

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 Maintenance of Line—

Each Inspector of Way or Works shall –

- (a) see that his length of line or works in his charge are efficiently maintained and
- (b) 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 action as may be necessary to prevent accidents.

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.

15.04 Inspection of Permanent Way and Works—

- (1) 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.

- (2) 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 all trains shall be inspected regularly in accordance with special instructions.

S.R.15.04. The Keyman of the Gang shall walk over his length at least once in a day in each direction, examining the permanent way and attending to the tightening or replacement of loose keys or fastenings. If he discovers any dangerous condition, such as a broken rail etc., he shall at once protect the line in accordance with rule 3.62, take such immediate action as necessary and report the matter, without delay, to the Gangmate and nearest Station Master who shall arrange to communicate the same to the PWI concerned.

2. The PWIs shall trolly over their lengths in accordance with the instructions issued by the Engineering Department.

15.05 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

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civil disturbances, the line shall be patrolled in accordance with special instructions.

- (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. For special instructions regarding patrolling of line, see Appendix IV

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 gives permission shall himself be present to superintend such work and shall see that the provisions 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.Engineering works affecting traffic-

1.1 For the purpose of these rules, Engineering works are classified under the following categories:-

1.1.1 Category I - Works of normal routine maintenance, such as lifting and packing, renewals of keys and bolts, isolated renewals of a chair, pot or sleeper, etc.

1.1.2 Category II - Works such as scattered renewals of pots, sleepers, oiling of bolts, greasing of fish plates, painting of bridges or other works necessitating observance of hand signals or 'Stop' or 'Proceed with Caution' signals etc.

1.1.3 Category III - Works involving renewal of rails/sleepers, relaying, temporary diversions, loading / unloading of ballast, re-girdering, welding of rail joints or other works causing interference with traffic.

1.2 Slots for integrated blocks for maintenance, identifying the least crowded time span, have been indicated in the Divisional Working Time Tables. The schedule for traffic blocks required every week for carrying out maintenance works is to be jointly planned by Sr.DOM & Sr.DEN(Co-ord) in previous weekends. All other departments like S&T, Electrical should invariably plan their work coinciding with these corridor blocks. However if safety is endangered, the PWIs can impose emergency caution order for ensuring safety.

1.3 In case of operational exigencies like late running of scheduled express/passenger trains / accidents / bunching etc., the block timings can be modified and advised to Engineering control in advance in the morning hours so as to enable them to plan revised utilisation of blocks accordingly.

1.4 SCOR will advise the Station Masters on either side who in turn will advise in charge of the work about the commencement of the line block and the last train after the departure of which the line block will commence. In charge of the work shall adhere to block timings, complete all preliminary works and ensure completion of maintenance work strictly within the time as advised to them by the Station Masters through the memo, while granting the line block.

1.5.1. Engineering works listed under 1.1.1 (Category I) No special precautions are necessary and no advice need be given to any operating official.

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1.5.2 Engineering works listed under 1.1.2. (Category II) SCOR and Station Master shall arrange to issue suitable caution order to the Loco Pilots indicating the speed restrictions. However, caution order shall be issued even in the absence of speed restriction indicating to look out for engineering signals. The Engineering Official-in-charge will also arrange for the protection of the affected area in accordance with S.R.15.09.1

1.5.3 Engineering works listed under 1.1.3. (Category III)

1.5.3.1. In all cases of Engineering works involving renewal of rails/sleepers, relaying, temporary diversions, loading / unloading of ballast, re-girding, welding of rail joints or other works causing interference with traffic or observance of any other restrictions in normal train running, the Engineering Department will interact with the Operating Department for the issue of a *circular notice*.

1.5.3.2. Traffic blocks will be of two types viz., long traffic block and short traffic block. Long traffic blocks will be of more than 2 hours duration wherein ballast train may be permitted. Short traffic block will be of less than 2 hours wherein TT machine/s will be permitted.

1.5.3.3. The *circular notice* referred to in para 1.5.3.1 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 *circular notice* must be issued. Once the work is taken in hand the *Circular Notice* will be effective as long as the work is in progress.

1.5.3.4. On receipt of advice from the Official-in-charge of the work and before the work is taken in hand, the DOM will issue an all concerned message to the officials mentioned in the aforesaid *circular notice*.

1.5.3.5. The work must not be taken in hand until acknowledgements have been received from the Station Masters concerned, the SCOR, the TPC and Chief crew controller. If acknowledgements are not received, the DOM will take steps to prevent the work being taken in hand.

1.5.3.6. The Engineering Official-in-charge will also arrange for the protection of the affected area in accordance with S.R.15.09.1.

1.6. 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.

1.7. If it is necessary to dispatch a Material train into the block section during the period of line block –

(a) When material train is programmed to go into the block section and return to the station where from it started, T/462 shall be issued.

(b) When material train is programmed to go into the block section and then proceed further to the next block station, T/A 462 shall be issued.

1.7.1 when track machine/machines is/are programmed to be sent into the block section-

(a) If one track machine is programmed to go into the block section and return to the station where from it started, T/465 shall be issued.

(b) When one track machine is programmed to go into the block section and then proceed further to the next block station, T/A 465 shall be issued.

(c) if more than one track machine are programmed to go into the block section and return to the station where from they started, the first one will be given T/465 and the succeeding ones will be given caution order. When T/465 is received back by the Station Master, it ensures that the block section is clear.

(d) If more than one track machine are programmed to go into the block section and then proceed further to the next block station, the first one will be given caution order

and the last one will be given T/A 465. When T/A 465 is received by the Station Master of the next station, it ensures that the block section is clear.

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Note: The speed of the first track machine will be booked speed and the following ones will observe a speed restriction of 25kmph during day and when view is clear and 10kmph during night and also during day when view is not clear.

1.8. Station Master whoever receives T/462, T/A 462, T/465 and T/A 465 shall intimate to the other Station Master under exchange of PN in token of block section being free of material train or track machine.

1.9. On completion of the work and after ensuring that the block section is free of Material train or Track machine, the Official-in-charge will hand over to the Station Master a *safety certificate* for resumption of normal traffic and specify therein whether any speed restriction is to be observed. On receipt of this certificate, the Station Master will advise the SCOR and all concerned, cancel the line block and resume normal working.

1.10 Before cancelling the line block and resuming normal working, Station Masters at both ends must scrutinise the TSR entries to satisfy themselves that the section is clear of Material train / Track machine/s.

Note : 1. Combination of material train and track machine in the same block section during line block is not permitted.

2. Only one material train at a time is permitted.

SR 15.06.2 Obtaining line block on Portable Radio Communication.

2.1 The name of the Engineering official in charge of the work, who shall not be below the rank of PW1 should be mentioned in the circular Notice. Except the railway official so nominated, no other person, will be authorized to obtain blocks on Portable Radio Communication.

2.2 The all concerned message issued by the DOM will mention the name of the engineering official-in-charge of the work and the last train before permitting line block and also state the line block will be allowed on advice from the section on Portable Radio Communication.

2.3. If PWI is not having PN sheet, he shall obtain one from section Traffic Inspector and return the same on completion of the work.

2.4. Before leaving the station for the site of the work, the engineering official-in-charge will consult the SCOR who will advise him the approximate time and the number and description of the last train after which the line block will be allowed.

2.5. After passage of the nominated train, the engineering official-in-charge will arrange to protect the place of obstruction in accordance with the GR 15.08 and GR 15.09 and after having satisfied himself that the obstructed area is properly protected, will call Station Master on portable Radio Communication and inform about protecting the work spot and give a PN.

2.6. The Station Master will inform SCOR and Station Master at the other end. After obtaining permission from SCOR for line block, Station Master will give message to PWI on Portable Radio Communication regarding the permission granted by the SCOR and give a PN. He will also inform Station Master at the other end of the block section about the block given to PWI with the permission of SCOR.

Cancellation of line block

2.7.1. On completion of the work and after the track is made safe for the passage of trains, the engineering official-in-charge removes the protection and conveys to his representative at the station on Portable Radio Communication. (PWI shall keep his representative at the station with a signed written memo from his side with the time and PN columns being kept blank).

2.7.2. The PWI shall also communicate a PN to his representative. His representative shall enter the PN and time of cancellation of block and hand over the memo to the Station Master.

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2.7.3. On receipt of block cancellation memo signed by the PWI, the Station Master will advise SCOR and the Station Master at the other end of the block section and take necessary action for the cancellation of the block.

Note: In the event of failure of Portable Radio Communication, the procedure laid down in SR 15.06.1 will be followed.

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 case of emergency.

15.08. (1) 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 signal 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.

(2) No work involving removal of any rail from the track shall be undertaken without traffic block, except as provided in sub rule (3) below.

(3) In emergent cases, the Engineering official not below the rank of PWI – Grade III, undertaking such operations shall first bring the train to a stop and advise the Loco Pilot of the train about the need to stop the train through a written memo. The Engineering official shall simultaneously arrange to send a message to the Station Master for the need to block the track and obtain written confirmation of the same. In such emergent cases work may be commenced only after bringing the train to a stop and the Loco Pilot has been advised.

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**
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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) 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 of 600 metres on the Broad Gauge and 400 metres on the Metre Gauge and the Narrow Gauge and three detonators shall be placed, 10 metres apart, at a distance of 1200 metres on the Broad Gauge and 800 metres on the Metre Gauge and the Narrow Gauge from the place of obstruction. In addition, Stop hand signal shall be shown at a distance of 30 metres from the place of obstruction, at the banner flag and at a distance of 45 metres 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.

- (b) 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 metres from the place of obstruction and a caution indicator at 1200 metres on the Broad Gauge and 800 metres on the Metre Gauge and the Narrow Gauge from the place of the obstruction. In addition, termination indicators shall be provided at the place where a Loco Pilot may resume normal speed.

- (c) 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 metres and again at a distance of at least 800 metres from the place of obstruction. The distance of 800 metres shall be suitably increased by special instructions, 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.

- (d) 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 metres from the place of obstruction and again a caution indicator at a distance of at least 800 metres from the place of obstruction. The distance of 800 metres shall be suitably increased by special instructions, where required. In addition, termination indicators shall be provided at the place where a Loco Pilot may resume normal speed.

- (2) 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

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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.**

- (3) 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 metres on the Metre Gauge and provided the Automatic signal has been secured at 'on'—**

- (a) the banner flag and three detonators referred to in clause (a) of sub-rule (1) may be provided at 90 and 180 metres respectively; and**

- (b) the caution indicator referred to in clause (b) of sub-rule (1) may be dispensed with.**

- (4) 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. Engineering fixed signals where special precautions are necessary:

1.1. The Engineering indicators shall be provided both by day and night, to indicate the place where a stop or a reduction of speed is temporarily required in terms of G.R.15.09 (1) (b) and (d).

