

## CHAPTER III

# SIGNALS

### A. General Provisions

**3.01. General use of Signals.** – The Signals prescribed in these rules shall be used for controlling the movement of trains in all cases in which exceptions are not allowed by approved special instructions.

**3.02. Kinds of signals.**- The signals to be used for controlling the movement of trains shall be-

- (a) fixed signals,
- (b) hand signals,
- (c) detonating signals and
- (d) warning signals.

**3.03. Use of night signals by day.**- The signals prescribed in these rules for use by night shall also be used by day in tunnels and in thick, foggy or tempestuous weather impairing visibility.

**3.04. Placing of signals and signal arms; painting of signal arms.**-

(1) Fixed signals shall be clearly visible to the Loco Pilots of trains approaching them and shall be placed immediately to the left of or above the line to which they refer unless otherwise authorised by special instructions.

(2) In the case of semaphore signals, signal arms shall be placed on left hand side of the post as seen by the Loco Pilot of any approaching train to which they refer.

(3) (a) Except as provided for in clauses (b) and (c), signal arms shall be painted the same colour as the light exhibited in the 'on' position with a white bar on the side facing trains to which they refer and white with a black bar on the other side. Such bars shall be parallel with end of the arms.

(b) In the case of a yellow arm, a black bar shall take the place of the white bar on the side facing trains.

(c) Calling-on arms shall be painted white with a red bar on the side facing trains to which they refer, white with a black bar on the other side.

## **B. Description of Fixed Signals**

### **3.05. Use of fixed signals.-**

(1) Except under approved special instructions, all railways shall be equipped with fixed signals as prescribed in these rules.

(2) The aspects of a semaphore signal shall be displayed by the position of the arm by day and by a light or lights by night.

**Note.-** In the illustrations given in this chapter, which are not drawn to scale, the day aspect of the semaphore signals is shown by the position of the arm and the night aspect is shown by the light or lights to the right of the signal concerned.

(3) The aspects of a colour light and position light signal both by day and by night shall be the same and shall be displayed by fixed light or lights.

(4) The arm of a semaphore signal shall work in

(a) the lower quadrant in two-aspect signalling, and

(b) the upper quadrant in manually operated multiple aspect signalling.

(5) The 'off' position of a semaphore signal shall be displayed by day by the inclined position of the arm from  $45^{\circ}$  to  $60^{\circ}$  below the horizontal in case of two-aspect lower quadrant signals and  $45^{\circ}$  or  $90^{\circ}$  above the horizontal in case of multiple-aspect upper quadrant signals.

### **3.06. Description of Warner signals and their indications.-**

(1) A semaphore Warner signals has a fish-tailed arm.

(2) A Warner signal is intended to warn a Loco Pilot -

(a) of the condition of the block section ahead, or

(b) that he is approaching a stop signal.

(3) A Warner signal may be placed either-

(a) on a post by itself with a fixed green light 1.5 to 2 metres above it by night, or

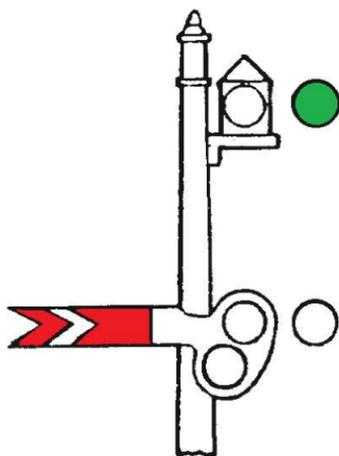
(b) on the same post below the first stop signal or the last stop signal.

(4) When placed in accordance with clause (b) of subrule (3), the variable light of the stop signal shall take the place of the fixed green light of the Warner signal be such that the Warner signal cannot be 'taken off' while the stop signal above it is 'on'.

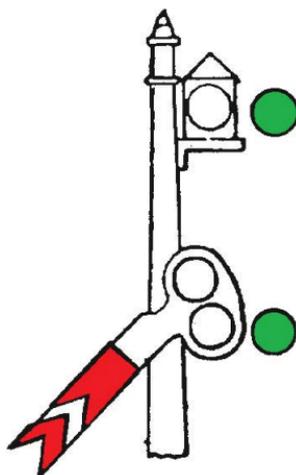
(5) The aspects and indications of a semaphore Warner signal are shown below:-

(a) **Semaphore Warner signal in Two-Aspect Signalling Territory- on a post by itself**

**'On' position**



**'Off' Position**



**ASPECT:**

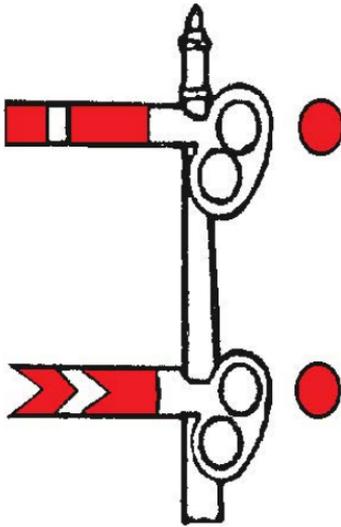
**Proceed with caution**

**Indication:**

Proceed with Caution and be Prepared to stop at the next Stop signal.

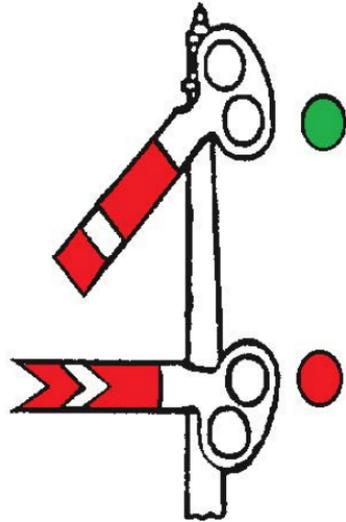
**Proceed**

**Proceed**

(b) Semaphore Warner signal in Two-Aspect Signalling Territory- below a stop signal'On position'

**ASPECT :**  
**Stop**

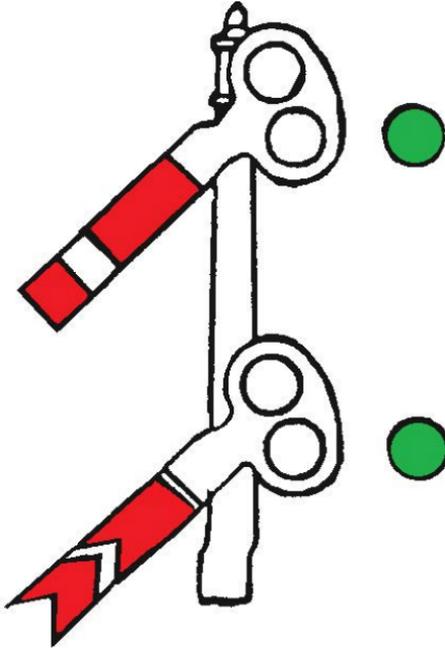
**Indication:**  
 Stop dead

'Off' Position

**Proceed with**  
**Caution**

Proceed with  
 Caution and be  
 Prepared to stop  
 at the next Stop signal

**Semaphore Warner signal in**  
**Two-Aspect signalling Territory- below a Stop Signal**  
**'Off position**



**ASPECT:**

**Proceed**

**Indication:**

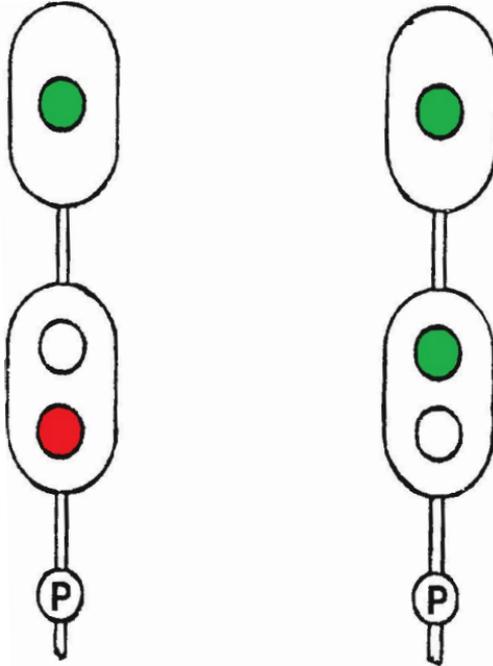
**Proceed**

(6) The aspects and indications of a colour light Warner signal are shown below:-

(a) **Colour light Warner signal in Two-Aspect Signalling Territory-on a post by itself**

'On' position

'Off' Position



**ASPECT:**

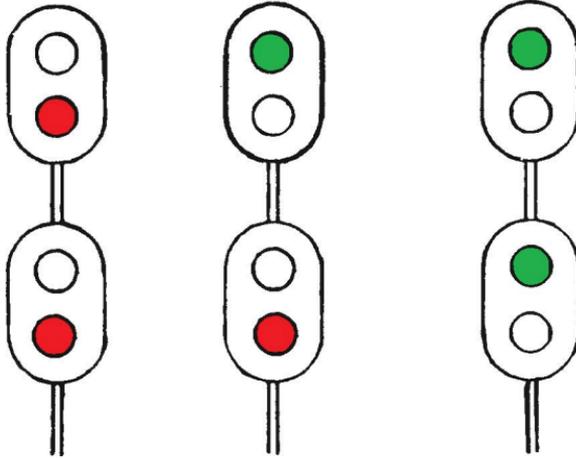
**Proceed with  
Caution**

**Indication :**

Proceed with caution  
and be prepared to  
stop at the next Stop  
signal

**Proceed**

Proceed

(b) Colour Light Warner signal in Two-Aspect Signalling Territory-below a Stop signal'On' Position'Off' Position**ASPECT:****Stop****Proceed with  
caution****Proceed****Indication:**

Stop dead

Proceed with caution  
and be prepared to stop  
at the next Stop signal

Proceed

(7) A Warner signal with a fixed green light above it by night, on a post by itself, shall be located at an adequate distance in rear of the stop signal, the aspect of which it prewarns:

Provided that when such a Warner signal applies to a gate stop signal, it shall not display the 'Proceed' aspect unless there is adequate distance between the gate stop signal and the first stop signal of the station ahead. The adequate distance in such a case shall never be less than 1200 meters.

