On the single line, Token or Line Clear Ticket must also be sent by the Station Master. Working of Motor Trolleys on single Line section where Tokenless Block instruments are provided. (i) The Station Master of the block station from which the motor trolley has to leave, will obtain Line clear from the Station Master at the other end of the block section on block telephone without the operation of block instruments. He will then prepare an authority to enter the block section in manuscript in duplicate in the form given below, which will indicate the Private Number obtained in support of the Line Clear obtained from the station in advance, One copy of the same will be handed over to the official-in-charge of the motor trolley. (ii) The Station Master of the receiving station will deliver the authority to the Station Master with the endorsement that the motor trolley has arrived complete and sign with date and time on it. The authority will be retained by the Station Master and pasted in the station diary. Out and in reports of the motor trolley may be given by the Station Masters concerned. To cancel Line clear for a motor trolley, messages will be exchanged between the Station Masters with Private Numbers.

"Cancel last signal" signal will then be given. (iii) Working of Motor Trolleys double line where Lock and Block instruments have been provided- When a Motor trolley has to enter the block section the Station Master of the station from which the motor trolley has to leave will obtain Line clear from the Station Master at the other end of the block section on telephone attached to the block instruments, as the block instruments are not operated. He will then issue an authority on form T/369 (3b) to the official-in-charge of the motor trolley, to pass the last stop signal in the 'On' position. The Private Number received from the Station Master in advance will be recorded on T/369 (3b) and it should be clearly endorsed that 'Line Clear' has been obtained from the station in advance. An authority to enter the block section on the prescribed form given in sub-clause 14 (c) (i) shall be given to the official-in-charge of the motor trolley. At the receiving station, the Station Master will arrange for the reception signals to be taken 'Off'. On arrival at the station in advance the official-in-charge of the motor trolley will deliver the authority to the station Master with the endorsement that the motor trolley has arrived complete and sign with date and time on it.

The authority must be retained by the Station Master at the receiving end and pasted in the station diary. The station master will then clear the block section supported by a Private Number. To cancel Line Clear for a motor trolley, message will be exchanged between the Station Masters with Private Numbers. Cancel last signal will then be given. Speed of motor trolley - The speed of motor trolleys while passing over points and crossings, irrespective of whether the trolley is running on the straight or turn-outs, shall not exceed 15 KMPH.

Spring Points - (i) (ii) The Station Master of the station situated short of the place where spring points are located, shall issue Caution Order to the person in-charge of the motor trolley giving the location of the spring points. The motor trolley shall stop dead in the rear of the spring points and then proceed over them only when they have been correctly set and clamped. Boards warning the existence of spring points are provided. (iii) (iv) (v) (vi) The Station Master of the station situated short of the place where spring points are located, shall issue Caution Order to the person in-charge of the motor trolley giving the location of the spring points. The motor trolley shall stop dead in the rear of the spring points and then proceed over them only when they have been correctly set and clamped. Boards warning the existence of spring points are provided. (vii) (viii) (ix) (x) The Station Master of the station situated short of the place where spring points are located, shall issue Caution Order to the person in-charge of the motor trolley giving the location of the spring points. The motor trolley shall stop dead in the rear of the spring points and then proceed over them only when they have been correctly set and clamped. Boards warning the existence of spring points are provided.

250 CHAPTER-XV (g) A Motor Trolley following a Train or another Motor Trolley - PERMANENT WAY AND WORKS (i) (ii) (iii) (iv) (v) (vi) A motor trolley may follow a fully vacuum/air braked train or another motor trolley, in the same block section during day light hours and clear weather only, both on the single and double line sections. When motor trolley follows a train or another motor trolley at minimum distance of half a kilometer should be kept with the train or trolley to be followed. For this purpose, the Official-in-charge of the motor trolley shall obtain a "Motor Trolley Permit" from the Station Master concerned before entering the block section. The Motor Trolley Permit shall be prepared in duplicate by carbon process. One copy will be retained by the Station Master issuing the permit and the other will remain in the custody of the official-in-charge of the motor trolley till the next block station in advance is reached, where this permit shall be handed over to the Station Master on duty. The last Stop Signal shall not be taken 'Off' for the motor trolley following a train or another motor trolley.

An authority on Form T/369 (3b) to pass the same in the 'On' position shall be issued to the official in charge of the following motor trolley. After complete arrival of the train of the preceding motor trolley at the station in advance the Station Master may receive the following motor trolley/trolleys by taking off signals on an unoccupied line, or take off the calling on signal or green hand signal the motor trolley/trolleys on an occupied line, as convenient. The 'Out' report for the preceding train or motor trolley shall be given and acknowledged in the usual manner and advice shall also be given at the same time of the number of trolleys that will follow. The time of departure of each of the following motor trolleys shall be given (together) to the station in advance after the last motor trolley had left the station the rear. The 'In' report of the preceding train or motor trolley shall not be given, until the last following motor trolley has arrived. The time of arrival of the preceding train or motor trolley and the time of arrival of each of the following motor trolleys supported by a Private Number shall be given together and recorded in the Train signal Register of the despatching and receiving stations. Where token instruments are in use the token received from the preceding train or motor trolley shall be kept in the safe custody of the Station Master on duty and inserted in the block instrument, only after the arrival of the last following motor trolley. If there is more than one motor trolley to follow a preceding train or motor trolley, the station Master will prepare and hand over a "Motor Trolley Permit" to each official-in-charge and will add the words, "Last Motor Trolley" on the permit of the official-in-charge of the last motor trolley. Each Official-in-charge of motor trolley will hand over the trolley permit to the Station Master on duty at the station in advance. The Official-in-charge of the last motor trolley besides handing over the trolley permit to the Station Master on duty at the station in advance, will also sign the Train Signal Register in token of his motor trolley having arrived intact indicating the time of arrival. The Station Master of the station in advance will only then clear back the block section. The Official-in-charge of the last motor trolley will ensure that his trolley is the last one to arrive at the station, even if the order of the other trolleys is changed enroute due to any reason. (vii) In the event of a breakdown of the preceding motor trolley both on the single and double lines, the provisions contained in sub-clause (b) (i) and (ii) of Clause 14 above must be complied with. In the case of a breakdown of the following motor trolley in section, it must be removed clear of the track and the official incharge must send an intimation in writing to the Station Master of the nearest station to this effect along with the 'Motor Trolley Permit.' If the breakdown of the preceding motor trolley, this advice may be sent to the Station Master of the station in advance through the official-in-charge of the following motor trolley.

250 14. (i) On the single line section, the official-in-charge of the preceding motor trolley will also hand over to the official-in-charge of the following motor trolley, Line Clear Ticket or token as the case may be, which shall be handed over to the Station Master at the station in advance by the official in charge of the following motor trolley in addition to the "Motor Trolley Permit" in his possession. Once a motor trolley has been removed from the track it must not be replaced unless the line has been blocked for the purpose. Working of Motor Trolley during total interruption of communications - If there is total interruption of communications, the Station Master on duty must advise the official-in-charge of the motor trolley of the same and the motor trolley shall be worked in the section in accordance with S.Rs. 6.02-3 and S.R. 6.02-4. Running of motor trolley on Automatic Signalling section- (a) (b) Normally, Motor trolley shall be allowed to run on Automatic signalling section during day light hours and clear weather following a train only. At night or in emergency or when there is no train to follow, if it becomes necessary to run a motor trolley, Automatic Block system shall be suspended by exchange of messages supported by Private Numbers between the Station Masters of the Stations concerned. After obtaining 'Line Clear' from the station in advance supported by a private number, an authority in form T/369(3b) for last stop signal shall be issued to the official in charge of motor trolley. The official in charge of motor trolley shall proceed following the aspect of other automatic signals in the section. Working of trains on Automatic Block system between the stations concerned shall be resumed only on receipt of the arrival report of the motor trolley supported by a Private Number from the station in advance. When the motor trolley is required to follow a train/light engine, the following conditions shall be observed - (i) (ii) The motor trolley shall be under the charge of an official holding necessary trolley permit it shall carry adequate number of trolley men so as to enable its being removed bodily from the line in case of necessity. Only when the motor trolley reached the station ahead, the next train/light engine will be permitted to enter the block section. The official in charge of the motor trolley

shall also be cautious and vigilant while negotiating points and crossings. In the interest of safety, he shall stop short of the points and ensure their proper setting before proceeding slowly over them. Where the route is set against the trolley, he shall arrange for the trolley to be lifted and placed on the correct line



14. Working of Lorries - (a) (b) Working of a lorry within station section - Whenever a lorry has to work within station section, the SE (P.Way) or other official in-charge of the work will advise the Station Master in writing specifying the period during which it will work. The Station Master on duty, when granting Line Clear' or authorising the taking' off of signals for the reception and despatch of trains, will personally satisfy himself that the official-in-charge of the lorry is advised and that the lorry does not fall the path of trains. Running of lorries - (i) A lorry shall normally be run during day light hours. (ii) A lorry may be worked without block protection when the official-in-charge, before putting a lorry on the line, has ascertained from the Station Master on duty whether line clear can be obtained for the lorry without causing detention to a train, and if no detention would be caused, Line clear should be obtained. If line clear cannot be obtained without causing detention to a train, the official-in-charge of the lorry, after considering the urgency of the work to be done, should decide whether to place the lorry on the line without line clear being obtained or wait until line clear can be obtained for it. 251 (iii) • (iv) (iii) *iei4 I - art -\$1 a-fi TAT I (R7T <rtl a--TIRF-RF Adi 252 CHAPTER-XV PERMANENT WAY AND WORKS (iii) Notwithstanding the provisions above, a lorry shall invariably be worked under block protection when - it is necessary' duling an emergency to run it at night or when the visibility is restricted (1) due to dust, storm, fog, rain or any other cause. it is loaded with rails or girders. (2) (3) it is loaded with specially heavy materials which cannot be readily unloaded, and (4) When it is working in cenain sections with hea\,y curves, cuttings oron ghat sections. (iv) In circumstances other than those mentioned in item (iii) above, the following precautions must be taken while working a material lorry without block protection, sub-para (2) to (g) are retained. (1) When the official-in-charge intends to place the lorry on the line in mid section, he shall issue a message on field telephone to the Station Masters of the stations on either side on single line and the Station Master of the station in rear on double line indicating the exact kilometerage where he will be placing the lorry on the line. This message shall be supported by a Private Number. The Station Master who receives notice about the 1011)' to be put on line shall inform the official-in-charge of the 1011)' about particulars of trains which are expected to run on the section and also the time at which the lorry can be placed on the line. When permission has been asked to keep the 1011)' on line from the block section, the Station Masters shall block the line and issue a message to the official-in-charge of the lorry intimating that the line has been blocked for the 1011)'. This message shall be supported by a Private Number. The Official-in-charge of the 1011)' shall under no cileumstances keep the lorry on the line unless he has obtained acknowledgement in wlitng from the Station Master of the station at which the lorry enters the section that he has advised the Station Masters concerned in regard to the issue of Caution Order, or a message on telephone supported by a Private Number to the effect that the line has been blocked when the lorry is kept online from the section. Notice No Date To, Station Master and Kms. from leave Station at station/km No. To, TROLLY/LORRY NOTICE (Working without Line Clear) Station is required to work between stations at (Station) Trolley/Lorry No. hrs. It will hours of this day for The Official in charge of Trol ly/Lorry Trains due to anive/pass this stations at so except : Train No. is — minutes late. I have exchanged advice with Official-in-charge hours have actually done station and shall issue Caution Order to all Loco Pilots until I receive advice of the removal of the trolley/lorry. * The line has been blocked for your Trolley/Lorry between station on Up/Down station to line and the block will be removed only on receipt of the removal report of the Trolley/Lorry. Private No. Station Master * Applicable when permission is given on the telephone. 252 (2) (3) (4) (5) (6) (7) (8) EF•zrr Rui-é dii Rqhé I e•e-rå R•qté crzrere 1 200 I 40 nmier, 25 EieT 100 (61@ uT trR•N-2.fi 15.27 15.27-1 12 (q) (ii) (iii) dii 253 CHAPTER-XV (2) (3) (4) (5) (6) (7) (8) PERMANENT WAY AND WORKS On receipt of this notice, the Station Master will indicate the particulars of trains running on the section as shown in the form. The Station Master will then issue a message to the Station Master of the station at the other end of the block section indicating the time and kilometer where the material lorry' will be working. On receipt of this message, the Station Master concerned will issue Caution Orders mentioning the particulars as indicated under sub-clause (4) above to all trains proceeding into the block section in which the lorry is working without block protection. The above Caution Orders will continue to be issued till the removal report in the prescribed form or through the field telephone supported by a Private Number has been received from the Sectional Engineer (P. Way) or the Official in charge of the material lorry and the 'lorry removed from the section' signal has been received and acknowledged. REMOVAL REPORT Reference : Trolley/Lorry Notice No Trolley/Lorry No. removed from the track at km Removal Report received at Station Master *

Private No Date arrived at at hours. Station. was hours. Official in charge * To be given when the removal report is given on field telephone. A material lorry must be protected in accordance with G.R. 15.27 and S.R. 15.27/1. On receipt of this message (of Lorry working without block protection), the Station Master concerned will issue Caution Orders as indicated under sub-clauses (4) and (5) above, to all trains proceeding into the block section in which the lorry is working to restrict the speed so as to enable the Loco Pilot to stop short of the km, where the lorry might be working, on observing the danger signal. In case, there is a gradient of 1 in 200 or steeper, additional speed restrictions must be recorded in Caution Order issued to the Loco Pilots of goods/material trains proceeding in that direction. The speed restriction shall be B.G./MG 40 KMPH and N.G. 25 KMPH. When temporary single line working is introduced on a double line section, no material lorry shall be allowed to work in that section except in case of an emergency. (c) LORRIES FOLLOWING ONE ANOTHER - When lorries follow one another, a minimum distance of 100 meters should be kept. This should be increased by the official-in-charge of the lorry as required in accordance with gradient and other local conditions. (d) WORKING OR LORRY DURING TOTAL INTERRUPTION OF COMMUNICATIONS - Material lorries shall not be allowed to enter a block section when there is total interruption of communications. If, however, in a grave emergency, it is necessary for a material lorry to enter a block section when there is total interruption of communications, it is the responsibility of the official-in-charge of the material lorry to have it protected in accordance with the provision of G.R. 15.27 and S.R. 15.27/1 and subclauses (c) (ii) and (iii) of Clause (12) above. (e) On double line, material lorries must go out on the right line and if necessary, they must push back on the same line. On no account a lorry must be transferred from one line to another in a block section. 253 (15) (i) zrr (ii) (16) (17) a-fi a--1TQZ1A5 (18) - (2) (3) (4) (5) (6) (7) (8) (9) 180 (ii) 254 CHAPTER-XV (15) ADJACENT LINES NOT TO BE FOULED - PERMANENT WAY AND WORKS (i) When working a trolley, motor trolley or lorry on the double line section, if the same is removed from the rails in the block section, it should be removed in such a way that the adjacent running lines are not fouled or infringed. (ii) In the case of lorries working in the block section on double line, when material is unloaded, it should be ensured that no running line is fouled. (16) WHEN VISIBILITY IS IMPAIRED - when a trolley or is working on a block section during day without block protection, if the visibility is impaired due to rain, dust, or any other cause, the trolley or lorry should be removed from the line and should not be replaced until the visibility is adequate. (17) UNAUTHORISED PERSONS ON TROLLEY/MOTOR TROLLEY/LORRY - Persons authorised to work a trolley, motor trolley or lorry shall not take anyone with them on trolley/motor trolley/lorry unless employed on the Railway, and then only if duty requires, it, except in case of sickness or other emergency, when a report should be made to their Divisional Officers. (18) CONVEYANCE OF MOTOR TROLLEES TROLLIES AND LORRIES IN TRAINS - Motor trollies and trollies may be carried in the brakevans of goods and mixed trains, and also by passenger trains if there is room and provided the loading and unloading can be done without delaying the passenger train and they are not likely to cause damage to the packages in the van. Lorries will ordinarily be carried in the brakevans of goods and mixed trains and on sections where goods services are insufficient, by passenger trains, provided the conditions for the carriage of trollies and motor trollies by passenger trains are fulfilled. S.R. 15.18/2. Working of Dollys - (1) (2) (3) (4) (5) (6) (7) (8) (9) Subject to their certified competent, all inspector and Mistries of paramount way or permitted to use dollys. Certificate of competency shall be issued by the SSE (P. Way), in charge of the section who must satisfy himself that the person to whom competency certificate is being issued is fully conversant with the rules for the working of rail dollys and is also well acquainted with the concerned section. The permit will only be issued, after the person, in whose name, it is, issued, has been examined and declared to be conversant with the rules for working of dollys. The permit shall be valid for a period of one year from the date of issue. It shall, therefore, be renewed annually after the person holding it has been examined as mentioned above. Each dolly must have marked on it, the number, designation and code-initials of the head quarter station of the official, to whom it is allotted, painted in white letters, conspicuously. Dollys should always be pushed and not pulled. Dollys shall normally be worked during day light hours. If it is necessary to work at night, it shall be worked under block protection. The official-in-charge of the dolly, while approaching a level crossing should look out for road traffic and ensure safe passage of his dolly. Equipment of Dollys - (i) Following equipment should be provided on Dollys when placed on running line. (a) During the day time a red flag, fixed to a staff of not less than 180 cm. in height should be displayed on each dolly so as to be

clearly visible. (b) During the night, a light shall be placed to show conspicuously, on the double line, white to the front and red to the rear and on single line, red both to the front and the rear. (ii) A portable field telephone in working order must be carried with the in-charge of dolly when dollies are put on track. Minimum number of Dollymen - A minimum number of 3 dollymen should man each dolly exclusive of flagmen to protect them with flags and detonators. 254 (10) GTFIT (ii) zrr 1200 1527 15.27 / 1 I (iii) (iv) (v) 15.18/1 (12) (q) (1) uT 15.8/1 12 (u) (ii) (1 4) (vi) (vii) a-fi a-fi \$1 3 (11) Gi) (iii) (12) 255 CHAPTER-XV (IO) System of working of Dollies- PERMANENT WAY AND WORKS (a) (b) (c) At night time all dollies must work under block protection. Working of dollies within station section - Whenever a dolly has to work within Station section, the official-in-charge of the Dolly will advise the Station Master in writing

specifying the line and the period during which it will work. The Station Master on duty before authorising taking "Off" of signals for reception and despatch of trains, will personally satisfy himself that the official incharge of the dolly is advised and that the dolly does not foul the path of trains.

Button/Slide/Lever collars shall be used on those button/slides/levers governing the signals of the line on which dolly would be working. The speed of Dolly will not exceed 3 KMPH at any time. Working Dollies in Block section without Block protection - (i) Dollies shall normally be worked without block protection.

When it is proposed to work dollies outside the station section, without block protection, the official incharge of the dolly shall ascertain the whereabouts of trains that he is likely to encounter on the section before he places the dolly on the line. (ii) Where due to curves, cuttings or gradients, a clear view is not available for a distance of 1200 Meters, the dollies must be protected in accordance with G.R. 15.27 and SR

(iii) When the nature of the line is such that the flagmen cannot be seen by the person incharge of the dollies, the latter must arrange, before entering the section, to take with him sufficient number of Gangmen with hand signals and banner flags so that the required number of flagmen can be provided for repeating the signals to the person in charge of the dollies. (iv) If the visibility is impaired due to rain, dust, storm, fog or any other cause the dolly shall be removed from the line and should not be replaced until the visibility is adequate. (v) On the sections enlisted under Rule SR 15.18/1 (12) (d) (i) special precautions should be

taken as in SR 15.18/1 (12)(d)-(ii) I to 4, when working dollies without block protection due to sharp curves, cuttings tunnels etc. (vi) Dollies shall invariably be worked under block protection when- (a) it is necessary during an emergency to work it at night. (b) the visibility is restricted due to dust, storm, fog, rain or any other causes. (vii) During total interruption of communications or when TSL working is in force on a Double line section Dollies shall not be allowed to enter a block section. In case of extreme emergency, if it is indispensable to work dollies, the person incharge of dolly should arrange for protection as in G.R. 15.27 and S.R. 15.27/1 and ensure that the speed of the dolly does not exceed 3 KMPH at any

time. (11) Mode of working Dollies- (i) For carrying of single rail, 2 rail dollies shall be used and for transporting a 3 rail panel 6 number of rail dollies shall be deployed. The minimum number of dollymen shall be 3 (three) per dolly. (ii) Rail dolly should run on the cess rail in case of double line to ensure safety of adjacent track. (iii) As soon as the train is sighted, the dolly shall be instantly released by the release lever arm from the running line thus allowing the rail to drop on the ballast shoulder far away from the running line. Simultaneously the rail dolly is turned over and all infringements cleared before the passage of the train. All these operations normally should not take more than 2 minutes. (12) On Ghat sections, rail dollies are not to be worked. 15.19. Red flag or light to be shown - Every lorry or trolley when on the line shall show a red flag by day and a red light by night, during thick, foggy or tempestuous weather impairing

visibility or in a tunnel in the directions from which a train may come. 255 15.20. (IT) gel*. fr-uwtr:— 15.22. (Sülü) (1) GINT 15.23. - I 15.24. - q-afq 800 I 15.25. - I 15.26. — (ülü) 15.27. (2)

(Riu«0 GINT I 600 400 vâq) 1200 \$1 800 256 CHAPTER-XV PERMANENT WAY AND WORKS

15.20. Equipment of trolley, lorry or motor trolley - Each trolley, lorry or motor trolley shall have the following equipment - (a) (b) (c) (d) (e) (f) (g) (h) Two hand signal lamps. TWO red and two green hand signal flags, Sufficient supply of detonators, A chain and a padlock, a copy of the Working Time Table and all correction slips and appendices, if any, in force on that section of the railway over which the trolley, lorry or motor trolley is to run, a motor horn and a search light (for motor trolley only), two banner flags (for lorry only), and such other articles as may be prescribed by the Railway Administration in this behalf.

Note : The Official-in-charge of the trolley, lorry or motor trolley shall also be in possession of a watch in addition to the prescribed equipment. 15.21. Efficient brakes - No lorry or trolley shall be placed on the line unless it is fitted with efficient brakes. 15.22. Qualified person to be incharge of lorry or trolley when on the

line. (1) No lorry or trolley shall be placed on the line except by a qualified person appointed in this behalf by special instructions. (2) Such qualified person shall accompany the lorry or trolley, and shall be responsible for its proper protection and for its being used in accordance with special instructions. 15.23.

Attachment to train prohibited -No lorry or trolley shall be attached to a train. 15.24. Time of running - A lorry shall ordinarily be run only by day and when the weather is sufficiently clear for a signal to be distinctly seen from an adequate distance, which shall never be less than 800 meters. IS.25. Motor Trolley - A motor trolley shall only be run in accordance with special instructions. 15.26. Protection of trolley on the line -The qualified person in charge of a trolley shall, before leaving a station, ascertain the whereabouts of all approaching trains, and shall, when a clear view is not obtainable for an adequate distance. (a) (b) (1)

(2) On a single line, in both directions, or On a double line, in the direction from which trains may approach, take such precautions for the protection of his trolley as may be prescribed by special instructions. Protection of lorry on the line - Whenever it is proposed to place a lorry, whether loaded or empty on the line, the line shall if it is possible to do so, without interference with the working of trains, be blocked under the rules for working of trains. Except under approved special instructions, when the line has not been so blocked and a lorry whether loaded or empty is placed on the line, the lorry shall be protected. (a) On double line, by one or two men as required, at a distance of 600 meters on the Broad Gauge and 400 meters on the meter Gauge and the Narrow Gauge, carrying a banner flag across the track and another man plainly showing a Stop hand signal at a distance of not less than 1200 meters on the Broad Gauge and 800 meters on the Meter Gauge and the Narrow Gauge from the lorry in the direction from which trains may approach, or 256 600 400 31R-t:rrq (aqq-qârr) 1200 800 (3) 1200 800 \$1 ale—me

(6) (\$ülü) / 1. errs•a - zrr 600 400 a-TR 2 1200 800 \$1 @ 600 400 \$1 2 tra•tr) 3F4 1200 800 10-10 \$1 V&QT) GTFIT 15.28. - ur 257 CHAPTER-XV PERMANENT WAY AND WORKS (3) (4) (5) (6) (b) On single line, by one or two men as required, following and preceding the lorry at a distance of 600 meters on the Broad Gauge and 400 meters on the Meter Gauge and the Narrow Gauge, carrying a banner nag across the track and another man plainly showing a Stop hand signal at a distance of not less than 1200 meters on the Broad Gauge and 800 meters on the Meters Gauge and the Narrow Gauge from the lorry on either side.

Each man so following or preceding the lorry at a distance of 1200 meters on the Broad Gauge and 800 meters on the meter Gauge and the Narrow Gauge shall be provided with detonators and place three on the line, 10 meters apart, immediately the lorry comes to a stand for the purpose of either unloading or loading or should any train be seen approaching, and continue to display the Stop hand signals. The man or men carrying the banner nag shall immediately fix the banner flag across the track immediately the lorry comes to a stand or a train is seen approaching and continue to display the Stop hand signal. In all cases where the Flagmen in advance or in rear cannot be kept in view from the lorry, additional intermediate Flagmen shall be posted to relay the signals. The Stop Signals and detonators shall not be removed until the Flagmen have received the orders to withdraw them from the official-in-charge of the lorry. S.R. 15.27/1. Protection

of Lorry on the line - When a lorry', whether loaded or empty, is placed on the line, without block protection, the lorry shall be protected : (a) (b) (c) (d) (f) (g) On double line, by nvo men at a distance of 600 meters on Broad Guage and 400 Meters in M.G. & N.G. carrying a banner flag held with staff of 2 meters height across the track and another man plainly showing a danger hand signal at a distance of not less then 1200 meters on B.G. and 800 meters on M.G. & N.G. from the lorry in the direction from which trains may approach. On a single line, by nvo men, following and preceding the lorry' at a distance of 600 meters on B.G. and 400 meters on M.G. & N.G. carrying a banner flag held with staff of 2 meters height across the track and another man plainly showing a danger hand signal at a distance of not less than 1200 meters on B.G. and 800 meters on M.G. & N.G. from the lony on either side. Each man so following or preceding the lorry at distance of 1200 meters on B.G. and 800 meters on M.G. & N.G. shall be provided with detonators and place three on the line IO meters apart immediately the lorry comes to a stand for any purpose or should any train be seen approaching, and continue to display the danger hand signal. The men carrying the banner flag shall immediately fix the banner flag across the track immediately the lorry comes to a stand or a train is seen approaching, and continue to display the hand danger signal. The danger signals and detonators shall not be removed until the flagmen have received the orders to withdraw them from the official in charge of the lorry'. When the nature of the line is such that the flagmen cannot be seen by the person in charge of the lorry', the latter must arrange, before entering the section, to take with him sufficient gangmen with hand signals so that the required number of flagmen can be provided for repeating

the signals to the person in charge of the lorry. Station Masters at both ends of the block section enter remarks in the Train Signal Register showing the time at which the lorry entered and cleared the block section. 15.28. Lorries and trollies out of use -A lorry or trolley when not in use, shall be placed clear of the line, and the wheels thereof be secured with a chain and padlock. 257 6 — 16 (ana 16.01. - 34fizi<T cre•rur 16.02. 16.03. ÉT12.T) ærrrrrq 60 258 CHAPTER-XVI CHAPTER-XVI LEVEL CROSSINGS LEVEL CROSSINGS 16.01. Knowledge of signals - No person shall be appointed to be a Gateman unless he has a knowledge of signals. S.R. 16.01/1. Gateman Competency Certificates - No person shall be appointed to work as a Gateman unless he is in possession of a certificate of competency. This certificate shall be issued as per the guidelines given below : (a) Every Gateman shall be tested by SE (Engg.) or Traffic Inspector as the case may be, and issue a certificate of competency in the form given below before he is put to work independently which shall be valid for a period to three years. CERTIFICATE OF COMPETENCY Certified that I have examined Shri . Gateman at level crossing gate no. S/O • in his duties of He is also conversant in the use of hand signals, detonators and other safety equipment provided at this gate. He is also conversant with the procedure to be adopted during abnormal conditions at this gate. This certificate is valid for three years from the date of issue. Place . Date (b) (c) 16.02. (a) (b) Signature SE (Engg)/T1 In addition to the above certificate, every Gateman shall be issued a certificate of training by the instructor in charge of the Training School after passing initial/ refresher course. The competency of Cabinmaster/Cabinman/Leverman regarding working of the gate should be checked at ZTC/DTC. The competency certificate should include their competency regarding operation/working of the gate also.