1.2. There are four types of Engineering speed restriction indicators viz., Caution, Speed, Stop and Termination, the description of which are given below.—

1.2.1. Caution Indicator—

This board indicates that the line ahead is under repairs necessitating speed restriction with the Loco Pilot to be prepared for either a Speed Indicator or Stop Indicator ahead. This shall consist of a horizontal board 1.371 metres, wide by 0.381 metre deep fish tailed at one end as shown in diagram 'A'. The Caution Indicator shall be situated not less than 1200 metres for B. G. and 800 metres for M. G. from the point, where speed is to be restricted or where stoppage is required.

This indicator shall be provided both for permanent and temporary restrictions. When used for permanent restrictions, no lights need be displayed. When used for temporary restriction, it shall display at night two horizontal yellow lights towards approaching trains.

1.2.2. Speed Indicator—

This shall consist of a yellow equilateral triangular board with 0.914 metre sides, painted yellow and bearing 0.305 metre high black figures giving the speed at which a train is to proceed past the indicator as shown in diagram 'B'. The speed indicator shall be provided for both permanent and temporary restrictions, the indicator for temporary restriction shall be illuminated by night by fixing a lamp in front of it. The indicator for permanent speed restrictions will not be illuminated.

Note : (i) The Caution and Speed indicator boards shown in diagrams 'A' and 'B' along with the legend "goods trains only" on metal plates fixed below the Caution Indicator and

the Speed Indicator shall be provided where speed restrictions exist due to continuous falling gradients. The legend shall be in black letters on yellow background.

(ii) On the MG the maximum permissible speed of all goods trains on the continuous falling gradients of 1 in 200 and steeper existing for a stretch of 2 kilometres and over shall not exceed 30 KMPH.

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(iii) While reckoning the continuous falling gradient, short intervening stretches of level or easier gradients of half a Kilometre or less shall be ignored and the entire length shall be reckoned as continuous falling stretch.

(iv) The particulars of the sections where such continuous falling gradients exist shall be notified in the WTT.

1.2.3. Stop Indicator—

This shall consist of a horizontal board 1.371 metre wide by 0.381 metre deep and painted with red and white vertical stripes as shown in diagram 'C'. The indicator will display two red lights by night in a horizontal line. This indicator will be used when trains are required to stop.

1.2.4. Termination Indicator—

There are two Termination Indicators namely Termination Indicators for passenger trains and Termination Indicators for goods trains. These shall consist of one metre diameter disc, painted yellow and bearing 250 mm high 40 mm thick letter 'T/P' and 'T/G' in black as shown in diagram 'D'. The Termination Indicator bearing letters T/P shall be located at a distance equal to the length of the longest passenger train operating on the section. The Termination Indicator bearing letters T/G shall be located at a distance equal to the length of the longest goods train operating on the section. These shall indicate the point from which the normal speed may be resumed.

Note:— In the case of speed restrictions imposed on account of inadequate sighting distance available for first Stop signal, the Termination Indicator shall be placed at a point from where the signal can be sighted.

1.3. In areas controlled by Automatic or Semi-Automatic signalling, prior notice shall be given to the CSTE to enable him to arrange to alter the control of the signals governing the section where Engineering Speed Indicators have to be provided

1.4. Fortnightly advice of Engineering Speed restrictions and Caution Orders shall be issued by the DRM to all concerned.

1.5. Reflective type indicator for temporary speed restriction need not be lit.

2.1. Before commencing any work in terms of G.R.15.09 (1) (a) outside station limits, the PWI or any other authorized Railway servant shall notify the Station Master at each end of the block section and obtain their acknowledgements. The Station Master shall issue Caution Orders to Loco Pilots in accordance with G.R. 4.09 and Subsidiary Rules there under.

2.2. The Engineering Official-in-charge of the work shall protect the line as follows—

2.2.1. Post a Flagman with hand signals at a point not less than 30 metres in rear of the work spot.

2.2.2. Fix a banner flag across the line at a point not less than 600 metres on BG and 400 metres on MG in rear of the work spot and post a Flagman with hand signals to take his stand in rear of the banner flag, at a place from which he can obtain a clear view of an approaching train.

2.2.3. Post a Flagman with hand signals and detonators at a point not less than 1200 metres on BG and 800 metres on MG in rear of the work spot. This Flagman shall place 3 detonators on the line about 10 metres apart and take his stand at a distance of not less than 45 metres in rear of the rearmost detonator, from where he can obtain a clear view of an approaching train and show Stop hand signal.

Note:—(i) On the Single Line, the line shall be protected in both directions and on the Double Line, in the direction from which trains will approach.

(ii) At places where there are curves or falling gradients and at times of poor visibility, the distances laid down in paras 2.2.2 and 2.2.3 above may be suitably increased, wherever necessary, in order that the Stop hand signal and banner flag may be visible to the Loco Pilot of an approaching train from an adequate distance of not less than 400 metres or in order to avoid a girder bridge or any other obstruction which may prevent the fixing of

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the banner flag, the intermediate Flagman, as and when necessary, shall be posted to relay the hand signals.

2.3.1. The Loco Pilot of an approaching train shall come to a dead stand on seeing the Stop hand signal shown by the Flagman farthest from the obstruction, vide clause 2.2.3 above. Only after the train has come to a stand, the Flagman shall remove the detonators and allow the train to proceed by showing "Proceed-with-Caution" hand signal.

2.3.2. The Loco Pilot shall, thereafter, restart and proceed with caution and be prepared to stop his train short of the banner flag fixed in accordance with clause 2.2.2 above. If it is necessary to stop the approaching train short of the banner flag, the Flagman shall show a Stop hand signal to the train.

Note:—After the train has passed, the Flagman farthest from the obstruction shall place three detonators again on the line and continue to show a Stop signal, until recalled.

2.3.3. The Flagman nearest the obstruction (at the 30 metres point) shall, if it is necessary to stop the approaching train, show a Stop hand signal to the train. He shall, on receiving orders from the Engineering Official-in-charge of the work to allow the train to pass over the obstruction at reduced speed, show 'Proceed with Caution' hand signal and intimate the intermediate Flagman (at the 600 or 400 metres point) who shall thereafter, remove the banner flag. The train shall then be hand-signalled forward by both the Flagmen showing "Proceed-with-Caution" hand signal.

Note.— After the train has passed, the intermediate Flagman shall fix the banner flag again across the line and be prepared to show a Stop hand signal and stop approaching trains, until recalled.

2.4. If, in an emergency, it becomes necessary to carry out the work at night, the provisions of clauses 2.1 to 2.3 above shall be complied with, except that red lights shall be exhibited, in the direction from which trains will approach, instead of the flags and banner flags used during day.

3. Procedure for passing trains in block section for work requiring, stop-dead speed restriction— For works requiring 'stop-dead' speed restriction, Caution, Stop and Termination Indicators shall be fixed as indicted in G.R. 15.09 (1) (b). The Loco Pilot of a train shall, on approaching the Caution Indicator, reduce the speed as necessary and bring his train to a dead-stop in rear of the Stop Indicator. The Engineering Watchman posted at the Stop Indicator shall, after the train has actually come to a dead-stop, hand over his restriction book Form ER 7 to the Loco Pilot. The Loco Pilot shall fill in the date, train number and time in the respective columns, affix his signature in full in the column provided for this purpose and return the book to the Watchman. The Watchman shall, after satisfying himself that the columns have been filled in, exhibit a "Proceed with Caution" hand signal to the Loco Pilot. The Loco Pilot shall then restart and proceed cautiously at a speed not exceeding 8 KMPH and continue at this speed until the train has cleared the restricted length, after which he may resume normal speed in accordance with para 5 below.

4.1. In the case of works inside station limits, special instructions shall be issued by the DRM in regard to the use of the indicators in conjunction with the station fixed signals, detailing the position of the indicators. In such cases, the work shall not be commenced until the special instructions are issued to all concerned and their acknowledgements obtained.

4.2. In the case of an engineering restriction just outside station limits, when the distance between the Outer or Home signal and the near end of the restriction is less than the length of the longest goods train operating on the section, the Warner, if any, or Distant at both ends of the station shall be placed at 'on'

4.3. In the case of an engineering restriction between the Outer and Home signals in the two-aspects signalling area, with Caution, Speed and Termination Indicators, the warner if any at both ends shall be placed at 'ON', the other fixed signals being used in the

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normal manner. In the case of Multiple-Aspect signalling area, the distant signal shall be kept at 'ON'.

4.4. In the case of an Engineering restriction between the Outer and Home signals, with caution, stop and termination indicators—

4.4.1. The Warner, if any at both ends shall be placed at 'ON'

4.4.2. The Outer signal nearest to the restriction may be used in the normal manner and all incoming trains shall be stopped at the Stop indicator. The Loco Pilot shall proceed observing the restrictions imposed in between them.

4.4.3. If the restriction is between the Advanced Starter and the Outer signal, the Starter and the Advanced Starter shall be only taken off after the train has come to a stop at the station.

4.5. Cases not covered by clauses 4.2, 4.3 and 4.4 above shall be dealt with on their merits on similar lines.

4.6. In case of works within station limits, when a train is required to stop and the restriction is likely to last only for a day or less, banner flags and detonators shall also be placed on the line in accordance with G.R. 15.09. (1) (a), wherever necessary preceding the point of obstruction. All trains proceeding towards the obstruction shall be brought to a stand at the FSS or banner flag. The banner flag and detonators may then be removed, signals taken 'off' and the train then hand signalled past the obstruction as necessary. This shall be done only under the personal instructions of the Engineering Official-in-charge. After the train has passed complete, the banner flag and detonators shall be placed.