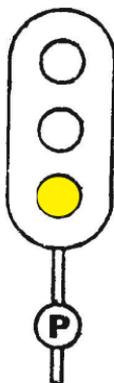




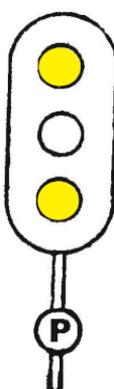
(4) The aspects and indications of a colour light Distant signal are shown below:-

**Colour light Distant signal in Multiple-Aspect Signalling Territory**

'On' position



'Off' position



**ASPECT:**

**Caution**

**Attention**

**Proceed**

**Indication:**

Proceed and be prepared to stop at the next Stop signal

Proceed and be prepared to pass next signal at such restricted speed as may be prescribed by special instructions

Proceed

(5) A Distant signal shall be located at an adequate distance in rear of the stop signal, the aspect of which it pre-warns.

(6) Where necessary more than one Distant signal may be provided. In such a case, the outermost signal, to be located at an adequate distance from the first stop signal, shall be called the Distant signal and the other called the Inner Distant signal, with the distant signal capable of displaying 'Attention' or 'Proceed' aspect only.

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

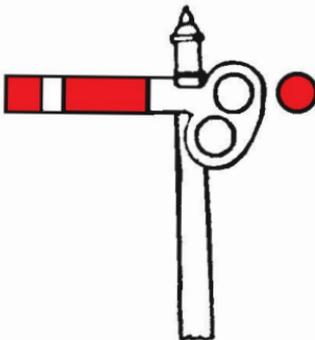
### **3.08. Description of Stop signal and their indications.-**

(1) A semaphore stop signal has a square ended arm.

(2) The aspects and indications of a semaphore stop signal working in the lower quadrant are shown below:-

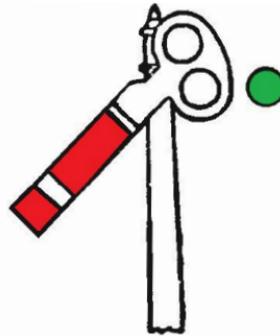
#### **Semaphore Stop signal in Two- Aspect Signalling Territory**

**'On position**



**ASPECT:**  
**Stop**  
**Indication:**  
 Stop dead

**'Off position**



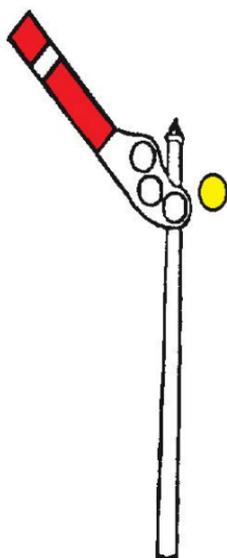
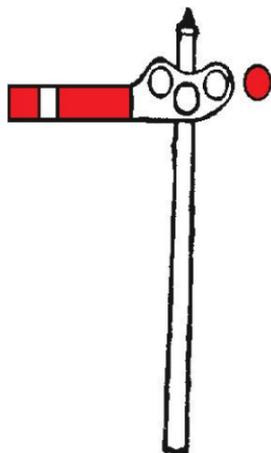
**Proceed**  
**Proceed**

(3) The aspects and indications of a semaphore stop signal working in the upper quadrant are shown below:-

**Semaphore Stop signal in Multiple-Aspect  
Signalling Territory**

'On' position

'Off' position



**ASPECT:**

**Stop**

**Indication:**

Stop dead

**Caution**

Proceed and be prepared to stop at the next Stop signal

**Proceed**

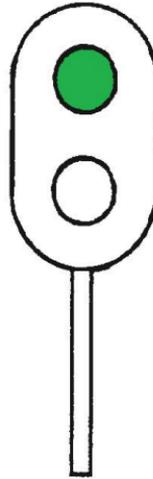
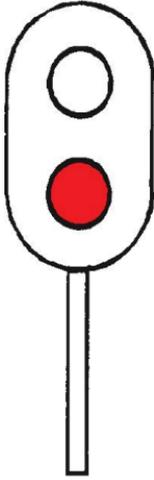
Proceed

(4) The aspects and indications of a colour light stop signal are shown below:-

**(a) Colour light Stop signal in Two-Aspect Signalling Territory**

'On' position

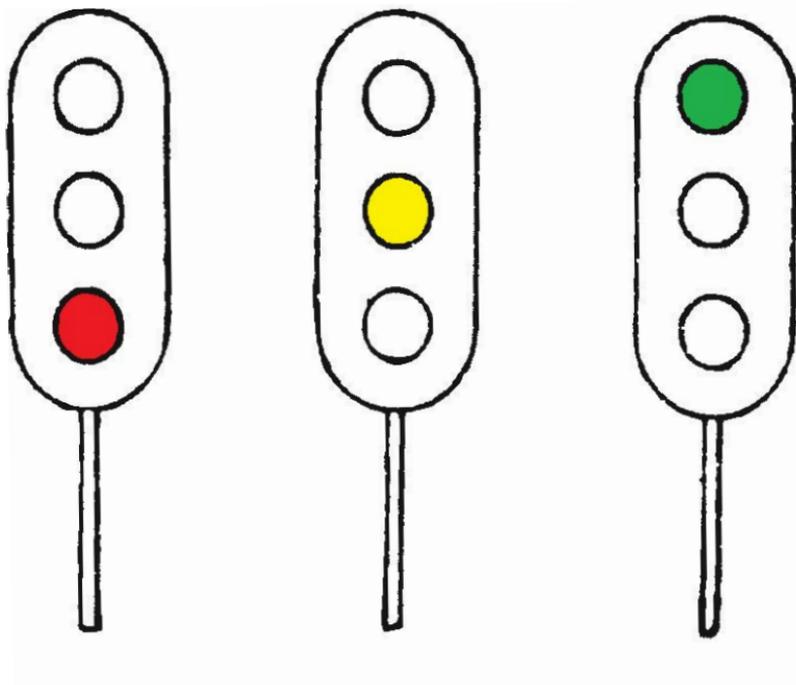
'Off' position



**ASPECT:**  
**Stop**  
**Indication:**  
Stop dead

**Proceed**  
**Proceed**

(b) Colour light Stop signal in Multiple Three-Aspect Signalling Territory  
'On' position                      'Off' position

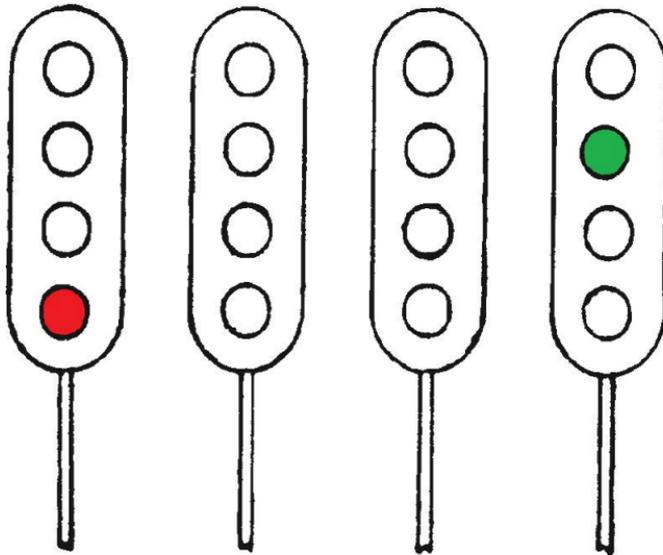
**ASPECT:****Stop****Caution****Proceed****Indication:**

Stop dead

Proceed and  
be prepared  
to stop at the  
next Stop signal

Proceed

(c) Colour light Stop signal in Multiple Four-Aspect Signalling Territory  
'On' position 'Off' position



**ASPECT:**

**Stop**

**Indication:**

Stop dead

**Caution**

Proceed and be prepared to stop at the next Stop signal

**Attention**

Proceed and be prepared to pass next signal at such restricted speed as may be prescribed by special instructions

**Proceed**

Proceed

### **3.09. Kinds of fixed stop signals for approaching trains.-**

(1) The stop signals which control the movement of trains approaching a station are of three kinds, namely-Outer, Home and Routing signals.

(2) The Outer signal, where provided, is the first stop signal of a station and is located at an adequate distance outside the point upto which the line may be obstructed after Line Clear has been granted to or obtained by the station in near.

(3) The Home signal is the first stop signal of a station at which an Outer signal is not provided and the second stop signal of a station at which an Outer signal is provided. It shall be located outside all connections on the line to which it refers.

(4) The Routing signal is a signal used to indicate to a Loco Pilot which of two or more diverging routes is set for him, when the Home signal is, in consequence of its position, inconvenient for this purpose.

### **3.10. Kinds of fixed stop signals for departing trains.-**

(1) The stop signals which control the movement of trains leaving a station are of two kinds, namely-Starter and Advanced Starter.

(2) When a train leaving a station is guided by only one starting signal, it is the last stop signal of the station and is called the Starter.

(3) When a train leaving a station is guided by more than one Starter signal, the outermost starting signal is the last stop signal of the station and is called the Advanced Starter.