Supply and care of equipment - Every Gateman shall - be supplied with day and night hand signals, detonators, and other prescribed equipment, and keep such signals, detonators and other equipment in proper order and ready for use. 16.03. Road Traffic - (1) Subject to such special instructions in that behalf as are permitted by these rules, all gates at level crossings shall be kept constantly closed and securely and fastened across the thorough fare on both sides of the railway and shall only be opened when it is necessary and safe to open them for the passage of road traffic: Provided that any Railway administration may from time to time issue special instructions for any particular level crossing or class of level crossing and may by such special instructions permit the gates at any level crossing or class of level crossing to be normally kept open to road traffic and may therein prescribe the conditions under which gates are to be kept closed against road traffic for the passages of a train or trains or for the purposes of any other railway operation; and all such special instructions so long as they be not cancelled or superseded shall for the purposes only of the Railway Administration issuing the same be deemed to be General Rules within the meaning and subject to the provision of section 60 of the Act. 258 6 (3) qe-i AGi zrr *ie4 uT g•zi (O Eiz I Adi (i) (iii) (iv) (v) (vi) (vii) frfieäT \$1 arqN-2TT u-l@e q-Ht I crzrere 3--441 I zrrer I \$1 a-TIA?ZEFTTT 259 CHAPTER-XVI LEVEL CROSSINGS (2) (3) (4) If for any reasons, the gates at level crossing can not be so closed/fastened across the thorough fares on both sides of the track, action to prevent the approaching trains, if any, from running in to the gate may be taken in accordance with stipulations laid down under General Rules 16.06 Gatemen, where provided, shall, at all level crossings be prepared, whenever such level crossings be open to road traffic, to show a Stop hand signal to any approaching train. Where to Gateman is specially provided for night duty at a level crossing, the gates thereat shall, subject to special instructions, be locked at night and opened only to pass road traffic in such manner as may be prescribed by special instructions. S.R. 16.03/1. (a) (b) (c) The detailed working instructions of level crossing gates including its normal position will be incorporated in the Station working Rules in respect of level crossing gates, which are situated within station limits and also of those engineering gates, which are provided with telephonic communication with the station. all the gate working instructions, including Traffic and Engineering gates will be signed by Sr. DOM & Sr. DEN. In case of interlocked gates the gate working instructions will be signed by Sr. DOM, Sr. DEN and Sr. DSTE. In addition to English version a signed copy of the instructions in Hindi language should be available at the level crossing gates. The normal position of all non-interlocked gates will be closed to road traffic. In case of branch line, gates where road traffic has increased and rail traffic is less may be kept open to road traffic provided the following conditions are satisfied. (i) (ii) (iii) (iv) (v) (vi) (vii) The level crossing should not be on a suburban section. All level crossing should be equipped with lift up barriers except those located on Branch lines where provision of lifting barrier need not be insisted upon. The section concerned should not have automatic block signalling. The level crossing should be provided with a

telephonic connection with the Station Master and should have a system of obtaining private number from Gateman in token of having closed the gate. The railway track at the level crossing should be straight on either side to afford a clear view of an approaching train. As long as the gate is kept open for road traffic a red flag by day time and a red light during night should be displayed towards the approaching train on either side of the level crossings. The level crossing shall be provided with Whistle Board on either side at an adequate distance to enjoin the Loco Pilot of approaching train to give audible warning of the approach of train to the road users. When no Gateman is specially provided for night duty at a level crossing, the gates there at shall be closed and locked against road traffic by the Gateman of day duty after his duty hours and should give his private number to the station/cabin concerned and the key should be kept with the Gateman only. In a traffic gate, such Gateman should give his private number after ensuring the closure and padlocking of gate and hand over the keys to the Station Master concerned. Likewise, while the Gateman resumes his duty at the gate in the day time, he should give his private number to the station/cabin concerned as an assurance of having resumed duty. Review of such level crossings should be taken every year and attempts should be made to provide necessary, facilities and upgrade them to 'A' class at the earliest. All gates shall be closed for road traffic in the event of failure of telephone or during night and also, if the visibility is impaired due to rain, thick, foggy or tempestuous weather and shall be opened only when necessary, provided no train is approaching. 259 6 verr GTFIT I 16.04. crzrere 16.05. - \$1 6.05 / 1. — 3NT\$1 260 CHAPTER-XVI LEVEL CROSSINGS (d) Where there is no rail traffic during night, the gateman of day duty, after his duty hours may leave the gate open for road traffic, Before leaving the gate, the gateman will ask permission to do so from the controlling station Master under exchange of private number, Station Master will give such pennission only after ensuring that there is no train in the block section. Keys of gate lodge will be kept by gateman, Likewise, while the gateman resumes his duty at a gate in the day time, he will exchange private number with the controlling Station Master as an assurance of having resumed duty. Station Master will ensure the availability of gateman at the gates in the section before resumption of train working in the block section. S.R. 16.03/2. Special instructions shall be embodied in the station working rules for level crossings situated within the station limit and also for those engineering level crossing gates, which are situated outside station limits but provided with telephone communications. These instructions shall be framed by engineering branch signed by Sr. DEN with prior approval of Sr. DOM and Sr. DSTE, If any communication is provided between station and level crossing whether situated within or outside station limits, procedure to be followed must be laid down in the special instructions. Action to be taken by the Gateman/SM in the event of failure of communication between the level crossing and the station/cabin should specially be maintained in such rules/instructions. A copy of these rules/relevant extract from the Station Working Rule should be hung, up at the gate lodge at manned level crossing. S.R.16.03/3. All entries regarding opening/closing of the gate should be recorded by the Gateman in a seprate Log Register, Whereas Station Master/Cabinmaster will work the entries in their LogjTrain Signal Register. S.R. 16.03/4. Working instructions formanned level crossing is given in Appendix 'A' 16.04. Gateman to observe passing trains - Except where otherwise prescribed under special instructions, the Gateman shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains. S.R.16.04/1.The Gateman at all level crossing gates should stand alternatively at the gate lodge side facing to the track with furled red and green flags during day in right and left hands respectively and at night hold the hand signal lamp with the white light pointing towards the track. He shall watch all passing trains to see any unusual condition like hot axle, chain hanging, any vehicle/wagon on fire, load-shifted etc. and take prompt action to warn the Loco Pilot and Guard of the train while showing danger hand signal and blow whistle also. 16.05. Channel for flange of wheels - The Gateman shall see that the channel for the flange of the wheels is kept clear. S.R. 16.05/1. Maintenance of road surface at Level crossing gates - In case of level crossing gates where Gate men are provided, the maintenance of the road surface will be done by Permanent way gangs and the watering and ramming of road surface and keeping clear of the channel for flange of wheels will be done by the Gateman. In the case of level crossing gates, which are operated by Lever men/Cabin men of the nearby cabins, or by Points men deputed from the stations, the clearing of the channel for flange of wheels shall be done by Key man and maintenance of road surface. watering and ramming will be done by the Permanent Way gangs. 260 6 "Riu) — 16.06. R-2.fı crzrere G" R-2.fı crzrere "G" crgrere crzrere CT) @ (u) crzrere 16.07. - CT) 3.62 I 16.08. — (RBI) 16.09. - O, 16.10. - 261 CHAPTER-XVI LEVEL CROSSINGS 16.06. Defects

at level crossings - If any gate or the fastenings there of, or any fixed signal pertaining to the gate becomes out of order, the Gateman shall- (a) Take action to close the gates, if possible, against the road traffic; (b) After closing the gates, hand signal the train movement past the level crossing; (c) If the gates cannot be closed put the banner nag or level crossing flag in such manner as to warn the approaching train to stop short of the gate and thereafter hand signal the train. (d) Report the fact to his Superior or the nearest gang mate. S.R. 16.06/1. Gate Signal Defective - (a) (b) (c) If any Gate signal of a level crossing gate outside station limits, which has been provided with a 'G' marker, becomes defective, it shall be kept at 'On' The

Loco Pilot of an approaching train, finding a Gate signal with a 'G' marker at 'On' shall sound a long whistle and bring his train to a stop in rear of the signal. If after waiting for one minute by day and two minutes by night the signal is not taken 'Off' he should draw his train ahead cautiously and stop again short of the level crossing. The Gateman, after closing and locking the gate across the road, shall hand signal the train passed the level crossing. In the absence of the Gateman, this duty will be performed by one of the engine crew. If any Gate signal of a level crossing gate in non-automatic signalling territory, which has not been provided with 'G' marker, becomes defective, it shall be kept in the 'On' position and the light shall be kept burning at night. The Loco Pilot of an approaching train finding such Gate signal without 'G' Marker in the 'On' position, shall bring his train to a stop in rear of the signal and sound his whistle to attract the attention of the Gateman. The Gateman after closing and locking the gates against road traffic, shall proceed to the signal, report the defect to the Loco Pilot and Pilot the train passed the level crossing gate.

In respect of Gate signals referred to in (a) and (b) above, the Loco Pilot of the first train shall stop the train at the next station and report the defective signal to the station master on duty, who will then advise the station at the other end when gate signal has failed in 'Off' position. The Station Master of the station immediately in rear shall stop all trains and issue Caution Order. S.R. 16.06/2 Sliding boom arrangement at interlocked level crossing gate is an emergency gate protection in case of breakage of boom, where as in double electric lifting barrier arrangement an additional ELB provided. Relevant working is detailed in SWR concerned. 16.07. Obstructions at level crossing - Every Gateman, on noticing any obstruction on the line, shall at once remove it or, if unable to do, shall - (a) Take action to ensure that the fixed signals, if any, protecting the gate are kept at 'On' (b) Show Stop hand signal and do his best to stop approaching trains and (c) Shall protect the obstructions as per Rule 3.62 16.08. Parting of a train if a Gateman notices that a train has parted, he shall not show a Stop hand signal to the Loco Pilot, but shall endeavour to attract the attention of the Loco Pilot and the Guard by shouting, gesticulating or other means. 16.09.

Trespassing Every Gateman shall, as far as possible, prevent any trespassing by persons or cattle. 16.10. Transfer of charge of gate except in accordance with special instructions, No Gateman shall leave his gate unless another Gateman has taken charge of it. 261 6 16.11. (Glee diü. 262 CHAPTER-XVI 16.11. Height gauges - LEVEL CROSSINGS (1) (2) (3) Adequate arrangements shall be made to erect height gauges on either side of the overhead equipment or other equipment at every level crossing so as to ensure that all vehicles and moving structures passing under the height gauge also pass under the over head equipment or other equipment with adequate clearance. The adequate clearance referred to in sub-rule (1) shall be sanctioned under approved special instructions. Vehicles and moving structures, which cannot pass under the height gauge without striking or touching it, shall not be permitted to pass the overhead equipment or other equipment except in accordance with special instructions. 262 7 17.01. (2) (3) 17.02. (2) (3) (4) (5) (6) (7) — 17 ft-g -q-rq-h \$1 (O 25 @ 25 qi•æei GIRT I gas QQ (ii) 21 (i) .3T2i firrg (ii) "312*" 263

CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS

CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS 17.01.

Applicability of General Rules - All rules referring to the working of trains shall also apply to electrified sections except as otherwise provided in the rules contained in this chapter. S.R. 17.01/1.(1) All Subsidiary rules, which control the movement and operation of Diesel trains shall also apply to movement and operation of electric trains, except as otherwise provided in these rules. (2) (3) (a) (b) (a) (b) All officials connected with movement of rolling stock shall have a thorough knowledge of these rules. They shall also be responsible for ensuring that staff, working under them, are thoroughly conversant with the instructions relating to their work and correct procedure to be followed under normal condition as well as in an emergency. Every Railway employee, supplied with these rules shall make himself thoroughly acquainted with the rules and shall be held responsible for knowledge of and compliance with them. Ignorance of the rules will not be accepted as an excuse for non-compliance. The A.C. Traction Manual containing the rules

for the operation of A.C. Traction equipment shall be applied to only 25 KV AC Traction System. All staff working in an area where electric traction is in use must make themselves thoroughly conversant with the appropriate rules pertaining to their duties on 25 KV A.C. traction. 17.02. Special definitions applicable to this chapter in these rules unless the context otherwise requires. (1) (2) (3) (4) (6) (7) "electrical way and works" means the traction installations including overhead equipment and other connected works provided on the electrified sections of the railway; "feeding post" means a supply control post, where the incoming feeder lines from grid sub-station are terminated; "neutral section" means a short section of insulated and dead overhead equipment which separates the areas fed by adjacent sub-stations or feeding posts; "Power Block" means blocking of a section offline to electric traffic only; "Supply control post" means an assembly of interruptors, isolator switches, remote control equipment and other apparatus provided for controlling power supply to overhead equipment. It includes feeding posts, sectioning and paralleling posts, sub-sectioning and paralleling posts and sub-sectioning posts; "tower wagon" means a self-propelled vehicle which is used for the maintenance and repairs of overhead equipment; "Traction Power controller" means a competent railway servant who may for the time being be responsible for the control of power supply on the traction distribution system. S.R. 17.02/1. (i) "Phase Conductor" means a conductor, which carries current to the traction overhead equipment. (ii) "Return Conductor" means a conductor which carries return current from the tracks to the sub-station. Return conductor also includes conductor carrying return current from booster transformer to the track. S.R. 17.02/2. "Traction Power distribution system" means a distribution system provided for traction purposes. This is also referred to as "Power distribution system". S.R. 17.02/3. (i) "Earthed" or "Connected to Earth" means electrically connected with the general mass of earth in such manner as to ensure at all times an immediate discharge of energy without danger. (ii) "Earth" for the purpose of the overhead equipment only includes the track return circuit and the structures supporting the overhead equipments, provided such structures are connected to earth or track return. 263 7 .3T2i me "Al-e&" (ii) / 7. (i) a-IN (ii) ü" (iii) (iv) zrr crRp.T (vi) (i) ul*1" t•zrr (ii) 'ag ul*1" (ii) .3Træ•æ (iii) (iv) a-TFßT 10. - 264 CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS S.R.17.02/4. "Feeder" means a conductor connecting a switching station to a grid sub-station, and a switching station or switch gantly to a feeding point and includes a conductor connecting O.H.E. to switching station. S.R.17.02/5. "Voltage" means the difference of electric potential measured in volts between any two conductors or between any part of either conductor and the earth as measured by a suitable voltmeter. S.R. 17.02/6.(i) All overhead electrical equipments, distribution lines, transmission lines and feeders may be collectively referred to as "overhead lines". (ii) "Pantograph" means collapsible devices mounted on and insulated from the roof of an electric engine or motor coach and provided with a means for collecting current from the overhead equipment. S.R. 17.02/7. (i) "Rail Bond" means an electrical connection across a joint in or between adjacent length of (ii) "Bond Continuity" means a rail bond used for maintaining continuity of the rail return circuit at points and crossings. (iii) "Bond cross" means a rail bond used for connecting together two rails of a track or rails of adjacent tracks. (iv) "Bond Impedance" means a bond installed on a double rail track circuit by the S&T department, which provides a low impedance path for the traction return current and relatively high impedance path for track circuit current. (v) "Bond, joint" means an electrical connection across a joint between two adjacent lengths of rails as part of the track return. (vi) "Bond Structure" means an electrical connection between the steel work of a track structure, bridge or station building to which the traction overhead equipment is attached, and the track return. S.R.17.02/8. (i) "Single Unit Train" means the combination of a motor coach and trailer or motor coach and trailers adopted as an operating unit. (ii) Multiple Unit Train" Means a train consisting of two or more single unit trains coupled together and operated as one train. S.R. 17.02/9. (i) "Switch (Electrical)" means a device for opening or closing an electric circuit. (ii) "Switch, Alternate Feed" means a switch used for connecting the overhead equipment of a loop or siding or crossover to alternative sections of the overhead equipment. (iii) "Switch, Gang operated, Earth type" means a special switch used for isolating and earthing the O.H.E. over electric loco inspection pits and in electric loco sheds (and carriage, coaching section) and for providing a dead section in front of it. Simultaneously and for energising both sections in one operation. (iv) "Switch, Inter connecting, section or isolator" means a switch used for connecting or disconnecting adjacent elementary section of overhead equipment or of distribution mains. (v) "Switchgear" means isolator switches, Circuit Breakers, Interrupters, Cut-Outs and other apparatus used for the operation, regulation and control of electrical circuits. S.R. 17.02/10. Additional definitions in use

on North Central Railway- (1) "Apparatus" means electrical apparatus and includes all machines fittings, accessories and appliances in which conductors are used. (2) "Assistant Electrical Engineer (Traction Distribution) / (AEE/TR_D)" means an Assistant Executive Office-in-charge of maintenance and repairs of the Power distribution system in a division or in an area and responsible to the Divisional Electrical Engineer (Traction Distribution). 264 7 (3) (4) (5) (6) t (8) (9) (qa ærq;) zrr cret / a (Gz«q) I uT el-äl crRcp.T (10) a-nu (11) (12) (13) 3TF3Z" .31* a-rrq I (14) zrr (15) (16) eb" 25 a-fi (17) (18) ær.)" zrr 265

CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS (3) (4) (5) (6) (7) (8) (9) "Assistant Electrical Engineer (Rolling Stock) / (AEE/RS)" means an Assistant Executive Officer-in-charge of maintenance and repairs of electrical rolling stock in a division or in an area and responsible to the Divisional Electrical Engineer (Rolling Stock). "Assistant Traction Foreman (A.T.F.O. Y' (a) Means a subordinate of the area concerned responsible to the Traction Foreman for inspection and maintenance of traction overhead lines, rail bonds and for the staff employed there on. (b) "Rolling Stock (RS)" means a subordinate of the area concerned responsible to Traction Foreman (Rolling Stock) for the maintenance of electric rolling stock and for the staff employed thereon. "Bare" means not covered with insulating material. "Cable" means length of Insulated single conductor (solid or stranded) or of nvo or more such conductors, each provided with its own insulation which are laid up together. Such insulated conductor or conductors may or may not be provided with an overall mechanical protective covering. "Caution Notice" means notice attached to or placed near live equipment calling attention to the danger of touching or interfering with such equipment, and bearing the words "Caution - Live Equipment. "

"Chargeman" means an authorised person in charge of a gang of workmen and/or Lineman, authorised to work on specific types of traction equipment such as overhead equipment, switching station feeder lines, remote control equipment, electric rolling stock etc. "Circuit" means an arrangement of conductor or conductors for the purpose of conveying electrical energy and

forming a system or a branch of a system. When they form a closed path through which a current can circulate, the circuit is referred to as 'closed'. When the path is not closed, the circuit is referred to as 'Open'.

(IO) "Circuit Breaker" means a device for closing and opening an electrical circuit under all conditions unless otherwise specified and so designed as to open the circuit automatically under abnormal conditions.

(11) "Competency Certificate" means a certificate issued to a person by the Railway Administration authorising him to carry out specified duties pertaining to his employment. (12) "Contact Wire" means an overhead conductor from which electric power is supplied to electric rolling stock. (13) "Cut-out" (fuse) means any appliance for automatically interrupting the transmission of energy through any conductor when the current rises above predetermined value. (14) "Danger" means danger to health or to life or any part of body from shock, burn or other injury to persons, or property, or from fire or explosion, attendant upon transmission, transformation, conversion, distribution or use of electrical energy. (15) "Danger Notice" means a notice attached to dead equipment to convey a warning against such equipment being made alive, and bearing the words "Danger-Men Working."

(16) "Danger Zone" means the zone lying within two meters of any live equipment in the 25 KV AC traction system in which no work is permitted when the equipment is alive. Notwithstanding the above the Loco Pilot of an electric loco is permitted to change the headlight bulb of the loco while standing on the buffer beam projection at the floor level of the cab.

(17) "Divisional Electrical Engineer (Traction Distribution) (D.E.E./TR.D)" means an Executive officer responsible for the traction power distribution system including power supply arrangement and remote control equipment in a division or in an area. (18) "Divisional Electrical Engineer (Rolling Stock)/(D.E.E./R.S.)" means an Executive officer responsible for the electric rolling stock in a division or in an area.

(19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) GIAN" 'fig 25 zrr iiii) — — g;) .3T2i ertTTZIT I R-2.fi .3T2i .3T2i zrref (34) zrr a-e-RuT 266 CHAPTER-XVII WORKING

OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS (19) "Dropper" means a fitting used in overhead equipment construction for supporting the contact wire from the catenary. (20) "Electrified

Track" means track provided with overhead equipment. (21) "Emergency telephone" means a telephone circuit provided for contacting the Traction Power controller. (22) "Grid sub-station" means a sub-station equipped with transformer and switchgear belonging to the power supply authority from which power at 25 K V is supplied for electric traction. (23) "Guarded" means covered, shielded, fenced or otherwise protected by means suitable casing, barrier, rails or metal screens to remove the possibility of dangerous contact or approach by persons or objects to a point of danger. (24) "Insulated (Air-gap) Overlap-Span" means an arrangement of overhead equipment over a track where two sets of traction conductors overlap each other for a short distance providing for a smooth passage for the pantograph of electric rolling stock, the two sets of wires being insulated from each other by an adequate air-gap. (25)(i) "Interruptor" means a

single phase oil circuit breaker without an automatic tripping (a) (b) (c) device. "Bridging Interruptor" means an "Interruptor" which is provided at a natural section to enable one sub-station to feed a sector of the overhead equipment normally fed by another sub-station during emergencies or when the latter is out of use. This interruptor normally remains in the open position. "Sectioning Interruptor" means an Interruptor, which connects adjacent sub-sectors together to maintain continuity of supply. This interruptor normally remains in the closed position. "Paralleling Interruptor" means an interruptor, which connects overhead equipment of two different tracks. This interruptor normally remains in the closed position to reduce voltage drop. "Isolator" Means a switch suitable for disconnecting circuit on no load condition. (26) "Lineman" means a person authorised to inspect and work on the overhead lines and switches in relation therewith. (27) "Operator" means a person on duty who is in charge of a switching station. (28) (a)

"Remote Control Centre" means the centre from which the equipment's at various switching stations are remote controlled by the Traction Power Controller. (b) "Remote Control Cubicle" means a room in a switching station in which remote control equipment and batteries are erected for remote operation of switchgear located at the post. (29) "Section Isolator" means a device installed in the contact wire for insulating two elementary electrical sections from each other while providing a continuous path for the pantograph. (30) "Sector" means a section of overhead equipment of a track from a feeding post to a sectioning post. (a) "Sub-sector" means the shortest section of overhead equipment, which can be isolated by opening of Interruptors. (b) "Elementary Section" means the shortest section of overhead equipment which can be isolated from the rest of the system by switching operations. (31) "Sectioning and Paralleling post (SP)" Means a switching station situated mid way between two feeding posts at a neutral section and

(32) "Sectioning and Paralleling post (SP)" Means a switching station situated mid way between two feeding posts at a neutral section and (33) "Sectioning and Paralleling post (SP)" Means a switching station situated mid way between two feeding posts at a neutral section and (34) "Sectioning and Paralleling post (SP)" Means a switching station situated mid way between two feeding posts at a neutral section and (35) "Sectioning and Paralleling post (SP)" Means a switching station situated mid way between two feeding posts at a neutral section and (36) "Sectioning and Paralleling post (SP)" Means a switching station situated mid way between two feeding posts at a neutral section and (37) "Sectioning and Paralleling post (SP)" Means a switching station situated mid way between two feeding posts at a neutral section and (38) "Sectioning and Paralleling post (SP)" Means a switching station situated mid way between two feeding posts at a neutral section and (39) "Sectioning and Paralleling 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provided with bridging and paralleling Interruptors. (32) "Sub-sectioning and Paralleling Post (SSP)" means switching station where sectioning and paralleling Interruptors are provided. (33) "Yard Supply Post (Y S)" means a switching station where sectioning interruptors are provided for feeding yards. (34)

"Traction Sub-station" means an electrical installation comprising of converting or rectifying and transfonning machinery, batteries and controlling apparatus for supply of energy to the power distribution system. 266 (35) Re-â" (36) (37) .3T2i (38) / uT Adi (39) .3T2i \$1 \$1 a-rf 17.03. — (TFT. 15.01 15.10

*fifi zrra•r a-Tl'V--q (2) (3) æe-ßF) (q) GTFIT). 267 CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS (35) "Track Return" means the track rails when used as the return conductor for the traction return current to the sub-station. (36) "Traction" means electric traction. (37) "Traction Engine Examiner" means an official responsible for inspection and maintenace of electric rolling stock. (38) (a) "Traction Foreman (T.F.O.) Overhead equipment (O.H.E.) means a subordinate of the area concerned responsible for the operation and maintenance of overhead equipment and for the staff employed thereon. (b) "Traction Foreman (T.F.O.) Rolling Stock (RS)" means a sub-ordinate responsible to Assistant Electrical Engineer (Rolling Stock) for the maintenance and/or inspection of electric rolling stock and for the staffemployed thereon. (39) "Traction Loco Controller (T.L.C.)" means an official under the control of Assistant Electrical Engineer (Rolling Stock) who will be responsible tar booking of electric locomotives and running staff to meet the requirements of the traffic. 17.03. Inspection of electrical way and works - The electrical way and works shall be inspected regularly in accordance with special instructions by officials nominated for the purpose and in accordance with the duties assigned to them.