5. Responsibility of Loco Pilot and Guard.

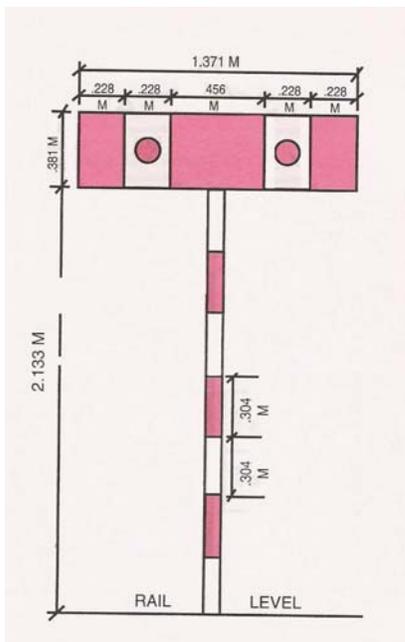
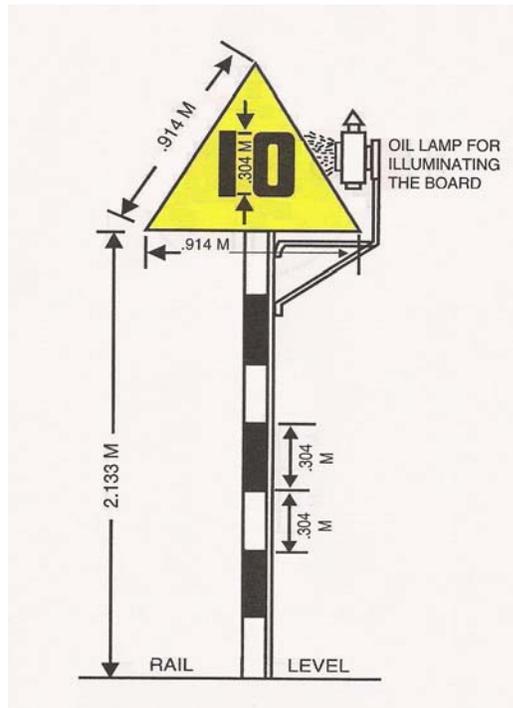
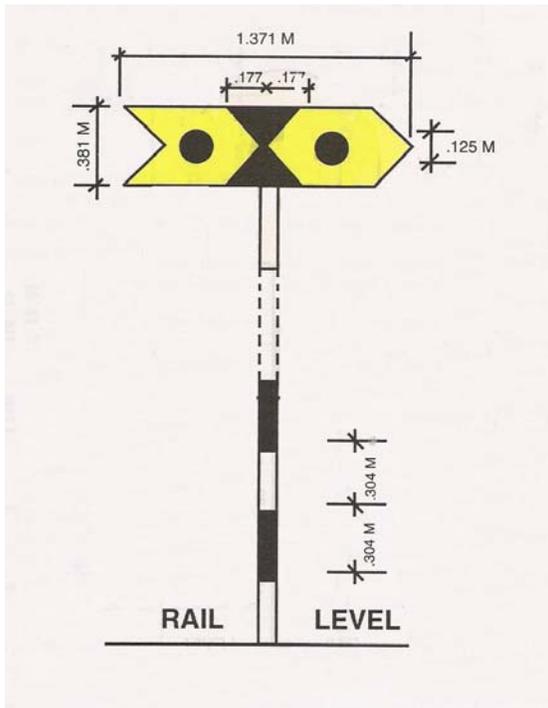
5.1. The Loco Pilot of a train shall, on approaching the Caution Indicator, reduce speed as necessary and while actually passing over the speed restricted length, take care to see that his train is under proper control, that the speed restriction is strictly observed and avoid the use of brakes as far as possible. In the case of a goods train, the Loco Pilot shall resume normal speed only after his engine has passed the Termination Indicator having the legend 'T/G'. In the case of a passenger train, the Loco Pilot shall resume normal speed only after his engine has passed the Termination Indicator having the legend 'T/P'. In the case of passenger train shorter than the longest passenger train operating on the section, the Loco Pilot shall resume normal speed only after getting the 'All right' signal from the Guard and acknowledging it by giving a short whistle. In the case of the light engine, single unit rail car or rail motor coach or electric train, the Loco Pilot shall resume normal speed after clearing the speed restricted length.

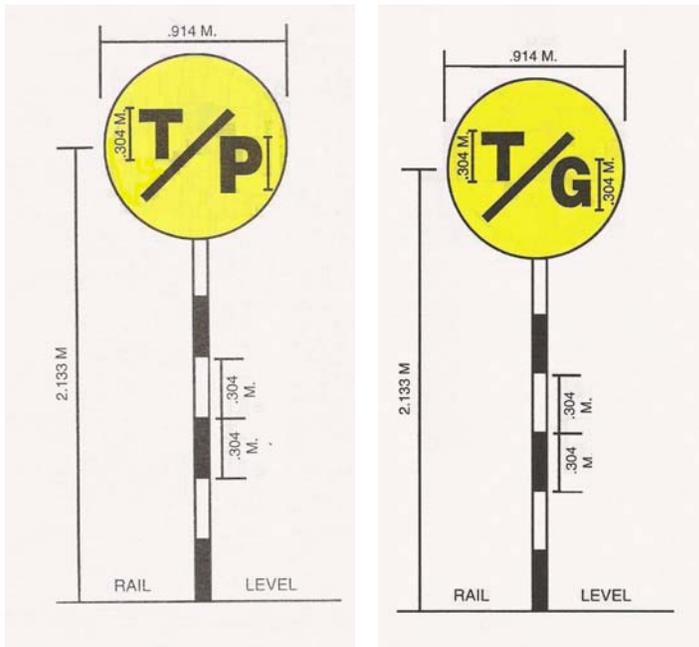
5.2. The Guard of a train shall be on the look-out for signals and be prepared to help the Loco Pilot to keep the train under proper control while passing over a speed restricted length. The Guard shall exhibit the 'All right' signal to the Loco Pilot after the last vehicle has cleared the restricted length.

6. When a major work, such as, relaying or regirdering is in progress, a speed restriction of 50 KMPH shall be observed on the adjoining lines in the Zone of obstruction, if necessary. The prescribed Engineering Indicators shall also be provided.

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The following Diagrams 'A', 'B', 'C' and 'D' show the prescribed standard types of indicators:





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7. Multi speed restriction (i.e. existence of two or more speed restrictions in continuation)—

When work of deep screening or sleeper renewal is in progress, there is a situation of having two or more than two speed restrictions in continuation. In such situation placement of speed boards for following speed restriction shall be as under:

In case of following speed restrictions being more restrictive, a minimum of two hundred meters of track should be under earlier speed restriction zone. If not, then only one speed indicator board should be provided considering that the previous speed restriction is at par with the following speed restriction which is more restrictive.

In case of following speed restrictions being less restrictive, corresponding speed indicator board for following speed restriction shall be placed at a distance equal to the length of the longest goods train operating on the section after termination point of previous speed restriction zone.

Note: If there are two or more speed restrictions adjacent to each other, say A to B is 40 Kmph and B to C is 20 Kmph in the direction of traffic (A to C) and if the length from A to B is less than 200m, there will be only one speed board of 20Kmph to be fixed before A.

15.10 Assistance in protection of train—

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 or 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 or Works shall see:

- (a) that every Gangman and Gangmate employed under him has a correct knowledge of hand signals and detonating signals; and
- (b) that every gang employed in his length of line is supplied with a permanent way gauge, two sets of flag signals, two hand signal lamps and twelve detonators, in addition to such other tools or implements as may be prescribed by special instructions.

S.R.15.12. In addition to the equipment specified in rule 15.12(b) every gang shall be supplied with two banner flags for use in case of emergency envisaged in the provision to rule 15.06.

15.13 Inspection of Gauges, signals, tools and implements—

- (1) Each Inspector of Way or Works shall at least once in every month inspect the permanent way gauges, flags, 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.
- (2) He shall also see that any defective or missing articles are replaced.

15.14. Responsibility of Gangmate as to safety of line—

Each Gangmate shall:

- (a) see that his length of line is kept safe for the passage of trains;
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- (b) that the signals supplied to him under clause (b) of rule 15.12 are kept in proper order and ready for use;
 - (c) that the men in his gang each have a correct knowledge of hand signals and detonating signals,
 - (d) endeavour to prevent any trespassing by persons or cattle on his length of line or within the fences thereof, and
 - (e) 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.

S.R.15.14. Tools and materials, precautions—

The Gangmate will be responsible for the safe custody of the tools issued to him. These shall be placed, when not in use in a tool box properly padlocked. These tool boxes will ordinarily be placed near the Gangman's quarters or at Gate lodges. On no account shall permanent way men throw out tools or materials from moving trains.

15.15 Blasting—

No Railway servant employed on the way or on any works shall carry on any blasting operations on or near the Railway except as permitted by special instructions

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. For special instructions regarding putting in or removing points and crossings, see Appendix V.

15.17 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 circumstances detailed in G.R.15.17, the Gangmate or any other Railway servant on the spot shall, if it is considered necessary to stop any approaching train, protect the line in accordance with G.R. 3.62.

2. In the case of permanent causeways that are flooded and the velocity of current is insignificant, trains may be permitted to pass when the depth of water above rail-level does not exceed the following values, provided in each case the PWI has satisfied himself by walking over and probing that the permanent way is intact and in a fit condition:

Gauge	Passenger& Mixed trains	Goods trains
BG	300 mm (12 inches)	450 mm (18 inches)
MG	230 mm (9 inches)	300 mm (12 inches)

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In electrified area special gauges are provided at places liable to flood, to indicate when the different types of electric stock have to be stopped.

2.1. Indication posts about 1200 mm (4') in height shall be fixed at each dip, one at each end of the level position, with flat bars attached to them to indicate the levels in sub-para (2).

The posts should be painted black and white in 300 mm (one foot) length, so arranged that the flat bars which shall be painted white, show up against 300 mm (one foot) length of black colour.

2.2. The posts shall be fixed 3 metres (10 feet) from the center of the track in the case of BG and 2.5 meters (8 feet) from the center of track in the case of MG.

Where desirable, the posts may be graduated in millimeters (inches), provided this is clearly marked so as to avoid interference with visibility.

3. Special precautions when water level rises:—

The following precautions shall be observed, in each case trains being stopped dead and allowed to proceed at a speed not exceeding 8 Kmph.

3.1. If water rises over the ballast-level but is below rail-level the track should be walked over by two men abreast one at either end of the sleepers before each train and only if the track has not been disturbed, should the train be allowed over the track.

3.2. When water over-tops the rail, the PWI should certify by walking over and probing that the track is safe.

3.3. Message shall be sent by the PWI to the AEN and DEN when water rises above ballast level and again when it subsides. This should be followed up with special reports.