(4) The Starter, where only one such signal is provided, or the Advanced Starter, shall be fixed at the limit beyond which no train may pass, unless the Loco Pilot is given the authority

to proceed required under the system of working, and shall be placed outside all connections on the line to which it refers except where otherwise allowed by approved special instructions. Shunting operations beyond this limit shall be carried out only in accordance with special instructions.

(5) Where an Advanced Starter is provided, the Starter referring to any line shall be placed so as to protect the first facing points or fouling mark of the connections to another running line.

**SR 3.10.01.- Last Stop signal.-**

Where there is no Advanced Starter, the Starter is the last Stop signal. At a 'C' class station, in absence of a Starter, the Home signal is the last Stop signal.

**3.11. Intermediate Block stop signal.-** Intermediate Block Stop signal is the Home signal provided at an Intermediate Block Post.

**3.12. Kinds of fixed Stop signals in Automatic Block territories.-**

(1) Stop signals in Automatic Block territory shall be colour light signals and may be of the following kinds-

(a) An Automatic Stop signal which is not dependent upon manual operation but is controlled automatically by the passage of a train into, through and out of the automatic block signalling section;

(b) A Semi-Automatic Stop signal which is capable of being operated either as an Automatic Stop signal or as a Manual Stop signal, as required;

(i) When a Semi-Automatic Stop signal works as an Automatic Stop signal, it assumes 'on' and 'off' aspects automatically according to the conditions of the automatic block signalling sections ahead;

(ii) When a Semi-Automatic Stop signal works as a Manual Stop signal, it assumes 'on' aspect automatically on the occupation of the automatic block signalling section ahead, but assumes 'off' aspect when operated manually provided the relevant automatic block signalling sections ahead are clear;

(iii) When a Semi-Automatic Stop signal works as an Automatic Stop signal, the 'A' marker provided under the signal is illuminated. When the 'A' marker is extinguished, the signal shall be deemed to work as a Manual Stop signal; and

(c) A Manual Stop signal operated manually and which cannot work as an Automatic or a Semi-Automatic Stop signal.

2. Colour light signals in Automatic Block territory shall be three aspect or four aspect.

### **3.13. Calling-on signals.-**

(1) A Calling-on signal is a subsidiary signal which has no independent aspect in the 'on' position and shall be-

- (a) a short square ended semaphore arm, or
- (b) a miniature colour light provided with a 'C' marker

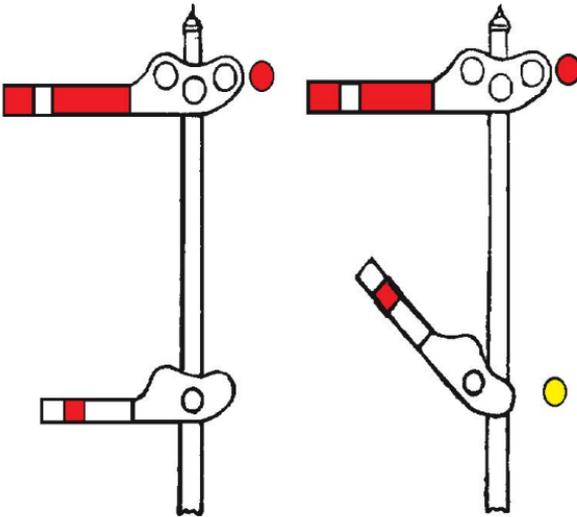
(2) A Calling-on signal, where provided, shall be fixed below a stop signal governing the approach of a train. Under approved special instructions, a Calling-on signal may be provided below any other stop signal except the last stop signal.

(3) A Calling-on signal, when taken 'off', calls on the Loco Pilot of a train to draw ahead with caution, after the train has been brought to a stop even though the stop-signal above it is at 'on' and indicates to the Loco Pilot that he should be prepared to stop short of any obstruction.

(4) A Calling-on signal shall show no light in the 'on' position.



- (b) Miniature semaphore Arm type Calling-on signal in Multiple-Aspect Signalling Territory  
'On' position                      'Off' position



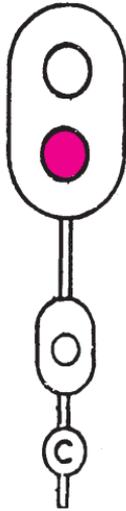
Loco Pilot shall obey the aspect of the Stop signal

**ASPECT:**  
**Proceed slow**  
**Indication:**

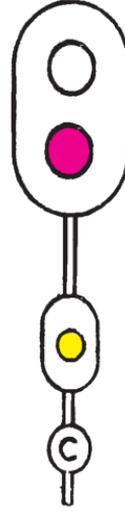
Stop and then draw ahead with caution and be prepared to stop short of any obstruction

6) The aspects and indications of a colour light type Calling-on signal are shown below:-

- (a) Colour light type Calling-on signal in Two-Aspect Signalling Territory  
'On' position                      'Off' position



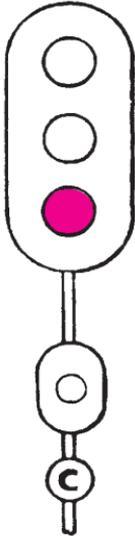
Loco Pilot shall obey the aspect of the Stop signal



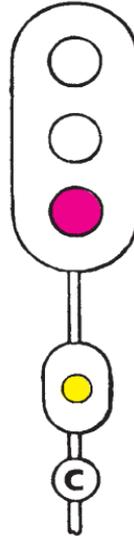
**ASPECT:**  
**Proceed slow**  
**Indication:**

Stop and then draw ahead with caution and be prepared to stop short of any obstruction

- (b) Colour light type Calling-on signal in Multiple-Aspect Signalling Territory  
'On' position                      'Off' position



Loco Pilot shall obey the aspect of the Stop signal



**ASPECT:**  
**Proceed slow**  
**Indication:**

Stop and then draw ahead with caution and be prepared to stop short of any obstruction

### **3.14. Shunt signals.-**

(1) (a) A Shunt signal is a subsidiary signal and shall be either-

(i) a white disc with a red bar across it, or

(ii) a position light signal.

(b) Under special instructions, a shunt signal may be a miniature semaphore arm.

(2) Shunt signals control shunting movements.

(3) A shunt signal may be placed on post by itself or below a stop signal other than the first stop signal of a station.

(4) More than one shunt signal may be placed on the same post and when so placed the topmost shunt signal shall apply to the extreme left hand line and the second shunt signal from the top shall apply to the next line from the left and so on.

(5) When a shunt signal is taken 'off', it authorises the Loco Pilot to draw ahead with caution for shunting purposes although stop signal if any, above it is at 'on'

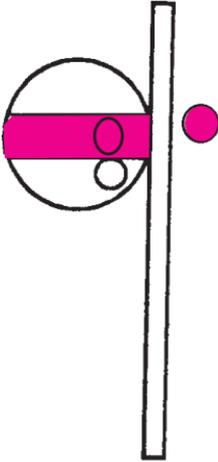
(6) When a shunt signal is placed below a stop signal, it shall show no light in the 'on' position.

(7) In case shunt signals are not provided, hand signals may be used for shunting.

(8) The aspects and indications of a disc type shunt signal are shown below:-

(a) Disc type Shunt signal in Two-Aspect Signalling Territory

'On' position



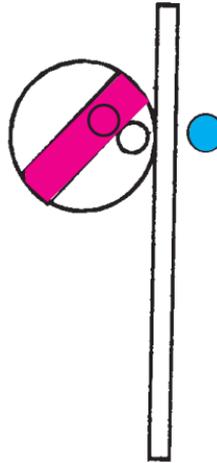
**ASPECT :**

**Stop**

**Indication :**

Stop dead

'Off' Position

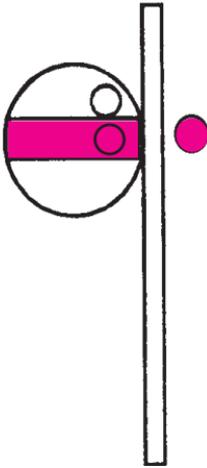


**Proceed slow**

Proceed with  
caution for  
shunting

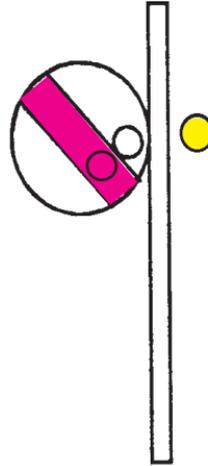
**(b) Disc type Shunt signal in Multiple-Aspect Signalling Territory**

'On' position



**ASPECT :**  
**Stop**  
**Indication :**  
 Stop dead

'Off' position



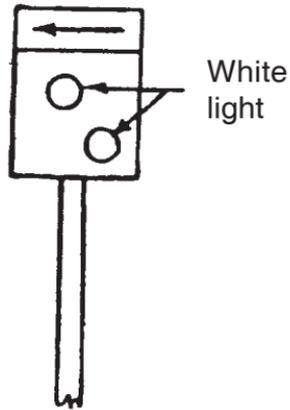
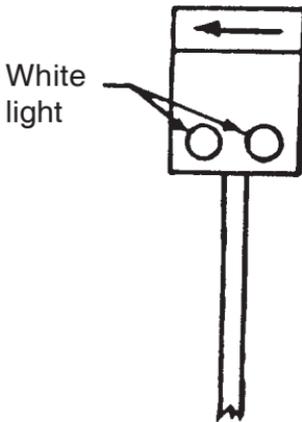
**Proceed slow**  
 Proceed with  
 caution for  
 shunting

(9) The aspects and indications of a position light type shunt signal are shown below :-