S.R.17.03/1.(a) The duties of Section Engineer in General Rules 15.01 to 15.10 (inclusive), wherever applicable to electrical way and works shall devolve on the Traction Foreman, (Overhead Equipment) and Assistant Traction Foreman, (Overhead Equipment) in so far as these duties related to the respective items of electrical way & works in their charges. (b) The duties of the Gangmate, wherever applicable to overhead equipment, shall devolve on the overhead equipment Lineman. If due to any defect or damage to the overhead equipment it is necessary to lower pantographs over any particular section of the running lines, the traction official concerned shall communicate with the Traction Power Controller, who, in turn, shall advise the Section Controller tar arranging the issue of necessary Caution Orders by the Station Masters to the Loco Pilots. The Caution Order shall specify the exact kilometers and structure numbers between which the Loco Pilot shall lower the pantographs and trail through. In addition, the traction official, asking for the Caution Order to be issued, shall arrange with the Assistant Traction Foreman (Overhead Equipment) for the exhibition of suitable indication boards marking the beginning and end of the affected section in which Loco Pilots shall train through with lowered pantographs. S.R.17.03/2. No

conductor shall be erected over or along side an electrified track unless it is adequately guarded in accordance with the rules laid down by the Railway Administration. This guard shall be effectively connected to earth. S.R.17.03/3. (1) (2) (3) The inspection of overhead equipment and electrical equipment at supply control posts shall be carried out periodically in accordance with instructions issued by the Divisional Electrical Engineer (Traction Distribution). Electrical equipment in rolling stock shall be inspected periodically in accordance with instructions issued by the Divisional Electrical Engineer (Rolling Stock). (a) (b) (c) (d) Loco Pilots of electric rolling-stock shall, as far as possible and without interfering with their primary duties, watch the overhead equipment. When a defect on the overhead equipment, which is likely to intertZre with the smooth movement of the pantograph or cause damage to it, is noticed ahead, the Loco Pilot shall trip the circuit breaker and immediately lower the pantograph by placing the pantograph handle in the 'lower' position. An emergency stop should be made, ifnecessary. If damage to overhead equipment is slight (such as a slight break away of the contact wire from the droppers or catenary), it may be practicable to coast under the defective section, but the detZct shall be reported to the Traction Power Controller through the nearest emergency telephone circuit or in case this circuit is not available, through any other telephone. 267 (4) (5) (6) (7) 3-+441 MR.6. 03 MR.9.10 zrr (RITIT) ,/T11 é

æTITZI (u) crrqg Giq elQ GTT Sre•zn 268 CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS (e) (4) (5) (6) (7) In the case of a breakdown of overhead equipment requiring trains to be stopped, the Loco Pilot noticing such a breakdown shall immediately bring his train to a stop and arrange protection of the line or lines affected in accordance with G.R. 6.03. In the case ofa breakdown in an automatic signalling section, the track must be protected in accordance with G .R.9. I O. Thereafter he will take immediate action to advise the Traction Power Controller on the

nearest emergency telephone circuit giving details of the break down, In case this circuit is not available, communicate the information to the nearest Station Master/Cabin S .M./Cabinmaster on any other telephone circuit. The Traction Power Controller, on receipt of such message, will pass on suitable instructions to the section Controller, and, if necessary, advise him to stop running or trains in the affected section. (a) (b) (a) (b) All breakdowns of defects, noted in the overhead equipment or any other traction equipment, including continuity bonds, joint bonds, cross bonds, structural bonds and impedance bonds by any railway employee, shall be reported immediately to the Traction Power Controller. In case he cannot be contacted, the nearest Station Master, Cabin Station Master, Cabinmaster, Traction Foreman, (Overhead equipment) or the Assistant Electrical Engineer (Traction Distribution) shall be advised. In case of the impedance bonds, the Signal Inspector shall be advised. The Station Master, Cabin Station Master or Cabinmaster to whom such breakdowns or defects are reported shall convey the information immediately to the Traction Power Controller through the Section Controller. In case of failure of communication, he shall use his discretion regarding movement of traffic and advise the nearest Traction official. In case of breakage of an overhead line the railway employee detecting it shall ensure that no person comes in contact with the line until an authorised person arrives on the spot. The authorised person will take immediate action to make the affected line dead and earthed. All overhead line staff, when on patrol, shall watch the pantographs of passing electric rolling stock and, if any defects are noticed, they should immediately try to attract the attention of the Loco Pilot/ Guard to stop by displaying hand danger signals or by gesticulation. If, however, they are unable to attract the attention of Loco Pilot/Guard, they must immediately report to the Traction Power Controller through the emergency telephone circuit or any other telephone, if the emergency telephone circuit is not available, giving full particulars including number of the rolling stock, nature of defect and the time when the defect was noticed. The Traction Power Controller shall communicate reports of a defective pantograph to the Traction Loco Controller who shall arrange to have the electric rolling stock stopped as soon as possible for examination of the defective pantograph. Traction Foreman (Overhead equipment) shall be responsible for the proper and efficient maintenance of all breakdown equipment, wiring trains, tower wagons, break down lorries etc., so that they are always in a state of good repair. He shall ensure that they are equipped with full quantities of stores and spare parts as per approved inventory. All tools and tackles, straining screws, clamps, ropes and ladders shall be maintained in good condition and ready for use at all times. The staff concerned shall ensure that equipment, not in immediate use, is always ready for service, except such equipment as may be under repair or overhaul. S.R. 17.03/4. (a) The keys for all out door switches shall be kept in locked glass fronted boxes in the custody of Station Masters, Cabin Station Master, Cabin Master or other persons stationed conveniently nearby the switches. The keys shall be issued on demand only to authorised persons, whose signatures for receipt shall be obtained in a book maintained for this purpose. 268 7 (ii) (iii) (O zrr a•rerr zrr I efre•rr zrrerr g) a-rerrzrr (Qlfitf) OT) (Qlfitf) a•rerr a--TIZF-RF (Tfr•r zrr (T\$•r (u) (341Qeq) uT 269 CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS (b) (c) (d) (a) (b) (c) (d) All chambers or enclosures containing live equipment shall be kept closed and locked, with the keys in the custody of the authorised person. A duplicate key shall be kept in a box with a fixed glass fronted cover in place to be notified by the Divisional Electrical Engineer (Traction Distribution). The key may be removed by breaking open the glass over the box, in case of emergency, by an authorised person. A record shall be maintained of every such use of the key. In the event of breaking of the glass of the keyboard, the key or the keys will be kept in safe custody of the A.S.M., Cabin S.M. or Cabin Master, until the glass is replaced. The Traction Power Controller will keep a record where such keys are kept so that, in an emergency, he will be able to direct the parties. When the glass cover is broken to obtain the duplicate key, the concerned Traction Foreman (OHE) shall be immediately advised to replace the glass. The person replacing the glass shall obtain the signature of the authorised person who shall put down the date of replacement. Any person, while working in a chamber or enclosure containing electrical equipment, which under normal conditions is alive, shall retain the keys of the chamber or enclosure. These keys shall be returned to the person in whose custody they are normally kept, immediately after the chamber or enclosure has been locked. Permit-to-work cards shall not be cancelled until the keys have been returned to the box or to the person in whose custody they are normally kept. In emergency, Station Master or a Cabin Station Master/Cabinmaster shall operate such switches as per specific direction of the Traction Power Controller. In the event of a fault in the overhead equipment necessitating isolation of a section in addition

to the faulty one, the Assistant Traction Foreman (Overhead Equipment) or an authorised person shall arrange with the Traction Power Controller to isolate the healthy section also. However, if necessary, he shall himself open those switches, which can be operated conveniently. Should the Traction Power Controller wish to have any isolator switch opened or closed he shall ask the Assistant Traction Foreman (Overhead Equipment) or Station Master/Cabin Station Master/Cabinmaster or any authorised person to carry out the required switching operations. The person concerned shall, after carrying out the orders, lock the switch either in 'Open' or 'Closed' position, as the case may be and inform the Traction Power Controller of the action taken. He shall not part with the key until receipt of further order from the Traction Power Controller. A record of every such operation shall be maintained by the person concerned. Each instruction regarding the parting with the keys shall be confirmed by exchange of Private Numbers. Every Station Master, Cabin Station Master or Cabinmaster shall be fully aware of the location of isolator switches provided for the control of power supply overhead equipment at his station or near his cabin and shall be conversant with the correct method of opening and closing the same in an emergency. (iii) No person other than authorised maintenance staff, their assistants when accompanying them, and persons provided with special permits issued by Divisional Electrical Engineer (Traction Distribution) shall be admitted to supply control posts except the following. (a) A person escorted by the Divisional Electrical Engineer (Traction Distribution) or by the Assistant Electrical Engineer (Traction Distribution) (b) A doctor summoned to attend an accident case. (c) Electrical Inspector to Government for the Railway area concerned. (d) A person required by an officer to speak from a telephone installed in the premises. (iv) No person below the rank of an Operator or Lineman shall be allowed to enter an unattended supply control post alone.

269 7 (2) (3) (4) (5) (2) (3) (4) (5) 15.09 ft-g *rrr I s:rrq I (zrrq (QINZ) (Tfr 400 uT a-TINT--H I zrr 25 2 MZt70T 270 CHAPTER-XVII S.R.17.03/5. WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS (2) (3) (4) (5) Presence of a responsible person - When repair or adjustment to overhead equipment makes it necessary for a train to proceed cautiously, an authorised person shall be present at the site of work and shall be responsible for showing the signals prescribed in G .R. 15.09. Issue of Caution Orders - Before commencing work on overhead equipment or in cases of breakdown of overhead equipment, when it is necessary for a train to proceed cautiously, the Traction Foreman or Assistant Traction Foreman (Overhead Equipment), Responsible for such notification, shall arrange for issue of Caution Orders in accordance with S.R. 4.09/1. No alteration or addition shall be made to any equipment so as to infringe standard dimension, whether permanent or temporary. If an infringement is unavoidable, sanction shall first be obtained from the Divisional Electrical Engineer (Traction Distribution). Care shall be taken to ensure that covers of tank wagons, funnels of steam cranes or such other items are not left in such a position as to foul the traction overhead equipment. (a) (b) (c) No steam or hand-crane shall be worked adjacent to traction overhead equipment unless such overhead equipment is dead and earthed. All movements of the crane jib shall be carefully controlled so as not to foul the traction overhead equipment. Wherever possible the direct blast from the crane funnel to the overhead equipment and particularly to section insulators shall be avoided. Except in an emergency, 24 hours advance notice of intention to work a crane adjacent to overhead equipment shall be given to the Divisional Electrical Engineer (Traction Distribution) in order to make arrangements for overhead equipment staff to standby. When possible the working of cranes shall be included in the weekly programme detailed in S.r. 17.04/1. In an emergency, the Traction Power Controller shall be advised and he shall make arrangements for overhead equipment staff to standby. Crane shall not be worked adjacent to traction overhead equipment unless the overhead equipment staff is present. S.R.17.03/6. (1) (2) (3) (4) (5) No work on live or unearthed indoor or outdoor equipments above 400 volts is permitted. The only occasion when maintenance staff may work on unearthed equipment, after it has been isolated, is for the purpose of taking insulation tests'. On completion of tests the equipment shall be earthed before any work started. Earthing of feeder lines - After the feeder is made dead, it shall first be discharged by throwing an earthed chain over the conductor. The feeder line is then connected to earth by means of a Stranded copper cable of adequate size securely connected to earth and the conductor. Interruptors or Isolator - switches, which have been opened for the purpose of isolating electrical equipment for maintenance, shall have a danger notice displayed in a prominent position on the Interruptor Operating Handle of the switch or on the enclosure containing Isolator-switch and control apparatus as well as on the corresponding switches in remote control centre. Work in the danger zone of overhead equipment - Before any work is undertaken on a section of overhead

equipment, which is normally alive, or on any part of the structure adjacent there to or supporting such equipment situated at a distance less than 2 meters for 25 KV AC system from the live parts, the overhead equipment shall be made dead and earthed. A minimum of two earths shall be provided one on either side of the working party. In case the work is spread over several sub-sectors, additional earths shall be provided close to the feeding points of supply control posts involved. Work at insulated overlap spans (air-gap sections) - No work shall be attempted on insulated overlap spans or on section insulators unless the adjoining sections or overhead equipment on either side are made dead and earthed. In the case of a sectioning point, the isolator switch, the bridging or sectioning interruptor bridging the overlap span shall be closed.

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CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS

S.R.17.03/7. Precautions to be taken by staff - Where overhead equipment for two or more tracks is supported on one structure and work has to be done on the overhead equipment for adjacent tracks are alive, access to the overhead equipment to be worked on shall be direct by ladders, trestles or similar means but not by supporting structures. Staff shall not, in any circumstances, walk or climb across live overhead equipment by means of the supporting bridge to gain access to the overhead equipment to be worked on. S.R. 17.03/8. Working on service buildings and structures in the vicinity on live equipment- (a)

(b) Railway staff, when required to carry out work on service buildings and structures in proximity to overhead equipment shall exercise special care to ensure that tools wearing tapes, materials etc. are not placed in a position where they are likely to fall or make contact with electrical equipment. Wherever such

work has to be carried out under conditions which involve risk to the workmen or other persons, arrangements shall be made for authorised overhead equipment staff to be present who shall take such precautions as may be necessary for the safety of the persons concerned. (2) (3) (4) Protection of the

maintenance parties - (a) (b) (c) A working party shall not commence or carry out any work on or adjacent to overhead equipment involving danger to trains or tram without the consent of the divisional Electrical Engineer (Traction Distribution) or the Assistant Electrical Engineer (Traction Distribution). No person shall disturb the overhead equipment or carry out bonding or other work in such a way as to obstruct the line and necessitate the showing of danger signals, (i) Until such signals have been shown, and (ii) If within

the station limits, until he has also obtained the written permission of the Station Master and all the necessary signals have been placed in the 'On position. When such work is to be undertaken the traction official responsible for the work shall advise the Station Master (s) concerned and arrange for showing the necessary danger signals. When defects are noticed on overhead equipment which are likely to cause

damage to pantographs or emergency repairs are being effected to overhead equipment and it is not possible to convey the information to the Station Master (s) concerned to enable him/them to issue Caution Orders, the line or lines shall be protected in accordance with G.R. 15.09 and S.R. there to. Protection of

staff - Every member of the staff shall provide for his own protection independent of every other member except when one is assisting another in which case, the person in charge of the work is responsible for the proper protection of himself and his assistants. Working on structures supporting live overhead equipment

- (a) (b) (c) No person other than overhead equipment staff shall climb or work on any structure, which supports the overhead equipment without having received a permit-to-work card. No work shall be carried

out on any structure nor anything affixed to a structure without the written permission of the Divisional Electrical Engineer (Traction Distribution) Before work is commenced on a structure supporting overhead equipment, the limits of the danger zone (s) shall be defined by day by means of a red disc and by night by

means of a red lamp, which shall be placed in suitable position. When work is to be carried out in the danger zone of a structure after the overhead equipment is made dead, no staff other than the person

authorised to test and earth the overhead equipment shall attempt to climb a structure, until he personally has received definite instructions to climb the structure from the person-in-charge of the working party and no message or signal other than these instructions is permissible. 271 (5) \$1 s:rrq (34@frT) 25 2 GT&TT I

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WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS (d) (e) (f) (g) (h) (i) The instructions may be conveyed from the person in-charge of the party to workmen by another person. Such a person shall be individually deputed as a messenger by the person in-charge of the party and shall be not below the rank of a Linesman. All persons, deputed in clause (d) to convey instructions to workmen, shall be made known to the workmen previously and the workmen shall be advised that orders regarding the

climbing of structures shall on no account be accepted from any person other than those deputed. The persons, in charge or the person deputed under clause (d), shall, before instructing his men to climb a structure, explain which section overhead equipment is dead which section is alive and which parts of the structure are safe to work upon. The person in charge or the person deputed under clause (d) shall satisfy himself that his explanation is clearly understood by all the workmen whom he has instructed to climb the structure. It shall be the responsibility of every person conveying instructions to climb structures to see that the danger discs or lamps are correctly fixed before work is commenced. On structures spanning multiple tracks where work is being carried out adjacent to one or more sections of overhead equipment, the person in charge shall ensure, before any of the line or lines are made alive on completion of work that all men and materials adjacent to the line or lines have been withdrawn from the danger zone and if work is to continue on other parts of the structures, that the danger discs or lamps have been moved to indicate the changed danger zone. The special attention of person, in charge of painting of structures, is directed to this rule. (5)

Painting of structures - Only after permit-to-work has been received and overhead equipment has been correctly earthed, portions of track structures at a distance less than 2 meters in case of 25 K. V.A.C. system from any live equipment may be scraped, cleaned or painted. Other portions of structures of overhead equipment may be cleaned and painted while the overhead lines are alive unless special conditions at site render it unsafe or inadvisable, in which case the work shall only be done after making the equipment dead and earthed. S.R. 17.03/9. (i) Markers are placed wherever possible, along the cable alignment and plans are available indicating generally the position of buried cables. Excavation must not be undertaken in the vicinity of cable routes until the exact position of the cables has been ascertained and a representative of the department concerned is present. This is applicable to cables of Posts and Telegraphs Department also. (ii) If circumstances make it imperative that work be undertaken without sufficient notice, the Assistant Electrical Engineer (Traction Distribution) and the Assistant signal and Telecommunication Engineer concerned must be informed by a message for arranging staff to be present.

17.04. Permit-to-work on electrical equipment - If work is to be carried out adjacent to the electrical equipment or any other part thereof by other than the competent railway servant, such work shall be done only when and for such time as the person-in-charge of the work has obtained a written permit to work, duly signed and given by the railway servant authorised for the purpose by special instruction. He, in turn, shall issue the same only with the knowledge of the Traction Power Controller. S.R. 17.04/ I. Work in the danger zone of traction electrical or overhead equipment - 1. Before commencing work, and for the whole time that work is being performed on any part of the electrical equipment or adjacent thereto, that part of the electrical equipment shall be made dead and earthed save and except as provided in these rules. A permit to work shall be obtained from the Traction Power Controller or an authorised person in accordance with sub-rules (4), 272 (2) (3) (4) zrr zrr crqq N-ü:- zrr \$1 10 (ii) ? (iii) (iv) QT\$ AR. guAIR 12 1 s:rrq (3). (4) (5) GT&fi I crqq (?lfrtl) \$1 \$1 zrr (11) @ I GTFT Ati -q;-q-h GTR•g) 1 a-T17F-RT7 273

CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS 2. (3) (4) Procedure for obtaining tram or power block and permits to work on traction electrical or overhead equipment - (a) (b) (c) All departments in the electrified area who require tram blocks, power blocks or permits to work in the danger zone of traction equipment, or who require overhead line and/or bonding staff to be present at site for scheduled maintenance works, shall deliver at the office of the divisional Electrical Engineer (Traction Distribution) not later than 10 Hours on every Monday morning, statements in the prescribed form showing: (i) The nature of the work and the date on which it is to be performed. (ii) By whom the work is to be carried out, (iii) Location of the work and the section of the lines to be blocked. (iv) The trains between which the block is required and (v) Whether the track will be available for diesel traffic. The requirements of all departments will be co-ordinated in the office of the Divisional Electrical Engineer (Traction Distribution) and a consolidated statement forwarded to the Divisional Operating Manager concerned. by 12 hours on every Wednesday for inclusion in the weekly programme of traffic and power blocks. Works of an urgent character shall be attended to by obtaining emergency blocks and permits to work from the Traction Power Controller. A weekly programme of work involving tram blocks, power blocks and permits to work shall be prepared in the office of Divisional Operations Manager, and despatched to all concerned by Friday evening, for the week commencing on the following Monday. Note : The procedure detailed in paras (3), (4) & (5) must be followed for obtaining the power blocks and permits to work shall be obtained in each case as prescribed even though the work is included

in the weekly programme. Procedure for ananging Power blocks in electrified sections - (a) (b) (c) When a power block has been sanctioned, Traction Power Controller shall issue to the Section Controller a power block message (in the prescribed form) in duplicate either through messenger or by telephone with exchange of private numbers. The section Controller shall get confirmation from the Station Master (s) or Cabin Assistant Station Master (s) or Cabinmaster that the section will be blocked for electric traffic as detailed in sub-rule (1 1) (b) below. He shall then either return one copy of the written message duly acknowledged indicating thereon the time from which the block will be given or send a phone message to the Traction Power Controller giving the same information supported by a private number. The Traction

Power controller will thereafter arrange to isolate and make dead the portions of electrical equipment concerned at the time indicated by the Section Controller and issue a permit to work thereon, as detailed in sub paras (4) and (5) below, However in the case of an emergency the Traction power Controller shall switch Off the power fust and then advise the Section Controller of the power block imposed and reasons for doing so. When pemlit to work on the portion of the electrical equipment has been cancelled and the Traction Power controller had restored normal conditions, he shall cancel the power block message issued to the Section Controller, either by message sent in duplicate or by telephone with exchange of private

numbers. Method of obtaining permit to work in the danger zone of traction electrical or overhead equipment for work by authorised persons - (a) Excepting as detailed in Sub-rule (9) permits to work shall be obtained by authorised persons from the Traction Power Controller who shall carry out through remote control or order the switching operations nesssmy to isolate the portion of the equipment concemed. When the Traction Power Controller receives confirmation that the switching operations have been correctly carried-out, he shall inform by a telephone message with exchange of Private Numbers the authorised person stating clearly that the electrical equipment has been made dead. This information shall constitute a pen-nit-to-work. Permits-to-work will be issued in this manner only to authorised persons not lower in grade than a Linesman. A duplicate copy of every permit-to-work issued should be retained in the personal possession of the authorised person issuing it for the period prescribed by the Railway Administration. 273

7 (5) (6) (7) (8) (9) gel ZIT zrr trgq zrr 274 CHAPTER-XVII WORKING OF TRAINS ON

ELECTRIFIED SECTIONS OF RAILWAYS (b) (c) On receipt of a permit to work, and before work is commenced, the electrical equipment specified shall be earthed as per rules in force. Each working party shall be protected by independent earths. On completion of the work the person who received the permits-to-work shall ensure that all men all materials have been withdrawn from the electrical equipment and its vicinity. He shall then remove the earths, and inform the Traction Power Controller either by "Titten memo or by a phone message supported by a private Number that the work for which the permit to work was issued has been completed, men and materials have been withdrawn from the specified electrical equipment and the same may be made alive. Such procedure shall constitute cancellation of the permits to work. (5) (6) (7) (8) (9) For work by other than authorised persons- (a) (b) (c) If work is to be carried out on or adjacent to any part of the electrical equipment by other than authorised persons such work shall not commence until the person in-charge of the work is in possession of a permit to work card issued to him

by an authorised person. The pemit to work shall be taken from the Traction Power Controller by an authorised person who shall earth the electrical equipment specified and hand over a permit to work card to the person in charge of the work holding an acknowledgement on the other copy. A duplicate of every permit to work card shall be retained in the personal possession of the authorised person who issued it. On completion of the work and when all men and materials have been withdrawn from the electrical equipment and its vicinity, the person in charge of the working party shall cancel his permits to work card and return it to the authorised person who issued it. The authorised person shall in turn cancel the permit to work as

detai led in 4 (c) above. Local cancellation of permit to work when telephones are interrupted - If telephone communication with the Traction Power Controller is interrupted when a permit to work is to be cancelled, the authorised person to whom the pemit to work was issued shall arrange locally for restoring to normal (Live) conditions the portion of traction electrical or overhead equipment, specified in the permit to work and for cancelling the power block, if possible. Working of more than one party independently on the same portion of traction electrical or overhead equipment - Whenever work has to be carried out by more than one working party the permit to work shall be issued by the Traction Power Controller only to one authorised person who alone shall be responsible under this rule, for all work on the portion of electrical equipment, specified in the permit-to-work. Any additional party or parties may work on the

same portion of electrical equipment only with the permission of this authorised person who shall inform all parties of the total number of parties working on the same portion of electrical equipment. The authorised person shall cancel the permit-to-work only when he is satisfied that all working parties have withdrawn all men and materials and removed the earths from the electrical equipment. In the event of telephone communication being interrupted, the responsible person shall proceed as provided in (6) above. Entries in the log book - The number of each permit to work issued must be entered in the log book of the Traction Power Controller, together with the particulars and time when the equipment is made dead for the work and re-energised after completion of the work as per information received on the telephone from the authorised person concerned. Work inside electric loco shed - In case of work to be done inside electric loco sheds, the application for permit-to-work must be made to the Traction Foreman, Assistant Traction Foreman or Chargeman (Rolling Stock), who shall arrange for the issue of the permit to work after getting the switch of the inspection bay or the feeders opened. No intimation to the Traction Power Controller is necessary and the permit to work must be returned for cancellation by the person in charge of the work to the Traction Foreman, Assistant Traction Foreman or Chargeman (Rolling stock) before the switches are closed. 274 7 (11) (12) 17.05. s:R-2.TT7 u-lé *lei g•rq zrr crrqg -q-rq (2), (3), (10) 1 1 275

CHAPTER-XVII (10) Local Blocks- WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS (a) Local arrangements may be made with the Station Master, Cabin Assistant Station Master, Cabinmaster, Yard Master and others responsible for the movement of traffic, for power blocks in such sidings as do not affect the movement of trains on main running lines, loop lines and reception or departure lines in yards. The Traction Power Controller shall, however, be kept informed as to when the power block is taken and cancelled. The Station Master, Cabin Assistant Station Master, Cabin Master, Yard Master and other persons shall also advise the Section Controller of such power blocks. (b) Local blocks shall be arranged on the forms prescribed for the purpose. (11) Procedure for Preventing admission of electric rolling stock into or over sections of track with dead or earthed overhead lines - (a) (b) (c) In order to prevent electric rolling stock from being admitted on a cross over or track over which overhead equipment is made dead or for which a permit-to-work has been issued, the levers of signals and points in the signal cabins, governing such movements of electric rolling-stock, shall be protected by means of lever collars. If the points and signals are locally operated, the same should be locked and the keys kept with the Station Master. The Section Controller, on receipt of a power block message from the Traction Power Controller, shall repeat to all Station Master/Cabin Assistant Station Masters/Cabin Master concerned the said message indicating the time from which the block is to commence. Each Station Master/Cabin Assistant Station Master/Cabinmaster shall record and acknowledge the message with a Private Number and the time of receipt and then block to electric tramc the line or lines described from the time indicated and place lever collars on the appropriate levers. When lever frames or other signal cabins are controlled electrically from a Station Master's office or signal cabin, the Station Master/Cabin Assistant Station Master/ Cabinmaster shall place the slide collars on the slides of electric slide instruments, or on the keys of electric transmitters or interlocked key boxes. The Station Master/Cabin Assistant Station Master/Cabinmaster shall ensure that lever collars are placed on the relevant levers. Note : The information in regard to AC Traction working is given in Appendix to the Traction Working Rules of each station. The lever/slide collars shall not be removed until the Station Master/Cabin Assistant Station Master/Cabinmaster receives from the Section Controller and acknowledges a message supported by Private Number cancelling the power block. The Section Controller shall not issue such a message unless he has received a "Titten message or phone messages supported by a Private Number from the Traction Power Controller cancelling the power block. Note : In all cases mentioned under paras (2), (3), (10) and (11) of this Subsidiary Rule the Station Master/Cabin Asstt. Station Masters/Cabinmaster must record the information in the Power Block Register/Train Signal Register. (12) (a) All messages relating to operation of switches and issue of permit to work shall be 17.05. (1) confirmed by Private Numbers. (b) all messages together with the Private Numbers shall be issued from and received into books specially maintained for the purpose. Warning to staff and Public - All electrical equipment shall be regarded as being live at all times and consequently dangerous to human life, save and except in cases, where the electrical equipment has been specially made dead in accordance with special instructions. Caution notices shall be prominently fixed near all vulnerable places to warn staff and public to exercise due caution. 275 7 (2) (3) (4) 17.06. (2) (3) (4) q@QT11 -n TTZiQTrq zrr g•rq I 17.04/1. (2)-E1 I ER-2.rrq•a 3F4 (u) 34fizi<T (Qaw) 276

CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS (2) No person shall climb on the top of engines or tenders or on the roofs of carriages or wagons when those vehicles are located beneath overhead equipment except when the overhead equipment is dead and earned in accordance with special instructions. S.R.17.05/l. (1) (2) (3) (4) Work on pantographs and roofs of rolling stock shall nonnally be carried on special sidings where switches are provided for making such sidings dead and earthed. Traction Engine Examiner or other authorised person in charge shall be responsible for making dead the overhead equipment over the tracks of inspection lines in loco sheds and stabling siding before pennitting work to be done on the roof of electric rolling stock. The overhead equipment over these tracks shall not be energises except by the authorised person in charge, who shall be responsible for every precaution being taken to ensure that everything is in order and that all staffare clear before energising the equipment. (a) In stations and yards an authorised person shall anange to make dead and earth the overhead equipment and a pemit-to-work card shall be obtained by the staff concemed before work on the roof of rolling stock or engines is commenced. On completion of work, the card shall be returned to authorised person for cancellation. The authorised person shall then satisfy himself that every thing is in order and that all staff are clear before energising the overhead equipment. (b) Prescribed working rules for isolating and making dead section of overhead equipment for watering of carriages shall be fol lowed at watering stations. Supplement to the Station Working Rules for A.C. Traction Issued to each station, loco shed etc. speci5,' that switches, the operation of which, will make a section dead or alive. 17.06. Alterations to track - Before any alteration to alignment or level of electrified tracks is commenced, due notice shall be given to those responsible for the overhead equipment so that the overhead equipment may be adjusted to conform to the new conditions. S.R.17.06/l. (1) (2) (3) (4) Before any slewing, alteration to super-elevation or level of tracks is done, notice shall be given to the Divisional Electrical Engineer (Traction Distribution) to enable him to anange for adjustment overhead equipment to confohn to the new conditions, if necessary. Such work shall be included in the weekly programme detailed in S.R. 17.04/ I(2-d). (a) (b) (a) (b) (a) (b) All minor alterations to overhead equipment whether permanent or otherwise shall be reported to the Traction power Controller immediately by telephone and to the Divisional Electrical Engineer (Traction Distri bution) or the Assistant Electrical Engineer (Traction Distribution) in writing. Major alterations affecting the existing disposition of any section of overhead equipment shall not be made unless sanctioned by the Divisional Electrical Engineer (Traction Distribution). When working on overhead equipment, all staff shall ensure that the wires are not deflected so as to cause pantographs of electric rolling stock passing on other lines to be fouled by steady arm tubes or any other parts ofthe overhead equipment. When the overhead equipment is slewed either temporarily or permanently, the person in charge shall ensure that section insulators, jumpers, distance and other fittings will not foul the pantographs of electric rolling stock passing on other lines. Whenever any work on track, which is likely to affect rail bonds, is undertaken by permanent way staff, adequate notice shall be given to the Traction Foreman (Overhead Equipment), to enable him to anange for bonding staff for removal and replacement of bonds. Bonding staff when working with a Section Engineer (P. Way) shall work under the latter's instructions who shall then be responsible for the safety ofthe track and ofthe staff. 276 7 17.07. — GINT I •e.lB' HPf«fq I — Ruf-R« 17.08. (q) zrr 10 -a-rh q-lå 40 Eiel I 17.09. — GINT (ii)

- \$ ft-q-a 277 CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS 17.07. Tripping of circuit breakers of locomotives and electrical multiple units at neutral sections Unless othenwise allowed by special instructions, the Loco Pilot of the locomotive or electrical multiple unit shall coast through the neutral section, duly switching off power, Necessary indication boards to this effect shall be provided to guide the Loco Pilot to switch off and switch on Power. 17.08. Tower Wagon -The rules for the movement and working to tower wagons shall be laid down by special instructions. S.R.17.08/l. (a) Whenever it is necessary to work a Tower Wagon either for the maintenance of OHE or attending to the site of Break Down or for any other reason, the person incharge of the Tower Wagon shall advise the Station Master/Cabin Assistant Station Master/Cabinmaster about the movement of Tower Wagon. (b) (c) (d) (D (g) A Tower Wagon is to be treated like a train and shall be worked without a guard. The duties and responsibilities for protecting the train/track and other duties of the guard shall devolve on the OHE Supervisor accompanying the Tower Wagon. In case of an arranged OHE block, one or more Tower Wagons can be worked and follow one another. The Station Master, while authorising the following Tower Wagon/ Wagons into occupied affected OHE Section, shall issue an " Authority to

proceed Without Line Clear" and a Caution Order mentioning the site of work indicating the speed which under no circumstances, shall exceed 10 KMPH. The first Tower Wagon to enter the section shall also not exceed the prescribed speed. A Tower Wagon shall, however, not be permitted to enter the section following a train in Absolute Block Signalling Territory. After completion of the work, the official incharge of the Tower Wagon which entered last in the section shall certify at the station in advance about clearance of section and initial against the relevant entry in the Train Signal Register in token of the Section having been cleared of the last Tower Wagon. Tower Wagons have a key role in the maintenance of OHE and for attending to breakdowns. As such as soon as the programmed and sanctioned work is completed they shall be returned to their base depot with the utmost expedition in as much the same way as an Accident Relief Train. No tower wagon shall be driven except by an authorised person and no person shall be so authorised, unless he has knowledge of the section on which tower wagon is operating in addition at being conversant with the operation of tower wagon.