3.4 Records of all such occurrences should be entered in the PWIs section register

B. The working of Lorries, Trolleys and Motor Trolleys

15.18 Distinction between trolley, lorry and motor trolley—

- (1) 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.**
- (2) Any trolley which is self-propelled, by means of a motor, is motor trolley.**
- (3) A trolley shall not, except in case 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. Marking of Trolleys, Lorries and Motor Trolleys:-

- 1.1. Each Push trolley, Cycle trolley, Moped trolley, Lorry or Motor trolley shall be painted conspicuously, the number, the code initials of the headquarters station and the designation of the official to whom it is allotted.
- 1.2. Push trolleys and lorries shall always be pushed and not pulled.
- 1.3. Cycle trolleys or trolleys which are propelled by pedaling instead of pushing, and Moped trolleys can either be driven by a motor or pedaled. It may be pushed when necessary, but not pulled. Cycle trolleys and Moped trolleys are so designed as to be capable of being removed from the track by two men. Seats should also be provided in Cycle trolleys and Moped trolleys for at least one person other than person or persons pedaling or driving to sit facing towards the rear continuously to give adequate warning of approaching trains.
- 1.4. Use of sails or any other unauthorised aid for propulsion of trolleys or lorries is strictly prohibited.
- 1.5. Cycle trolleys and Moped trolleys shall be treated as push trolleys in all respects for the purpose of these rules except where otherwise provided for.

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2. Minimum number of men to accompany Push trolleys, Lorries and Motor Trolleys.

- 2.1. Push trolleys shall be manned by at least four trolley men exclusive of any Flagman who may be required for the protection of Push trolley in accordance with special instructions.
- 2.2. Lorries shall be manned by at least six lorry men exclusive of any Flagman who may be required for the protection of the lorry in accordance with special instructions.
- 2.3. A Cycle trolley or Moped trolley shall be manned by three persons including the persons pedaling or driving.
- 2.4. Motor trolley shall be in all cases be manned by not less than four able bodied Trolley men. When a Motor trolley is running, there shall be at least two persons seated in the front.

3. Maximum number of men to be carried.

3.1. The number of men that may be carried on a Push trolley shall not exceed:-

3.1.1. 'eight men on the MG.

3.1.2. ten men on the BG, provided the Push trolley is structurally safe to take the men prescribed.

3.2. The total number of men including trolley men who can be carried on a Cycle trolley or Moped trolley shall not exceed five.

3.3 The maximum number of men that may be carried on a Motor trolley shall not exceed:-

3.3.1. Eight on the MG.

3.3.2. Ten on the BG.

This is subject to the condition that the Motor trolley is structurally fit to carry the number prescribed.

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.

15.20 Each trolley, lorry or motor trolley shall have the following equipments:-

- (a) two hand signal lamps,**
- (b) two red and two green hand signal flags,**
- (c) sufficient supply of detonators,**
- (d) a chain and a padlock,**
- (e) a copy of the Working Time Table and all correction slips and appendices, if any, in force on that section of the railways over which the trolley, lorry or motor trolley is to run,**
- (f) a motor horn and a search light (for motor trolley only)**
- (g) two banner flags (for lorry only), and**
- (h) such other articles as 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.

S.R. 15.20.1.1 Each Push trolley, Cycle Trolley, Moped trolley or Lorry shall be provided with five red flags instead of two red flags mentioned in Rule 15.20(b).

1.2. The number of detonators to be supplied for each Push trolley, Cycle trolley, Moped trolley, Lorry or Motor trolley shall be ten.

1.3. Each Motor trolley, Cycle trolley and Moped trolley, shall also be provided with a five cell electric torch in good order for use during night or when visibility is poor.

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2.1. On the Single Line and when Single Line working is in force on the Double Line by day for all Trolleys and Lorries a red flag shall be shown so as to be conspicuously visible in both directions and at night a red light shall be shown in both the directions. On the Double line, by day a red flag shall be shown conspicuously in the direction from which trains approach and at night, a red light shall be shown in the direction from which trains approach and a white light in the other direction. Inside station limits, by day a red flag shall be shown so as to be conspicuously visible in both directions and at night a red light shall be shown in both directions.

Note;— The night signals shall be shown during day at times of poor visibility.

2.2. On sections where there are tunnels the night signals prescribed for Single Line or Double Line, as the case may be shall be displayed during the day, in addition to the red flag. Further trollies or Lorries not provided with Head lights, shall carry a Petromax Lamp or its equivalent and five cell electric torch to illuminate the track ahead .

3.1. A Motor trolley shall show during day on the Single Line and when Single Line working is in force on Double Line Section, a red flag so as to be conspicuously visible in both directions and on Double Line a red flag conspicuously to be shown in the direction from which trains will approach. It shall carry a side lamp (for use by night) so as to show a red light in both front and rear on single line, and when single line working is in force on the double line and a red light in the direction in which trains will approach and a white light in the other direction.

Note:— The night signals shall also be shown during day in long and dark tunnels and at times of poor visibility in addition to the red flag.

3.2. Inside station limits a Motor trolley shall show during day a red flag conspicuously in both directions and at night red light both in front and rear.

3.3. As soon as a Motor trolley is removed from the line and placed clear off the track, the red flags or lights should be removed.

15.21 Efficient brakes—

No lorry or trolley shall be placed on the line unless it is fitted with efficient brakes.

S.R.15.21 Before a Trolley or Lorry is placed on line, the Official-in-charge shall examine and test the brakes and satisfy himself that they are in good working order.

15.22 Qualified person to be in charge 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.

S.R. 15.22.1.1 Staff permitted to use push trollies and lorries:-

Subject to their being certified competent by the authorized officer, all officers and Inspectors of the Engineering and S & T departments and such other Officers and staff of the Operating and Commercial departments as may be required. Section Mates and Head Trolley man of the Engineering department and Signal and Block maintainers of the S&T department, as may be authorized, may be permitted to use push trollies and lorries.

1.2. Cycle Trollies and Moped Trollies:- All officers and Inspectors of the Engineering and S&T departments such staff of the Engineering and S&T department as are specifically authorised by the DRM and such staff of the Operating Department as are authorised by the CSO.

1.3. In respect of officers on the Division, the DRM is the authorised officer to issue the certificate of competency. The DEN, the DSTE and the DOM are the authorised officers in respect of staff working under them.

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1.4. Before a competency certificate is issued to any one, in the first instance, a written test shall be held in rules pertaining to the working of trollies and lorries and only those who qualify in the test shall be issued the competency certificate by the Authorised Officer. The competency certificate issued will be valid for one year.

1.5. The staff who are given the competency certificate for working lorries/trollies should be literate, having minimum knowledge of Hindi or other languages. No staff who is an illiterate shall be issued with the competency certificate.

1.6. Before the end of December of each year, every Trolley or Lorry holder will submit a Certificate of declaration to the Authorised officer in the following form:-

I, (name)working in the capacity of (designation)..... at (station)..... hereby declare that I am fully conversant with the section on which I have to use my trolley/lorry and with the rules in respect of working trollies/lorries and as well as the latest changes made in them and undertake to conform meticulously to these rules. In the event of any failure to comply with the these rules I shall alone be held responsible.

Signature.....

Date.....

1.7. This declaration shall be carefully examined in the Divisional Headquarters Office and if a certificate holder fails to submit it in time, he will be treated as having forfeited his right to use the certificate until such time the declaration is submitted by him and will also render himself liable for disciplinary action.

2. Official-in-charge:-

When a trolley is accompanied by more than one railway official qualified to be in-charge of a trolley, the railway official, who is actually manning the brakes, shall act as the

official-in-charge of a trolley. Senior officials who are being conveyed by the trolley are however expected to take intelligent interest in the working of the trolley and shall call attention to any breach of rules which come to their notice and to the need for adequate protection.

3. Conveyance of non-railway officials:—

3.1. Trolleys – Normally persons who are not railway servants shall not be conveyed on trolleys. A railway official qualified to be in-charge of a trolley may however convey on his trolley, if it will not interfere with his duties and responsibilities. Magistrates and Police Officials (not below the rank of Sub-Inspector) proceeding to the site of a serious accident in the performance of their official duties and other Government officials in general (Civil, P&T, Military, Medical etc.) when their journey concerns with the working of the railway or a person requiring medical aid. Railway contractors and their agents proceeding in connection with their work may also be conveyed by trolleys. In such cases the prior permission of the DEN or the DOM or the DSTE, shall be obtained by phone. However, in emergency, such permission may be obtained from the AEN, ASTE who shall, at once, advise the DEN regarding the grant of such permission. Prior to being conveyed the person(s) concerned shall execute an indemnity bond in the prescribed form.

Note:— In case of emergency or when such a journey does not interfere with his duties and responsibilities, the railway official-in-charge of a trolley may convey Railway employees on his trolley when employees are travelling on duty.

3.2. Lorries:- No person unconnected with the working of lorry shall be conveyed on a lorry.

15.23 Attachment to train prohibited—

No lorry or trolley shall be attached to a train.

S.R.15.23 Conveyance of trolleys and lorries by trains—

1. Trolleys and lorries shall not be carried by Mail and Express trains except in an emergency.

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2. Trolleys may be carried in the brake-van 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.

3. Lorries will, ordinarily, be carried in the brake-vans of goods and mixed trains and on sections where goods and mixed train services are insufficient, they can be carried by passenger trains, provided the conditions prescribed for the carriage of trolleys by passenger trains are fulfilled.

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 metres.

S.R. 15.24.1. Working of Trolleys/Lorries:-

1.1. Ordinary trolleys and lorries shall be worked only during day light hours. However, during day, when there is rain, thick, foggy or tempestuous weather impairing visibility and always at night, trolleys and lorries shall be worked under the rules for working of trains.

1.2. Whenever a trolley/lorry is to be worked under block protection on a Double Line section or on a Single Line section where tokenless Block Instruments are provided, the Station Master on either side of the block section shall adhere to the procedure given in S.R.15.25.7.2. 'Trolley/Lorry on Line' Cap shall be placed at both stations on the plunger of the Block Instruments to serve as a visual reminder that section is occupied.

1.3. When trolley/lorry is to be worked under block protection, if the visibility is impaired, due to rain, thick, foggy or tempestuous weather or any other cause, the trolley/lorry shall be removed from the line and not replaced until the visibility is adequate.

2. Placing of Trolleys/lorries in track circuited yards:-

2.1. A trolley/lorry which is not insulated shall not enter or be placed on the line within station limits at stations where track circuits are provided.

2.2. The person-in-charge of a trolley or lorry before placing the trolley/lorry on line at such stations shall give in writing to the Station Master concerned that the trolley/lorry is insulated.

2.3. The Station Master shall permit a trolley/lorry to be placed on the line after getting the written advice referred in clause 2.2.

2.4. The person-in-charge of a trolley/lorry should have the insulation of his trolley tested and certified once in every six months by an Inspector of the S&T department.

15.25 Motor Trolley—

The Motor trolley shall only be run in accordance with special instructions.