**Position light type Shunt signal in Two-Aspect or Multiple-Aspect Signalling Territory**

**'On' position**

**'Off' Position**



**ASPECT :**

**Stop**

**Proceed slow**

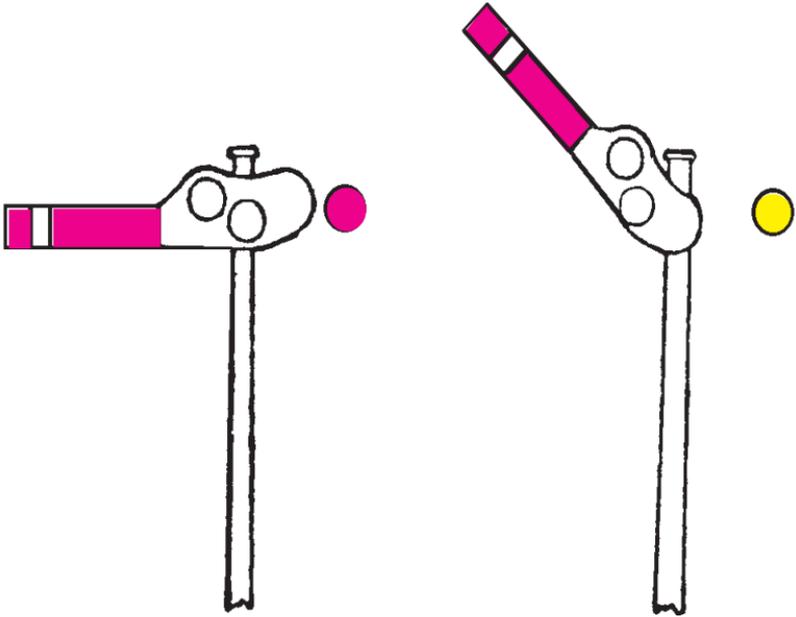
**Indication :**

Stop dead

Proceed with  
caution for  
shunting



(b) Miniature Semaphore Arm type Shunt signal  
in Multiple-Aspect Signalling Territory  
'On' position                      'Off' Position



**ASPECT :**

**Stop**

**Indication :**

Stop dead

**Proceed slow**

Proceed with  
caution for  
shunting

**3.15. Co-acting signals –**

(1) Co-acting signals are duplicate signals fixed below ordinary signals and are provided where, in consequence of the height of the signal post, or of there being an over-bridge or other obstacle, the main arm or light is not in view of the Loco Pilot during the whole time that he is approaching it.

(2) Co-acting signals shall be fitted at such height that either the main arm or light, or the Co-acting arm or light, is always visible.

**3.16. Repeating signals :**

(1) A signal, placed in rear of a fixed signal for the purpose of repeating to the Loco Pilot of an approaching train the aspect of the fixed signal in advance is called a Repeating signal.

(2) A Repeating signal shall be provided with an 'R' marker and shall be of –

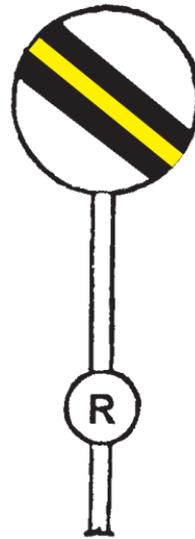
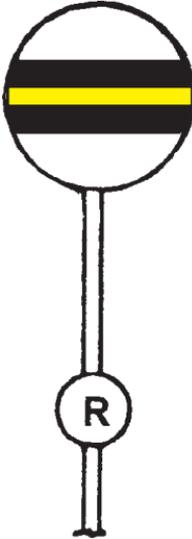
- (a) banner type, or
- (b) a square ended semaphore arm, or
- (c) a colour light signal.

(3) The aspects and indications of a banner type Repeating signal are shown below :-

**Banner type Repeating signal in Two-Aspect Signalling Territory**

**'On' position**

**'Off' Position**



**ASPECT :**

**Signal 'On'**

**Indication :**

Signal which it repeats is at 'on'

**Signal 'Off'**

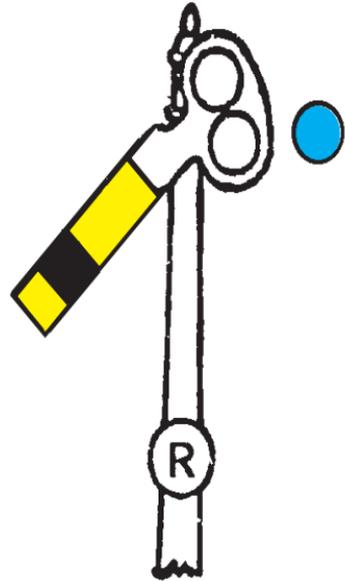
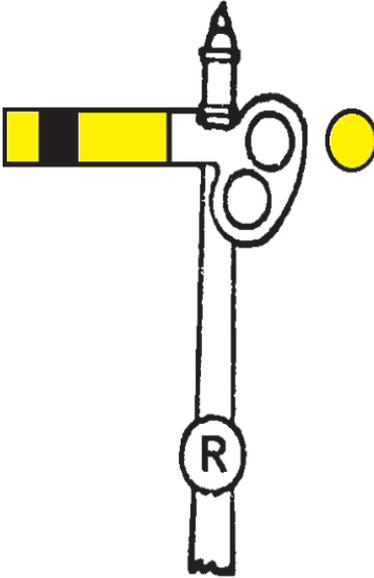
Signal which it repeats is 'off'

(4) The aspects and indications of a semaphore arm type Repeating signal are shown below :-

**Semaphore Arm type Repeating signal**  
**in Two-Aspect Signalling Territory**

'On' position

'Off' Position



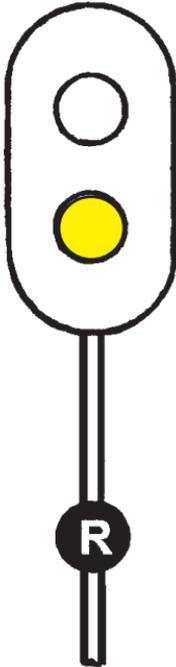
**ASPECT :**  
**Signal 'On'**  
**Indication :**  
Signal which it repeats is at 'on'

**Signal 'Off'**  
  
Signal which it repeats is 'off'

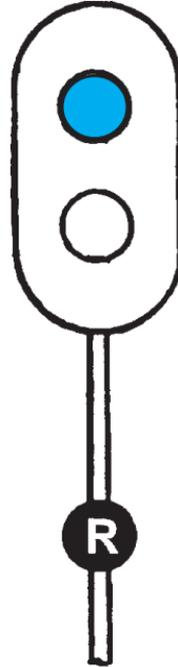
(5) The aspects and indications of a colour light type Repeating signal are shown below :-

**Colour light type Repeating signal**

**'On' position**



**'Off' Position**



**ASPECT :**

**Signal 'On'**

**Indication :**

Signal which it repeats is at 'on'

**Signal 'Off'**

Signal which it repeats is 'off'

**SR 3.16.01.** – (i) When a stop signal cannot be seen from the sighting distance on account of curves, over bridges or other local conditions, a Repeating signal shall be provided.

(ii) In regard to Two-Aspect Signals including Modified Lower Quadrant signals, the minimum visibility distance for various signals shall be as follows-

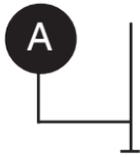
- (a) Home signals - 400 metres
- (b) Main Starter signals - 400 metres
- (c) Loop Starter signals - 200 metres
- (d) Outer/Warner signals in Two-Aspects lower quadrant signalling territory only - 1.2 Kilometres.

(iii) In regard to Multiple-Aspect signals. The minimum visibility distance of various signals shall be as under.

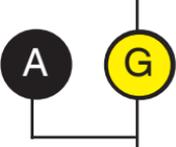
- a) Distant signal - 400 metres
- b) Inner Distant - 200 metres
- c) All stop signals - 200 metres

### **3.17. Distinguishing markers and signs for signals :-**

(1) Where necessary, signals shall be distinguished by prescribed markers. Such markers shall be fixed on the signal posts below the signals as under :-

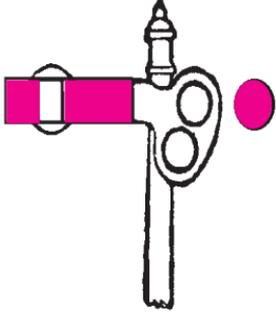
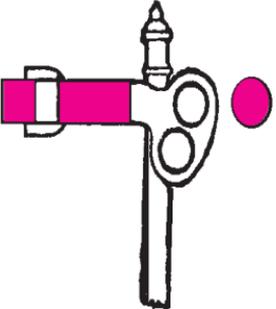
<u>Appearance</u>	<u>Provided on</u>	<u>Description</u>
	Automatic stop signal	Letter 'A' in black on white circular disc.
	Semi-Automatic stop signal	White illuminated letters 'A' against black background when working as an Automatic Stop signal, and letter 'A' extinguished when working as a Manual Stop signal.
	Colour light distant or on Warner signal on a post by itself	Letter 'P' in black white circular disc.

Note – Where a colour light Distant signal is combined with a last stop signal as provided for under sub-rule(7) of Rule 3.07, the marker shall be dispensed with.

<u>Appearance</u>	<u>Provided on</u>	<u>Description</u>
	Intermediate Block Stop signal	Letter 'IB' in black on white circular disc.
	Calling-on signal	Letter 'C' in black on white circular disc.
	Repeating signal semaphore signalling territory	Letter 'R' in black on white circular disc.
	Repeating signal in colour light signalling territory	White illuminated letter 'R' against black background
	Gate Stop signal	Letter 'G' in black on yellow circular disc.
	Gate Stop signal in Automatic Block territory	Letter 'G' in black on yellow circular disc and white illuminated letter 'A' against black background.