17.09. Additional rules for electrified section - Special instructions for working of trains on electrified sections shall be notified by the authorised officer.

S.R. 17.09/1. Accident an Unusual In Electrified Territory - (I) Duties and responsibilities of Traction Power controller. Section Controller and Station Master in case of No Tension Fault Tripping in Over head equipment- Fault Isolation : (i) (ii) In an electrified section in the event of Over-head equipment failure, Traction Power controller shall immediately identify and localise the faulty section and isolate the same. In case of double and multiple line sections, he shall also isolate healthy section on adjacent track on the same route length as faulty sections. The Traction Power Controller shall then advise the Section Controller in writing or on Phone under exchange of private number, of the section found faulty and healthy section temporarily isolated. On receipt of the advise from Traction Power Controller, the Section Controller shall take as under - (a) Section Controller shall, under exchange of private number, advise Station Masters of stations on either side of isolated sections to treat the faulty section as if the same is under emergency power block and take action accordingly.

277 7 (2) Rule 60 30 I (ii) a-fi Rule (iii) (iv) crzrere R•qté zrr / gel* 8i p•zi — (ii) 60 30 \$1 zrr Rule 278 CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS (b) (c) The Section Controller shall check whether any train has entered in the faulty section. If not he shall advise the concerned SM to issue caution order to the Loco Pilot of the first train on unaffected section to 'keep a sharp look out on the adjacent line-lines to see if there are any OHE abnormalities'. On reaching the next station, Loco Pilot should report whether or not the section over which they have passed is safe for train movement. The Section controller will advise the Traction Power Controller in writing to re-energize the healthy section that was temporarily isolated. If however a train has entered in faulty section, the Section Controller shall immediately inform SMS of all stations who are concerned with working of train in the faulty section and also in the section in which healthy Over-head equipment is temporarily isolated, under exchange of private number, that they shall not allow any train to enter the effected block sections unless both Loco Pilot and Guard of the first train in unaffected section have been issued caution order to this effect. (ii) (iii) (iv) "Proceed with speed not exceeding 60 KMPH during day when visibility ahead is clear and not exceeding 30 KMPH during night subject to observance of other speed restrictions "Keep a sharp look-out and be prepared to stop short of any obstruction. which may be due to any infringement from the adjacent line-lines and also keep a sharp look-out on the adjacent line-lines to see if there are any over-head equipment abnormalities. On reaching the next station. Loco Pilots to report whether or not the section over which they have passed is safe for train movement. " Only after taking this action the Section Controller shall advise the Traction Power Controller in writing that necessary precaution have been taken to ensure safety of the train. The Traction Power Controller shall then restore the feed to the healthy section. with was temporarily isolated. Action to remove speed restrictions shall be taken by Section Controller in consultation with Station Master on receipt of report from the Loco Pilot and the Guard that the section is free of obstruction. Section Controller shall also advise the Traction Power Controller of the report of Loco Pilot-Guard of the train indicating whether or not there are any infringements or abnormalities in Over-head equipment. Till such time, it is decided to remove speed restriction, subsequent train shall be allowed to enter into the section only with permission from the Section Controller and shall continue to be issued caution order prescribing clearly the speed restriction and other precautions. as pointed out in c (i) above. (2) Duties and responsibilities of Traction Power Controller in the event of any abnormality in train on Electric Traction necessitating 'Switching off of overhead equipment supply :- (i) As soon as Traction Power Controller

comes to know about unsafe condition of a train working on Electrified Traction, he shall immediately 'switch Off' the over-head equipment supply of both the lines of relevant Sub-sector. Traction Power Controller shall then advise in writing, the Section Controller of sections in which over-head equipment has been switched 'Off' (ii) On receipt of advice from Traction Power Controller, the Section Controller shall, under exchange or private number, advise Station Masters of all stations, who are concerned with working of trains in the affected section to treat the Dead section as if the same is under emergency power block and to ensure that no train is allowed to enter into the section. Healthy Section temporarily isolated.

(i) Station Masters will not allow any train to enter even healthy line of the affected section unless both Loco Pilot and Guard of the first train of unaffected section have been issued caution order to proceed with the restricted speed not exceeding 60 KMPH during day when view ahead is clear and 30 KMPH during night subject to observance of other speed restrictions and keep a sharp look-out and be prepared to stop short of any obstruction, which may be due to any infringement or over head equipment abnormalities from the adjacent line-lines. Also advise Loco Pilot to report immediately on reaching the next station whether or not the Section over which they have passed is safe for the train movement. 278 (3) (ii) 60 30 Rql-é (iii) (fire qtl) (ii) 60 si.Ei. 30 a-RTITTF2Z17T MTIT8 V&TT I (OHE) (QHE) (i) (OHE) (ii) (OHE) 60 (iii) g•zi crzrere 1 \$1 crzrere (iv) 279 CHAPTER-XVII WORKING OF TRAINS ON ELECTRIFIED SECTIONS OF RAILWAYS (ii) If Loco Pilot of unaffected section contacts him on phone, the over-head equipment of unaffected portion should be resumed and he will be asked to proceed with the restricted speed not exceeding 60 KMPH during day when view ahead is clear and 30 KMPH during night subject to observance of other speed restrictions and shall keep a sharp look out and be prepared to stop short of any obstruction, which may be due to any infringement from the adjacent line-lines. On reaching the next station Loco Pilot will report whether or not the section over which they have passed, is safe for train movement. (iii) After ascertaining that there is no infringement to adjacent track, the Caution Order as indicated shall be withdrawn immediately. Section having affected train. (i) (ii) After getting information from the Crew of the affected train about the nature of abnormality, decision regarding recharging of the over head equipment shall be taken by the Section Controller in consultation with Chief Controller/Dy. Chief Controller (Shift duty) and controller of concerned department. If the Loco Pilot of the affected train contacts Traction Power Controller/Control and no defect is detected in the train, on resumption of over head equipment he will be asked by control to clear the block section with the restricted speed not exceeding 60 KMPH during day when view ahead is clear and 30 KMPH during night subject to observance of other speed restrictions and shall keep a sharp look out for any abnormality in the train. On arrival at the station the staff of concerned department should Check the train. If no abnormality detected the train should resume at normal speed. (3) Duties and responsibilities of the Loco Pilot and the Guard in case of the over-head equipment tripping/no tension in over-head equipment:- (i) (ii) (iii) (iv) In case of Transient Tripping of Over-head equipment the Loco Pilot shall resume normal traction and keep a sharp look out including on the adjacent line/lines to see if there are any abnormalities/obstructions and will inform to the Guard through walkie-talkie or whistle code about tripping in over-head equipment. The Guard of the train will look out for any abnormality on his train. The Assistant Loco Pilot should look back and observe his train for any abnormality. If no tension in over-head equipment continuous, the Loco Pilot shall immediately switch 'ON' the Loco flasher and control the speed (not exceeding 60 KMPH at night) so as to be able to stop short of any obstruction and stop his train close to first emergency socket and will communicate with the Traction Power Controller/Control to know the reason for no tension in overhead equipment. the Crew should act according to advice of control. If it is not possible to communicate with the Traction Power Controller/Control immediately, the Loco Pilot shall depute the Assistant Loco Pilot to get down and check the train with the Guard in order to look for any abnormality for any defect in his train including locomotive. After the train has been checked, the Loco Pilot-Guard shall inform Section controller of the abnormality, and assistance required, if any, or otherwise, through emergency phone of other line walkie talkie, Level Crossings gate or through train of other direction or by any other means of communication and act in accordance with advice of control. In case no abnormality is noticed in his train, Loco Pilot should switch "Off" the loco flasher. If in the meantime, Power supply to over-head equipment gets restored, the Loco Pilot shall resume normal traction no sooner he come to know of such resumption of supply. 279 .MU.IIU—18 18.01. - aid) 1929 \$1 1078-81 \$1 280 CHAPTER-XVIII MISCELLANEOUS CHAPTER-XVIII MISCELLANEOUS Repeal and saving - The General Rules

issued under the notification of the Government of India in the late Railway Department (Railway Board) No. 1078-T, dated the 9th March 1929, are hereby repealed except as respect things done or action taken or omitted to be done or taken before such repeal 280 1.1 2. 3. 4. 5. 7. 8. 10. 11. 12. 13. 14. 15. 16. 17. 18. 20. 21. 22. 23. 24. 25. 28. 29. 31. 32. 33. 34. / Eitl (ii) cre•rū (RFÜ) 281 Appendix - 'A' APPENDIX - 'A' WORKING INSTRUCTIONS FOR MANNED LEVEL CROSSING GATES ON INDIAN RAILWAYS

These instructions should be read together with provisions in General & Subsidiary Rules, Following

General Instructions are meant for all types of Manned Level Crossing Gates. 1. 1.1. GENERAL DESCRIPTION OF THE LEVEL CROSSING GATE : Following details shall be maintained at all Manned Level Crossing Gates : 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 32. 33

34. Speed Breaker Indication Board 31. TW Number of Level Crossing Gate . Engineering of Traffic Gate Under control of Station Master/Section Engineer (P. Way) Location at km . At Station In between Stations.....& Single line/Double line/Multiple line Normal Position Interlocked/Non-Interlocked..... Means of Interlocking Provision of Gate Signal at kms. (ii) DN Line.. Signalling arrangements — Means of Communication - Telephone/Bell etc. Width of Level Crossing Gate . Type of Road (NH/SH/Others) . Name of Road..... Metalled/Non-metalled Approach Road Angle of Road Crossing (in case of the skew gates) . Road gradient (if any) (ii) South/West Side Road alignment (Straight/Curve) Provision of Height Gauges . Type of Barriers Length of check rails Road surface in between L-xing gates Length of Rumble strips/Speed breakers Road signs on . Census next due on..... Demarcation for placement of Detonators No. of Gateman working ,, 281 35. (\$7) 36. u-l@e (öq) 37. -q-a 12 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 (R*fi) (ufi HI-a-I // €4) qo•g 10 -aB--H 2 - 10, 11, 12. 13, 15, 17, 282 35. 36

37. Appendix - 'A' Nearest Railway Medical Assistance . Nearest Privately Medical Assistance (if any) . List of equipment available Yes/no..... 1.2 EQUIPMENT : Sr. No. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21

22. Items Hand Signal Lamp Tri-C010ur Hand Signal Flag Green Hand Signal Flag Red Banner Flag Red Posts for exhibiting Red Banner Flag Spare Chains with Padlocks Detonators Gate lamps Tommy Bar Morter Pan Spade / Fowrah Hammer Pick Axe Tin Case for Flags Can for Oil Water Pot/Bucket Canister for Muster Roll Set of spare spectacles of gateman wearing glasses Board demarcating protection of Level Crossing Gate Diagram in case of obstruction on gate. Basket Whistle Wall Clock Quantity/Numbers 3 (5 on Quadruple/Line or twin single line) I Mounted on sticks 3 (6 on Quadruple/Line or twin single line) and 7 in case Hexaple Section mounted on sticks) 3 (S on Quadruple/Line or twin single line) 2 (4 on Quadruple/Line or Twin Single Line and 5 on Hexaple section). 2 with stop mark. IO in plastic case 2 I (In case of asphalted road this may not be provided) I (In case of asphalted road this may not be provided) Note : Item No. 10, 11, 12, 13, 15, 17, 19 & 20 shall be dispensed with at level crossing gates operated by Cabinmaster/Cabinman Leverman. 282 1.3 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. (I) (2) (3) GTFIT a--1TQZ1A5 q-lâ I (ii) a-TFßT-a-TFßT (iii) (iv) NöT11 (1) (ii) (iii) (v) T-g•r\$ I 3-11-q1tT SIFT a-FZI-2.1T R-2.fi 283 Appendix - 'A' RULES FOR WORKING LEVEL CROSSING 1.3 1.4 RECORDS TO BE KEPT AT GATE LODGE: In addition to the above equipment, following records shall also be kept at the Gate Lodge - (1) (2) (3) (4) (5) (6) (7) (8) (9) Gate Working Instructions in Hindi/English. Gateman Rule book in Hindi/English. List for tools and books. Duty Roster Certificate for working as Gateman Bio-data particulars of Gate men, including date of passing Vision test, initial VRefresher course. safety camp etc. Accident Register Record of last census of road tramc at Level Crossing Gate. Public Complaint Book. (10) Inspection Book (11) S & T Register in case of Interlocked Engineering Gate. MODE OF OPERATION - Detailed mode of operation for opening and closing the gate shall be provided in the respective Station working Rules and Gate Working Instruction incorporating Local operational requirements. When level crossing gate is required to be opened for passage of road tramc, the Gateman must first open the gate farthest away from approaching road traffic and then open the gate on the side nearest the approaching road tramc. DUTIES OF GATEMAN - 1) ALERTNESS - The Gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys

from the Station Master/Cabinmaster/Cabinman after two or three attempts. he shall first protect the gate and then inform on phone. The Gateman shall protect the line/Gate as under - (a) (b) On double line section - (iii) (iv) (vii) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red flashing light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first. Then he will similarly protect the other line. Gateman shall then proceed to protect the gate along with detonators and red flag by day and red flashing hand signal lamp by night. Gateman shall proceed exhibiting red flag by day and red flashing hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and 400 meters on MG/NG and place on detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG and 800 meters on MG/NG from the level, Crossing gate and place 3 detonators on the track 10 meters apart. having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back. Thereafter. he shall proceed the other line, showing red hand signal. similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back. Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train. On those Meter Gauge Sections where train run at more than 75 kmph. detonators shall be placed at distance to be specified under Special Instruction by the Administration. In case the Gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the Line at a distance as far away as he can go. Thereafter. he shall warn the Loco Pilot and stop the approaching train by waving his red flag by day and red flashing hand signal lamp by night repeatedly. Note : The level crossing gates which are located between outermost Stop signal of the station are exempted for placing the detonators as described in sub-para (iv) above. On Single line section - (iii) (iv) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first. Then he will similarly protect the other side. Gateman shall then proceed to protect the gate along with detonators. red flag by day and red flashing hand signal lamp by night. Gateman shall proceed exhibiting red flag by day and red flashing hand signal lamp by night towards the direction from which a train is expected to arrive first. to a point 600 meters on BG and 400 meters on MG/NG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meter on BG and 800 meters on MG/NG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protect the line he shall return to the level crossing gate picking up the intermediate detonator on the way back. 285 1.6 1.7 (v) (vii) (viii) (ix) (iii) 3qū—III 3TdūET—IV 3qū—VI (iv) 711tzrt 75 GTT crrzrere (t5TG) zrr tarp-I) 916. 918, 919 R-2.fi R-2.fi R-2.fi g•zi g•zi 286 Appendix - 'A (v) (vi) (vii) RULES FOR WORKING LEVEL CROSSING Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in sub-para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back. Having returned to the level crossing gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train. On those Meter Gauge section where trains run at more than 75 kmph. detonators shall be placed at distance to be specified under Special Instructions by the Administration. (c) (viii) In case the Gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators. he shall place detonators on the line at a distance as far away as he can go. (ix) Thereafter. he shall warn the Loco Pilot and stop the approaching train by waving his red flag by day and red flashing hand signal lamp by night repeatedly. Note - The level crossing gates, which are located between outermost stop signals of the station, are exempted for placing the detonators as described in para (iv) above. Other action to be taken by Gateman - (i) (iii) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in subparas (a) and (b) above. If the gate is broken by a road vehicle which is fouling the track. or if lifting barriers/leaf gates or any other part of the gate foul the track. or if there is any other obstruction at the gate. the Gateman shall take immediate action. He shall note down the particulars of the road vehicle, vehicle number, name of the driver & owner and relay these details to the nearest Station Master /Cabinmaster/Cabin man or JE/SE/SSE (P. Way) regarding the particulars and obstructions at the level crossing gate, through messenger or other means available. 1.6 1.7 For the visibility requirements at level crossings, provision of speed breakers on the approach roads of level crossings and census of traffic at level crossings are described in paras 916, 918, 9

19 of R_PWM. SPECIAL INSTRUCTIONS FOR DIFFERENT TYPES OF LEVEL CROSSING GATES

- Instructions for different types of manned Level Crossing Gates are given in Annexure as follows :-
 Annexure- I Annexure-II Annexure-III Annexure-IV Annexure-V Annexure-VI Engineering Level Crossing Gate, interlocked with gate signals, provided with telephone. with normal position 'Open to road traffic' Traffic Level Crossing Gate, interlocked with stop signals of the station, provided with telephone, with normal position 'Open to road traffic.' Tram Level Crossing Gate non-interlocked, provided with telephone. with normal position 'Closed to road tram'. Engineering Level Crossing Gate, non-interlocked, provided with telephone with normal position 'Open to road traffic'. Engineering Level Crossing Gate, non-interlocked, provided with telephone with normal position 'Closed to road tram'. Engineering Level Crossing Gate, non-interlocked, not provided with telephone, with normal position 'Closed to road traffic'

286 2. 3. 4. (ii) (iii) (iv) (ii) (iii) (iv) (v) (vi) (vii) (viii) 10 - 2-3 q-g-q-±f e-g I 3.73 W. €1. sri HRZN/' 287 Appendix - 'A RULES FOR WORKING LEVEL CROSSING ANNEXURE - I 2

4. ENGINEERING LEVEL CROSSING GATE INTERLOCKED WITH GATE SIGNALS. PROVIDED WITH TELEPHONE WITH NORMAL POSITION "OPEN TO ROAD TRAFFIC" (General Instructions are common for all types of Manned Level Crossing Gates) Mode of Operation - Detailed mode of operation for opening and closing the level crossing gate shall be provided in the respective Station Working Rules and Gate Working Instructions incorporating local operational requirements. When level Crossing gate is required to be opened for passage of road traffic. the Gateman must first open the gate farthest away from approaching road tram and then open the gate on the side nearest the approaching road traffic. Intimation to Gatemen - (i) The Station Master/Cabinmaster/Cabinman shall intimate the Gateman through telephone connected at his end about movement of train (s) proceeding towards the level crossing gate. If the telephone is connected to the station at the receiving end, this advice shall be given by the Station Master/Cabinmaster/Cabin man to the Gateman, as soon as he received Train Entering Section advice from the dispatching station. If the actual running time of the train from either end of the section is less than 10 minutes, Station Master/Cabinmaster/Cabin man will convey this advice to the Gateman before obtaining/ granting line clear. It should be the duty of the Gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic. Failure of Telephonic Communication - When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted : (ii) (iii) (iv) (vi) (vii) if the telephone fails at the gate connected with the station at the dispatching end, Station Master shall issue a caution order to the Loco Pilot of the departing train. Station Master shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate. In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73. In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end. under exchange of private number. that the telephone at the gate has failed. The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end. Station Master will also advise the Gateman through Gang man/Patrolman/Loco Pilot of the first train that the telephone has become defective. Station Master should also advise S&T Staff responsible for maintenance of the telephone to rectify the same at the earliest. (viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection/fit memo for the same. Failure of Lifting Barriers or Leaf Gates - (i) When the gate can not be closed due to failure of lifting barriers or leaf gates. the Gateman shall immediately inform the Station Master on duty under exchange of private number, and ensure that lifting barriers or leaf gate do not foul the track. 287 5. 6. (ii) (iii) (iv) (vi) (vii) (viii) sri (i) (iii) (iv) (v) (vi) (vii) (viii) sri (ix) (ii) ag (iii) (iv) I (v) 288 Appendix - 'A RULES FOR WORKING LEVEL CROSSING (ii) (iii) (iv) (v) (vi) (vii) He shall immediately fix red banner flag by day and red flashing light by night on the post at that end first from which the train is approaching and then at the other end. Gateman shall secure the gate against road traffic by means of safety chains and padlocks. After securing the gate against road traffic, Gateman shall show green hand signal flag by day and green light by night to the Loco Pilot of the approaching train. Station Master on duty shall issue caution order to the Loco Pilot of a departing train. He also advise the Station Master at the dispatching end, under exchange of private number; to similarly issue a caution order to the Loco Pilot before dispatching a train the block section from his end. Station Master shall advise maintenance staff responsible for maintaining the lifting barrier/leaf gates to rectify the

same at the earliest. (viii) Normal working will be resumed only after maintenance staff repair the lifting barrier/leaf gates and issue reconnection/fit memo for the same. Failure of Gate key with the gate in closed condition - 5. 6. (iii) (iv) (v) (vi) (vii) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then Gateman must immediately inform the Station Master/Cabinmaster/Cabin man on duty on telephone, under exchange of private number. If Emergency Key is available at the gate lodge/cabin, Gateman /Cabinmaster/Cabin man /lever man will take it out from the sealed box by breaking the seal and open the gate for road traffic. The record of the date and time of breaking the sealed cover of Emergency Key Box shall be recorded and signed with reasons. Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates, should be adopted. Station Master on duty shall issue caution order to the Loco Pilot of a departing train. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end. Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest. (viii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection/fit memo for the same. (ix) After rectification, the Emergency Key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer. Failure of the Gate Key with the gate in open condition - (ii) (iii) (iv) If the gate key cannot be extracted from winch, gate signal lever or key transmitter then Gateman must immediately inform the Station Master/Cabinmaster/Cabin man on duty on telephone, under exchange of private number. Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates, should be adopted. The Gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals. Station Master on duty shall issue a caution order to the Loco Pilot of a departing train. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end. 288 (vi) (vii) 'S1 7. 8. (i) (iii) (iv) (v) (vi) (vii) di *QTI— a-T17F1-RT7 I (viii) W. ag (ix) (ii) (iii) (iv) (v) (vii) (viii) (t5TG) 2-3 / 811b 289 Appendix - 'A' RULES FOR WORKING LEVEL CROSSING (vi) Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest. (vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection/fit memo for the same. Defective Gate Signals - 7. 8. (i) (iii) (iv) (vi) (vii) The Gateman shall treat the gate signal as defective and must not take 'Off' them under following circumstances - If gate signals can be taken 'OFF' without closing the gate, or (a) (b) The key can be extracted from the operating winch when the gate is in open condition. or (c) The key can be extracted from the leaf gates when the gate is in open condition. If the Gate or the Gate Signal or Warner/Distant Signal becomes defective in 'OFF' Position, the Gateman will make all efforts to put it at 'ON' position even by cutting signal wires, if necessary. The Gateman will immediately advise the Station Master/Cabin master/Cabin man on duty under exchange of private number, regarding defective gate signals. Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch as prescribed for non-interlocked gates should be adopted. He shall show green hand signal flag by day and green light by night to the passing train after closing the gate. Station Master on duty will issue a caution order to the Loco Pilot of a departing train. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end. (viii) Station Master shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest. (ix) Normal working will be resumed only after S&T staff rectify the defective gate signal and issue reconnection/fit memo for the same. Obstruction at the Gate - (ii) (iii) (iv) (vi) (vii) (viii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barrier/leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the Gateman shall immediately put back gate signals to 'On' Position. He shall fix red banner flag by day and red flashing lamp by night on posts provided at both ends of the gate for this purpose. Immediately after this, the Gateman shall advise the Station Master/Cabinmaster/Cabin man on duty regarding the defects/obstructions at the gate, under exchange of private number. If there is no response from the Station Master/Cabinmaster/Cabin man after two or three attempts, he shall first protect the gate and then inform on phone. Gateman shall then rush with detonators and red flag by day and red flashing hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of Gateman under item

No. 1.5 (S). Thereafter he shall protect the gate from the other direction also. He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master/Cabin master/Cabin man who shall not start the train unless he has been assured by the Gateman that the road vehicle or the lifting barriers/leaf gates are not fouling the track. The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction. 289 (ix) (x) (xi) (xii) a-T17F-RT7 \$1 R-2.fi g•zi 9. 2. 3. (xiii) Afüfl +i. 8 - 11 tram - g•zi (i) (ii) (iii) (iv) (v) (vi) i-e-h-q - 2-3 (i) ft--q-WT 290 Appendix - 'A RULES FOR WORKING LEVEL CROSSING (ix) (x) (xi) (xii) After the track has been cleared of all obstructions the Gateman shall inform the Station Master accordingly, under exchange of private number. Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously. and pass the gate signal at 'ON' position on green hand signal of the Gateman, if the gate is broken. but is clear of any obstruction. Gateman shall secure the gate against road traffic by means of safety chains and padlock and there after exhibit green hand signal. if the gate is not obstructed. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gates to repair the same at the earliest. 9. 2. 3. (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same. Obstruction on the Track near Level Crossing Gate - If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the Gateman. the Gateman and Station Master will adopt the procedure given under item No. 8 above, if the obstruction fouls the Level Crossing Gate, Gateman must keep the gates closed against road traffic till the track is cleared of the obstruction. ANNEXURE-11 TRAFFIC LEVEL CROSSING GATE INTERLOCKED WITH STOP SIGNALS OF THE STATION, PROVIDED WITH TELEPHONE, WITH NORMAL POSITION OPEN TO ROAD TRAFFIC (General Instructions are common for all types of Manned Level Crossing Gates) Mode of Operation - Detailed mode of operation for opening and closing the level crossing gate shall be provided in the respective Station Working Rules and Gate Working Instructions incorporating local operational requirements. When level crossing gate is required to be opened for passages of road traffic, the Gateman must first open the gate farthest away from approaching road traffic and then open the gate on the side nearest the approaching road traffic. Intimation to Gateman - (i) (ii) (iii) (iv) (v) (vi) The Station Master/Cabinmaster/Cabinman shall intimate the Gateman through telephone connected at his end about movement of train(s) proceeding towards the level crossing gate. The Gateman shall close the gate and transfer the key to the Station Master/ Cabinmaster/ Cabinman. The reception/departure signals will then be taken Off. In order to ensure that road traffic is not held up for a long time. the Station Master/ Cabinmaster/ Cabinman must ensure that the train is ready for departure in all respects before he advises the Gateman of closing the gate. If the gate is operated from the cabin itself. Station Master/Cabinmaster/Cabin man shall ensure that the gate is closed against road traffic, before taking 'OFF' reception/departure signals. When a train has to be piloted to and from the station yard or any shunting movement is to be done, the staff deputed to pilot the train or to perform shunting across the gate shall be personally responsible to ensure that the gate is closed against road traffic before allowing any movement across the gate. Failure of Telephonic Communication - When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted - Station Master on duty shall send written advice to the Gateman through the porter/Pointsman with full details of number, description and direction of the train. 290 *TIT -q-A..T4 I (iii) I ati 3.7 3 (2) I (vii) (viii) : 0111 4. s. (i) (ii) (iii) (iv) (v) (vi) (vii) (viii) 04) qtr, trrzrqz âfiz:R/fi6iz iz crR:a, 291 Appendix - 'A RULES FOR WORKING LEVEL CROSSING (ii) (iii) (iv) (v) (vi) (vii) Gateman on receipt of such advice shall close the gate and transmit the key to the Station Master/Cabinmaster/Cabin man, which will enable them to take 'Off reception/departure signals. When sufficient time is not available because of greater frequency of train service. Station Master will issue written authority to the train Loco Pilot to pass the signal at 'ON' position. In addition Station Master shall also issue a caution order advising the Loco Pilot to whistle continuously and approach the gate cautiously. The train Loco Pilot shall be instructed to pass the gate cautiously on being hand signalled by the Gateman If hand signal is not seen, Loco Pilot should be prepared to stop short of the gate and ensure that gate is closed following GR 3.73 (2) (b). In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed. The Station Master at the dispatching

end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end. (viii) He should also advise S & T staff responsible for maintenance of the telephone to rectify the defect at the earliest. (ix) Normal working will be resumed only after S & T staff rectify the telephone and issue reconnection/fit memo for the same.

Failure of Lifting Barriers or Leaf Gates - 4. 5. (i) (ii) (iii) (iv) (v) (vi) (vii) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the Gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure the lifting barriers or leafgates do not foul the track. He shall immediately fix red banner flag by day and red flashing light by night on the post at that end first from which the trains approaching and then at the other end. Gateman shall secure the gate against road traffic by means of safety chains and padlocks. After securing the gate against road traffic, Gateman shall show green hand signal flag by day and green light by night to the Loco Pilot of the approaching train. Station Master on duty shall issue a caution order to the Loco Pilot of a departing train. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end. Station Master will advise maintenance staff responsible for maintenance of lifting barriers/leaf gate to repair the defect at the earliest. (viii) Normal working will resume only after maintenance staff repair the barrier/leaf gates and issue reconnection/fit memo for the same.

Note - In case of failure of lifting barriers/leaf gates worked from the cabin, Station Master will send (a) station porter to secure the gate against road traffic by safety chains and padlocks. (b) Authority to pass signals at 'ON' position as per rules shall also be issued to the Loco Pilots of both departing and arriving trains. Failure of the Gate Key with the gate in closed condition - If the gate key cannot be extracted from the winch/ the gate levers or the key transmitter, then Gateman must immediately inform the Station Master/Cabinmaster/Cabin man on duty on telephone, under exchange of private number. If Emergency Key is available at the gate lodge/cabin, Gateman /Cabinmaster / Cabin man/Lever man will take it out from the sealed box by breaking the seal and open the gate for road traffic.