S.R.15.25.1.Railway Officials permitted to use Motor trollies:-

No official can place a Motor trolley on line, unless he holds a Competency Certificate. Officers of Engineering, S&T, Operating and Commercial departments and such Inspectors of these departments as may be authorized and Motor Trolley Drivers are permitted to operate Motor trollies, subject to their being certified competent by the Authorized Officer as mentioned below:-

Category of Staff	Officer authorized to issue competency certificate
Group 'C' staff of the division	DSO
Officers of the division	DRM
Officers in headquarters of the Railway (other than deputy/ heads of department and above)	CSO

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2. Certificate of Competency:-

2.1. The Competency certificate shall be issued, in the first instance, only after the staff or officer is subjected to a written test regarding the rules relating to Motor trollies and the relevant General and Subsidiary rules and rules in block working manual, and found fit by the Authorized Officer.

2.2. Every Official holding a Competency Certificate for working Motor Trolley shall give a declaration before the end of December of each year that he is well conversant with the rules for working Motor Trolley and apply to the Authorized Officer for renewal of the competency certificate. The Authorized Officer shall then renew the same after conducting an oral test.

2.3. The Certificate of Competency shall be kept in the personal custody of the staff working the Motor Trolley.

3. Person in-charge of Motor trolley and his responsibilities:-

3.1 When a Motor Trolley is accompanied by more than one railway official qualified to work, the Railway official operating the Motor Trolley shall act as the person in-charge.

3.2 The person in-charge of the Motor Trolley is responsible at all times for its safe working. However, senior officials who are being conveyed by the Motor Trolley are expected to take an intelligent interest in the working of the Motor Trolley and shall call attention to any breach of rules which come to their notice.

4. Conveyance of non-Railway Officials:-

Normally persons who are not railway servants shall not be conveyed on Motor Trollies. Railway official in-charge is an Officer, he may, however, convey on his Motor Trolley if it will not interfere with his duties and responsibilities, the non-railway servants mentioned in Subsidiary Rule 15.22(3) in accordance with procedure laid down therein.

5. Provision of Brakes:-

A Motor Trolley shall not be placed on the line, unless it is fitted with efficient brakes. The person in-charge shall test the brakes and satisfy himself that they are in working order before the commencement of each journey.

6. Motor Trolleys not in use:-

Whenever a Motor Trolley is placed on the platform for being loaded in a train or for any other purpose, it shall be invariably placed parallel to the track properly locked and in-charge of a Railway servant. It shall be so placed, as not to come in the way of passengers and railway staff, when not in use, it shall either be placed clear off the track with the wheels secured by a chain and padlock or berthed on a non-running line with the wheels chained to the rail and padlocked.

7. Working of Motor Trolleys:-

7.1 A Motor trolley shall always run under Block Protection and shall be treated and signaled as a train. However, it may follow a fully vacuum braked train or a Light Engine or another Motor Trolley both on single Line and Double Line during day light hours and in clear weather only.

7.2 Procedure when working under Block Protection on Double Line and Single Line sections provided with Tokenless block instruments.

7.2.1 Whenever a Motor Trolley has to enter a Double Line section or a Single Line section, where tokenless Block Instruments are provided, the Station Master of the block station from where 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 the block instruments. He will then prepare an authority to enter the block section in the prescribed form (T/A1525) which includes (a) authority to proceed and (b) authority to pass LSS and/or IBS if any, in duplicate and hand over one foil to the person in-charge duly obtaining his signature in the counterfoil. The Station Masters at both ends of the block section shall immediately place the 'trolley on line' cap on the plunger of the block instruments to serve as a visual reminder that the section is occupied by the Motor Trolley.

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On double line section, the Station Master of the station from where motor trolley has to leave shall advise the Station Master of the station at which the motor trolley has to arrive, to turn the block handle at his station to TOL and lock the same in that position. The TOL red indication shall serve as an additional visual warning at both the stations.

The Station Master at the receiving station after verifying and ensuring that the motor trolley for which LC was granted has arrived complete into his station shall turn the block handle from TOL position to 'line closed' position.

7.2.2. While leaving the station, the relevant starter signal, when free, may, however, be taken 'off'.

7.2.3. At the receiving station, the Station Master will arrange for the reception signals to be taken 'off'.

7.2.4. On arriving at the other end of the block section, the official in-charge of the Motor Trolley will deliver the authority to the Station Master with an endorsement to the effect, 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. The Station Master will then clear the block section supported by a PN.

7.2.5. Procedure for working of Motor trolley in Automatic Block System:

Let the block stations be X & Y (GR 9.01 (b)).

7.2.5.1.X shall obtain line clear from Y for motor trolley.

7.2.5.2.Y shall grant line clear to X for Motor trolley only when Y-X Automatic block section is clear of all trains.

7.2.5.3.X shall prepare T/A.1525 and hand over to motor trolley and X shall not allow any train into X-Y Automatic block section till the motor trolley reaches Y.

7.3 Procedure when a Motor trolley / Motor trolleys following a train or Motor Trolley:-

7.3.1. A Motor Trolley / Motor trollies may be allowed to follow a train / Motor Trolley. However, no Motor Trolley shall be allowed to follow a goods train on the sections specified in Subsidiary Rule 15.26.2.1.

7.3.2. Before a Motor Trolley / Motor trollies is / are permitted to follow a train or another Motor Trolley, the Station Master of the station from where the Motor Trolley / Motor Trolleys is / are to leave, shall advise the Station Master of the station in advance by a message and obtain his permission supported by a Private Number.

The messages exchanged shall be in the following form:-

From: SM 'X'	To: SM 'Y'
Msg.No.-----	
Grant permission for Motor Trolley / Motor trollies number/s -----occupied by -----to follow train / motor trolley No.-----to your station.	
Date Time	Signature of SM / X

From: SM 'Y'	To: SM 'X'
Msg.No.-----	Your Msg.No.-----
Motor Trolley / Motor trollies number (s)-----occupied by----- -----permitted to follow train / motor trolley number-----to my station. Section will not be cleared till the arrival of the last following Motor Trolley at my station. Private Number (s)-----	
Date: Time:	Signature of SM / Y

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7.3.1 The Station Master of the station, from where the Motor Trolley is following, will prepare a Motor trolley permit in the form appended below and deliver it to the official in-charge of the Motor Trolley and obtain his signature in the counter-foil. When the LSS goes back to 'on' after the passage of the Train/Motor Trolley, which is followed by the Motor Trolley, an authority to pass the LSS at 'ON' shall be given to the person in-charge of the following Motor trolley along with the permit. The Out report for the preceding Train/Motor Trolley shall be sent separately and recorded in the TSR.

7.3.2 The Motor Trolley following the train or another Motor Trolley shall obey the signals for the train or the leading Motor Trolley. When following a train it shall, in this sense, be regarded as the last vehicle of the train. In other words, signals taken 'off' for a preceding train or a Motor Trolley shall not be put back to 'on' until the following Motor Trolley has passed such signals. The Motor Trolley will be admitted on the same line as the train or the Motor Trolley it is following.

7.3.3 At station, where automatic reversers are in use in conjunction with track circuiting, the signal levers shall not be put back to normal and the road for the reception of the preceding train or Motor Trolley shall not be altered until the following Motor Trolley has been admitted on the same line. The person in-charge of the Motor Trolley shall pass the signal/signals at 'on' and enter the station with special caution.

7.3.4 The 'in-report' for the preceding Train/Motor Trolley shall be sent and recorded separately in the TSR. Where the Block Instruments are in use, the block section should not be cleared on the Block instrument after arrival of the preceding Train/Motor Trolley, but the 'in report' should be sent. Where token working is in force, the token received from the preceding Train/Motor Trolley shall be kept in his safe custody by the Station

Master on duty and inserted in the Block instrument for clearing the section only after the arrival of the following Motor Trolley.

7.3.5 On arrival of the following Motor Trolley at the station, the official in-charge will sign the TSR in token of his Motor Trolley having arrived intact, indicating the time of arrival. The Station Master on duty at the station in advance, on receipt of the Motor Trolley permit, will advise the Station Master of the station in rear by issuing the following message and then clear the block section:-

From:SM 'Y'	To: SM 'X'
Number-----	
Your number ----- My number ----- Motor Trolley number----- following train number/Motor Trolley number ----- arrived here intact at ----- -----Hrs.	

7.3.6 Till receipt of this message, the Station Master of the station allowing the Motor Trolley to follow a Train/Motor Trolley shall not give LC for another train. Copies of all messages exchanged shall be pasted in the Station Dairy.

7.3.7 When a Motor Trolley is following another Motor trolley, the leading Motor Trolley will in addition to the usual 'authority to proceed' be given a caution order to the effect that a second Motor Trolley is following.

7.3.10 When a Motor Trolley follows another Motor Trolley, the distance between the Motor Trolleys should be at least two telegraph posts. This should be ensured by the official in-charge of the following Motor Trolley.

7.3.11 Entries should be made in red ink in the TSR at both the stations for the Motor Trolley following the train in the usual manner.

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8. Breakdown of Motor Trolley

8.1 In the event of complete break-down of Motor Trolley in the section, the same shall be removed clear off the track and the Station Master of the nearest station advised in writing to clear the section. The token or the line clear ticket, if any, shall also be sent with the memo. The same procedure shall be observed, if for any reason, a Motor Trolley is removed from the track while in the section. Once a Motor Trolley has been removed from the line, it shall not be replaced on the line, unless the line has been blocked for it.

8.2. Before a Motor Trolley is to be replaced on the line, intimation in writing shall be sent to the nearest Station Master starting in which direction the Motor Trolley will proceed. The Station Master will, when the train service permits, arrange to block the line from a specified hour or after the passage of a particular train. The LC token or the written authority in form T.1525 will, then be sent to the official-in-charge of the Motor Trolley together with the manuscript memo given below:-

To -----(Designation of the official-in-charge) at Km-----	
Line is blocked for your Motor Trolley from ----- Hours----- after the passage of ----- train until the arrival of your Motor Trolley at ----- station.	
Token number ----- or authority number-----sent herewith.	
Signature of official (Whom handed over)	Signature of SM

The carbon copy of this memo shall be kept by the issuing Station Master. The person-in-charge shall not place the Motor Trolley on the line until he has received the above memo together with the LC token or the written authority in form T.1525.

8.3. In the event of break-down of the following Motor Trolley in section, it shall be removed clear off the track and the official-in-charge shall send intimation in writing to the Station Master of the nearest station to this effect along with the Motor Trolley permit.

8.4. If the Breakdown is 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. The official-in-charge of the preceding Motor Trolley will also hand over to the official-in-charge of the following Motor Trolley, the LC token or the written authority (T/A.1525) as the case may be, which shall be handed over to the Station Master of the station in advance by the official-in-charge of the following Motor Trolley in addition to the Motor Trolley permit in his possession.

9. Spring Points in the path of Motor Trolley:-

9.1 Motor Trolleys by virtue of their lightness are not able to trail through spring-loaded points and, therefore, will derail while passing over such points.