Note – Letter 'A' shall be lit only when the gates are closed and locked against road traffic.

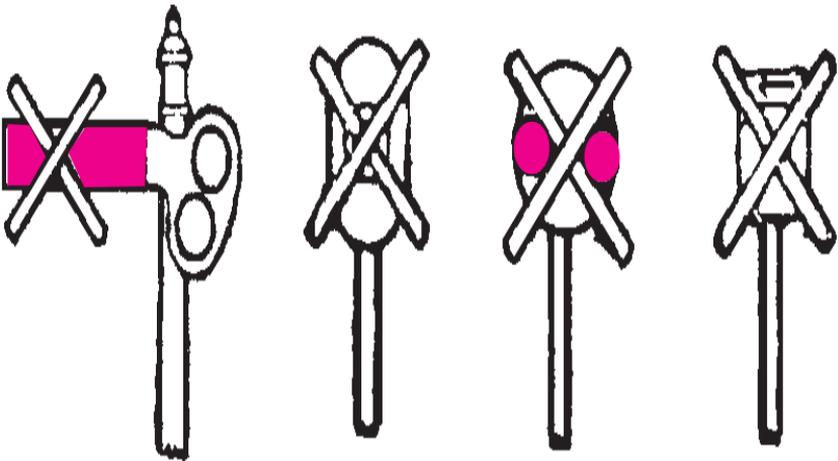
(2) Where necessary signal arms shall be distinguished by prescribed signs as under :-

Appearance	Provided on	Description
	<p>Approach Stop signals for Goods running lines only</p>	<p>One black ring on semaphore arm.</p>
	<p>Approach Stop signal for Dock platform</p>	<p>Letter 'D' in black on semaphore arm.</p>

(3) Other distinguishing markers or signs may be used with the approval of the Railway Board.

### 3.18. Signals out of use –

(1) When a fixed signal is not in use, it shall be distinguished by two crossed bars, each bar being not less than 1 metre long and 10 centimetres wide, as illustrated below:-



(2) A semaphore or disc signal when not in use shall be kept fixed in the 'on' position.

(3) Signals not in use shall not be lit.

### **3.19. Placing of Stop signals at diverging junctions:-**

Unless otherwise permitted by approved special instruction, where two or more lines diverge, the signals shall be fixed on a bracket post or an approved type of route indicator shall be provided instead of separate signals ;

Provided that for speeds upto 75 kilometres per hour with manually operated multiple-aspect signals, only a single arm Home signal may be provided instead of separate signals on a bracket post or a route indicator. The facing points must be provided with point indicators.

### **3.20. Placing of Stop signals at converging junctions**

: – Unless otherwise permitted by approved special instructions, where two or more lines converge, signals shall be placed on separate posts. Where the number of signals is considerable, these may be provided on a bracket post or a signal bridge or gantry.

**3.21. Signals on bracket post or signal bridge or gantry** - Where signals are placed on a bracket post or a signal bridge or a gantry, these shall be -

(a) so grouped that the respective signals are easily distinguishable for each running line and are placed as nearly as possible over the running lines to which they refer.

(b) so placed that the signal referring to the main line is higher than the signal or signals referring to the other running line or lines, and

(c) so arranged that the extreme left hand signal refers to the extreme left hand line and the second signal from the left refers to the next line from the left and so on.

### **3.22. Placing of more than one signal on the same post. -**

(1) Not more than one signal referring to trains moving in

the same directions, whether, on the same line or on separate lines, shall be placed on the same post, except-

(a) as prescribed in these rules for Calling-on, Shunt, Co-acting and Warner signals, or

(b) under approved special instructions.

(2) Where under approved special instructions, more than one signal is placed on the same post, the topmost signal shall apply to the extreme left hand diverging line and the second signal from the top shall apply to the next line from the left and so on.

Provided that in exceptional cases, where two home signals are placed on the same post, under approved special instructions, the top signal shall apply to the main line and the lower signals shall apply to the other lines.

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

**SR 3.23.01.-** In the event of electric repeater fitted to any signal getting out of order, the signal to which it refers, shall be treated as out of use.

### **3.24. Back-lights.-**

(1) Every semaphore or disc signal, the light of which cannot be seen from the place from which the signal is worked, shall be provided with a back-light to indicate whether the signal light is burning or not.

(2) Back-lights of signals shall show a small white light when 'on', and no light at all in any other position.

(3) Any fixed light used in conjunction with a semaphore signal shall show a back-light.

(4) Back-lights may not be provided when alternative arrangements are made at the place from which the signal is worked to indicate whether signal lights are burning or not.

## **C. Equipment of Signals**

### **3.25. Obligation to provide fixed signals at stations.-**

Fixed signals prescribed in this sub-chapter shall be provided at every station, except -

(a) at stations between which trains are worked on the One Train Only System, and

(b) at stations which are exempted from the provisions of signals under approved special instructions.

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

**SR. 3.26.01.-** No new signal shall be taken into use until it has been inspected by a Sighting Committee consisting of Divisional Transportation Inspector, Loco Inspector and JE/SE (S&T).

**3.27. Minimum equipment of fixed signals at stations provided with manually operated multiple-aspect signalling.-** The minimum equipment of fixed signals to be provided for each direction shall be as follows-

(a) at class 'B' stations .... a Distant, a Home and a Starter, and

(b) at class 'C' stations .... a Distant, and a Home,

**3.28. Minimum equipment of fixed signals at stations provided with modified lower quadrant signalling.-** Modified lower quadrant signalling may be introduced only where it is

expressly sanctioned by a special order of the Railway Board. The minimum equipment of fixed signals to be provided for each direction shall be as follows-

- (a) at class 'B' stations ... a Distant, a Home, a Warner below the Main Home, and a Starter, and
- (b) at class 'C' stations .... a Distant and a Home.

**3.29. Minimum equipment of fixed signals at other stations provided with two-aspect signalling.-** The minimum equipment of fixed signals to be provided for each direction shall be as follows-

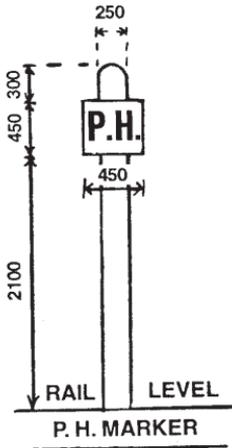
- (a) at class 'A' stations ... a Warner, a Home and a Starter,
- (b) at class 'B' stations ...
  - on a single line ... an Outer and a Home.
  - on a double line ... an Outer, a Home and a Starter, and both on a single and a double line, a Warner shall be provided in accordance with Rule 3.06, if trains run through at a speed exceeding 50 kilometres an hour without stopping, and
- (c) at class 'C' stations ... a Warner and a Home.

**3.30. Additional fixed signals at stations generally.-**

In addition to the minimum equipment of signals prescribed in Rules 3.27, 3.28, 3.29 and 3.32 such other fixed signals shall be provided at every station as may be necessary for the safe working of trains.

**3.31. Signals at class 'D' stations.-** At a class 'D' station, a train may be stopped in such manner as may be authorised by special instructions.

**SR 3.31.01.**



(i) At a class 'D' station, a 'P. H' marker post shall be provided by the side of the track, on either approach to the station, at a distance of not less than 400 metres from the centre of the station.

(ii) The marker post shall be as per diagram given along side with 450 mm square board at a height of 2100 mm above the rail level, bearing the letters 'PH'. The face of the post and board shall be painted white with the lettering in black and the back painted in black

**3.32. Provision of an Advanced Starter, Shunting limit Board or Block Section Limit Board.-**

(1) On a single line class 'B' station worked on the Absolute Block System, if the obstruction of the line outside the Home signal or the outermost facing points in the direction of an approaching train is permitted under special instructions under Rule 8.09, a Shunting Limit Board or an Advanced Starter shall be placed at such shunting distance from the Home signal or the outermost facing points as local conditions may require, provided the distance between the Shunting Limit Board (bearing the words 'Shunting Limit on the side which faces the station, and fitted with a lamp showing a white light in both directions to mark its position by night) or the Advanced Starter and the opposing first stop signal is never less than 400 metres in the two-aspect signalling territory and 180 metres in the



**3.33. Exceptions to rules 3.27,3.28,3.29 and 3.32:-**

Notwithstanding anything contained in rules 3.27, 3.28, 3.29 and 3.32.-

(a) If the station has only one connection off the Main line, the station shall be worked in accordance with approved special instructions;

(b) On any section where traffic is light and speeds slow, one stop signal only in each direction may be provided at each station ; such signal to be located at an adequate distance outside the outer-most facing points of the station and trains worked in accordance with approved special instructions ; and

(c) On any Railway having very light traffic, all signals may be dispensed with and trains worked under approved special instructions;

Provided that at stations with manually operated multiple aspect signals, where the speed of trains through a station does not exceed 50 kilometres per hour, a Distant signal and a Home signal only may be provided in each direction under approved special instructions.

**3.34. Fixed signals at level crossings.-**

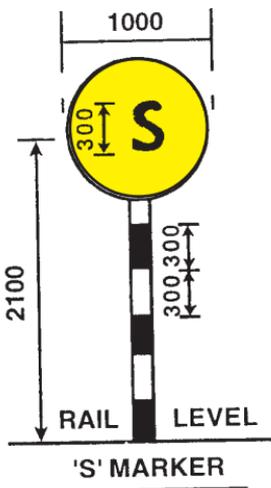
(1) Unless exempted under approved special instructions, every level crossing gate which closes across the line at a level crossing shall, except when interlocked with station signals, be provided with signals fixed at an adequate distance from the level crossing showing stop aspects in both Up and Down directions when the gates are open for the passage of road traffic.