291 6. (iii) (iv) (v) (vi) (vii) (viii) (ix) (i) (ii) (iii) (iv) (v) (vi) (vii) (i) (ii) (iii) (iv) (v) (vi) -q-I@TIT I trrzrqz I q•rqz Zi. I q•rãTIT, €1. '\$14-Ä+0u' (t5T3q) iz zrr 2-3 *ill 292 Appendix - 'A' RULES FOR WORKING LEVEL CROSSING (iii) (iv) (v) (vi) (vii) The record of the date and time of breaking the sealed cover of Emergency Key Box shall be recorded and signed with reasons. Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates, should be adopted. Station Master on duty shall issue a caution order to the Loco Pilot of a departing train. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching train in the block section from his end. Station Master will advise S&T staff responsible for maintenance of winch/gate leaves/key transmitter to rectify the defect at the earliest. (viii) Normal working will resume only after S&T staff repair the winch/gate leaves/mey transmitter and issue reconnection/fit memo for the same. (ix) After rectification, the Emergency Key shall be replaced in the Emergency Key Box and re-sealed by the S & T maintainer. Failure of the Gate Key, with the gate in open condition - 6. 7. (ii) (iii) (iv) (v) (vi) (vii) If the gate key cannot be extracted from the winch, gate lever or key transmitter then Gateman must immediately inform the Station Master on duty on telephone, under exchange of private number. Thereafter, the gate must be treated as non-interlocked and procedure for reception/despatch of trains as prescribed for non-interlocked gates should be adopted. Gateman shall secure the gate against road traffic by means of chains and padlocks and pass the trains on hand signals. Station Master on duty shall issue caution order to the Loco Pilot of a departing train. He will also advise the Station Master at the dispatching end under exchange of private number to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end. Station Master will advise S&T staff responsible for maintenance of winch/gate leaves/key transmitted to the defect at the earliest. Normal working will resume only after S & T staff repair the winch/gate leaves/key transmitter and issue reconnection/fit memo for the same.

OBSTRUCTION AT THE GATE - (ii) (iii) (v) (vi) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate fouled the track, or if there is any other obstruction at the gate, the Gateman shall immediately fix red banner flag by day and red flashing lamp by night on posts provided at both ends of the gate. for this purpose. Immediately after this, the Gateman shall advise the Station Master/Cabin Master/Cabin man on duty, regarding the defects/obstruction at the gate, under exchange of private number. Station Master/Cabinmaster/Cabin man on duty shall be advised to put the reception/depanure signals back to 'ON'

position, if taken 'OFF' for a train. If there is no response from the Station Master/Cabin Master/Cabin man after two or three attempts, he shall first protect the gate and then inform on phone. Gateman shall then rush with detonators and red flag by day and red flashing hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of Gateman under item no. 1.5 (5) thereafter he shall protect the gate from the other direction also. 292 8. 2. (vii) (vii) (ix) (x) (xi) (xii) (xiii) (i) (ii) (iii) (iv) zrrrrzrrrr iz * I Al*z @-qfr ira â#zR/trt6 -fr-d I frlû, qfrf7 07, -\$-f*-q-d I 293 Appendix - 'A' RULES FOR WORKING LEVEL CROSSING (vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the Gateman that the road vehicle or the lifting barriers/leaf gates are not fouling the track. (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of (ix) (x) (xi) (xii) private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction. After the track has been cleared of all obstructions the Gateman shall inform the Station Master accordingly, under exchange of private number. Station Master shall then issue a Caution order to Loco Pilots of all trains to proceed cautiously. and pass the reception/departure signal at 'ON' position on green hand signal of the Gateman, if the gate is broken. but is clear of any obstruction. Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gates to repair the same at the earliest. 8. (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE - If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by Road Vehicle or derailment. which is visible to the Gateman. Gateman and Station Master will adopt the procedure given under item no. 7 above. If the obstruction fouled the level crossing gates. Gateman must keep the gate closed against Road traffic till the track is cleared of the obstruction. ANNEXURE - 111 TRAFFIC LEVEL CROSSING GATE NON-INTERLOCKED PROVIDED WITH TELEPHONE. WITH 2. NORMAL POSITION "CLOSED TO ROAD TRAFFIC" (General Instructions are common for all types of Manned Level Crossing Gates) MODE OF OPERATION - Detailed mode of operation for opening and closing the level crossing gate shall be provided in the respective Station Working Rules and Gate Working Instructions incorporating local operational requirements. When level crossing gate is required to be opened for passage of road traffic. the Gateman must first open the gate farthest away from approaching road traffic and then open the gate on the side nearest the approaching road traffic. EXCHANGE OF PRIVATE NUMBERS - (i) (ii) (iii) (iv) Gateman must seek permission from Station Master/Cabinmaster/Cabin man for opening the Station Master/Cabinmaster/Cabin man shall ensure that there is no train movement within the station limit. Thereafter Station master Cabinmaster/Cabin man shall exchange private number to the Gateman allowing him to open the gate for the purpose of clearing to road traffic. Suitable entries shall be made by the Station Master/Cabinmaster/Cabin man in the Train Signal Register, Private number Book and Log Book in red ink. After passage of road traffic. Gateman shall close the gate and confirm this to Station Master/Cabinmaster/Cabin man under exchange of private number. Gate once closed can be opened by the Gateman. after passage of train/trains or change in planning of train movement etc. with the permission of Station Master as the need of opening is known to Gateman according to road traffic to be cleared. Obviously it can be done only after exchanging private number with the control Station Master who will ensure that there is no train movement towards the level crossing. 293 (vi) q*rzrrz 2-3 3. 4. (i) (ii) (iii) (iv) (v) (vi) (vii) (viii) (ix) (x) (i) (ii) (iii) (iv) (v) (vi) (vii) (viii) (45) (u) tr trrzrqz iz q*rzrrz 3.7 3 (2) I 0111 Al*z zrrrrzrrrr I 8tra*r, 294 Appendix - 'A' RULES FOR WORKING LEVEL CROSSING (vi) When a train has to be piloted to and from the station yard or any shunting movement is to be done, the staff deputed to pilot the train or to perform shunting across the gate shall be personally responsible to ensure that the gate is closed against the road traffic before allowing any movement across the gate. 3

4. FAILURE OF TELEPHONIC COMMUNICATION - When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted - (ii) (iii) (iv) (vi) (vii) Station Master on duty shall send written advice to the Gateman through the Portor/Pointsman with full details of number, description and direction of the train. The Gateman on receipt of such advice shall acknowledge the same after closing the gate. duly supported by a

private number. On receipt of confirmation about closer of the gate. reception/departure signals will then be taken 'OFF' When sufficient time is not available because of greater frequency of train service, Station Master will issue written authority to the train Loco Pilot to pass the signal at 'ON' position. In addition, Station Master shall also issue a caution order advising the Loco Pilot to whistle continuously and approach the gate cautiously. The train Loco Pilot should be instructed to pass the gate cautiously, on being hand signalled by the Gateman. If hand signal is not seen, Loco Pilot should be prepared to stop short of the gate and ensure that gate is closed following GR 3.73 (2) (b). In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed. (viii) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot. before dispatching a train in the block section from his end. (ix) He should also advise S & T staff responsible for maintenance of the telephone to rectify the defect at the earliest. (x) Normal working will be resumed only after S & T staff rectify the telephone and issue reconnection/fit memo for the same. **FAILURE OF LIFTING BARRIERS OR LEAF GATES** - (i) (ii) (iii) (iv) (v) (vi) (vii) When the gate cannot be closed due to failure of lifting barriers or leaf gate the Gateman will immediately inform the Station Master on duty, under exchange or private number. and ensure that lifting barriers or leaf gates do not foul the track. He shall immediately fix red banner flag by day and red flashing light by night on the post at that end first from which the train is approaching and then at the other end. Gateman shall secure the gate against road traffic by means of safety chains and padlocks. After securing the gate against road traffic, Gateman shall show green hand signal flag by day and green light by night to the Loco Pilot of an approaching train. Station Master on duty shall issue a caution order to the Loco Pilot of a departing train. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end. Station Master should also advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to rectify the defect at the earliest. (viii) Normal working will be resumed only after maintenance staff rectify the lifting barrier/leaf gates and issue reconnection/fit memo for the same. Note : (a) In case of failure of lifting barriers/leaf gates worked from the cabin, Station Master will send station porter to secure the gate against road traffic by means of safety chains and padlocks. (b) Authority to pass signals at 'ON' position as per rules shall also be issued to the Loco Pilots of both departing and arriving trains. 294 5. 6. (i) (ii) (iii) (iv) (v) (vi) (vii) A1*Z I 2-3 34--dä?T ki. 1.5 (5) (viii) (ix) (x) i, trrzrqz (xi) (xii) -fr-d I (xiii) 07, zrrrrzrrrr zrrrrzrrrr 295 Appendix - 'A' RULES FOR WORKING LEVEL CROSSING 5

6. OBSTRUCTION AT THE LEVEL CROSSING GATE- (ii) (iii) (iv) (v) (vi) (vii) **If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate fouled the track, or if there is any other obstruction at the gate, the Gateman shall immediately fix red banner flag by day and red flashing lamp by night on posts provided at both ends of the gate, for this purpose.** Immediately after this, the Gateman shall advise the Station Master/Cabinmaster/Cabin man on duty, regarding the defects/obstruction at the gate, under exchange of private number. Station Master/Cabinmaster/Cabin man on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train. If there is no response from the Station Master/Cabinmaster/Cabin man after two or three attempts, he shall first protect the gate and then inform on phone. Gateman shall then rush with detonators and red flag by day and red flashing hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of Gateman under item no. 1.5 (5). Thereafter he shall protect the gate from the other direction also. He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the Gateman that the road vehicle or the lifting barriers/leaf gates are not fouling the track. (viii) The Station Master shall also inform the Station Master at the dispatching end. under exchange of (ix) (x) (xi) private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction. After the track has been cleared of all obstructions the Gateman shall inform the Station Master accordingly. under exchange of private number. Station Master shall then issue a Caution order to Loco Pilots of all trains to proceed cautiously, and pass the reception/departure signal at 'ON' position on green hand signal of the Gateman, if the Gate is broken, but is clear of any obstruction. Gateman shall secure the gate against road traffic by means of safety chains and padlocks and thereafter exhibit green

hand signal, if the gate is not obstructed. (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gates to repair the same at the earliest. (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same. **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE** - If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the Gateman, the Gateman and Station Master will adopt the procedure given under item no

5. If the obstruction fouls the level crossing gate, Gateman must keep the Gates closed against road traffic till the track is cleared of the obstruction. ANNEXURE-IV ENGINEERING LEVEL CROSSING GATE NON-INTERLOCKED PROVIDED WITH TELEPHONE, WITH NORMAL POSITION "OPEN TO ROAD TRAFFIC" (General Instructions are common for all types of Manned Level Crossing Gates) **MODE OF OPERATION**- Detailed mode of operation for opening and closing the level crossing gate shall be provided in the respective Station Working Rules and Gate Working Instructions incorporating local operational requirements. When level crossing gate is required to be opened for passage of road traffic, the Gateman must first open the gate farthest away from approaching road traffic and then open the gate on the side nearest the approaching road traffic. 295 2. 3. (ii) q•rqrz (iii) (iv) qtr (i) (ii) (iii) (iv) (v) (vi) -Q @lfr-u.I 2-3 q•rTfi- (ii) trrqrz iz (iii) q•rqrz q•rqrz , (iv) 296 Appendix - 'A' RULES FOR WORKING LEVEL CROSSING 2

3. EXCHANGE OF PRIVATE NUMBER - (a) (b) When Gate is connected with the Station at the Despatching End - (i) (ii) (iii) (iv) (v) Station Master/Cabinmaster/Cabin man at the despatching end shall advise the Gateman, No., description, direction and expected time of passage of train at the gate under exchange of private number. Such advice shall be given before taking 'Off departure signals or giving an authority to proceed to the Loco Pilot. The Gateman on receipt of the advice shall close the gate well in time and confirm the same, under exchange of Private Number. Station Master/Cabinmaster/Cabin man will 'take off the departure signals after getting the Private Number of the Gateman. Gate once closed can be opened by the Gateman, after passage of train/trains or change in planning of train movement etc, with the permission of Station Master as the need of opening is known to Gateman according to road traffic to be cleared. Obviously it can be done only after exchanging private Number with the control Station Master who will ensure that there is no train movement towards the level crossing. "On a single line the gateman shall be authorised to open the level crossing gate after complete passage of train from the gate by observing Tail Board/Tail Lamp". When Gate is connected with the Station at the Receiving End - (i) (ii) (iii) (iv) (v) (vi) Station Master/Cabinmaster/Cabin man at the despatching end shall advise the Station Master/Cabinmaster/Cabin man at the other end. the number, description, direction and expected time of passage of the train at the Gate under exchange of Private Number. Such advice shall be given before obtaining Line Clear. The Station Master/Cabinmaster/Cabin man at the Receiving End shall in turn convey the same advice to the Gateman under exchange of Private Number. The Gateman shall close the gate and thereafter give his Private Number to the Station Master/Cabinmaster/Cabin man. Only then the Station Master/Cabinmaster/Cabin man at the receiving end shall grant Line Clear to the Station Master/Cabinmaster/Cabin man at the despatching end. Gate once closed for road traffic must on no account be opened unless this is authorised by the Station Master/Cabinmaster/Cabin man, under exchange of Private Number. **FAILURE OF TELEPHONIC COMMUNICATION - When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted : (ii) (iii) (iv) (v) (vi) Station Master at the despatching end shall issue a caution order to the Loco Pilot before dispatching a train in the block section from his end. The Caution Order should advise the Loco Pilot to whistle continuously and approach the gate cautiously. The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signalled by the Gateman. If hand signal is not seen, Loco Pilot should be prepared to stop short of the gate and depute his Assistant Loco Pilot to see the condition of the gate. If the gate is closed, the Assistant Loco Pilot will give the all light signal and if the gate is not closed the Assistant Loco Pilot must close the gate and then give the All Right Signal. In the absence of the Assistant Loco Pilot, the Loco Pilot may take the assistance of the Guard and shall stop clear of the level crossing to pick up the assistant Loco Pilot who will reopen the gate for passage of road traffic. In case of an approaching train, the Station Master shall advise the Station Master at the despatching end, under exchange of private Number, that the telephone at the gate has failed. The Station**

Master at the dispatching end shall then issue a Caution Order to the Loco Pilot before dispatching a train in the block section from his end. Station Master shall also advise the Gateman through Gang man /Patrolman or Loco Pilot of the first train that the telephone has become defective. 296

4. S. (vii) (viii) (i) (ii) (iii) (iv) (v) (vi) (vii) (viii) (i) (ii) (iii) (iv) (v) (vi) (vii) (viii) (ix) (x) zrrrrrzrrrr iz I 8tra*r, e--11Q114A/41-4H, 2-3 *ill 1.5 (5) āfrzwtrq iz I -Q -rlT4 1 i, trrzrqz @-q-q-el q-« I 297 Appendix - 'A RULES FOR WORKING LEVEL CROSSING (vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the defect at the earliest. (viii) Non•nal working will be resumed only after S & T staff rectify the telephone and issue reconnection/ fit memo for the same. FAILURE OF LIFTING BARRIERS OR LEAF GATES - 4. 5. (i) (ii) (iii) (iv) (v) (vi) (vii) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the Gateman will immediately inform the Station Master/Cabinmaster/Cabin man on duty, under exchange of private number, and ensure that lifting barriers or leaf gates do not foul the track. The Gateman shall immediately fix red banner flag by day and red flashing light by night on the post at that end first from which the train is approaching and then at the other end. Gateman shall secure the gate against road traffic by means of safety chains and padlocks. After securing the Gate against road tramc, Gateman shall show green hand signal flag by day and green light by night to the Loco Pilot ofthe approaching train. Station Master on duty shall issue a caution order to the Loco Pilot ofa departing train. The Station Master shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a Caution Order to the Loco Pilot before dispatching a train in the block section from his end. The Station Master shall also advise maintenance staff responsible for maintenance of lifting barriers /leaf gates to rectify the defect at the earliest. (viii) Normal working will be resumed only after maintenance staff rectify the lifting barriers/leaf gates and issue reconnection/fit memo for the same. OBSTRUCTION AT THE LEVEL CROSSING GATE - (ii) (iii) (iv) (v) (vi) (vii) Ifthe gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate fouled the track, or if there is any other obstruction at the gate, the Gateman shall immediate fix Red Banner flag by day and Red Signal Lamp by night on posts provided at both ends ofthe gate, for this purpose. Immediately after this, the Gateman shall advise the Station Master/Cabinmaster/Cabin man on duty. regarding the defect/obstruction at the gate. under exchange ofprivate number. Station Master/Cabinmaster/Cabin man on duty shall be advised to put the reception/departure signals back to 'ON' position. iftaken 'OFF' for a train. If there is no response from the Station Master/Cabinmaster/Cabin man after two or three attempts. he shall first protect the gate and then inform on phone. Gateman shall then rush with detonators and red flag by day and red flashing hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties ofGateman under item No. 1.5 (5). Therea fter he shall protect the gate from the other direction also. He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the Gateman that the road vehicle or the lifting barriers/leafgates are not fouling the track. (viii) The Station Master shall also inform the Station Master at the dispatching end. under exchange of (ix) (x) private number. asking him not to dispatch any train in the block section from his end. until the track has been cleared of all obstruction. After the track has been cleared of all obstructions the Gateman shall inform the Station Master accordingly, under exchange ofprivate number. Station Master shall then issue a Caution order to Loco Pilots of all trains to proceed cautiously, and pass on green hand signal ofthe Gateman, ifthe gate is broken, but is clear of any obstruction. 297 6. 2. 3. (xi) (xii) -fr-d I (xiii) frlū, zrrrrrzrrrr 311ÄH-RH- (i) (ii) (iii) (iv) (v) (vi) Al*z zrrrrrzrrrr 2-3 q•râTtr- (i) trrzrqz 298 Appendix - 'A RULES FOR WORKING LEVEL CROSSING (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and thele after exhibit green hand signal, ifthe gate is not obstructed. 6. (xii) Station Master shall advise maintenance staffresponsible for maintaining the lifting barriers/leaf gates to repair the same at the earliest. (xiii) Normal working will be resumed only after maintenance staff rectify the decective lifting barriers/lea f gates and issue reconnection/fit memo for the same. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE - If there is a rail fracture or obstruction on the track due to falling ofa tree, fouling by Road Vehicle or derailment. which is visible to the Gateman. Then Gateman and Station Master will adopt the procedure given under item No. 5 above. If the obstruction fouled the level crossing gates. Gateman must keep the gates closed against Road tramc till the track is cleared ofthe obstruction. ANNEXURE - V ENGINEERING LEVEL CROSSING GATES NON-INTERLOCKED, PROVIDED

198 / 220

for the same. OBSTRUCTION AT THE LEVEL CROSSING GATE - (ii) (iii) (iv) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the Gateman shall immediately fix Red Banner flag by day and Red flashing Lamp by night on posts provided at both ends of the gate. for this purpose. Immediately after this, the Gateman shall advise the Station Master/Cabinmaster/Cabin man on duty, regarding the defects/obstruction at the gate, under exchange of private number. Station Master/Cabinmaster/Cabin man on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train. If there is no response from the Station Master/Cabinmaster/Cabin man after two or three attempts, he shall first protect the gate and then inform on phone. 299 (v) (vi) (vii) 34--dä?T ki. 1.5 (5) 6. (viii) (ix) (xi) (xii) -fr-d I (xiii) fr-lü, 300 Appendix - 'A RULES FOR WORKING LEVEL CROSSING (v) (vi) (vii) Gateman shall then rush with detonators and red flag by day and red flashing hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of Gateman under item No. I .5 (S). Thereafter he shall protect the gate from the other direction also. He shall note down the particulars of the road vehicle, name of the Driver, Owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the Gateman that the road vehicle or the lifting barriers/leaf gates are not fouling the track. (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of (ix) (x) (xi) (xii) private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction. After the track has been cleared of all obstructions the Gateman shall inform the Station Master accordingly, under exchange of private number. Station Master shall then issue a Caution order to Loco Pilots of all trains to proceed cautiously, and pass the Gate on green hand signal of the Gateman, if the gate is broken, but is clear of any obstruction. Gateman shall secure the gate against road traffic by means of safety chains and padlocks and thereafter exhibit green hand signal, if the gate is not obstructed. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gates to same at the earliest. 6. (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same.

OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE - If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by Road Vehicle or derailment, which is visible to the Gateman, then the Gateman and Station Master will adopt the procedure given under item no. 5 above. If the obstruction fouls the level crossing gate, Gateman must keep the gates closed against Road traffic till the track is cleared of the obstruction. 300 (i) (ii) (iii) (iv) (vi) (vii) (viii) .3EG+VI 34R-q« e--1AN4 1.5 2. (i) (ii) (iii) (iv) (v) (vi) (vii) (viii) âfizr((1513Ø) trrzrqz 301 Appendix - 'A RULES FOR WORKING LEVEL CROSSING ANNEXURE - VI ENGINEERING LEVEL CROSSING GATES, NON-INTERLOCKED, NOT PROVIDED WITH TELEPHONE, WITH NORMAL POSITION "CLOSED TO ROAD TRAFFIC" (General Instruction are common for all types of Manned Level Crossing Gates)

MODE OF OPERATION - Detailed mode of operation for opening and closing the level crossing gate shall be provided in the respective Station Working Rules and Gate Working Instructions incorporating local operational requirements, when level crossing gate is required to be opened for passage of road traffic. The Gateman must first open the gate farthest away from approaching road traffic and then open the gate on the side nearest the approaching road traffic. (i) (ii) (iii) (iv) (v) (vi) (vii) Whenever the Gateman has to pass a road vehicle across the level crossing gate, he must ensure that no train is in sight in either direction, nor there is any audible sound of an approaching train. He shall then plant red banner flags by day and red flashing lamps by night on posts provided on both sides of the gate for this purpose. He shall then open the gate to pass road traffic, and close it again immediately thereafter. He shall then remove the red banner flags by day and red flashing lamps by night. If the Gateman sees or hears a train approaching the level crossing gate when the gate is in open condition, he shall rush with detonators and red flag by day and red flashing hand signal lamp by night towards the approaching train. If the train is too close, he shall place detonators on the line at a distance as far away as he can go. Thereafter, he shall stop the approaching train by waving his red flag by day and red flashing hand signal lamp by night repeatedly. 2. (viii) If there is sufficient time, the Gateman will protect his gate as stipulated in General instructions for duties of Gateman under item no. I .5. (S).

FAILURE OF LIFTING BARRIERS OR LEAF GATE : (a) Failure when the Gate is in open condition : (i) (ii) (iii) (iv) (v) (vi) (vii) (viii) Gateman shall first ensure that the lifting barriers/leaf gates do not foul the track. Gateman shall secure the gate against road traffic by means

of safety chains and padlocks. He shall fix red banner flag by day and red flashing lamps by night on posts provided at both sides of the gate for this purpose. If he sees a train approaching the gate before he has secured the gate, he shall rush towards the train with detonators and red flag by day and red flashing hand signal lamp by night. He shall place detonators on the line at a distance as far away he can go. There after he shall stop the approaching train by waving his red flag by day and red flashing hand signal lamp by night repeatedly. He shall send information through Gangmate / Petrolman / Keyman or loco pilot of a train to the JE/SE/SSE (P. way)/Station Master to necessary action. Station Master on duty shall issue caution order to the Loco Pilot of a departing train. 301 3. 4. (ix) (xi) (i) (ii) (iii) (iv) (vi) iz tr Fifia (CF13ü) 1.5 (s) 34--*Fffl (vii) (viii) iz i, * trrzrqz (ix) (xi) FIG, Afifi 3 3.4--q-üq 1 302 Appendix - 'A (ix) (x) (xi) RULES FOR WORKING LEVEL CROSSING He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a Caution order to the Loco Pilot before dispatching a train in the block section from his end. Station Master shall advise maintenance staff responsible for maintaining the lifting barrier/leaf gates to rectify the same at the earliest. Normal working will be resumed only after maintenance staff repair the lifting barrier/leaf gates and issue reconnection/fit memo for the same. (b) Failure when the Gate is in closed condition - Gateman shall send information through Gangman/patrolman/key man or Loco Pilot of a passing train to the JE/SE/SSE (P. Way)/Station Master concerned. asking for necessary action. 3

4. OBSTRUCTION AT THE LEVEL CROSSING - (ii) (iii) (iv) (v) (vi) (vii) If the gate is broken by a road vehicle which is fouling the track. or if lifting barriers/leaf gates or any other part of the gate foul the track. or if there is any other obstruction at the gate, the Gateman shall immediately fix Red Banner flag by day and Red flashing Signal Lamp by night on posts provided at both ends of the gate. for this purpose. Gateman shall then rush with detonators and red flag by day and red flashing hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of Gateman under item no. 1.5 (5). Thereafter he shall protect the gate from the other direction also. He shall note down the particulars of the road vehicle, name of the Driver. owner and relay these details to the Station Master and JE/SE/SSE, (P. Way) through a Gangmate/Patrolman/Keyman or any other railway employee or through the Loco Pilot of a passing train. After being informed the Station Master shall not start any train unless he has verified that the obstruction has been removed and the Gate is safe for the passage of trains. The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, not to dispatch any train in the block section until the track has been cleared from all obstruction. After the track has been cleared from all obstructions the Gateman shall inform to Station Master accordingly, under exchange of private number. (viii) Station Master shall then issue a Caution order to Loco Pilots of all trains to proceed cautiously, (ix) (x) (xi) and pass the Gate on green hand signal of the Gateman, if the gate is broken, but is clear of any obstruction. Gateman shall secure the gate against road traffic by means of safety chains and padlocks and thereafter exhibit green hand signal, if the gate is not obstructed. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gates to repair the same at the earliest. Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same. **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE -** If there is rail fracture or obstruction on the track due to falling of a tree. fouling by Road Vehicle or derailment, which is visible to the Gateman. Then Gateman and Station Master will adopt the procedure given under item no. 3 above. If the obstruction fouls the level crossing gates. Gateman must keep the gates closed against Road traffic till the track is cleared of the obstruction. 302 (\$u.q.) \$.gq.q. tr- Élu.H31x. 2 - - (i) 34 I (ii) (iii) q4+f- (iv) 3 (i) \$.gq.q. (ii) - 4.15 (i) - \$.gq.q. (a) 6.03 Élu.q.34R. 4 - - (3.048 \$1 (3.658 S - \$.11q.q. - 1 7.04 tl.uq.34R. 7 - - - 303 Appendix - 'B' TSR 1. (ii) **RULES FOR WORKING OF EMU TRAINS APPENDIX - 'B' TRACTION RULES FOR WORKING OF EMU TRAINS** In addition to these rules all General and Subsidiary Rules which control the movement and operation of trains, shall also apply to the movement and operation of EMU's except as otherwise provided in these rules. Station Master, Inspector and Staff working EMU's must have thorough knowledge of these rules. **TSR2. Definitions - (i) (ii) (iii) (iv) TSR3. (i) (ii) Motorman -** means a duly certified Loco Pilot of a single or multiple unit train. **Guard's emergency Brake valve-** means a valve fitted in the driving compartments of EMU train equipped with compressed air brakes. by means of which the Guard can apply the brakes of the train in times of emergencies. **Jumpers -** means multi-core flexible cables connected between all coaches of multiple units trains by means of which

the control of the electrical equipment is affected from any driving compartment in use. Trailer Coach - Means a passenger carrying coach equipped for coupling to and operating with motor coach, and not possessing traction motors, pantographs or driving or high voltage compartments. Only one motorman is necessary for operation of an EMU train. The following exceptions are permitted : (a) GR 4.15 (1) - Side lights showing white towards the front and red towards the rear are not provided on EMUs. (b) GR 6.03 (3) On an EMU there is only one motorman for driving and he must not leave his post except for attending to defective equipment in his train. TSR4. Width of Stock—Owing to the extra width (3.658 metres) of the EMU stock as against (3.048 metres) of conventional stock, staff are specially cautioned to stand well clear of passing trains and to warn passengers of the danger of standing too near the edge of the platform. Motormen and Guards must not put their heads out of their compartments when the train is running or when it is standing at a line when another train is passing on the adjacent track. TSR 5. Work inside EMU car shed—In case of work to be done in EMU car shed, the rules as laid down in GR 17.04 should be followed. TSR 6. Washing and cleaning of stock — When EMUs are placed in siding for washing, cleaning etc. the section switch for that particular siding must be opened by the man in charge of washing and the key retained by him. TSR 7. Accidents : Responsibility of Electrical Department —In the event of any accident occurring in which electric coaching stock is involved or where damage to overhead structures or equipment takes place, the railway servant who notices it shall take necessary precautions against danger of electric shock and shall inform the nearest Station Master, section controller and Traction Power Controller to take immediate action to cut off power supply, if necessary, and restore the equipment as early as possible. The line is not to be re-opened for traffic until a responsible official of the Electrical Department inspects the site and certifies that the line is safe for the passage of train. 303