9.2.1 The Station Master, before granting LC for the Motor Trolley shall advise the Station Master at the other end of the block section to issue caution order to the official – in-charge of the Motor Trolley warning him about the presence of the spring points duly furnishing the location..

9.2.2 Similarly if the station from where the Motor Trolley is being dispatched has a Catch Siding taking off the running line or any other spring points over which the Motor Trolley has to pass while being dispatched from a station, the Station Master of that station shall issue a caution order to the official-in-charge of the Motor Trolley warning him of the presence of the spring points duly furnishing the location.

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9.3 Warning Boards have been provided for the guidance of Motor Trolleys short of spring points. The official-in-charge of the Motor Trolley shall stop short of the spring points, lift the Motor Trolley off the track, if necessary, and place it on the correct line, before proceeding further.

10 Speed of Motor Trolleys:

10.1 At night a Motor Trolley shall run at a speed not exceeding 30 KMPH.

10.2 The speed of a Motor Trolley shall not exceed 15 KMPH over points and crossings.

11. Responsibility of person-in-charge of Motor Trolley with regard to level crossing gate:-

The Official-in-charge/Driver of a Motor Trolley while approaching level crossing gates should exercise caution and ensure, that the level crossing gates are closed against road traffic before passing the gate. He may, however, pass the gate signals, where provided, in the 'on' position, if they are not taken 'off'

12 General:-

12.1. Attaching to Train prohibited:- A Motor Trolley shall under no circumstances be attached to a train.

12.2. Movement of Motor Trolley, within station limits:- A Motor Trolley shall not be placed on any line at a station without the permission of the Station Master. A Motor Trolley which has arrived at a station or which has been placed on line can be moved from one line to the other only with the consent of the Station Master. The movement may be either a shunt move or by lifting the Motor Trolley off the track..

12.3. Care over curves and cuttings:- Great care shall be exercised while approaching curves or cuttings and at such places where the view ahead is not clear. The person-in-charge of Motor Trolley shall apprehend danger in such places and reduce the speed of Motor trolley efficiently to stop short of any obstructions.

12.4. Working of Motor Trolleys during total interruption of communications:-

If there is total interruption of communications, the Station Master on duty shall advise the official-in-charge of Motor Trolley of the same and the Motor Trolley shall be worked on the section under the rules of working of trains during total interruption of communications.

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) on a single line, in both directions, or

(b) 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.

S.R. 15.26.1. Working of trolleys without block protection.—

1.1. On section other than those mentioned in SR 15.26.2.1. during day, in clear weather, trolleys may be worked on the sole responsibility of the official-in-charge. He shall, however, notify the Station Master of the station at which the trolley will be put on line, the block section he is going to enter and the probable time at which he will clear section. He will also ascertain from the Station Master the particulars of the trains that he is likely to encounter on the section. The official-in-charge shall protect the trolley in accordance with the procedure laid down in clauses 1.2 to 1.7 when the view ahead and/or rear is not clear for a distance of at least 800 metres in the direction from which trains will approach.

1.2. On the single line, a Flagman shall follow and another Flagman shall precede the trolley at a distance of not less than 800 metres plainly showing a Stop hand signal. On the double line, a Flagman shall either follow or precede a trolley at a distance of 800

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metres in the direction from which trains will approach plainly showing a Stop hand signal.

1.3. The distance of 800 metres mentioned above is the minimum, which shall be increased on steep gradients and sharp curves or wherever the view is restricted, to such an extent as will be adequate to ensure the removal of the trolley before the arrival of the train.

1.4. When the nature of the line is such that the Flagman in advance or in rear cannot be seen by the person-in-charge of the trolley, the latter shall arrange before entering the section, to take with him sufficient number of Gangmen with hand signals so that the required number of additional intermediate flagmen can be provided for repeating the signals of the outermost Flagman or the Flagman posted at the observation post.

1.5 On seeing a train approaching, the Flagman nearest the approaching train shall immediately place three detonators on the line, ten metres apart, and then wave a red flag vigorously to warn the official-in-charge of the trolley about the approaching train. The official in charge shall after removing the trolley from the line, wave a green flag to the Flagman who shall then remove the detonators and withdraw the Stop hand signal.

1.6. Where owing to curves or cuttings or due to other causes, the view of the line is obstructed, observation posts shall be established at such sites so as to command a good view in both directions for the use of Flagman, thus enabling hand signals being conveyed to the person-in-charge of the trolley.

1.7. In case no signals are forthcoming from the Observation posts or when conditions are such that the Flagman at the Observation Posts cannot be seen by the official-in-charge of the trolley, the latter shall arrange to post additional intermediate flagmen at suitable positions to relay the signals from Flagman to Flagman.

2.1 On the following sections, due to existence of sharp curves, cuttings, tunnels etc., special precautions mentioned in clauses 2.2 to 2.10 shall be taken while working trollies without block protection:-

SECUNDERABAD DIVISION

- (1) Vikarabad-Rukmapur.
- (2) Siripurkaghaznagar-Makaudi.
- (3) Ghatnandur-Parli Vaijnath.

HYDERABAD DIVISION

Indalwai-Upalwai

NANDED DIVISION

Ambari-Kosai

GUNTAKAL DIVISION

- (1) Mamanduru-Balapalli
- (2) Balapalli-Settigunta
- (3) Dronachalam-Panyam

GUNTUR DIVISION

Gazulapalli-Diguvametta

2.2. The official-in-charge, shall fill up in duplicate Part 'A' the notice portion of Trolley/Lorry Notice (T/1518) and send to the Station Master at which he intends to place the trolley on line. The Station Master shall advise on telephone the station at the other end of the block section as under:-

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Trolley number.....will enter section at hours with Trolley Notice number.....Issue Caution Order to the trains coming from yours.

2.3. The Station Master at the other end shall acknowledge and advise as under:-
I understand trolley numberwill enter section at.....hour and will issue caution order till the trolley is removed from the line. PN.....

2.4. The Station Master shall ascertain from the Control the particulars of trains likely to be encountered by the trolley while working in the section, and furnish these particulars in part 'B' of the Trolley Notice (T/1518). On the non-controlled section, the relevant particulars shall be obtained from the station where trains originate.

2.5 If there is total interruption of communication, the Station Master shall advise the official-in-charges of this fact and make an endorsement on the form T/1518 to this effect and it will be the personal responsibility of the official-in-charge to protect the trolley as per Rules. When communication is restored, caution orders will be issued as per the procedure mentioned above till the removal report of the trolley is received by the Station Master.

2.6. If it is necessary to place the trolley on the line outside the station limits, the official-in-charge shall fill in the particulars in Part 'A' and send the form T/1518 through a messenger to the Station Master and obtain the particulars of trains likely to be encountered. Till this information is received, the official-in-charge shall not place the trolley on line.

2.7. On arrival of the trolley at the station, the official-in-charge shall fill up the removal report of the form Part 'C' (T/1518) and send it to the Station Master, who shall acknowledge receipt of the same in the office copy and also enter the time. The Station

Master shall immediately advise the Station Master at the other end of the block section for the discontinuance of the issue of caution order. All entries relating to the trolley shall be made in red ink in the TSR. If the trolley is removed from the line in mid-section and if it is not intended to replace it on the line, the official-in-charge shall fill up the removal form and send it to the Station Master of the nearest block station. The Station Master shall enter the time at which the removal report is received by him, sign the entry and return the block foil through the messenger. He shall then immediately advise the Station Master at the other end of the block section and discontinue the issue of caution order thereafter.

2.8. Immediately a trolley is permitted to be placed on the line, the Station Master shall place the 'Trolley on Line' cap on the plunger of the Block Instruments to serve as a visual reminder for the issue of caution order.

2.9. During the period the trolley is working on the section, the Station Masters at either end of the block section shall issue caution orders for all trains entering the section.

2.10. The official-in-charge of the trolley is responsible for the safe working of the trolley. He shall ensure that Rules for the working of the trolley are strictly adhered to, and always be alert to guard against accidents. The issue of caution orders by the Station Master does not absolve the official-in-charge of the trolley from his responsibility for protecting the trolley.

3. Working under Block Protection:-

3.1. The Cycle trolley or Moped trolley shall, invariably, be worked as a train on 'line clear' under the system of working on the sections mentioned in S.R. 15.26.2.1.

3.2. During day, when the visibility is not clear and during night a trolley or Cycle trolley or Moped trolley shall work only under block protection.

4. Speed of Trolleys:-

4.1. The speed of a trolley or Cycle trolley shall not exceed 15 KMPH.

4.2. If the speed of a Moped Trolley is more than 15 KMPH, it shall work only under block protection.

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5. Responsibility of Engineering staff working on line:-

Gangmates/Gangmen, Keymen and Gatemen shall exhibit stop hand signals to warn any approaching train, when they see the trolley on line and continue to exhibit the Stop hand signal, till the trolley has passed 800 meters away or until it is removed from the line.

6. Working of private trollies:-

No private trolley shall be used by non-railway official except under special permission of COM.

7. Trollies following one another:-

When two trollies are running together in the same direction and on the same line care shall be taken to ensure that they are kept at least one telegraph post apart.

8. Spring Points / Catch-siding :-

The official-in-charge of the Cycle / Moped trolley shall stop short of the spring / catch siding points, lift it off the track, if necessary and place it on the correct line, before proceeding further.

9. The Official-in-charge of the Cycle / Moped trolley, while approaching level crossings, shall look out for the road traffic and ensure safe passage for his Cycle / Moped trolley.

10. Trolley when not in use:-

Whenever a trolley is not in use and is placed on the platform for being loaded on a train or any other purpose, it shall 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.

15.27 Protection of lorry on the line—

- (1) 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.**
- (2) 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 metres on the Broad Gauge and 400 metres on the Metre 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 metres on the Broad Gauge and 800 metres on the Metre Gauge and the Narrow Gauge from the lorry in the direction from which trains may approach or**
 - (b) On single line, by one or two men as required, following and preceding the lorry at a distance of 600 metres on the Broad Gauge and 400 metres on the Metre 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 metres on the Broad Gauge and 800 metres on the Metre Gauge and the Narrow Gauge from the lorry on either side.**
- (3) Each man so following or preceding the lorry at a distance of 1200 metres on the Broad Gauge and 800 metres on the Metre Gauge and the Narrow Gauge shall be provided with detonators and place three on the line, 10 metres apart, immediately the lorry comes to a stand for the purpose of either unloading or loading or**

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should any train be seen approaching and continue to display the Stop hand signal.