(2) Except where otherwise prohibited under special instructions, a 'G' marker shall be provided on a gate stop signal.

**SR. 3.34.01.-**(a) A gate stop signal shall be placed ahead of the level crossing at a minimum distance of 400 metres in two-aspect signalling territory and 180 metres in multiple-aspect or modified lower quadrant signalling territory.

(b) Every gate signal shall be preceded by a Warner/Distant/Warning Board. Where necessary, both the Warner signal and Warning Board in two-aspect signalling territory and both Distant and Warning Board in multiple-aspect or modified lower quadrant signalling territory shall be provided in conformity with the type of signalling provided in the adjacent stations.

**3.35. Protection and Working of points of outlying sidings.-** Where there are points in the main line at a place which is not a block station, provision for the protection of such points, by signals or otherwise, and for working them, shall be made in order to secure the safe working of trains, as laid down under approved special instructions.



**SR 3.35.01.-** Indication to Loco Pilots for points outside station limits.-An indication ('S' marker) as per diagram shown alongside shall be provided at a distance of 30 metres in the rear of the facing points of every outlying siding to indicate to Loco Pilots the location of such points.

The 'S' marker shall be preceded by a caution indicator fixed 800 metres in its rear. If there is any restriction in speed, a speed indicator shall be fixed below the 'S' marker on the same post and, in addition, an indication of speed given on the Caution Indicator Board also.

## D. Working of Signals and Points.

### 3.36. Fixed signals generally. -

(1) Every fixed signal shall be so constructed that, in case of failure of any part of its connections, it shall remain at, or return to its most restrictive aspect. -

(2) A signal which has been taken 'off' for the passage of a train shall not be placed 'on' until the whole of the train which it controls has passed it, except-

(a) in case of emergency, or

(b) where arrangement is provided to restore the signal to 'on' automatically the control operating the signal shall not be restored to its normal position till the whole of the train has passed it.

(3) No fixed signal within station limits shall be taken 'off' without the permission of the Station Master, and in the case of a signal outside the station limits without the permission of such person as may for the time being be in independent charge of the working of such signal.

**SR 3.36.01** – The staff responsible for working signals shall always see that the position of the signal arm or the aspect as repeated electrically corresponds with the position of the lever or the controlling device operating the signal.

**SR 3.36.02** – Replacing signal to 'on' –

(a) If in an emergency a reception signal has to be put back to 'on' position when a train is approaching it, the route over which the train would pass shall not be altered until the train has come to a stand except to avert an accident.

(b) If the departure signal once taken 'off' for a train has to be put back to 'on' –

(i) On single line section, before changing the route or allowing any other movements, the “Authority to Proceed” if any, handed over to the Loco Pilot must be withdrawn.

(ii) At a station on double line section or on single line section having tokenless working, before changing the points or allowing any other movements, the Loco Pilot of the train concerned must be advised of the change in writing and his acknowledgement obtained. There after the Loco Pilot and staff so deputed shall immediately exhibit stop hand signal to the Station Master / trailing end cabin.

Provided that the above written advice need not be given to the Loco Pilots of starting trains in respect of movements in power signal and route relay yards or if the signals are interlocked with a mechanical / electrical time release.

**SR 3.36.03-** (a) The Station Master’s electric slide frames are provided with locking arrangements so that the machine can be locked in either normal or operated position of slide (s), by the removal of a lock up key. This key must be kept in the personal custody of the Station Master.

(b) Slide collars must be placed on the slides concerned of the Station Master’s electric slide frame for a line on which a train, an engine or a vehicle is left standing or if the line is otherwise obstructed.

(c) At key locked and non-interlocked stations, the points & signal keys when not in use, shall remain in the key box which shall be locked and the key of the pad lock shall remain in the personal custody of the Station Master.

(d) A starter or an Advanced starter on single line which is controlled by Block Token Instruments must not be taken ‘off’ when the block instrument is out of order or suspended. The Station Master must ensure that this signal is not taken ‘off’. When a lever key is provided for this signal, he must keep the key in his personal custody, unless it is held locked in the Block instrument.

**SR 3.36.04.-** Taking ‘off’ fixed signal.-

(a) Incoming trains.-

A fixed signal shall not be taken ‘off’ for a train earlier than necessary.

(b) Outgoing trains.-

(i) in case of through trains the starting signals may be taken 'off' at the same time as the approach signals are taken 'off' provided 'Line Clear' has been received from the station in advance.

(ii) In case of trains booked to stop, starting signals shall be taken 'off' after the train has stopped provided 'Line Clear' has been received. Where scheduled halt is long, starting signals shall be taken 'off' on completion of the station work.

(c) In case of suburban trains where the stoppage of the train at a station is one minute or less, starting signals may be taken 'off' as soon as 'Line Clear' has been received from the station in advance and even before the train has come to a stop at the station. It shall be the responsibility of the Loco Pilot/Motorman to stop the train at the station at which it is booked to stop according to Working Time Table although the starting signals at the station may have been taken 'off' earlier.

**3.37. Normal aspect of signals.-**

(1) Unless otherwise authorised under approved special instructions, fixed signals, except automatic signals, shall always show their most restrictive aspect in their normal position.

(2) The normal aspect of an Automatic Stop signal is 'Proceed'. Where, however, the signal ahead is manually operated, the aspect normally displayed may be 'Caution' or 'Attention'.

**3.38. Points affecting movement of train.-** The Station Master shall not give permission to take signals 'off' for a train until-

(1) (a) all facing points over which the train will pass are correctly set and locked,

(b) all trailing points over which the train will pass are correctly set, and

(c) the line over which the train is to pass is clear and free from obstructions.

(2) When a running line is blocked by a stabled load, wagon, vehicle or by a train which is to cross or 'give precedence to another train or immediately after the arrival of a train at the station the points in rear on double line sections and at either end on single line sections should be immediately set against the blocked line except when shunting or any other movement is required to be done immediately in that direction on that line.

**SR 3.38.01.-** Reception of a train at interlocked stations provided with end cabins.-

(a) At stations where Block Instruments are installed in the cabins, the Assistant Station Master / Cabin Master on duty at the Cabin shall obtain permission from, the Station Master on duty at the station supported by a Private Number before granting "Line Clear" for a train.

(b) (i) The Station Master on duty at the station where end cabins are provided, shall nominate a clear line for reception of the train and shall direct the facing end Assistant Station Master / Cabin Master / Cabin man to set and lock the nominated route. Station Master shall also give the number and description of the train to be received and whether the train will stop at the station for any work or will pass through to the Asstt. Station Master/ Cabin Master /Cabinman.

(ii) Similarly Station Master shall intimate the trailing end Assistant Station Master/Cabin Master/Cabin man giving the particulars of line nominated, number and description of the train and direct him to set and lock the nominated route and to operate the concerned slot. He shall also advise him whether the train will stop at the station for any work or will pass through.

(c) The facing end Assistant Station Master/Cabin Master/ Cabin man shall acknowledge the directive of the Station Master by repeating the line number, and the number and description of the train. He must stop all non-isolated shunting and ensure that the nominated line is clear and free from obstruction at his end. He shall

set and lock the concerned points, traps, derails etc. for the nominated route. He shall then give a Private Number to the Station Master as an assurance for the compliance of the orders given to him.

(d) The trailing end Asstt. Station Master/Cabin Master/Cabin man shall acknowledge directive of the Station Master by repeating the line number, number and description of the train. He must stop all non-isolated shunting at his end. He shall ensure that the nominated line is clear and free from obstruction including the clearance of sand hump, snag dead end or over-run line where required. He shall set and lock all the relevant points, traps, derails etc. for the nominated route. He shall operate the slot lever and give a Private Number thereafter to the Station Master as an assurance that the orders given to him have been complied with.

(e) After getting the assurances both from facing and trailing end Asstt. Station Masters/Cabin Masters/Cabin men, the Station Master shall authorise the facing end Assistant Station Master/Cabin Master/Cabin man to take off the reception signal (s) by issuing a Private Number and by operating the S.M's control slide (where provided).

(f) The facing end cabin shall give a Private Number to the Station Master as an assurance that the train has arrived complete and is standing clear of the fouling mark, except where Block Instrument is provided in the cabin.

(g) A record of the Private Numbers exchanged shall be kept both at the station and in the concerned cabins.

**SR 3.38.02.-** Procedure for reception of trains at stations on Automatic Signalling section, provided with end cabins.-

(a) The Station Master on duty at the station on receipt of departure report of the train from the Station in rear shall after nominating a clear line, advise the facing end Cabin Master/Cabin man to set and lock the nominated route, giving the number and description of train and the line number nominated.(b) Similarly, he shall also advise the trailing end Cabin Master/ Cabin man to set and lock the nominated route and to give the relevant slot for the nominated route, giving the number and description of the train and line number nominated.

(c) The facing end cabin shall repeat the instructions of Station Master, see the clearance of the nominated route, set and lock it and

stop all non-isolated shunting at his end. He shall then give a Private Number to the Station Master as an assurance of the compliance of the orders.

(d) The trailing end cabin shall repeat the instructions of the Station Master, see the clearance of the nominated route, set and lock it, stop all non-isolated shunting at his end give the relevant slot. He shall then give a Private Number to the Station Master as an assurance of the compliance of the orders.

(e) The Station Master shall then give a Private Number to the facing end cabin to take 'off' the reception signal (by pulling the relevant slide control where provided).

(f) The facing end cabin shall give a Private Number for the stopping train to the Station Master as an assurance that the train has arrived complete.