31x. 8 - (ii) (iii) - e-â 9 - *41.Ä. 6.1 0 I 1 0 - F,) ag) (71) (El) aft. I Él.uq.34R. 1 4 - 21.uq..34R. 15 - *Zii a) (ii) fira-1T2fi tT.g•qNR. 1 7 - g.gq.q. 1 60 R.#T. 304 Appendix - 'B' TSR 8. - RULES FOR WORKING OF EMU TRAINS (ii) (iii) For the protection of staff employed on coaches/at car shed/stabling depots/or on platforms, warning boards must be placed in a conspicuous position on the ends of the coach or rake by the staff concerned before proceeding to carry out any work in or under the coaches. This board should bear a remark "Not to be Moved" in white letters on a red background and on no account it should be removed except by the man who placed them in position. Warning Boards are on no account to be removed and power applied until all precautions have been taken to ensure that all men are clear of danger. Overhead equipment alive - The whole of the overhead equipment comprising of contact wire, catenary, droppers, register arms, steady arm etc is always to be considered "ALIVE" and men working over the electrified area must take care to see that nothing comes in contact with it. There is danger take care to see that nothing comes in contact with it. There is danger of death if men come in contact, directly or indirectly, with the overhead contact system. TSR9. Fire:- see GR6.10 and their S.R.s. TSR 10. Staff employed in the Electrical area must immediately inform the Section Controller by telephone as quickly as possible the event of (a) accident (b) disabling of train (c) Unusual occurrence on overhead equipment or on overhead feeders or high tension cables etc. (d) any occurrence affecting the working of trains. TSR 11. Messages sent through Station Master must be fully recorded by them in the Message Book and a note must be made in the diary. TSR 12. The Section Controller will immediately take action on the information received and promptly inform the Traction Power Controller who will take necessary action with any switching operations which may be necessary on the overhead equipment or at sub-station and will immediately inform Sr. Divisional Electrical Engineer (Traction). TSR 13. Access to the high tension compartment can be had only by authorised persons in possession of a reversing handle or special key provided for this purpose. Motormen and other officials to whom such keys are issued should keep them in their personal custody to prevent unauthorised person tampering with the equipment. TSR 14. No spanners or keys except those issued by the Railway Administration should be used for operating the equipment in electric trains. TSR 15. (i) No unauthorised person is allowed to travel in motorman's and Guard's Compartment of an EMU train unless he holds a Motorman's or Guard's Compartment pass. The Number of authorised persons, other than the Motorman and Guard (if travelling with Motorman), travelling in Motorman's Cab must not be more than three at any time. (ii) A Motorman who is off duty is not permitted to enter or travel in any of the driving compartments or to use his reversing handle under any circumstances. TSR 16. A trainee or apprentice motorman when authorised by Divisional Electrical Engineer (Traction) may drive an Electric train under the supervision of a certified motorman and the latter

shall keep a continuous watch over the trainee or apprentice and shall be responsible for safe working of the train. TSR 17. A driving Inspector is authorised to drive EMUs provided he had been driving at least 160 kms. In a calendar month over the entire EMU territory. 304 I (h) (i) (ii) (iv) (vi) (vii) (4.55 7 R. q-l<-q -q-lä 2.0 ÄNT./Q.#12 305 4.2 Ä.zrr./@-cfr2 2.0 -a-4f 3.5 '34TH' 3.5 3.5±0 Appendix - 'B' RULES FOR WORKING OF EMU TRAINS TSR 18. Line chargemen and other maintenance staff who are required to attend to defective equipment are allowed to handle the equipment in running train. They shall, however do this with the utmost care to ensure that the safety of the train and the equipment is not endangered in any way. TSR 19. An electric multiple unit train shall carry (a) one head light (b) one set of code lights in center (c) Two red tail lights (d) Two red tail lights in one fitting. The lights will have provision for blinking. TSR 20. Responsibility for head lights etc. of EMU's - The Motorman is responsible for carrying the correct Head lights by night and for ensuring that the tail lights are not seen that the tail lights are not exhibited in the front. The Guard is responsible for seeing that the tail lights/tail boards, as the case may be, are correctly exhibited. In case of failure of electrical red tail lights, Guard should fix his hand signal lamp on the bracket provided for this purpose. TSR 21. Lighting and fan circuit of EMU's - Guards must regulate the lighting of coaches and switch off the fans when not required. In the event of a defect in the lighting or in circuits the Guard will immediately inform the Motorman and the nearest Station Master will arrange for electrical staff to rectify defects. TSR 22. (a) Before an EMU train is brought on to a running line after inspection or maintenance in an EMU shed or stabling line, the brakes of the train shall be jointly tested by the Motorman and Guard to ensure that electropneumatic and automatic brakes are functioning normally and the brake pipe is continuous throughout the train. The horn or whistle should be sounded and precautions taken to see that no one is working on EMU train before brake test is undertaken. Procedure for Testing the Brakes : SL NO. (i) (iii) (iv) (v) (vi) (vii) To be done by the Motorman Give five rings to guard to be ready for brake test. Start the air compressor and when the main reservoir pressure is normal (4.55 kg/sq. cm. to 7 kg/ sq.cm.), open the isolating cock switch to charge the brake pipe. Make an electrical application to a pressure of 2.0 kg/sq.cm. (Approximately). Make a full EP application Move the brake controller handle to the 'release' position to release brake. On observing drop in brake pipe pressure, move brake controller handle to emergency. Keep the handle of the brake controller in release-running position and bring it to emergency position only after Guard has applied emergency brake by opening emergency application cock. 305 To be done by the Guard Acknowledge by five rings. When the brake pressure is 4.2 kg/sq. give one ring to Loco Pilot. On observing 2.0 kg/sq.cm. pressure in the brake cylinder gauge, give one ring. On observing 3.5 kg/sq.cm. pressure in the brake cylinder gauge, give one ring. On seeing that the brake cylinder pressure is 0, open the Guard's emergency brake valve (i.e. move the handle to 'ON') On observing pressure 3.5 kg/sq.cm. in the brake cylinder gauge, move the emergency valve handle to 'OFF' Open emergency application cock by means of red brake handle to destroy brake pipe pressure to zero and will observe 3.5±0 kg/sq.cm. pressure in brake gauge. qfi@rg - G' (viii) (ix) (x) Qllf#zii fäü-q 3.8 mylT./ (ii) (iii) qtrap•r I @-qfr zrr I fiz Él.uH.341!-24 - é.QH.4. - zrr (ii) I (iii) 306 Appendix - 'B' (viii) (ix) (x) Note - RULES FOR WORKING OF EMU TRAINS When the brake pipe pressure is zero move the brake controller handle to the 'release' position and when the brake pipe pressure is normal again, apply the automatic brake by reducing the brake pipe pressure to 3.8 kg/sq.cm. (approx). Move the brake controller handle to 'release' position. Motorman will acknowledge completion of test by giving five rings. Observe the drop in brake pipe pressure on the gauge and then give one ring. On observing that brake cylinder pressure is zero and brake pipe pressure normal on gauge, give one Guard will observe that brake pipe is 5 kg/sq.cm. and give five rings to indicate that above tests have been completed correctly from his end. (i) (ii) (iii) During brake tests, Guard and motorman may use one pause one ring to draw the other person's attention in case of any lapse or abnormality. During brake testing, one ring from guard will indicate acknowledgement of motorman's action. As far as possible, this joint test should be taken before the EMU train leaves the shed or stabling line. However, if authorised by C.E.E. and COM, the brake test may be taken on the platform before commencement of the first trip. (b) (c) (d) The examination and adjustment of brake must be carefully carried out before entering service. Motorman must ensure that jumpers and hose pipes are properly secured in their dummy receptacles after coupling. He must take a careful examination of multiple units before taking them into service and any defect or deficiency noticed must be brought to the notice of the supervisor and he must see that the defect card is in position and initialled to this effect. When

taking over from another motorman of any fault or defect likely to affect the working of the train. The above procedure must always be carried out most carefully when putting unit into service after stabling, also after two units have been coupled up. The train crew must assist the station staff in coupling and uncoupling units. The motorman should check the working of the dead man's safety device.

TSR 23. It is the duty of the Guard and the Motorman to change the destination indicators at respective ends of the train.

TSR 24. Stabling an EMU train-

(a) When stabling an EMU train in car shed or on a stabling line, the Motorman or Engine Turner who has taken over the rake will carry out the following essential operations :

(i) Switch off the lights and fans, if on. (ii) Trip the main circuit breakers and drop the pantographs. (iii) Destroy the brake pipe pressure, isolate the brake controller.

306 (iv) '4' (vi) (vii) (u) (4) ÉL.u«Él.) 1 0 Ä,ÄI.ÄÄ. €1. 34R. 25 - g. QH. 4. - €1. u-q. 34R. 2 6 - - ÉL.u«æft. ÉL.uq.34R. 2 7 - \$1 tr.gq.#r. ÉL.uq.34R. 28 - - Qllfüi * , •raz 30 - (ii) (3 5 EidT) I Éz zrr "3417" ' I fiz ' ('g') 307 Appendix - 'B' (iv) (v) (vi) (vii) (b)

(c) **RULES FOR WORKING OF EMU TRAINS** Apply the hand brakes fully in the 'D' coaches. Put off the main battery switch in the motor coaches. Lock the equipment compartments and driving cabs. Any other operation prescribed in local instructions. When a rake is to be stabled, the Motorman should invariably be at the leading cab. Backing an EMU rake into a siding with the Motorman at the rear cab is strictly forbidden. After stabling an EMU train or handing it over to the Engine Turner, the Motorman before going off duty should convey to supervisor in charge of the Car shed or stabling line (or to the TLC) any defect or abnormalities noticed during the previous trips requiring immediate attention. Note : On arrival of train at terminal station for stabling, the Guard shall switch off lights and fans. No Multiple unit or coach may enter a shed at a speed exceeding 10 km per hour and only after sounding the whistle and coming to a stand outside the shed.

TSR 25. Speed Control of EMU - For any position of the Master Controller chosen by the Motorman, the step by step notching is controlled automatically. The Motorman should switch on the Master Controller to the required position depending upon the speed to be attained.

TSR 26. Oiling and Greasing - Motorman must not oil or grease any part of the train or equipment except to attend a warm or hot bearing and when this has been done he must specially report the occurrence to TLC.

TSR 27. Motorman must keep a sharp lookout for all defects or anything unusual in the rolling stock equipment and promptly report such defects to the TLC or to the line chargemen and also record in the logbook. In the case of serious defects, a detailed report must be made by the Motorman.

TSR 28. Electric Trains outside Electrified Area - Electric Trains must not be hauled outside the electrified area until the pantographs have been lowered.

TSR 29. Non-electrified sidings - Except in case of emergency, electric train must not be placed in non- electrified sidings within the electrified area, but when it is necessary to do so, care must be taken by Motorman to ensure that all pantographs are lowered and that there is no obstruction on or along side the siding that will be likely to come in contact with the pantograph or any other part of the train. After which the train must be shunted into the siding with caution.

TSR 30. (i) Every Motorman and Guard must have with him while on duty all the equipments prescribed as per Annexure (ii) The Guard and the Motorman should also ensure that emergency telephone set is provided both in the front and rear cab before starting the train.

TSR 31. (i) Automatic and semi-permanent coupler - EMU stock is fitted with Schaku couplers of two types. i.e. automatic couplers for coupling unit to unit and semi permanent couplers for coupling the coaches of each unit. The units are coupled merely by bringing them together at a slower speed (between 3 to 5 K MPH). Both the automatic couplers should be in uncoupled position. While coupling the stationary unit or coaches it should have, its brake on. While uncoupling the automatic coupler, uncoupling ropes of both the couplers are pulled simultaneously and then the coaches are drawn apart. It is therefore, not necessary for the staff to go between the coaches during coupling operation. While coupling in between coaches of the unit, adjustable cup sleeves of end 'A' type coupler are opened by the handles provided on the semi-permanent coupler. Both the semi-permanent couplers are aligned manually and then coupled together by tightening the cup sleeves. Note that both the semi-permanent couplers, i.e. End 'A' and 'B' are aligned properly before coupling.

307 (ii) (iii) (v) (vi) zfiä - qq•rtr I é.uq.q. - 341Qii é.v4.Z{. ÉL.uq.34R. 32- 33- g.qq.q. 34- 5.14 35 - (i) (ii) (iii) (iv) eiü - 1 - "fi," @-qfr 21.1 {H..34R. 36 - (1) g.qq.q. - 308 Appendix - 'B' **RULES FOR WORKING OF EMU TRAINS** (ii) (iii) (iv) (v) (vi)

Coupling of Units - In coupling units together, the station staff will be responsible for seeing that the jumper connections are properly made. Care is to be taken not to touch the contacts or to let them come into contact with the rails, ballast or metal-work of the coach when inserting jumpers in the receptacles provided. In all cases, this operation will be carried out under the supervision of the Motorman who will

first ensure that both the motor generator sets are switched off. Stopping places of EMU trains - EMU trains shall be stopped at stopping marks as laid down in local orders. Guards to assist Station Staff- Guard must assist the station staff in coupling and uncoupling units which may have to be attached or detached. Guards are responsible for seeing that all lighting and fan switches and the main lighting switch are off before units are uncoupled. At Stations or sidings where it is necessary for the units to be disconnected, the person performing the work must before uncoupling, receive the assurance on a register of the Guard and Motorman that all the lighting and fan switches as well as the motor generator sets on both halves of the train have been switched off. TSR32. TSR33. TSR 34. TSR35. When two separate units are coupled together at stations, only one Motorman must be in charge and on no account, a Motorman who is off duty allowed to use his reversing handle under any circumstances. Formation of EMU's - Unless special instructions are issued to the contrary, the formation of EMUs is not to be altered. Shunting of Single and Multiple unit trains. When shunting is to be performed the rules contained in GR 5. 14 must be complied with. (ii) (iii) (iv) (v) Shunting and Setting Back - When performing shunting, the Motorman shall be in the driving compartment nearest to the front and in the direction of movement when driving is being done from other than the leading coach the man in charge of the movement must be in the leading coach in such a position that the Motorman can readily see his signals. Coasting - Power must be switched off as early as possible before the application of the brakes in order to reduce consumption of electric energy. Coasting Board to be observed in working trains - Motormen will normally observe the Coasting Boards. When time is to be made up, they may switch off power later than normal. The maximum permissible speed for the various sections shall not, howsoever, be exceeded in order to make up time. Stopping - Care must be taken when applying the brakes to stop the train as smoothly as possible and the brakes must be put on at such a distance as will enable the motorman to pull up at the proper stopping point at the station platform. Brake Application - Normally the brakes should only be applied after the Master Controller handle has been returned to the 'OFF' Position, except in case of emergency. TSR36. (i) Dead man's Handle applied to in EMU's - Obstruction on the permanent way if any obstruction is seen on the line ahead and the train cannot be brought to a stand still by ordinary application of brakes, the Motorman should remove his hand from the master controller handle when the power will be cut off and the brake applied automatically. This should only be done when an emergency application of the brake is required. The brake controller handle should then be moved to the full 'ON' position and the Master Controller switched off. 308 El.uq..34R. 37 - (i) (ii) 38 - 2. 3. 4. 5. 6. (a) 2. 3. 4. s. 6. 4.21 1 S Ä#r.y.Ei. Eitr H.Ä. 4.21 4.21 Eitr q.Ä. 9.02 '34TH' -111-4 309 00 00-00 000 0000 000000 000-000 0000-00 0000-0000 00 00000 000-0000 00 00-00 000 0000 000000 000-000 0000-00 0000-0000 00 00000 000-0000 Appendix - 'B' RULES FOR WORKING OF EMU TRAINS In the event of dead man's handle becoming defective or inoperative the Motorman must stop his train immediately, call the Guard and ask him to travel in the driving cab and should inform the Traffic Section Controller who should take the train out of service immediately if the defect is not rectified. TSR37. (i) (ii) When EMU train is driven in accordance with G.R. 4.21, its speed should not exceed 15KMPH. At the first station where facilities are available, the train should be cancelled and withdrawn from service for repairs. Before giving the staffing code signal to the Motorman, the Guard must satisfy himself that the correct signals are shown for the train to start and that the section is clear. The Guard must keep a good lookout and must exhibit a green hand signal to the Motorman. The absence of such signal shall indicate "Danger" and the Motorman must stop at once. He must keep a good lookout and be prepared to stop the train when necessary. He will also be responsible for observing all further signals en route. All Caution Orders, warning notices, advices and authorities regarding defective signals, authority to proceed without line clear, etc. Must be first delivered to the Motorman who will countersign these before they are sent to the Guard in the leading compartment. The Guard will retain such documents while he is in charge and will be responsible for seeing that the orders are carried out. At the end of the run these documents must be handed over to the Motorman and his signature obtained. TSR38. (a) 2. 3. 4. 5. 6. (b) 2. 4. 5

6. The following code of Bell signals shall be given by the Guard and acknowledged by the Motorman: Indication Start train Start train when working under G.R. 4.21. Push back train Stop train Stop train when working under G.R. 4.21. Guard leaving the cab Code 00-00 000 0000 000000 Acknowledgment 00-00 000 0000 000000 The following code of Bell signal shall be given by the Motorman and acknowledged by the Guard. Indication Guard required by Motorman Motorman has

received an authority to pass a signal at danger. Passing an Automatic Signal in 'On' position as G.R. 9.02 Train running through station For testing the brakes Protect train in rear Code 000-000 0000-00 0000-0000 00000 000-0000 Acknowledgment 000-000 0000-00 followed by code to start the train. 0000-0000 00000 000-0000 Note: '0' means one ring. 309 ÉL.uq.341x. 3 9 - - Rq€1 ÉL.uq.341x. 40 - - a-TN. 41 - - afi quã7111 42 - \$.gq.q. 43- é.uq.q. -q-, -eft (a) 1 0 R.#T.y.Ei. (3+1 Q) 1 0 R.#r.Â.Ei. (SIGQT) a, EiÉ1, 1 0 Ä.#r.y.Ei. tT.g•qNR. 44- tT.g•qNR. 45 - g.u•q.q. EiÉ1 I EiÉ1 310 Appendix - 'B' RULES FOR WORKING OF EMU TRAINS TSR 39. Disabled train - In the event of an electric train failing another electric train or a locomotive may be used to assist the disabled train, only after the mot01•man or the line Charge Man has certified that it is safe to be moved. TSR 40. Loss of time in locating defects - When a defect occurs which the Motorman is unable to rectify. he must not waste time in trying to locate defects after isolation has been effected except in case where it would be unsafe to proceed. Every effort is to be made to work the train to the nearest examining point and to get it out of tramc as soon as possible. TSR 41. Derailment - In the event of derailment, the Traction Power Controller will pass the information to the electrical foreman, who will treat it as if it is a line fault and shall proceed to take all necessary precautions to prevent damage to the overhead line during the re-railing process. TSR 42. In the case of partial electrical disablement of an electric multiple unit train, such train must be worked to destination if possible and stabled there until certified fit for running by electrical department. TSR 43. Procedure when automatic brakes cannot be operated from the leading driving companment of EMU train - When the automatic brake cannot be operated from leading driving companment of an EMU train, the following procedure should be obsewed. (a) (b) (c) (d) (e) All passengas must be detrained at the first station with platfoml. If the automatic brakes cannot be operated from any driving compartment of an EMU train but the driving apparatus in the leading compartment is in working order. the guard shall accompany the Motorman on the leading compartment and shall operate the hand brakes as required. The speed of the train shall not exceed IO KMPH. Ifthe brake apparatus in the leading compartment only is defective, the guard shall be responsible for the operation of the automatic brake from the nearest compartment (from the front) in which the brake apparatus is in working order. He will operate in accordance with the Motorman's signals. The speed of the train shall not exceed 10 KMPH. Ifthe driving apparatus in leading compartment in addition to the automatic brake is defective the Guard shall travel in the leading companment and operate the hand brake as required. The Motorman shall drive from the nearest compartment in which the driving and automatic brake apparatus is servicable. The guard shall be responsible for giving such signals as are required, to the motorman by means of the bell, horn or whistle and the Motorman shall control the train in accordance with these and the speed shall not exceed 1 0 KMPH. Under the circumstances mentioned in (b), (c) and (d) above, the Motorman shall arrange for the Section Controller and nearest train examiner to be informed. The Section Controller shall take immediate steps to have the train withdrawn from service at the nearest station where siding accommondation is available. TSR 44. In case of any emergency when the train is held up in block section. the Motorman/Guard should stop the train nearest to the telephone explaining the emergent situation and asking for assitance if required and also switch 'on' the blinker lights. TSR 45. Working of alarm bell and Inter - Communication chain apparatus of an EMU train - When in an emergency, in inter-communication chain handle is pulled by an emergency, the inter-communication chain handle is pulled by a passenger, a red disc shoots out in the corresponding coach and an electrical contact is made completing the electric circuit of the alarm bell located in each driving cab and the alarm bell will continuously ring in all the cabs warning the Motorman to stop the train immediately. On hearing the alarm bell the Motorman should apply the emergency brakes and stop the train as per extant rules. After ascertaining the reason for chain pulling the Guard should reset the disc in the corresponding coach with the help of the pole provided in the cab. 310 (i) (ii) 2. 3. 4. s. 6. 7. 8. 9. 10. 11. 12. g.gq.q. 3-41ü 2. 3. 4. 6. 7. 8. 9. 10. 11. 12. 13. 14

15. QITé 3.41R -rn-é 2 3 2 311 Appendix - 'A RULES FOR WORKING OF EMU TRAINS ANNEXRUE
(i) (ii) The following articles shall comprise the prescribed equipment of a Guard working on EMU train. which he must carry with him at all time while performing duty. 3. 4. 5. 6. 7. 8. 9. IO. 11

12. One hand signal lamp (Tricolor, 4 d_1Y cell lamp) One set of Flags (One green and two red). Two flag sticks of aluminium telescopic pipes. One Box. One case containing ten detonators. One whistle. One carriage key. One watch. One working Time Table. One rule book for working electric trains on electrified section. One detail book showing the link of Guard etc. One Guard's Memo Book. The following articles

shall comprise the personal equipment of a Loco Pilot working an EMU train. which he must carry with him at all time while performing duty. S.No. Description 2. 4. 5. 6. 7. 8. 9. IO. 11. 12. 13. 14

15. Handbook and trouble shooting directory for motorman. Copy of Working Time Table and schedule. Motorman's memo book. Memo Book for reponing defects. Reversing handles Motorman's control keys Brake control keys CalTiage Key Modified key for motor coach door Hand signal flags red and green with sticks Torch with red and green adopters and spare bulbs. Box often detonators Rule book for working electric train on electrified sections. Watch Duster 311 Quantity I each 3 2 fiz (tr.gq.q.) -8T.k-q.34R.1- €1.uH4. I I (ii) (ii) (iii) (iv) 3 - tr.gq.q. tr +IT.Ä. 6.03 (ö HT.Ä. 4.15 (u) HT.Ä. 4.14 4. 3245 uq.uq. I 5. él.QH.4. - €1.uH4. 6. a-I'm - (i) él.uqa. 1 (ii) (iii) I igr 7. él.uqa. (u) OT) 312 Appendix - 'C' RULES FOR WORKING OF DMU TRAINS APPENDIX - 'C' RULES FOR WORKING (DMU) DIESEL MULTIPLE UNIT TRAINS. DSR 1. In addition to these rules, all general and subsidiary rules which control the movement and operation of trains shall also apply to the movement and operation of DMUs except as otherwise provided in these rules. (ii) Station Masters, Inspectors and staffworking DMUs must have through knowledge of these rules. DSR2. Definitions - (i) (ii) (iii) (iv) Motorman- means a duly certified motorman of a single or a multiple unit train. Guards emergency brakes valve - means a valve fitted in the driving compartments of Diesel Multiple unit train equipped with compressed air brakes, by means of which guard can apply the brakes of the train in times of emergencies. Jumper - means multiple core flexible cables connected between all coaches of Diesel Multiple Unit trains by which the control of the electrical equipment is effected from any driving compartment in use. Trailer Coach- Means a passenger carrying coach equipped for coupling to and operating with motor and not possessing traction motors. DSR 3. On a DMU train, only one motorman is provided for driving and he must not leave his post except for attending to defective equipment in his train and protection in front in case of accidents. On a Double or Multiple line section if adjacent line in opposite direction is obstructed or fouled Motorman himself to protect in front as per GR 6.03. The following exception are permitted :- (a) GR.4. IS (Side Lights showing white towards there are not provided on DMUs. (b) G.R. 4.14 (l) On DMU train only head light and Tail Lights are provided, no marker light is provided. DSR4. DSR5. Work inside DMU Car Shed- It should be ensured that proper safety precautions are taken like display of red flag/fixed light, blocking of the movement on the line by scotch block and locking the same. DSR 6. Fire - (ii) (iii) In the event of a fire on a DMU stock, the motorman shall immediately switch off the circuit breaker and shut down the engine. The train shall be brought to a stop at once. The guard shall give all possible assistance to the Motorman in putting out the fire. The fire extinguishers of approved type shall be provided on each motor coach of a DMU when a DMU rake is turned out the Car shed. The SSE (C&W) Incharge of the Shed shall inspect the fire extinguisher and ensure that these are in good working order. DSR 7. Every employee in the DMU must immediately inform the section controller by telephone as quickly as possible in the event of (a) accident (b) Disabling of train (c) any unusual occurrence affecting the working of trains. 312 q.rßzri tr.gq.q. *T.gq.q. 11. (tr.gq.q.) (71) *T.qq.q. ati 2, * I 12. *T.uq.q. -fr-d --*QTI I 13. (i) él.v44. tr.gq.q. I (li) tr.gq.q. (iii) 1 fiz Ä---4T 14. (i) tr.gq.q. 313 Appendix - 'C' RULES FOR WORKING OF DMU TRAINS DSR 8. Access to the generator, engine & radiator compartments can be had only by authorised persons in possession of a special key provided for this purpose. Motorman and other official to whom such keys are issued should keep this in their personal custody to prevent unauthorised persons tampering with the equipment. DSR 9. No Spanners of key except those issued by the Railway Administration should be used for operating the equipment in DMU trains. DSR IO. No unauthorised person is allowed to travel in motorman's or Guard's compartment of a DMU train unless he holds a motorman or guard's compartment pass. The number of authorised persons, other than the motorman and guard (if travelling with motorman) in motorman's cabin must not be more than 3 at any time. DSR 11. The Diesel multiple unit train shall carry (a) headlight (b) one flasher Light (c) one set of code lights (d) one red tail light. Responsibility for headlights of DMU - The motorman is responsible for carrying out the correct headlights by night and ensuring that the tail lights are not exhibited in the front. The Guard is responsible for seeing that the tail light/tail board as the case may be correctly exhibited. In case of failure of electrical red lights. the guard shall fix his hand signal lamp on the bracket provided for this purpose. DSR 12. Lighting and Fans Circuits of DMU- Guards must regulate the lighting of coaches and switch off the fans when not required. In the event of a defect in the lighting. the guard will immediately inform the motorman and the nearest Station Master to arrange for electrical staff to rectify the defects. DSR13. (i) (ii)

(iii) (iv) (v) Before a DMU train is brought on to a running line after inspection or maintenance in a DMU Shed or stabling line, the brakes of the train shall be jointly checked by the motorman and the guard to ensure that the brakes are functioning normally and the brake pipe is continuous through out the train, the horn should be sounded and precautions taken to see that no one is working on DMU train before the brake test is undertaken. As far as possible, this joint test should be taken before the DMU train leaves the shed or stabling line. However, if specially authorised the brake test may be taken on the platform before commencement of the first trip. Examination and adjustment of brakes must be carefully carried out before entering service. Motorman must ensure that jumpers and hose pipes are properly secured in their dummy receptacles after coupling. He must take a careful examination of Multiple Units before taking them into service and any defect or deficiency noticed must be brought to the notice of the Supervisor and he must see that the defect card is in position and cleared of all entries unless these have been rectified and initialled to this effect. When taking over from another motorman, it will be his duty to ascertain whether any defect exists and the motorman handing over must acquaint him of any fault or defect likely to affect the working of the train. The above procedure must always be carried out most carefully when putting the unit into service after stabling, also after the new units have been coupled up. The train crew must assist the station staff in coupling & uncoupling the units.

DSR 14. Working or deadman's knob safety device - (i) Two deadman knobs have been provided in the DMU, one on the throttle handle and 2nd near the left knee of the Motorman's desk. The deadman knob has to be kept depressed both in the course of driving and during intermittent halts of the train. In order to give the Motorman a possibility of relieving the right palm by releasing the deadman knob during station stops or during driving. A knee operated mushroom headed switch has to be passed side wards to enable the deadman knob to be released, without application of emergency brakes. Before releasing the deadman's knob from the operating handle it has to be ensured that the knee operated switch is pressed by the Motorman.