- (4) The man or 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 Stop hand signal.
- (5) 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.
- (6) 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. Working of Lorries:-

Within station section.

1.1. Whenever a lorry has to work within station section, the official-in-charge of the lorry will advise the Station Master in writing on Trolley / Lorry Notice form T/1518 specifying the period during which the lorry will work and the line or lines over which the lorry will pass. The written notice shall be prepared in duplicate and one foil shall be handed over to the Station Master obtaining his acknowledgement on the other foil.

1.2. As soon as the lorry is placed on the line, the Station Master shall ensure that 'line blocked' pins/collars are placed on the Station Master's Control Slide and Cabin Levers concerned and they are removed only when the lorry is removed off the track.

1.3. The Station Master on duty when granting 'line clear' for a train and before authorizing the taking 'off' of signals for the reception and despatch of the train will personally satisfy himself that the official-in-charge of the lorry is advised and that the lorry does not foul the route for the passage of the train.

2. Working of lorries:-

Outside station Section

2.1 On sections other than those indicated in S.R.15.26.2.1. during day, when the weather is clear, a lorry can be worked without 'block protection' in accordance with S.R. 15.26.2.2. to 2.10. prescribed for trolleys. The Station Master receiving the Trolley/Lorry Notice shall also advise the Station Master of Notice Stations concerned, who will acknowledge receipt of this message and intimate the first train number, in which Divisional Caution Order, intimation about the lorry on line, has been included. The PWI or the official-in-charge of the lorry will, in no circumstances, place a lorry on line unless he has obtained the acknowledgment in writing from Station Master of the station at which the lorry enters the block section that he has advised the other Station Master concerned in regard to the issue of caution orders. However during day, when there is thick, foggy or tempestuous weather impairing visibility and during night a lorry shall only be worked under the Rules for working of trains.

2.2. On Sections indicated in S.R.15.26.2.1. a lorry shall only be worked under the Rules for working of trains both during day and night.

2.3. A lorry shall always be worked under block protection, when it is loaded with rails, girders or specially heavy materials which may cause delay in unloading.

2.4. Whenever a lorry is working on a section without block protection, the precautions laid down in Rule 15.27 (2) to (6) shall be complied with by the official-in-charge for protecting the lorry.

2.5. The distance of 1200 metres on the BG and 800 metres on the MG specified in Rule 15.27 (3) for following or preceding the lorry is the minimum which may be suitably increased on steep gradients, sharp curves or where the view is restricted to such an extent as will be adequate to ensure the removal of the lorry before the arrival of the train.

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2.6. The issue of caution orders to the Loco Pilots of trains will in no way relieve the official-in-charge of the lorry of his duty to protect his lorry. The lorry shall be removed from the line in time to ensure safety and without causing delay to any train.

3. Working of lorries on double line section—

3.1. A lorry shall be run on the proper line, the direction in which trains run except when returning to the station from which it has started. It shall be ensured by the person-in-charge of a lorry that under no circumstances a lorry be changed from one line to the other.

3.2 When working a lorry on a 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 line is not fouled or infringed in any way.

3.3 In case of lorries working in the block section on Double line when materials are unloaded, it should be ensured that no running line is fouled.

4. Speed of lorries:—

The speed of a lorry shall not exceed 10 KMPH over the straight and when the view ahead is not clear, the speed shall not exceed 6 KMPH.

5. Lorries following one another:—

When two lorries are required to be worked in the same direction on the same line, care shall be taken to ensure that they are kept at least 2 (two) telegraph posts apart..

6 Working of lorries during total interruption of Communications:—

Normally lorries are prohibited to be placed on line on a section, where there is total interruption of communications. However, when circumstances warrant the necessity for the working of lorry on this section, the following procedure shall be strictly adhered to :—

6.1. When lorries can be placed on line without block protection in accordance with the rules prescribed under S.R.15.26.2.2. to 2.10 for trollies, the Station Master shall advise the official-in-charge of the lorry about the total interruption of communications prevailing on the section and make an endorsement in the form T/1518 accordingly, and it will be the personal responsibility of the official-in-charge to protect the lorry as per rules. When communication is restored, caution orders will be issued till the removal report is received by the Station Master concerned.

6.2. When lorries are required to be worked in accordance with the rules prescribed for working of trains under block protection the same shall be worked as per SR 6.02.4.

7. Lorries when not in use:—

When a lorry is not in use and is placed on the platform for being loaded onto a train or for any 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 or railway staff.

S.R. 15.27.8. **RAIL DOLLEY:-**

8.1 Rail dolley is a device with two or more wheels which in balanced condition can be moved manually on one rail of track and can carry one rail/sleeper in suspended condition. When necessary the suspended material can be dropped and rail dolley cleared off the track.

8.2. Manning of Rail Dolley - Every rail dolley shall be manned by not less than two able bodied persons. The person incharge for the working of rail dolley shall be a Railway servant not lower in rank than a keyman. The official-in-charge should have passed in Medical category A3 and must hold a valid certificate of competency for working rail dolleys.

Certificate of competency shall be issued by the PWI of the section who must satisfy himself that the person, to whom competency certificate is being issued, is fully aware of the rules for the working of rail dolleys and is also well acquainted with the concerned section.

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The certificate of competency shall be issued in the following form.

CERTIFICATE OF COMPETENCY		Form No.E1527
Certified that Sri _____ s/o Sri _____ Desig. _____ staff No. _____ of Gang No. _____ has been examined in the rules for working rail dolleys. He is fully aware of the rules for working of rail dolleys and is also well acquainted with the section.		
This certificate is valid upto _____		
Station:	Signature:	
Date :	Designation:	

The certificate of competency issued by PWI will be valid for a period of five years from the date of issue.

8.3. Working of rail dolleys :

(i) The Railway servant in charge of the rail dolley must inspect the section in advance particularly in reference to heaping of ballast, girder bridges and any other special features which make it difficult to drop the materials and remove the rail dolley. He shall get the ballast heaps cleared and work the dolley in such locations only when visibility is clear for at least 1200metres and the rails can be dropped safely without affecting train safety.

(ii) Rail dolleys shall not be worked on sections having gradients steeper than 1 in 200

(iii) Not more than 6 rail dolleys should be worked in a group in any one block section.

(iv) Normally not longer than 3 rail welded panels should be carried by rail dolleys. The rail dolleys must not be worked after sunset and before sunrise and in bad weather when the visibility is poor. Rail dolley should not be worked in deep cuttings, steep grades, sharp curves, heavily built up areas etc., where the visibility is not clear for 1200metres on BG and 800m on MG. In such locations the rail dolley should be worked under block protection.

(v) In case, a rail dolley is to carry rails longer than 3 rail panel or it is required to move over crossovers in yard, crossing more than one line, then it should work under block protection.

8.4. Protection of rail dolleys :

(i) No traffic block or caution order is normally necessary for working of rail dolleys except as indicated in para 8.3 (iv) and (v) above.

(ii) Every rail dolley / group of rail dolleys when on line shall exhibit stop hand signal during day. No rail dolley should work during night or tempestuous weather.

(iii) On single line, depute flagmen with detonators and whistles to exhibit stop hand signal at a distance of not less than 1200m on BG and 800m on MG ahead and behind on each direction.

(iv) Where necessary i.e., in case of group of dolleys, intermediate flagmen should also be deputed with flags and whistles for relaying signals.

(v) On double line, the flagmen should be deputed in the direction from which the trains may approach. Rail dolley should not be worked during the period when traffic block has been granted on the other line.

(vi) The Official-in-charge of the rail dolley shall keep a sharp look out for approaching train and will get the rail dolley and materials cleared off the track as soon as an approaching train is sighted.

(vii) When a train is sighted, the flagman ahead or behind the dolly or group of dolleys should wave the red flags vigorously to warn the official-in-charge of the dolley and intermediate flagman if any, of the approaching train and at the same time place 3 detonators 10M apart on the line and show stop hand signal to the Loco Pilot of

approaching train to protect the rail dolleys. The detonators should be removed by the end flagman who has noticed the approaching train, only on receipt of signal from the

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official-in-charge by way of proceed hand signals indicating that the rail dolleys have been removed and track is clear. After removing the detonators, the flagman should show proceed hand signals to the approaching train.

(viii) While approaching level crossings, the official-in-charge shall look out for road vehicles and ensure safe passage of rail dolleys.

(ix) The official-in-charge shall be fully responsible for the safe working of rail dolleys.

S.R.15.27.9. RAIL-CUM-ROAD VEHICLE (RRV)

9.1 Description.

9.1.1 RRV is a self propelled one which can run on Railway Track as well as on road. It shall be treated and signalled as a train.

9.1.2 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 be under block protection only.

9.2 Incharge of RRV.

9.2.1 The RRV shall run under the supervision of SSE/SE/JE-Permanent way who herein after will be referred to as incharge. He will be responsible for all safety aspects regarding the movement of the RRV and is also responsible for obtaining and cancellation of 'traffic block' and protection of RRV

9.2.2 The driver, herein after to be referred as Operator and other staff on RRV shall work under direct supervision of the incharge.

9.3 Certificate of Competency.

9.3.1 For transportation training, the operator shall undergo training at Zonal Railway Training Institute (ZRTI) Moula-ali. The syllabus will be that of applicable to Assistant Loco Pilot.

9.3.2 On successful completion of training, Principal/ZRTI/MLY issues a certificate of competency, which will be valid for a period of 3 years and will be renewed at the time of refresher training. Refresher training modules applicable to Loco Pilots hold good to Operators.

9.3.3 The operator shall keep the Certificate of competency in his personal custody while on duty and it shall be produced whenever required. The operator shall also possess 'heavy vehicle driving license' for road vehicles. In charge shall ensure that driving license of operator is renewed on time.

9.4. Safety Equipment:

9.4.1 Auto flasher lights are to be provided on both sides of RRV.

9.4.2 RRV shall have provision to fix tail board / tail lamp on both sides.

9.4.3 The operator and incharge shall be responsible for ensuring that the equipment is complete and in working condition. The equipment will be the same as referred under SR. 4.65.5.

9.5 Rules for operation:

9.5.1 General

9.5.1.1 Advance weekly programme of Mobile Maintenance Units (MMU) shall be finalized at the level of Sr.DOM and Sr.DEN and circulated to all concerned.

9.5.1.2 RRV shall not be moved between running lines and siding / stabling lines without the permission of Station Master on duty. It will be treated as shunt movement.

9.5.1.3 On double or multiple line section, RRV shall run on proper line.

9.5.2 Movement from one block station to another block station:

9.5.2.1 The incharge shall give requisition to the Station Master for the movement of RRV.

9.5.2.2 On receipt of the requisition, the Station Master shall obtain permission of SCOR, obtain Line Clear and dispatch it as a train.