**SR 3.38.03.-** Procedure for reception of trains at interlocked stations where points and signals are operated from central cabin.-

(a) The Station Master on duty after giving 'Line Clear' shall nominate a clear line and after ensuring that the nominated route is clear and free from obstruction, shall advise the Cabin man to set and lock the nominated route with the following instructions:-

- (i) Number and description of the train
- (ii) The line number nominated ;
- (iii) Whether the train will stop or pass through.

(b) The Cabin man in turn shall repeat the instructions of the Station Master and where possible shall see the clearance of the nominated route including the clearance of sand hump/snag dead end/ over-run line and shall set and lock the nominated route. Thereafter, he shall give a Private Number to the Station Master as an assurance of the compliance of the orders given to him.

(c) The Station Master shall order the Cabinman to take 'off' reception signal (s) by pulling Station Master's control slide supported by a Private Number.

**Note :-**In case of failure of interlocking, Line Label and Badge system shall be introduced for reception and despatch of trains in terms of SR 3.39.02.

**SR 3.38.04.-** Procedure for reception of trains at interlocked stations where points are operated from one place and signals are operated from the Central Cabin.-

(a) The Station Master on duty shall nominate a clear line and after ensuring that the nominated route is clear and free from obstruction shall call two Pointsmen or unless otherwise mentioned in Station Working Rules, and order them to set and lock the both end points with the following instructions :-

- (i) Number and description of the train
- (ii) Line nominated ;
- (iii) Whether the train will stop or pass through.

(b) Each pointsman in turn shall repeat the instructions of the Station Master and proceed to the respective end of the nominated route walking along side and shall see that it is clear and free from obstruction and on arrival at the respective end shall contact Station Master on telephone provided at each end goomty.

(c) The Station Master shall transmit the respective route key electrically to each end pointsman to set and lock the route at their ends.

(d) The respective end Pointsman extract the concerned route key from the electrical transmitter and set and lock the points and transmit the key extracted from each end route to the Station Master.

(e) The Station Master having possession of both end route keys of the nominated route, shall hand over the route keys and the Station Master's control key for the respective Home signal to the Cabin man to take 'off' the reception signals.

**Note** - At stations where electrical key transmitters are not provided, the route keys shall be handed over to Pointsman before they leave for points, likewise they shall also take the relevant route keys of the nominated route from the points to the Station.

**SR 3.38.05.-** Rules for the working trains at stations provided with Rudimentary interlocking.

**(a) When only train is to be received and despatched-**

(i) The Station Master on duty shall select a clear line and call a Pointsman and give him verbal instructions for setting the trailing points with the following informations :-

The number and the description of the train, the line number on which the train is to be received and whether the train will stop at the station or pass through.

(ii) The Pointsman in turn shall repeat the instructions given by the Station Master and then proceed to the trailing points walking along the nominated route and see that it is clear and free from obstruction, shall set the trailing points walking along the nominated route and exchange 'GREEN' hand signal with the Station Master. He shall then return to the station.

(iii) The Station Master then shall depute the Pointsman with the facing points control key to set and lock the facing points of the nominated route.

(iv) The Pointsman shall proceed with the points control key walking along the nominated route and see that it is clear and free from obstruction, set the facing points in the desired position, lock it by inserting the key in the points lock and take out the required route key from points lock. He shall then insert it in the lock fitted on the Home signal post and operate and take out another key from the signal lock and return to the station and hand over the signal key to the Station Master.

(v) The Station Master shall retain the signal key in his personal custody and order the Pointsman to take 'off' signals by giving the relevant signal control key. On arrival of the train, the Station Master shall ensure that the train has arrived complete and stopped clearing the fouling mark, return the signal key to the Pointsman to unlock the facing points.

**(b) When there is a crossing of trains.-**

(i) The Station Master on duty after selecting clear lines for the trains from respective directions shall call the Pointsman and give him the following instructions :-

The number and description of each train, the line number selected on which each train is to be received, number of the train that is to be received first and also whether the second train will stop at the station or pass through.

(ii) The Pointsman in turn shall repeat the instructions of the Station Master.

(iii) The Station Master shall hand over the points control key to the Pointsman to set and lock the facing points for the second train by setting the trailing points against the first train and locking it where required.

(iv) The Pointsman shall proceed with facing points control key for the second train walking along the nominated route for the first train, and set the trailing points against the first train, lock it by inserting the key if required, and take out the required route key from the points lock and set and lock the facing points for the second train inserting the required key and take out the key from the lock for insertion to the lock fitted in the Home signal post and shall take out another key from the signal lock and return to the station and hand over the signal key to the Station Master. While returning the Pointsman shall walk along the nominated route for the second train and see that it is clear and free from obstruction.

(v) The Station Master shall retain the signal key received from the Pointsman in his personal custody and shall hand over to the Pointsman the points control key to set and lock the facing points in favour of the first train.

(vi) The Pointsman shall proceed to the facing points walking along the nominated route for the first train and see that it is clear and free from obstruction, set the facing points, lock it by inserting the points control key and shall take out the required key from the points lock and insert the same in the lock fitted on the Home signal post, shall take out another key from the Home signal lock and return to the station and hand over the same to the Station Master. While returning to the station the Pointsman shall walk along the nominated route for the second train and see that it is clear and free from obstruction.

(vii) The Station Master on receipt of the signal key from the Pointsman, shall hand over the signal key to the Pointsman and order him to take 'off' the signals for the first train.

(viii) The Station Master shall see that the correct signals are taken 'off'.

(ix) On arrival of the first train, the Station Master shall hand over to the Pointsman the Complete Arrival Register and the signal key for first train to return to the Home signal post and to bring back the points control key after setting the trailing points in favour of the second train.

(x) The Pointsman after getting the Guard's certificate in the Complete Arrival Register and ensuring that the first train has stopped clearing the fouling mark, shall proceed to the facing points and release the points and set the trailing points in favour of the second train and return to the station with the points control key.

(xi) The Station Master on receipt of the released points control key of trailing points for the second train shall order the Pointsman to take 'off' the signals for the second train by handing over the concerned signal key. Station Master shall see that the correct signals are taken 'off'.

(xii) On arrival of the second train, the Station Master shall hand over to the Pointsman the signal key for setting the trailing points in favour of the first train.

(xiii) The Pointsman shall proceed to trailing points and insert the signal key and release the key for points lock and unlock the points, set the trailing points in favour of the first train to despatch.

(xiv) During failure of Rudimentary interlocking the procedures detailed in SR 3.39.02 shall be followed.

**3.39. Locking of facing points.**- Facing points, when neither interlocked nor key locked, shall be locked for the passage of a train either by a clamp, or by a through bolt, with a padlock. It is not sufficient to lock the lever working the points.

**SR 3.39.01.-Points giving access to the line selected for reception of a train.-**

(a) All points from any adjoining line, giving access to the line selected for reception of a train, must be set against access to the selected line, before signals are taken 'off' for the reception of a train.

(b) Before the Station Master of a station where signals and points are not interlocked, takes 'off' signals for any train, he must himself, except when exempted by the Station Working Rules, inspect personally the correct setting for all points and locking of facing points for the selected route. The key (s) shall, in such case, be kept under his personal custody.

(c) In the event of the interlocking going out of order when a train is being admitted or despatched without taking 'off' the necessary signals, the facing points concerned shall be locked either by a clamp

or by a through bolt with a padlock. If, however, any of these points are key-locked and the Station Master is in possession of the key or keys ensuring the points being set and locked in the required position, such key locked points need not be clamped and padlocked.

**SR 3.39.02.- Rules for reception and despatch of trains at Non-interlocked stations-Line Label badge system.**

**(a) Applicability.-**

(i) At all non-interlocked stations where the facing points are not locked by means of route keys, “Line Label and Badge” system of working shall be observed for the locking of points.

(ii) ‘Line Label and Badge’ system shall also be observed at interlocked stations, in the event of failure or suspension of interlocking, as provided for in the Station Working Rules.

**(b) Description .-**

(i) For the purpose of the ‘Line Label and Badge’ system, the reception lines at the station shall be known by distinctive numbers as shown in the signal diagram.

(ii) (a) Metallic Labels, one each for each line and direction shall be provided and shall be known as ‘Line Labels’. Each label shall be readily distinguishable from the others and have clear and distinguishing indications that it is the Station Master’s label and refers to a specific running line for the specific Up or Down direction, as the case may be. The set for one direction shall be different in shape from that for the other direction

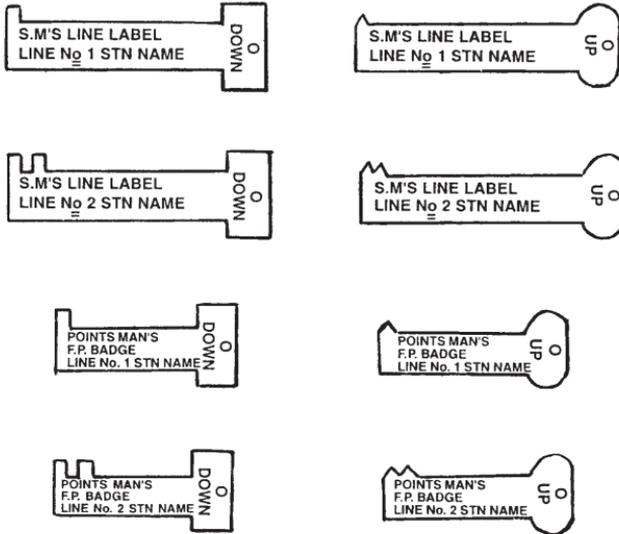
(b) The “Line Labels” should remain in the personal custody of the Station Master except when any label is handed out.