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Appendix - 'C' RULES FOR WORKING OF DMU TRAINS In the event of a deadman's handle becoming defective or inoperative, the motorman must stop his train immediately, call the guard and ask him to travel in the driving cab, and should inform the section controller who should take the train out of service immediately if the defect is not rectified.

DSR 15. Change over the cab at the terminal station - At the terminal section, the direction of travel will reverse. The operating personnel on the train will now switch their roles as motorman and Guard. The leading car during the previous travel will become trailing with Guard for the direction of drive and the trailing car during the previous will become leading car. The following is procedure to be followed for effecting the change of Motorman's cab : In the previous leading cab - (a) Release the deadman knob. This results in the operation of emergency brakes. (b) Shift the reversing lever to zero position. (c) Switch off the Motorman's lock/hob operated switch. (d) Operate the guard's lock/knob operated switch. In the previous trailing cab - (a) Switch back the guard's lock/knob to off position. (b) Operate the Motorman's lock/knob to off position. (c) Move the reversing lever to forward position. Note - It is the duty of the guard and the motorman to change the destination indicators at respective ends of the train.

DSR 16. Stabling of DMU train - When stabling a DMU train in the Car shed or on a stabling line, the following procedure for putting the train out of operation should be followed.

Operation by Motorman - (a) (b) (c) (d) (e) (f) (g) Shut off the excitation alternator by operating excitation shut off switch. Move the train operating handle to the 8th notch thereby increasing the diesel engine speed to 1800 RPM. Keep the engine running at this speed for approximately 2 minutes. This will be held in cooling down diesel engine. Switch off the diesel engine by actuating the diesel engine push buttons at the desk. Move the reversing order to zero position and take out the lever from the slot provided in the master controller. Switch back the key/knob operated Motorman's switch and take out the key from the Motorman's lock switch. Take out the guard's key from the guard's lock switch/switch off the knob. Switch off the lighting and ventilation circuits. Apply the parking brake. Switch off the switch fuse unit.

Operation by Guard :- (a) (b) (c) (e) (f) (g) Switch back the key/knob-operated guard's switch and take out the key from the guard's lock switch. Take out the Motorman's key from Motorman's lock/knob switch. Take out the reversing level from the master controller. When the rake is stabled, the motorman should invariably be at the leading driving cab. Backing a DMU rake into a siding with the motorman at the rear cab is strictly prohibited. After stabling a DMU train or handing it over to the supervisor, the motorman before going off duty should convey to the supervisor/Incharge of the car shed or stabling line any difficulty or

abnormalities noticed during the previous trips requiring immediate attention. On arrival of the train at terminal station for stabling, the guard shall switch off the lights and fans. No multiple unit or coach may enter the shed at speed exceeding 10 KMPH and only after sounding the whistle and coming to a stand outside the shed. Oil and water levels : All oil and water levels shall be checked by the motorman before leaving the Car shed. Any deficiency found should be got attended before leaving the Car Shed. 314 17.- (ii) 19. tr.uq.q. I €1.1H4. I 20. 5.14 21 . F,) qrrq;zzrr: (ATZü) 22. él.uq.q. - 41.34N. 4.21 1 s R.#r.y.Ei. (45) (a) 315 Appendix - 'C' DSR 17. RULES FOR WORKING OF DMU TRAINS (i) Every motorman and Guard must have with him while on duty all the equipments as per Annexure (ii) The guard and the mot01•man should also ensure that emergency telephone set is provided both in front and rear before staffing the train. DSR 18. Coupling Unit - In coupling the unit together, the station staff/car Shed staff will be responsible for seeing that the jumper connections are properly made. Care is to be taken not to touch the contacts or to let them come into contact with the rails, ballast or metal work of the coach when inserting jumpers in the receptacles provided. In all cases this operation will be carried out under the supervision of the mot01•man who will first ensure that all the motor generator sets are switched off. Guards are responsible for seeing that all lights and fans switches and the main light switches are off before units are coupled or uncoupled. DSR 19. Formation of DMU - Unless special instructions are issued to the contrary, the formation of DMU's is not to be altered. DMU are not to be used to haul ordinary train coaches. DSR 20. Shunting of Single and Multiple Unit - When shunting is to be performed, the rules contained in GR 5.14 must be complied with. DSR 21. Brake application - a. b. Normally the brakes should only be applied after the master controller handle (throttle) has been returned to the off position except in the case of emergency. Emergency brakes : If any obstruction is seen on the line ahead and the train cannot be brought to a stand still by ordinal)' application of brakes the motorman should remove his hand from the master controller handle when the power will be out off and the brakes applied automatically. This should only be done when an emergency application of brakes is required. The brake controller handle then to be moved to the full on position and the master controller switched off. DSR 22. Working of DMU's when motorman is not operating from the front cab - (i) The rules contained in GR 4.21 should also be applicable for the DMU trains. The speed should not exceed 15 KMPH. a. b. The motorman shall be in the leading driving compartment when the train is in motion or train is stationary on any running line except as otherwise prescribed in these rules. In the case of a single or multiple unit train. If the driving apparatus in the leading driving compartment becomes defective, the train shall be driven cautiously from the nearest driving compartment which is serviceable ; in this event, the Guard shall travel in the leading driving compartment and shall convey the necessary signals to the Motorman. the Guard shall also sound the horn or whistle as necessary and apply the brake in case of emergency and shall be responsible for stopping the train correctly at signals, station and obstructions. Before giving the starting code signal to the motorman, the guard must satisfy himself that the correct signals are shown for train to start and that the section is clear. The guard must keep a good look out and must exhibit a signal to the motorman. The absence of such signals shall indicate the danger signal and the motorman must stop at once. He must keep a good look out and be prepared to stop the train when necessary. He will also be responsible for observing all further signals enroute. All caution orders, warning notices, advices and authorities regarding defective signals, authorities to proceed without line clear etc. must be first delivered to the motorman who will counter sign these before they are sent to the guard in the leading compartment. The guard will retain such documents while he is Incharge and will be responsible for seeing that the order is carried out. At the end of the run all these documents must be handed over to the motorman and his signature obtained. 315

23. Eitr I (a) 2.3. 4. s

6. Eitr 2.3. 4. s. 6. 4.21 4.21 00 00-00 000 0 0000 000000 00 00-00 000 0000 000000 9.02 0000-0000 qtRPT (frlZR) 00 000-000 0000-00 00000 000-0000 0000-0000 000-000 0000-00 00000 000-0000 tr.gq.q. Bzifid I 316 Appendix - 'C' DSR 23. RULES FOR WORKING OF DMU TRAINS (a) (b) The following code of bell signals shall be given by the guard and acknowledged by the mot01•man 2. 4. 5

6. Indication Starting train Start train when working under G.R. Push back train Stop train 4.21 Stop train when working under GR 4.21 Guard leaving the cab Code 00-00 000 0 0000 000000 Acknowledged

by 00-00 000 0 0000 000000 The following code of bell signals shall be given by the motorman and acknowledged by the guard 2. 3. 4. 5

6. Indication Passing an automatic signal in 'ON' position as per GR 9

02. Train running through station Guard required by motorman. Motorman has received an authority to pass a signal at danger. For testing the brakes. Protect train in rear. Code 0000-0000 000-000 0000-00 00000 000-0000 Acknowledged by 0000-0000 000-000 0000- 00 00000 000-0000 followed by the code to start the train. Note : 'o' means one ring. DSR 24. Disabled Train - In the event of DMU train failing, another engine may be used to assist the disabled train, only after the motorman has certified that it is safe to be moved, and under no circumstances, a DMU train shall be used to assist a train. Since the DMU rakes are equipped with compressed air brakes. the train will be controlled by engine brakes only. The speed when hauling a disabled train must be cautious speed. 316 25. tr.uq.q. @-4d EiÉ1 1 I Eitr *T.gq.q. öfi- 2. 3. 4. 6. 8. 9. 10. 11. - qrofi *T.gq.q. I 2. 3. 4. s. 6. 7. 8. 9. au-g \$@-g-ql 60) (R#rr zH) 317 2 Appendix - 'C' RULES FOR WORKING OF DMU TRAINS DSR 25. Working of alarm bell in inter communication chain apparatus of DMU train - When in an emergency, the inter communication chain handle is pulled by a passenger a red disc shoots out in the corresponding coach and an Electrical contact is made completing the electric circuit of the alarm bell located in each driving cab. The alarm bell will continuously ring in all the cabs warning motorman to stop the train immediately. On hearing the alarm bell, the motorman should apply the emergency brakes and stop the train as per extant rules. After ascertaining the reason for alarm chain pulling. the guard should re-set the disc in the corresponding coach with the help of the pole provided in the cab. The following articles shall comprise the prescribed equipment of guard working on DMU train, which he must carry with him at all time while performing duty - 3. 4. S. 6. 7. 8. 9. 10

11. One hand signal lamp (tri-colour torch 4 dry cell) One set of flags (one green 2 red). Two flag sticks of aluminium telescopic pipes. One First Aid Box. One case containing 10 detonators. One whistle One carriage key. One watch. One working Time Table. One Rule Book One Guard's Memo Book. The following articles shall comprise personal equipment of motorman working on DMU train which he must carry with him at all times while performing duty:- 3. 4. S. 6. 7

8. Note Book Trouble shooting diary Working Time Table. Carriage Key Hand Signal flags (red & Green with sticks) Hand Signal Lamp (tri-colour Torch) One case containing 10 detonators. Rule Book. Duster 317 2 each (1) qrerr; zr (ö 34R.34«.41. 1.02 (u) q.ft I (2) (ö 34m. qq) 34R.34«.41. 341x.34R.41. &/'fi mtl, aa, * *'41tr I (3) (S) 318 Appendix - 'D' RULES FOR MOVEMENT OF RAIL-CUM-ROAD VEHICLES APPENDIX - 'D' RULES FOR MOVEMENT OF RAIL-CUM-ROAD VEHICLES GENERAL - (1) (2) (3) (a) (b) (c) (d) (f) (g) Rail-cum Road Vehicle herein after referred as RRV is a self propelled vehicle, which can run on railway track as well as on road. It shall be treated as a "Train" as defined in GR 1.02 (58) for the purpose of working on open line. Rail cum Road vehicle is meant for track maintenance works and may also be used for OHE and S&T works as and when essential. RRV will normally run on road, and would run on track only on the section where some maintenance work is required to be done. Its running on track shall always be under BLOCK protection only. For movement of RRV in Track circuited area, a certificate will be issued by SEE/Signal, which shall be valid for 06 months. Advance weekly programme shall be finalized at the level of Sr. DOM and Sr. DEN/Branch Officer concerned so that section supervisor/Chief Controller/Station Master is aware of such operating and maintenance schedule. RRV shall not be moved between running lines siding/stabling line (s) without the written permission of SM on duty in the form of shunting order. On double or Multiple Line Section RRV shall, invariably run on proper line. i.e. right line. INCHARGE OF RRV - (a) (b) (c) The RRV shall run under the charge of the SSE/JE (P. way) hereafter called as 'Incharge' who shall be personally responsible for all safety aspects regarding the movement of the RRV and shall be responsible for taking block, clearing the blocks, protection of line while the RRV is working as train and also when it is "on tracked" or "offtracked". After 'off tracking' the Incharge shall be personally responsible to position RRV away from the track so that it does not foul/obstruct any of the lines. As an assurance to the fact that no line is fouling, incharge will issue his private number to the Station Master concerned making entry in the gate register to this effect. The Loco Pilot of the RRV, hereafter to be called the RRV Operator, and other staff on RRV shall work under direct supervision of said Incharge. The Incharge will ensure that the RRV

Operator is sober and not in the state of intoxication. COMPETENCY OF THE RRV OPERATOR - (a) (b) (c) (d) The Operator of RRV shall be fit in A-3 medical category. While on duty, he shall have with him, nvo pairs of such spectacles, as he is required to wear under medical rules. For transportation training the RRV Operator shall under go training/refresher at Zonal Railway Training Institute and Principal ZRTI will issue competency certificate. The competency/refresher cefiificate shall be valid for 3 year. On successful completion of training, he shall be examined and if found competent, shall be issued a competency certificate by the concemed Sr. DEN and Sr. DOM. The certificate shall be kept in pasonal custody of the Operator while on duty and be produced as and when required by the inspecting officials. The operator shall also possess valid "Heavy vehicle Driving License" for road vehicles issued by State Road Transport Officer. the Incharge of RRV shall ensure that driving license of road vehicle issued to operator of RRV is renewed from time to time. as may be required under the Competency records (updated) ofOperator etc shall be maintained by the Incharge. 318 (u) 'u«.ål. qlé' 11. 111. lv. v. VII. VIII. x. XII. XIII. XIV. XVI. zi7-2 (s) (i) qq34«.34R.41. (il) 34R.34«.41. -rlT4 I (iii) (iv) 34R.34«.41. ül.*.uq. (71) (El) 34R.34N.41. (G) -fr-d *7111 (q) 8.01 (ii) 34R3«.ål. 34R.34R.41. a, 319 Appendix - 'D' RULES FOR MOVEMENT OF RAIL-CUM-ROAD VEHICLES (4) (5) SAFETY EQUIPMENTS - (a) (b) (c) Auto flasher lights (like locomotives) shall be provided on both sides ofRRV. RRV shall have a LV board and Flashing Tail Lamp, which shall be displayed in the rear duling movement. The Operator and Incharge of RRV shall be responsible for ensuring that the essential safety equipments are complete and available in RRV in working order as listed below- 11. 111. V. VI. VII. VIII IX. X. XI. XII. XIII. XIV. xv. XVI. Two Red one green H.S. Flag. Two Tri-C010urH.S. Lamps. Two Chains with pad locks. Two Clamps with pad locks. Ten fog signals. One Watch Copy ofthe Working Time Table ofthe section where RRV is working. G & SR book with update with amendment slips. One four cell flasher light torch. One petromax lamp. One portable field telephone. One wa Ikie-talkie. Two banner flags. One firstAid Box. Skids - 02 Fire extinguisher - 02 RULES FOR OPERATION - (1) (11) When the RRV is to be moved from one Block Station to another Block Station with conventional (mechanical) interlocking (a) (b) (c) (d) (e) (0 The Incharge of RRV shall give the requisition in writing. in duplicate, to the SM for the movement ofRRV from one block Station to an adjoining Block Station. On receipt ofthe requisition SM Shall - 11. 111. iv. Obtain the permission of Section Controller. Obtain Line Clear and issue Proper Authority to Proceed, take 'Off dispatch signals treating RRV at par with a Train. Return one copy of the requisition, and issue Caution order for the section, to the RRV Operator. Give TES signal to the SM ofreceiving station as soon as the RRV leaves the station and also advise the Section Controller. The SM at the other end of the Block section shall receive the RRV by mking 'Off Reception signals. On arrival of RRV, the Incharge of RRV shall issue a certificate for the clearance of the Block Section to the Station Master of the receiving Station. After the receipt of this celtificate, the Station Master shall close the block section. He shall also inform the Section Control. Rules underGR 8.01 shall be followed. Movement of RRV on section/stations with track circuiting/block proving with axle counter/RRL!Panel interlocking (Absolute or Automatic Block System). (a) (b) When RRV is to be dispatched from or received at a station with track circuiting/block proving axle counter/RRVPanel interlocking, such movement in the block section would be done on PLC. The line on which the RRV is stabled at a station would be treated as under block and clearance ofsuch line would be ensured by the SM through physical verification. 319 (iii) 341x.34R.41. 34R.34«.ål. '34Ä I (iii) (iv) R.itr. W' (S) (q) (.7) Otr (31) Al*z iz 320 Appendix - 'D' RULES FOR MOVEMENT OF RAIL-CUM-ROAD VEHICLES (III) Instruction for "Inten•nediate On Tracking and Off Tracking" (a) (b) (c) (d) (f) (g) (h) (i) (j) (k) (1) RRV has an unique facility of 'On Tracking" and 'Off Tracking" ofthe vehicle. 'On tracking" or 'Off tracking" of RRV in the block section shall be done under block protection only from a manned level crossing gate provided with telephone. This operation must be completed within 1 0 minutes peliod as far as possible. When RRV is to be "On Tracked" in the block section - The Incharge ofRRV shall give in advance a written requisition with message No. to the Station Master of the station connected to the gate with telephone from which RRV is to be 'on tracked' with following particulars. (i) The level crossing gate No. , Km at which he desires to 'On track' the RRV. (ii) Approximate time for 'ON' tracking the RRV (iii) Approximate duration ofblock. (iv) Level crossing gate No. and Km at which RRV shall Off Track' or the station at which the RRV will clear the block section. Note - If there is no level crossing gate in the block section where the site of work is situated 'On Tracking' shall be done at the level crossing of Block section in rear and accordingly block shall be taken by the Incharge RRV at such Level Crossing of

Block section in rear and accordingly block shall be taken by the Incharge RRV at such Level Crossing from the Station in advance. On arrival at the said Block station, the Block shall be cleared. And, for entering in the next required Block Section, fresh block shall be obtained by the Incharge. As soon as the RRV is ready for 'On Tracking' at the nominated manned level crossing provided with telephone. the Incharge of RRV shall request for block (for the purpose of 'On Tracking') on Gate telephone to the SM with reference to his message number of the requisition for block and also give the private number from the Gateman's private number sheet. Such entry shall be made by the Incharge personally in the Gate Log Register of the Level Crossing concerned. On duty Station Master shall inform the Section Controller. According to the train movement Section Controller shall grant permission with his private number to impose the block. After obtaining the permission of the block from the Section Controller the Station Master shall inform the SM at the other end of the Block Section under exchange of Private numbers. There after the Station Master on duty shall give the private number to Incharge of RRV for the imposition of Block. Where the gate is connected with a cabin, such exchange of information would be between the Incharge and the Cabinman/Cabin Master/Cabin ASM, who in turn shall exchange information with the SM and shall act on the instruction of the SM under exchange of private number. On double line section both station Masters shall also ensure that no train is in movement from either direction. The Station Master will inform the Incharge/RRV quoting his private number for imposition of Block nominating the line on which the RRV should be 'On tracked' (as per the due direction of the traffic). On receipt of such permission supported with the private number of the Station Master, the Incharge of RRV shall start the process of On tracking of the RRV. On double line, he shall ensure that the RRV is On Tracked on the line as per the due direction of train in accordance with Station Master's permission. After the RRV has been 'On Tracked'. the Incharge of RRV shall inform the SM with exchange of private number and entry in gate log register that the RRV has been 'On tracked' and on double line that the adjacent line is clear so that train movement can be started on other direction. During the 'ON' tracking procedure. the flasher light shall be switched 'ON'. On receipt of such information and exchange of private number regarding On Tracking on double line sections, Station Master will resume normal movement on the other line. As soon as the Block is granted, the on duty SM shall take the precautions as observed while granting traffic blocks and - (i) On token less single line section, Station Master shall extract the SH key. 320 (g) (iii) (T) (u) (q) (F) ya-lli (€?F a-TCFTT a-T17F-RT7 Adi '3-filb '316 / -e--u-d / (T) (u) zrr 321 Appendix - 'D (ii) (iii) (iv) RULES FOR MOVEMENT OF RAIL-CUM-ROAD VEHICLES On single line Token territory, Station Master shall extract the token and keep it till the removal of block. On double line where SGE Lock and Block instruments are provided, the Station Masters or both stations at either end shall turn the commutator directly to TOL position till the block has been removed. However, commutator of wrong line can be brought to line closed position provided Incharge of RRV has given the clearance of adjacent line. On double line where block proving Axle counter instrument are provided. the Station Masters of both stations at either end shall take out LCB Key. The LCB key shall be kept with SM till the block has been removed. However the LCB key of wrong line can be put in the block instrument provided SSE/JE (P. Way) incharge or RRV has given the clearance of adjacent line. (m) When RRV is to be 'Off Tracked' in block section - (a) (b) (c) (d) (e) (D) (g) (h) Before off tracking or RRV, Incharge RRV shall advise the Station Master concern for off tracking and give his private number, to the SM from the nominated (as per the requisition given at the station) level crossing gate telephone. Where the gate is connected with a cabin. such exchange of information would be between the Incharge RRV and the Cabinman/Cabin Master/Cabin SM. who in turn shall exchange information with the SM and shall act on the instructions of the Station Master under exchange of private numbers. On double line section Station Master shall block the adjacent line also before permitting the RRV to be 'off tracked'. After ensuring that no train is in movement on other direction on double line section Station Master shall give his private number to the incharge/RRV confirming his permission to 'offtrack' the RRV. During offtracking procedure the flasher lights shall also be switched on. As soon as the RRV is off tracked' and comes out of level crossing gate and not fouling adjacent track. Incharge RRV shall give the private number to concerned Station Master for clearance of track as well as for removal of block. Station Master will inform the section controller and adjoining station of the block section under exchange of private numbers regarding the clearance of the block. If the gate telephone of the nominated gate where the RRV is to be 'Off Tracked has become defective, the RRV shall be "Off tracked' at the next manned level crossing gate equipped with telephone. During the "On

tracking" and "Off tracking" the position of the Gates would be treated as open and precautions/procedure for opening of gates as per rules will be followed by the Gateman. After 'Offtracking', first train may be worked on PLC. 'On Tracking'/Offtracking' in station section - (a) (b) (c) (e) When RRV is to be 'On Tracked' or Off Tracked' at a level crossing gate within station section, the same shall be done only at manned gate provided with telephone. Such 'On Tracking/off Tracking' Shall always be done with prior written permission of the SM. "On Tracking" shall be done only on the nominated line, which shall be treated as blocked once the "On tracking" operation has started. The gate shall be opened for 'On Tracking/off tracking' after fulfilling all the conditions for opening of the gate. Incharge shall make entries in the Cabin Log Register regarding "On Tracking/OffTracking" and confirmation that adjacent lines are clear of obstruction. 321 (6) (7) (T) (O) (u) 2 3 4 5 6 7 8 9 10 11 12 13 6.03 g•zi a-IN. 322 Appendix - 'D RULES FOR MOVEMENT OF RAIL-CUM-ROAD VEHICLES (f) (g) The gateman/Cabinman/Cabin Master/Cabin SM shall close the gate only after the Incharge has confirmed in the cabin log register that the RRV has been "Off Tracked" and all lines are free of obstructions that the RRV has been "On tracked" on the nominated line (line No. to be entered) and that adjacent lines are free of obstruction. Station Master shall resume normal operation after this has been confirmed by the Cabinman/ Gateman/Cabin Master/Cabin SM under exchange of private number. (6) (7) FAILURES AND ACCIDENTS - (a) (b) (c) (a) (b) (c) Accidents involving RRV shall be treated as train accidents under the appropriate class and action should be taken as per rules in force. In case of failure of RRV in block section, the incharge may decide to push the disabled RRV to the nearest station or level crossing gate in consultation with SM concerned provided the brake power is in good condition. In the event of break down, RRV shall be protected under GR 6.03 & S.R. there under. During total interruption of communications on single line the RRV may be sent to open communication for establishing contact with the Station Master of the block station at the other end of the affected block section. Rail-cum-Road vehicle may be utilized as a relief train during accidents. The Station Master, where RRV is located shall advise the Incharge of the RRV at the time of accident/Total interruption of communication. The location of Rail-cum-Road vehicles on NCR are given below :- Agra Division Agra Kosikalan 4 5 7 8 10 11 13 Allahabad Division Chunar Jn Mirzapur Bhanvari Khaga Fatehpur Kanpur Central-2 Phaphund Etawah Shikohabad Jn Tundia Jn Hathras Jn Aligarh Jn Khurja Jn Jhansi Division Jhansi Lalitpur 322 2 g) (q) (g) 2. 2. 3. 4. 5. 6. 7. 8. *--ZIFilU 200 1 \$1 s:rrq g-qlfi-a q-lâ 323 di Elle Appendix - 'E GHAT RULES APPENDIX - 'E' GHAT RULES SRG 1. Ghat Rules - The subsidiary Rules for working on sections having steep gradients may be referred to as Ghat Rules and the sections to which they apply as Ghat Sections. SRG 2. (a) (b) (c) (e) (D These Rules apply to the following sections of North Central Railway :- Allahabad Division Note : - Chunar - Chopan (i) Divisional Railway Manager shall issue special instructions for local features prevailing on Ghat Sections over their Divisions. (ii) Divisions shall embody special instructions in SWRs/ working instructions for working trains sections having short grades steeper than 1 in 200. These instructions should be consistent with general & subsidiary/Ghat Rules. All other subsidiary Rules apply to the working of Ghat Sections, except those modified or superseded by the Ghat Rules. Certificate of Competency - The under noted staff, who are directly concerned with train movements, must qualify and shall not assume duties on graded sections until they are granted a certificate of competency by their executive officers. 2. 3. 4. S. 6. 7

8. Loco Pilots/Asstt. Loco Pilots. Shunters Train controllers Station Masters and yard Masters Guards Shunting Jamadars/shunting Master Leven-nan/Cabinman and Cabin Masters Pointsmen/Porters/Shuntmen The certificate of competency shall be valid for a period of three years only. A shunter or a Loco Pilot, before being allowed to learn road on Ghat Sections, should qualify in Ghat Rules. A Loco Pilot on having learnt the Ghat Section will not be allowed to work independently, unless a Loco Inspector after travelling with him, declares the Loco Pilot conversant with the section. Certificate of Competency- Asstt. Operating Manager are authorised to examine, issue and renew certificates of competency in the following form. North Central Railway I, The undersigned, hereby certify that Sri..... has passed the examination in Subsidiary Rules for working sections with steep gradient contained in unified Ghat Rules for the North Central Railway. (Designation of Divl. Officer) NOTE : Sr. Divisional Operations Manager may nominate Senior subordinates to examine, issue and renew certificate of competency in respect of class IV staff. 323 q. (ii) (iii) vrra•r - 5 58 4.8 5 8 qßzrr 4.8 47 50 53 (ii) 324 47 Appendix - 'E GHAT RULES BRAKES SRG 3. Vacuum/Air Brake - Rules on the Vacuum/Air Brake are to be read in conjunction with other extent Vacuum/Air Brake Rules. SRG 4. Engine Brakes - Every engine working on Ghat Section must be fitted

with the automatic vacuum/air brake in good working order and must be itself braked either by the vacuum brake or air brake. The hand brake of all engines must be in proper working order. SRG S. Vehicle Brakes - Train running on Ghat Section must be vacuum/air braked throughout. SRG 6. Hand Brakes - All goods vehicles on a train except powder vans must be fitted with a screw brake or hand lever brake capable of being fastened down. SRG 7. Examination of Train before Staffing - The train examiner, Loco Pilot and Guard must test the vacuum/Air brake of each train before its departure according to the Special instructions laid down in this behalf. SRG 8. Minimum Vacuum/Air Pressure on the Engine and in Rear Brake van - (a) (b) Minimum air pressure in engine and rear brake van of Passenger and Goods trains at the time of starting a train. (i) (ii) (iii) Particulars On Mail, Express and Passenger train On Goods train Kg/cm² with load up to 40 air braked 8 wheeler wagons. On goods trains with more than 40 air braked 8 wheeler wagons. On Engine 6 Kg/Cm² S Kg/Cm² 5 Kg/Cm² S Kg/Cm² On rear brake van 5.8 Kg/Cm² 4.8 Kg./Cm² 4.8 Kg/Cm² 4.7 Kg./Cm² Standardization of vacuum level in engine and brake van of passenger and goods trains :- (i) Minimum level or vacuum in engine and brake van :- Type of Service WE Passenger Goods Engine 53 50 46 Brake van 47 44 38 Average so 47 42 (ii) Whenever a coaching train runs initially on passenger and subsequently on express services, vacuum levels on such rakes will be maintained as those prescribed on M/E trains. 324 g) a-f i crrzra•est di I q-lå dii uT / qzrq I crrzra•ei QIN-AIR AIR-QIN R-2.fi (dIGTT) q*i) a-Tli117 R-2.fi / qzrq 325 Appendix - 'E GHAT RULES RESPONSIBILITY OF TRAIN STAFF AS REGARDS BRAKES SRG9. Loco Pilot to t-y Vacuum/Air Brakes - Loco Pilot must satisfy himself that the vacuum/Air brake is in proper working order through out the train before leaving the Starting station and at each station where any vehicle is attached or detached and also before descending steep gradients. He must also satisfy himself that he has enough brake power before passing the outer signal of any station at which the train has to be stopped. SRG 10. Defective Vehicles - If a Loco Pilot finds the vacuum/Air brake on his train defective. the vehicle with defective vacuum/Air brake if not immediately repairable must be detached from the train. Under no circumstances, whatsoever may/D.V. cylinder be blanked off. He must also refuse to attach any vehicle with a defective brake, but he must give his reasons in writing to the Station Master if asked to do so. SRG 11. Guard to see Vacuum/Air pressure Gauge - The Guard in charge before giving the signal to start must satisfy himself that the required vacuum/Air pressure is registered on the gauge in his brake van. If the required Vacuum/Air pressure is not registered he must inform the Loco Pilot. If the Loco Pilot is not able to create the required vacuum/Air pressure as required on the gauge in the rear brake van, the train must not start until the defect has been remedied by detaching defective vehicles or otherwise. The signal to start given by the Guard Incharge is an indication to the Loco Pilot that the gauge in the rear brake van shows the required vacuum/Air pressure. SRG 12. Descending (a) (b) In controlling trains on descending long and heavy grades, Loco Pilots are cautioned against allowing the vacuum above the pistons to fall too low which usually happens unless periodically restored by blowing up with the large ejector. The destruction of vacuum above the pistons. owing to leakage. is always taking place during the continuous application of the brake while descending long grades, and it is of the utmost importance that the vacuum above pistons should be restored by the use of large ejector but before using the large ejector the speed must be reduced to allow for increase of speed which will take place when large ejector release to brakes. The large ejector must be used in several short periods instead of one long period for the above purpose. Advantage should be taken of long curves or starts after stops at catch sidings to recreate the vacuum above the pistons. Care must be taken that the speed during the release of the brakes is not allowed to increase beyond a safe limit. If the speed is allowed to get beyond the certain point, the brakes will not pull the train up. Loco Pilots must note, that reading of vacuum chamber needle on the engine gives no indication also the vacuum above the pistons throughout the trains. SRG 13. Control of Vacuum/Air Brake on Running Trains- (a) (b) When a second leading engine is employed to pull a train (and not a banking engine pushing it). The Loco Pilot of the first leading engine will be held responsible for the working of the automatic vacuum/Air brake. The Loco Pilot of the second leading engine must, however, in case of emergency, assist in stopping or reducing the speed of the train by applying the air and hand brakes as may be required but he must not maintain or recreate vacuum/air pressure. When an additional engine or engines are employed to push a train, the Loco Pilots thereof must not interfere with the working of the vacuum/Air brake. which shall be under the control of the leading engine Loco Pilot. As laid down in para (a). except in case of a run back. when the banking engine Loco Pilot automatically becomes the leading Loco Pilot. 325 (ii) (ii) I crrzrere ga: // gzrq crrzrere /