9.5.2.3 The Station Master at the other end of the block section shall receive RRV by taking off reception signals.

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9.5.2.4 On arrival of RRV, the incharge shall issue a Certificate of complete arrival of RRV to the Station Master.

9.5.2.5 On receipt of certificate of complete arrival of RRV, the Station Master shall close the block section.

9.5.3 Movement of RRV on Section / Station with track circuiting / Block proving axle counter / RRI / Panel interlocking.

9.5.3.1 When RRV is to be dispatched from a station or received into a station provided with track circuiting / block proving axle counter / RRI / Panel Interlocking such movements in the block section would be dealt only on PLCT.

9.5.3.2 In case of IB signaling both axle counter section and IB section shall be treated as one block section for the purpose of working of RRV.

9.5.3.3. RRV shall not be permitted on tracking from LC gates in Automatic Block section. On tracking of RRV shall be permitted from reporting station only.

9.5.3.4 Ferrule / slide pins / lever collars will be used to indicate the presence of RRV whenever RRV is stabled at a station and occupation / clearance will be physically verified by Station Master on duty.

9.5.4 On tracking and off tracking in mid-section.

9.5.4.1 On tracking and off tracking in mid-section shall be done from a level crossing (LC) gate.

9.5.4.2 RRV has an unique facility for on tracking and off tracking. The turn table attached to RRV is used to rotate the complete vehicle through an angle of 360 degrees in either direction during on tracking or off tracking of the vehicle at level crossing gate.

9.5.4.3 RRV has a loading platform of adequate capacity with facility of roller on one side of loading platform for easy loading and unloading of two pieces of 6 meters (maximum) long rails. The pay load capacity of vehicle is 3500 kg.

9.5.4.4 Seating capacity : Seven persons, including operator are permitted in cabin and four persons are permitted on loading platform.

9.5.4.5 It has facility of 12V / 250 watts swivel type work light which can be used during night operations.

9.5.5 On tracking :

9.5.5.1 The incharge shall give a message supported by a PN, to the Station Master through LC gate phone, indicating – LC gate number, approximate time of on tracking, approximate time needed for movement of RRV and the place of off tracking. (Station / next LC gate)

Note: Incharge shall have an exclusive private number (PN) sheet .

9.5.5.2 In case of failure of LC gate telephone communication, the RRV shall be brought by road to the nearest block station on either end and give requisition to the Station Master for the movement of RRV.

9.5.5.3 As soon as the RRV is ready for on tracking, incharge applies for traffic block through LC gate phone. In turn Station Master obtains permission for traffic block from SCOR and conveys it to in charge supported by a PN. The Station Master shall also inform the Station Master at the other end of the block section about traffic block, under exchange of PNs. Before permitting on tracking of RRV, the Station Master at the receiving end should comply the conditions under GR.8.02., 8.03 and 8.04.

9.5.5.4 In charge starts the process of on tracking of the RRV. On double line section. RRV will be on tracked as per the established direction of traffic.

9.5.5.5. Both the Station Masters place 'traffic block' visual indicators on the block instruments.

9.5.6 Off tracking :

9.5.6.1 In charge asks permission of Station Master through LC gate phone, seeking permission for off tracking shall be through a message supported by a PN.

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9.5.6.2 Permission for off tracking will be conveyed by Station Master to the in-charge supported by a PN

9.5.6.3 However on double line section, Station Master cautions the in-charge about the movement of trains on the other line. In-charge takes all the necessary precautions while off tracking the RRV on double line section.

9.5.6.4 In case of failure of telephone communication at LC gate, the RRV shall be worked to the nearest block station on either end and the in-charge of RRV should give certification to the Station Master that the block section is clear of RRV so that normal traffic can be restored.

9.5.6.5 During the off tracking, the flasher lights of RRV shall be switched ON.

9.5.7 During on tracking and off tracking of RRV, the LC gate will be closed to road traffic. Care shall be taken that LC gate is not closed to road traffic for more than 10 minutes. In charge of RRV shall make entries including PNs issued and received, in LC` gate register with regard to on tracking/off tracking.

9.5.8 If no level crossing gate is situated in the block section where the site of work is situated, then on tracking shall be done at the level crossing of block section in rear and the block shall be taken from such level crossing gate to the station in advance. On arrival at the said block station, the block shall be removed and for entering the required block section, block shall be taken afresh.

9.5.9 On double/multiple line section, adjacent line parallel to the portion of RRV working must be protected.

9.5.10 Speed – Speed potential of RRV is 80KMPH on road and 60 KMPH on rail in forward direction and 10 KMPH on rail and road in reverse direction.

Note : On tracking/off tracking of RRV shall not be done from unmanned level crossing and during failure of telephone communication at manned level crossing gate.

9.6 Failures and Accidents.

9.6.1 Accidents involving RRV shall be treated as train accidents.

9.6.2 In case of any break-down of RRV in the block section, it shall be protected as per G.R.6.03 / G.R.9.10 and relief engine will be called to clear the disabled RRV. It can be cleared by towing with the help of any light engine. The disabled RRV can be towed by linking with the connecting rods and slings similar to that of any road vehicles. The connecting rods and slings should always be kept in the RRV and the same has to be ensured by the in-charge before entering into block section.

9.7 Working instructions for RRV in electrified territory.

9.7.1 It is to be remembered that the OHE shall always be considered live and staff working under live OHE with Rail-cum-Road Vehicle (RRV) shall take care to see that nothing comes in contact with OHE since danger of electric shock/burns resulting from coming in contact directly or indirectly with live OHE.

9.7.2 While Rail-cum-Road Vehicle (RRV) is working in electrified territory, a minimum working clearance of 2 meters shall always be maintained from live parts of OHE with any working staff.

9.7.3 Permit-to-work on OHE must be obtained from an authorized TRD official and OHE is to be made dead and earthed, if work is to be carried out or any worker is required to come within 2 meters of 25 KV live overhead equipment.

9.7.4 No one should ever climb on to and stand on the roof of the cabin of RRV when it is standing under live OHE. A shut down should invariably be effected before climbing on the roof of stabled RRV. There is danger to the employees getting a shock if inadvertently stand up on the roof in the course of work except when the

OHE is dead and earthed. A caution notice to this effect in red colour must be painted on the vehicle.

- 9.7.5 While on tracking / off tracking RRV, care shall be taken that any part of the RRV shall not hit OHE mast.

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- 9.7.6 While RRV is on-tracking/off tracking or moving in between two tracks it shall always be remembered that in between tracks also, OHE masts exist to hold the OHE. Sufficient mechanical clearance shall be ensured while moving RRV in between tracks on road.
- 9.7.7 While unloading the rails / sleepers, gadgets or heavy tools from RRV, care shall be taken that they shall not fall on traction bonds. OHE mast / anchor foundation blocks or they should not hit OHE mast which will result in damage/disturbance to OHE and consequent disruption to traffic.
- 9.7.8 While loading/unloading rails into or from RRV in electrified tracks, it shall be ensured that no rail or tool or any part of the body of the workers, comes within the danger zone i.e., within 2 meters of live OHE.
- 9.7.9 The flap door of the RRV should be properly closed and secured before placing on the track and should not be kept open or opened while on run to avoid hitting of OHE mast.
- 9.7.10 All movements of the crane jib shall be carefully controlled so as not to foul the traction overhead equipment. No work shall be done within a distance of two metres from the live parts of the OHE without a permit-to-work and all safety precautions are taken.
- 9.7.11 While the staff are being transported to site sitting or standing in the trolley of RRV, they shall not hold the tools/measuring gadgets etc., vertically so as to fall within the danger zone of 2 meters of live OHE.
- 9.7.12 No modification / any extension pieces temporarily or permanently be attached to the crane jib which will raise its effective height as well as width and come in the danger zone of OHE.
- 9.7.13 When unloading the rails along the track, care shall be taken to ensure that the rails do not touch each other to form a continuous metallic mass of length greater than 30 meters.
- 9.7.14 In case of a breakage of an overhead line or defect on the overhead equipment which is likely to interfere with movement of RRV, is noticed ahead, the driver of RRV shall make an emergency stop, if necessary and report to TPC / Station Master / SCOR, and it shall be ensured that no staff comes in contact with the hanging OHE parts.
- 9.7.15 Staff who shall work on RRV shall be in possession of Competency Certificate for working in electrified area issued by Competent Authority of Division.
- 9.7.16 Before starting work by RRV in electrified area, a permission shall also be obtained from Traction Power Controller of concerned section.
- 9.8. **Safety precautions for the benefit of staff of Rail-cum-Road Vehicle**
- 9.8.1 Make sure that all persons are clear of the vehicle before performing any operational function.
- 9.8.2 Understand equipment operation and be aware of all pinch points before operating or making adjustments to the equipment.
- 9.8.3 At maximum loaded gross weight on rail (Including driver equipment, tools, payload etc.) do not exceed any of the rated values.
- 9.8.4 Do not exceed 60 Kmph when operating vehicle on track. Rail/road rules governing speeds should be observed at all times. Reduce speed when propelling the vehicle through switches, self-guarded frogs, road crossings, curves and branch lines. Operating the vehicle at unsafe speeds could result in derailment of vehicle.
- 9.8.5 Ensure all safety locks are positioned properly.

- 9.8.6 Failure to heed these warnings could result in severe body injury.
- 9.8.7 Observe and follow all rail/road safety rules and regulations.
- 9.8.8 Know the positions and functions of all controls before attempting to operate the vehicle.

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- 9.8.9 Always keep pneumatic shut off cocks in selected mode (Rail/Road) before setting the vehicle in motion on Rail or Road.
- 9.8.10 When performing maintenance making adjustments or whenever unintended movement of the vehicle could occur apply the parking brake.

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- 9.8.11 Ensure that all five pneumatic shut off valve levers are in required mode (Rail/Road) before moving. Otherwise serious accident may occur.
- 9.8.12 Ensure steering lock lever is in closed position on rail mode and in open position on road before moving.
- 9.8.13 Ensure that power take off (PTO) of hydraulic pump is in off position before engaging gear for traction of vehicle.
- 9.8.14 Hydraulic pump will be engaged only during hydraulic operation.
- 9.8.15 Before moving the vehicle ensure indicators for parking brake (P) and low air pressure are off on panel board.
- 9.8.16 Before moving the vehicle ensure that turn table base is fully closed and mechanically locked.
- 9.8.17 Ensure that rail attachments are mechanically locked in their position.

15.28 Lorries and trollies out of use—

A lorry or trolley, when not in use, shall be placed clear of line and the wheels thereof be secured with a chain and padlock.