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Note - These rules are to avoid the serious danger, which would arise if the Guard or Loco Pilots of additional engines were to attempt to put the brake on, while the leading Loco Pilot was trying to recreate vacuum. SRG 14. Stopping at stations- (a) (b) Loco Pilots must enter stopping stations at such a speed that it would be possible to stop the train at proper place. The vacuum/Air brake must be applied by the Loco Pilot in stopping train or reducing its speed. Guards must watch the speed of the train and assist Loco Pilots by the use of their hand brakes, if necessary. They may only apply the vacuum/Air brake when it is necessary to make an emergency stop. WORKING OF TRAINS SRG 15. Sand Boxes - Dry, sharp sand not mixed with clay, is essential on all Ghat sections and Loco Pilots must see that their sand boxes are full and sanding gear is in working order. SRG 16. Speed Restriction - The speed of trains laid down in the working Time Table must be rigidly adhered to. In no circumstance whatsoever may time be made up on descending grades steeper than 1 in 50. SRG 17. Starting a train - When a train more than one engine is ready to start. the leading engine must whistle first. All being ready. the rear engine will also give whistle as a signal to all other engine starting from the rear. SRG 18. Admission of Train in Station - When two trains are approaching a station from opposite directions and cannot be received without one of them being stopped. the descending train must be stopped at the first stop signal and the ascending train given preference provided that the descending train is not stopped in a tunnel or on a bridge. SRG 19. (ii) If for any reason, a train is brought to a stand for a period longer than 15 minutes, the hand brakes of the locomotive shall be applied in addition to the application of vacuum/Air Brakes etc. If such stoppage happens to be, of train having vehicles with roller bearings on a section with a grade of 1 in 150 and steeper, and train having vehicles other than roller bearings on a section with a grade 1 in 100 and steeper, the following additional precautions shall be taken. On trains carrying the passengers, the Guard shall apply hand brakes in the brakevan and wedges or scotch blocks as the case may be to the wheels of two vehicles nearer to the descending steep incline. On goods trains, hand brakes of at least one third of the wagons in the train or IO wagons behind the engine and S wagons inside the brakevan. whichever is more. shall be pinned down, in addition to the application of Guard's hand brake in the brakevan. When the train is expected to start, proper vacuum/air pressure must be recreated/recharged, as the case may be, and the vacuum brake/air brake must be applied before the wedges or scotch blocks removed and/or hand brakes released. Thereafter the vacuum/air brakes may be released to start the train. 326 (iii) crgrere. (iv) 1 1 aie I met GTFO I arra I GTFT 50 1 - 50 1 GTFT I 50 1 a--TFTTT \$1 a-TFTTT t, (iii) (iv) (v) 15 8 a•rerr I : R-2.fi 327 Appendix - 'E' GHAT RULES (iii) The Loco Pilot himself or, on his direction, the Assistant Loco Pilot. shall be responsible for application and release of the hand brakes of wagons behind the engine. The Guard shall be responsible for similar action in regard to the wagons inside the brake van. (iv) Considering the condition of brake power on train, the Loco Pilot may take additional precautions, during the stoppage of his train on section flatter than 1 in 150 or 1 in 100 to avoid run away. SRG 20. Failure of the Vacuum/Air Brakes between Stations - If the vacuum/Air brake becomes defective while the train is running between stations so that it is dangerous to proceed, the Loco Pilot must bring the train to a stand and take it in portions to the next station. each portion being not more than he can safely control. The vehicles left behind will be secured. The Guard will remain with the portion of the train left behind and protect it. BALLAST TRAINS SRG 21. Brake of Ballast Trains - Each vehicle of a ballast train, in addition to being provided with the vacuum/air brake must be provided with an efficient hand brake capable of being fastened down. SRG 22. Application of Brakes when Stopping Ballast Train on a Grade- On stopping a ballast train on a grade, the Loco Pilot must give long blast of whistle to attract the attention of the Guard, and thereafter give three sharp blasts for the application of all hand brakes. The brakes must not be released until the Loco Pilot has signalled for this by giving two sharp blasts. SRG 23. Position of Ballast train engine when standing on a Grade 1 in 50 or steeper - Before entering a section on which a

ballast train is required to stand on a grade of 1 in 50 or steeper the engine must be attached so that when the train is standing, the engine is at the down hill end of the train. SRG 24. Vehicle not to be detached from a Ballast Train where Grades are 1 in 50 or steeper - Vehicle must not be detached from ballast train on a Grade of 1 in 50 or steeper. The engine itself may be detached with the Guard's permission after he has seen that the hand brakes on each vehicle are properly applied. SRG 25. Ballast Train not to work at Night - Ballast Train must not work at night except in an emergency. SRG 26. Restrictions and condition for pushing Ballast trains - Ballast trains are not allowed to be pushed outside station limits over descending gradients. Such trains may be pushed provided that - (i) The portion of the line over which the train will run is on a continuous ascending grade. The speed of the train must not exceed 15 kms per hour on the straight line and 8 kms per hour on the turn out if the leading vehicle is a brakevan and 8 kms per hour, if the leading vehicle is not a brakevan. The Guard must travel in the leading brakevan or the leading vehicle and must exhibit hand signals to the Loco Pilot. The train crew must keep a good lookout especially in the direction in which the train is moving and must be prepared to stop short of any obstruction, and When approaching turn-outs, the Guard must stop the train and satisfy himself that the points are correctly set and that all non-interlocked facing points are locked and manned. Note - This rule will also apply when the engine is placed somewhat in the middle of the train in an emergency or in exceptional circumstances. 327 (ii) (g) (ii) (iii) (iv) (v) (u) "34Tv," di ag (ii) I zrr g•rq ".3#" - \$ 328 Appendix - 'E' GHAT RULES SAFETY SIDING SRG 27. Definition - There are two kinds of safety siding called "Catch" and "Slip" siding. (i) Catch sidings are placed above stations approached by a descending grade to protect them from runaway vehicles or trains. (ii) Slip sidings are placed below station on a grade to prevent vehicles escaping from the station yard. SRG 28. Catch Siding- (a) (b) (c) The points of 'Catch' siding must always be set and locked for the 'Catch' siding except when a train is to be received or despatched. 'Catch' siding points should not be set for the main line for the reception of an approaching train unless it has first been brought to a dead stop at the first stop signal and the Loco Pilot whistles, except when the following conditions are fulfilled. 11. 111. iv. v. The line on which the train is to be received is clear and the train is to be received on the main line. The points leading to the catch siding as well as the points required for a run through train are set for the main line immediately after granting line clear to the block station in rear. Line clear has been obtained for the block section ahead. The gradients in the block section ahead are such that the train can be brought under control easily. Warning signal in the lower quadrant signalling territory is not taken 'Off and distant signal in multiple aspect signalling territory is kept at 'caution' position. In the case of an outgoing train, the 'Catch' siding points must not be set for the main line unless permission to approach has been received from the station in advance. (i) (ii) The points must be reset and locked for the 'Catch' siding as soon as the last vehicle of the train has passed over them. Hand Signal will be exhibited at all 'Catch' siding points. The points shall be fitted with point indicator showing red when the points are set for catch siding and white when they are set for the main line (Except when spring points are provided). SRG 29. Locking and Unlocking the Points of the Slip Sidings - Except for shunting, the points of slip sidings must be normally locked for the siding and must only be unlocked and set for the main line immediately before taking off the signal for the admission of an ascending train or, in the case of descending train, after permission to approach has been received from the station in advance. If the authority to proceed, for a descending train which is booked to run through the station, has not been received, the descending train must be first brought to a dead stop at the first stop signal before the 'Home' and/or 'Outer' signals are taken off for its reception. In the case of a descending train. The slip siding points may only be unlocked and set for the main line, when permission to approach has been received from the station in advance. The points must be reset for the slip siding as soon as the last vehicle of a train has passed over them. Note - (a) (b) (c) At certain slip sidings, spring points have been provided. These are normally unlocked and are set for the siding. An ascending train runs through them while entering the station. These points need only be locked for despatch of a descending train and this should be done only after permission to approach has been obtained from block station in advance. Point indicator at Slip sidings - Point indicators showing red, when the points are normally set for the siding and white when set for the main line, shall be provided at all slip siding points. (Except where spring points are provided). The duty of locking and unlocking "catch" and "slip" siding points may be performed only by the pointsman/Polyter in whose special charge they have been placed under the orders of the Station Master. 328 (u) (g) (u) Elle (1 31 41@) crv:q g•zi \$1 800 \$1 a-fi I GGi qi4 (ii) 4.5 I (iii) 18 (ii) (iii) 18.00 06.00 ülé \$1 329 Appendix - 'E' SRG 30. Orders for Patrolling - GHAT

RULES PATROLLING ON GHAT SECTIONS (a) (b) (c) (d) (e) The Sr. Divisional Engineer will decide and issue order regarding the Sections to be patrolled and the date on which patrolling is to begin and stop. At Chunar-Chopan Ghat section the Sr. Divisional Engineers will decide the question whether regular night patrolling is to be introduced during the monsoon period i.e. 1st June to 31st October, But the exact date of commencement and termination will be decided by Assistant Engineer of the section. Patrolling should not be started until the monsoon actually arrives. Vulnerable points: All the vulnerable points will be watched by static patrols, all such points being carefully selected by the Sr. Divisional Engineer. All vulnerable points (including vulnerable bridges and locations, which are subject to slips, rock-falls, water falls etc.) will be provided with sign boards fixed at a distance of 800 meters on either side of the vulnerable points. The fixing of these boards will be arranged by Divisional Engineers immediately before the monsoon and removal immediately after the monsoon. The Railway track and bridges will be patrolled during monsoons, stormy weather, heavy snowing or in the event of any other emergency which may interfere with the safe running of trains. Rains during the winter months also may be a source of danger to the line and therefore, patrolling should also be introduced on such sections where necessary' during the winter rains. Gang Patrol - In the event of a sudden storm and emergency during day and night, the Mate will on his own initiative, organise patrolling over the length affected, independent of any other patrolling being in operation. This patrol will confine its inspection to known points of danger such as cuttings, culverts and bridges likely to scour and their approaches, embankments likely to be affected and those places which are liable to be in danger on account of likely breach in railway affecting works such as banks and dams. In the absence of the mate, the keyman will organise this patrol. Half the gang will go out during the day and half during the night. SRG 31. Patrol Chans - Patrol chans will be prepared by the Divisional Engineer after the publication of the (a) (b) (c) time table to come into force from 1st April taking into consideration the following - (i) As far as possible, each block section will be treated as a unit of length and will be divided into approximately equal beats; (ii) The beat of patrolmen will not exceed 4.5 KMS (iii) The patrolman will go out on his beat in accordance with chart, Patrol charts will be scrutinised by JE and SE (P.Way) regularly and by ADENs and DENs frequently when on their inspection rounds. A Patrolman shall not be required to walk more than 18 KMS. In drawing up patrol charts the Divisional Engineers will arrange for maximum 'Protection' possible for all trains carrying passenger between the hours of sunset and sunrise. This protection can be given by organising patrolling as specified above and ensuring that - (i) The patrolmen meet at the end of their beats before a train (or the first train of a group of trains) enters the section, or (ii) The patrolmen have met and are on their way back when other trains or the group of trains enter the section, or (iii) The patrolmen are not back at the end of their beats a long time before the train enters the section. The patrol charts will show all trains between 18 hours and 6 hours with their time of entering and clearing the section so that the charts will show at a glance how the trains have been covered. 329 (q) (g) (q) (8) (iii) (iv) ulé GINT, (ii) I fre \$1 (\$GfifZIN7T) 3-+441 G 32. uRui Rui-é a-rra•r a-T17T R-2.fi *TIT- OT) €1/ 409 1 GGi 330 Appendix - 'E' GHAT RULES (f) (g) After drawing out the patrol charts, each chart will be examined by the Divisional Engineer to see what cover has been given to each train. If, on any block section, which is known to be giving trouble the interval between the patrol and the train is too long, an intermediate patrol will be introduced to reduce the interval. Copies of patrol charts prepared by Divisional Engineers for different sections will be distributed to the Assistant Engineers, SE/JE and copy of the relevant portion of the chart will be issued to each Station Master with instructions - (i) To record time of arrival and departure of Patrolmen in the patrol book and initial these entries, and (ii) To record time of arrival and departure of patrolmen and their names in the station diary. Copies of patrol chans together with a statement showing places where Loco Pilots, when running to time, may expect to pass patrolmen, will be sent to the Shed Foreman by the Divisional Engineer. Loco Pilots will proceed cautiously. If Patrolmen are not found at the expected kilometrages report the matter to the Station Master at the next station who will take necessary action and advise all concerned. A copy of the patrol charts for patrolling block sections, list of stationary watchmen at vulnerable points and mobile patrols between stations will be sent to the office of the General Manager (Engineering) in the month of December every year. Officers and Supervisors of the Engineering and Operating Departments, during inspections of station should check station diaries to ensure that SMS record correctly the time of arrival and departure of patrolmen. SRG 32. Patrol Books (ii) (iii) (iv) Patrol Book in a tin case, containing sufficient number of pages will be supplied to each patrolman. The books will be serially numbered to

conespond with the number of the patrol on each section. The first page of the book will contain the name of the patrolman, kilometrage of the patrol section and its number. The remaining pages will contain columns far date, station. times of arrival and departure and signatures of Station Master on duty. Disposal of Patrol Book - JE/SE (P.way) will take over the patrol books from the patrolmen after sunrise and will tear out the carbon copies and send them by the first available train to the Assistant Divisional Engineer for his information and record. Reporting for Duty - Patrolmen will report at the time shown in the chart for duty to Station Master of the station at which they are headquartered. If any of the patrolmen fails to report for duty. the Station Master must immediately send a message to the nearest JE/SE, so that arrangements maybe made at once for another man. When a Patrolman, who is due to arrive at a station does not turn up at the Nominated time or does not turn up at all, the Station Master on duty will take following action : (a) (b) (c) Stop run through trains proceeding into the block section. Advise the Station Master at the other end of the Section to take similar action and also advise the Controller, and Issue Caution Order to all trains proceeding into the block section advising the Loco Pilot to remain cautious and specify a speed restriction of 40 KMPH during the day and 15 KMPH during the night/poor visibility. Caution Order will be discontinued when the patrolman from either end of the patrol section arrives at the station and ltpolts that all is well. In cases where the patrolman does not tum up at all, the Station Master concerned should initiate action to ascertain the reason therefore.

330 (u) (q) (g) (q) (8) filR (ii) (iv) AltI a-T17F-RT7 I crrzra•est R-2.fi Rth•é 2--2113 a-TER Glü- (i) (iii) (v) (vi) (vii) (viii) (ix) 30 I 15 x 15 \$1 7.5 10 I errg•a - zrr a-VT zrr 331 Appendix - 'E' SRG 33. Duties of Patrolmen- GHAT RULES (a) (b) (c) (d) (e) (D) (g) To walk to and from over the beat in accordance with chart pertaining to his 'Patrol Section' looking for subsidence, slips, signs of erosion, trees blown across the track during storms or any other causes likely to endanger the safety of the line. Bridges and their approaches will be specially watched. The following are some instances when damage to the line may be apprehended - (i) (ii) (iii) (iv) (v) When the flood level reaches danger level at any of the bridges, or if any damage has started at the bridge and its approaches, even before the danger level has been reached; When water seeps through the bank from one side to the other; When any obstruction, such as fallen trees, blocks the waterway of a bridge; When the track shows signs of settlement. To take immediate steps to stop trains when any portion of the line is likely to be rendered unsafe. The patrolman must not allow trains to pass over a bridge or track in case of doubt. When no danger is apprehended to stand on the cess on the left hand side facing the train and exhibit his number plate turning the light of his lamp on to it so that the number can be seen from the passing train, and to blow on his whistle. To obtain signatures of the Station Master on duty at the station concerned for his arrival and depanure and exchange patrol books with adjacent patrolman. To exchange reports as to condition on their beats with adjacent patrolman and stationary watchmen. To heed instruction from Loco Pilots who may report a condition of danger at a kilometrage and proceed to the place indicated and take necessary measures. To post himself at the danger spot in the event of emergency and not to move under any circumstances till relieved by some other gangman. JES and SEs will record date of examining patrolmen in their duties in a patrol book, muster sheet or any other book issued to every patrolman for recording this. Similarly, ADENs on their rounds will examine patrolmen and watchmen in their duties and record the Itsult of the examination in the legisters mentioned. SRG 34. Equipment of Patrolman - Each patrolman and watchman on each SE (P.Way) will be numbered consecutively from one end of the section to the other. Each patrolman and watchman will be provided with the following equipment. (i) (ii) One staff, spiked and with a hook for hanging the hand signal lamp. The staff should fulther be graduated in 30 cms. height in white and black for mking approximate measurements. One number plate 15 cms x 15 Cms. number of patrolmen or watchmen painted with luminous paint in 7.5 cms. size figures (If luminous paint is not readily available, the plate and number will have to be larger). (v) (vi) (vii) (viii) (ix) 1 tin case containing 10 detonators. 1 set of hand-signal flags. I tricolour signal lamp. I three-cell electric torch with a red-cap by night. I box of matches. Whistle. Patrol book in Tin case. SRG 35. Protecting the line - In the event of any portion of the line being breached or otherwise rendered unsafe for traffic, the following procedure will be observed:- In case where two patrolmen are employed - (a) (i) The danger signals will be displayed at once in both directions. 331 (iii) 600 (freg 400 1200 800 fie•g) 10 a-VT 2--2113\$1 3--441 (ii) \$14tFTüV111 (u) (e) (q) 400 800 10—10 (ii) (iii) zrr dii \$1 1 a-TER -e--?IA (iii) R•qté g•rrr @ a-TER 332 Appendix - 'E' GHAT RULES (ii) (iii) The two patrolmen will then proceed in opposite

direction showing danger signals. On reaching a distance of 600 meters from the point of danger, each will clip one fog signal on the rail; they will then proceed to a distance of 1200 meters from the point of danger, where they will clip 3 fog signals at a distance of 400 meters apart; Should the nature of the obstruction be such as to render impossible for either of the patrolmen to get across the gap, as for instance a wash-away with a deep flood or strong current, one of the men will show a danger signal (red lamp or flag as the case may be) and endeavour to stop trains approaching the gap from his side while the other man will proceed, with all haste, towards the station on his side of the gap, fixing fog signals on the way as laid down in item (ii) above. and also informing the mate of the occurrence, if there is any gang-quarter on the way. (b) (c) (d) (e) (D In case where one patrolman is employed - when damage is detected on the line he will - place a red lamp in prominent position to warn a train which may approach from one direction. and run in the opposite direction and clip 1 detonator at 400 metres and 3 detonators at 800 metres from the damaged point; return to the damaged point and protect the other side with detonators similarly; (iii) in the event of it being impossible to get to the other side of the damaged point (as in a wash-away), place the red lamp or flag so that it can be seen from as great a distance as possible by a train approaching from that direction. The patrolman will arrange to send information to the nearest station, or, in case of an impassable obstruction, to the station in the opposite direction reporting the occurrence to the Station Master. He will also send information to the Mate, JE/SE (P. Way). The Station Master will - Stop trains entering the block section, (ii) Advise the Station Master at the other end of the block sections, and (iii) advise the Controller and all concerned. The Mate will proceed with his gang to the kilometrage and ensure proper protection and attend to repairs as necessary'. The first duty of all engineering staff on receipt of the report is to proceed to the site and ensure that the line is protected as described above and then make arrangements for repairing the damage that may have occurred. In the case of suspected damage to a portion of the line, a bridge or its approaches, a through inspection will be carried out testing the track. if necessary, by passing a light engine across. after which trains will be piloted over the threatened zones. These inspections. tests with light engine and piloting of trains will be carried out by engineering official not lower than the rank of an JE. In case of doubt the JE must not allow even a light engine to pass across and must await the arrival of the SE, ADEN, or higher railway officials. SRG 36. Importance of Checks - Proper supervision shall be exercised and frequent checks carried out to ensure that the patrolmen and watchmen are on duty and carry out the tasks assigned to them in an efficient manner. For this purpose the following checks are prescribed - (a) (b) (c) SE and JE will cover their lengths by footplate of engine. trains and by trolley at irregular intervals frequently both by day and night. Assistant Engineers will exercise similar checks over their entire section. The Divisional Engineers will also exercise check during their inspections and examine as many patrolmen as possible in their duties. 332 - 15.3hN t121) \$1 a-fi \$1 \$1TGz rrr GTFIT zrn•r '4181 / 1 (12) 333 Appendix - 'E' GHAT RULES SRG 37. SE (P. Way)'s Certificate - SE (P. Way) will submit certificate by 15th may each year to their Assistant Engineer, copy to Divisional Engineer that they have made arrangements for monsoon patrolling, and watching of vulnerable locations and bridges and that patrolmen and watchmen have been made conversant with their duties and rules for the protection of the line and vulnerable locations in their beats. The SE (P. Way) will also submit to their ADENs lists of the patrolmen and stationary watchmen with beats locations and bridges assigned to each. The SE (P.way) will issue to each individual by name, a certificate stating that he has been examined and is fully conversant with the rules, regulations and duties and also the location of the beat or static posts of duty assigned to him. A duplicate copy of this certificate should be kept on record with the SE (P. Way) in a Register and this copy of the certificate will bear the signatures or thumb impression of the individual concerned. The ADENs and DENs on their rounds will inspect this register and also examine as may as possible of the patrolmen and watchmen in their duties. SHUNTING SRG 38. Loose Shunting - Loose shunting is forbidden, except where specially authorised in the Station Working Rules. SRG 39. Hand Shunting- Hand shunting is forbidden, except where specially authorised in the Station working Rules. SRG 40. Shunting at Stations with Slip Sidings - Shunting is forbidden. unless the slip siding points are set and locked for the slip siding. except when it is absolutely necessary to shunt on the main line. In this case. the engine must be in front and the points must be manned the whole time any shunting is being carried out over them and must be reset for the slip siding every time the engine has returned over them. SRG41. Hand shunting at Stations with Slip Siding - Hand shunting is forbidden, unless the points are set for the slip siding. TROLLIES AND LORRIES SRG 42. Brakes on Trollies -All siding trolleys in use on

grades steeper than 1 in 50 must have two efficient and independent brakes, which must together brake all four wheels. On other Ghat section the trolley need have only one brake capable of braking all the four wheels efficiently. These brakes must be tested before each Journey. SRG 43. Brakes on Lorries - All material lorries working on Ghat sections must have an efficient screw brake operating on all four wheels and also a tail rope, which must always be manned when running downhill. The brake must be tested before each journey. Note - Dip lorries are not allowed to work on Ghat sections. SRG 44. The person in charge of a trolley or lorry is responsible for any accident resulting from a defect in the trolley or lorry, which he might reasonably have been expected to discover. SRG 45. Speed of Lorries- On falling grades the speed of a lorry must not exceed 8 Kms. an hour. SRG 46. Lorry only to run in Blocked Section or on Line Clear - Before lorry is allowed to enter a Block Section, the line must be blocked by the engineering official in charge or line clear must be obtained. Not more than two persons. one brakeman and one helper must travel on the lorry itself the other person would accompany the lorry on foot. SRG 47. Working of Motor and Push Trolleys - The motor trolleys on Ghat section may either be run on line clear or trolley permit in accordance with the instructions made down in S.R. 15.18/1 (14) push trolleys shall however run under precautions mentioned in S.R. 15.18/1 (12) which must be rigidly observed. 333 g) g) R-2. fi zrr zrr gel zrr \$1 R-2. fi fä-q zrrerr <rtl I zrr g•rq géAT g•eT 1 40 1 zrr (ii) — (iii) (?q) zrr 334 Appendix - 'E' SRG 48. Trolley Break Down - GHAT RULES (a) (b) (c) In the event of the break down of a trolley, or its brake gear becoming defective between stations, the official in charge shall have it removed from the line at once. If the break down occurs between stations and the trolley is running on an "Authority to Proceed" or "Trolley Permit" the official in charge shall at once employ the quickest means at his disposal to advise the nearest Station Master in writing that the trolley has been removed from the line, and will RETURN the "Authority to Proceed" or the 'I TROLLEY PERMIT' at the same time. The Station Master receiving the advice shall immediately to the Station Master at the other end of the section "trolley which left yours (or mine) at failed in the Block section and has been removed from the track. private number... . hours has A copy of this message must be recorded in the train registers of line clear enquiry and reply books. Following this, the station towards which the trolley was proceeding or in the case of Neales Token working, the station which receives the Token, shall give the "Train out of Section" signal for the trolley in the usual manner. When trolley has been made fit to run. the official in charge shall notify the nearest Station Master in writing that the trolley is fit to run to the Station to which he wishes to proceed, and shall give the estimated time that will be taken for the journey, and will ask for the "Authority to Proceed" or 'I Trolley Permit'. The Station Master receiving the message will inform station Master at the other end of the block section concerned accordingly and will then give or obtain the permission to proceed to the destination and send "Authority to Proceed" or 'I Trolley Permit' to the Official Incharge. SRG 49. Blocked Section - If a section between two stations on which trolleys may only run on line clear or trolley permit, is blocked by an accident or by the Way & Works Branch. a trolley may be run through the block provided the person Incharge given a message to the Station Master of the stations on each side of the block section stating that he is proceeding through the block and that the block must not be removed until he arrives at the station ahead. Before entering the blocked section. he must get an acknowledgement of his message from both stations. SRG 50. Inspection between Stations- When it is necessary to stop for work between stations, the trolley must be taken off the line and left with Incharge of the trolleyman but if a trolleyman cannot be spared. the trolley may be left after the wheels have been securely chained and padlocked. On grades 1 in 40 and steeper. not more than two inspecting officials and four trolleyman are allowed to travel on a trolley. SECURING OF VEHICLES SRG 51. In Sidings or Dead Ends- (a) (b) (c) The siding or dead end must be provided with either - Scotch Block which must be kept locked across the line when vehicles are standing in the siding, or (ii) Trap points which must be kept locked in the open position when vehicles are standing in the siding, and (iii) All vehicles must be placed inside the traps or scotch blocks and coupled together. All hand brakes must be put hard on, or if they cannot be put hard on the vehicles must be spragged. The vehicles nearest the traps of Scotch Block must be chained, if there are more than three vehicles, one must be chained, out of every three. SRG 52. On Running Lines During Shunting - When there is any risk of vehicles escaping into the block section. All hand brakes must be put hard on, or, if any cannot be put hard on, they must be spragged. 334 a-Tli 117 g) t•zrr 4.48 335 Appendix - 'E' SRG 53. In The Block Section- GHAT RULES (a) (b) (c) Vehicle must not be detached from an engine except in an emergency or as allowed under the rules for ballast trains. In every case where it is decided to detach a

vehicle from an engine, the Loco Pilot must obtain a memo from the Guard. in accordance with G.R. 4.48, which must bear certificate to the effect that the train has been properly secured. The detached vehicles must be secured by putting all hand brakes hard on. Vehicles, the hand brakes of which cannot be put "hard on" must be spragged. SRG 54. Scotchies. Wedges and Chains- Every Guard must carry sufficient number of scotchies or wedges to be able to comply with these rules. 335 Notes