(iii) (a) Metallic badges, one each for each line and direction shall be provided and shall be known as ‘Line Badge’. Each badge shall be readily distinguishable from other badges. It shall have clear and distinguishing indication and inscription, in English as well as in regional language, to indicate that it is the Pointsman’s badge and refers to a specific running line for the specific Up or Down direction, as the case may be. The set for one direction should be different in shape from that for the other direction.

(b) These sets should remain in the personal custody of the Pointsman on duty at the facing points for the relevant direction, except

when any badge has been handed out.

(iv) The sets for main and branch lines should be separate and distinguishable by shape and specifications. Rough diagrams of the badges for a two line station are given below.



### (c) Reception and Despatch of Trains.-

When only one train is to be received and despatched.-

(i) The Station Master gives verbal instructions to the Pointsman (one for the facing points and the other for the trailing points, unless otherwise prescribed in the Station Working Rules) in the presence and hearing of each other, regarding the number of the line nominated for the reception of a train with the given description and from a particular direction also whether the train is to stop or run through.

(ii) Hands over the appropriate 'LINE LABEL" along with keys of the facing points' padlock to the Pointsman.

(iii) The trailing points Pointsman proceeds to the trailing points, sets them as instructed by the Station Master and in addition sets and locks the facing points as required if any enroute. Then he shall exchange green hand signals with the Station Master.

(iv) The facing points Pointsman proceeds to the outermost facing points accompanied by a Porter, setting the route on his way sets the outermost facing points and locks them.

(v) The facing points Pointsman arranges to hand over his appropriate "LINE BADGE" to the Station Master through the Porter accompanying him.

(vi) The facing points Pointsman remains at the points to man them and shows 'GREEN" hand signal to the Station Master.

(vii) Both the facing and trailing points Pointsmen while going on their way to the respective ends shall see the clearance of the nominated line, walking alongside it.

(viii) The Station Master on receipt of the appropriate "Line Badge" from the Pointsman at the facing points and on seeing the 'GREEN' hand signals exhibited by the Pointsmen at both the ends, shall exchange ALL RIGHT SIGNALS first with the Pointsman at the trailing points and then with the Pointsman at the facing points.

(ix) The Station Master shall then authorise the Pointsman or Token Porter to take off the relevant Home, if any, and Outer signal by giving the relevant Home/Outer signal lever padlock key. The Station Master shall be responsible for keeping the other Home/Outer signal lever padlock key in his personal custody.

(x) After the train has arrived and is ready to start again, the Station Master shall exchange hand signals with the Pointsman at the trailing points for their correct setting for the despatch of the train. (In such a case, the Pointsman shall normally remain at the points until departure of the train). He shall then take steps to despatch the train.

(xi) After the passage of the train, the facing points Pointsman and the trailing points Pointsman shall set the facing and trailing points in their normal position.

(xii) Then both the Pointsmen shall return to the station (the Pointsman at the trailing points may return earlier, if required, after setting the trailing points). The facing points pointsman shall return to the Station Master the Station Master's "LINE LABEL" and the keys of padlocks of the facing points and get back his own 'Line Badge'.

**(d) When there is a crossing of goods trains.**

(i) The Station Master gives verbal instructions to two Pointsmen (one for each end unless otherwise prescribed in the Station Working Rules) in the presence and hearing of each other, regarding the number of the line nominated for the reception of the

respective trains with description, direction, including which of the two trains is to be received first, and whether the second train will be stopping or run through.

(ii) The Station Master shall hand over appropriate “LINE LABEL” along with keys of facing points padlocks to the Pointsmen.

(iii) Both the Pointsmen shall proceed to the outermost facing points setting & locking the facing points and setting the trailing points on the way, set the outermost facing points and lock them. in favour of the respective trains.

(iv) While on the way to the respective outermost facing points, the Pointsmen shall walk alongside the nominated routes and shall see their clearance.

(v) The Pointsmen shall return their appropriate “LINE BADGES” to the Station Master through a Porter deputed for the purpose.

(vi) The pointsmen shall remain at their respective facing points to man them and show GREEN hand signals to the Station Master.

(vii) The Station Master on receipt of the appropriate “LINE BADGES” from both the Pointsmen at the facing points and on seeing GREEN hand signals exhibited by them at both ends, shall exchange “ALL RIGHT” signals with them.

(viii) The Station Master shall then authorise the taking ‘off’ of the relevant Home (if any), and Outer signals for the first train by giving the relevant key, keeping the padlock key for the signal (s) for the opposite directions in his personal custody.

(ix) After the complete arrival of the train the Pointsmen concerned shall unlock and set the trailing end points for the reception of the second train and exchange GREEN hand signal with the Station Master.

(x) The Station Master shall then authorise the taking ‘Off’ of the relevant Home (if any), and Outer signals for the second train by giving the relevant signal lever padlock key after the reception signal (s) for the first train have been put back to normal.

(xi) After the complete arrival of the second train, the Pointsmen concerned shall unlock and set the trailing end points for

the departure of the first train and exchange GREEN hand signals with the Station Master.

(xii) After the departure of the trains, both the Pointsmen shall set the points to normal, return to the Station Master the Station Master's "Line Labels" and keys of padlocks for facing points and take back their own "Line Badges."

**Note :-** The possession with the Pointsman of Station Master's "Line Labels" for the line assigned for the reception of the train, shall be deemed to make him responsible for the setting of the trailing points for the despatch of other trains also.

**(e) Reception and despatch of passenger trains :-**

The procedure detailed above for the exchange of Labels and Badges shall not apply to passenger trains. For the reception of passenger trains, the Station Master shall be personally responsible for the locking of facing points. He shall also be responsible for the locking of facing points. He shall also be responsible for personally ensuring the locking of facing points in case of a goods train, if it is to be crossed with passenger train which has arrived at the station first. The trailing end points shall be set by the pointsman, who shall exhibit GREEN hand signal to the Station Master on setting the trailing end points in the desired position.

**SR 3.39.03.-Non-interlocked facing points, manning and exhibition of hand signal.**

(a) All non-interlocked facing points set for reception and despatch of trains shall be locked. In addition, the outermost facing points shall be manned and the person manning the facing points shall exhibit 'proceed' hand signal to the approaching train till it completely passes the facing points.

(b) At road side stations when there is no train at the station and none approaching, the points shall remain set in their normal position. The SWR diagram shall show the normal setting of points.

**SR 3.39.04 - (a) Custody of keys at non-interlocked stations:-** The Station Master on duty shall be responsible for safe custody of the keys of all points, point locks, and signal level frame as well as Station Master's set of line labels. These keys, when not in use, shall be kept in the key-box which shall always remain padlocked. The key of the padlock being in the personal custody of the Station Master on duty.

(b) During the passages of passenger trains into, out of, or through station yard, the keys of facing points affected thereby must be retained by the Station Master.

**SR 3.39.05.- Points of sick sidings.-**

(a) The points of sick sidings shall be locked with two clamps and two padlocks, the key of one padlock shall be in charge of the Station Master or the Yard Master and the key of the other in charge of the Train Examiner so that it is not possible to open the points except by the co-operation of the Train Examiner and the Station or Yard Master.

(b) The points shall normally be locked against any engine or vehicle going into the sick siding.

**SR 3.39.06.- Points of sidings or lines leading into traffic yard.**

Points of non-interlocked and key-locked sidings and the trap points and derails shall normally be set and locked against entrance to traffic yards and the keys of the locks shall remain in the custody of the Station Master. Cabin worked siding points shall be set to the normal position.

**SR 3.39.07.- Loss of siding keys of stations.-**

(a) Station Master shall report loss of siding key at once by wire to Divisional Safety Officer, Divisional Signal and Telecommunication Engineer, Divisional Transportation Inspector and SE/SSE (S&T). Until the recovery or replacement of the lost key that particular line shall be worked as non-interlocked, if the siding key is lost when the points are set for sidings, the points must be clamped and padlocked for any movement over them in the facing direction.

(b) If the lost key is found subsequent to the supply of a new key, the fact must be reported by wire to the above officials and the old key shall be returned to the SE/SSE (S&T) who shall take it in his imprest stock.

**SR 3.39.08 - a)** Every Railway Staff operating or issuing instructions for operation of points and signals and yard shall be thoroughly conversant with the working of points and signals and interlocking at the station/yard/branch lines/siding where they work. Before they are allowed to take up independent charge or when there is any major change in the working of points and signals/interlocking, such staff shall be examined by competent authority and after being satisfied that the staff concerned is thoroughly conversant with the

working of points and signals and understands the interlocking in force such authority shall issue a competency certificate for working of points and signals in favour of such staff under signature in the prescribed form. The authority competent to issue competency certificate in prescribed form to safety category operating staff working in different grades are cited below :

i) SS/SM/CYM/YM incharge/DTI shall examine and issue competency certificate to all TPs, TPMs, shunting staff working at his station in prescribed form no. OP/T 1A.

ii) At other than PI/RR/El stations, sectional DTI shall examine and issue competency certificate to all SM/SS/SMR/CYM/YMs of his section irrespective of grades in prescribed form no. OP/T 1A.

iii) At PI/RR/El stations, Panel Competency Certificate to ASM/SM/SS/SMRs shall be jointly issued by DTI and SE/SSE(Signal) of the section in prescribed form no. OP/T 1C.

b) The competency certificate for working of points and signals shall be valid for a period of three years from the date of issue and shall be renewed before the expiry of the period of validity. This certificate shall be kept pasted staff wise in the competency certificate register of the station/yard concerned.

c) The staff working at more than one station/yard/siding shall hold this competency certificate for each such station/yard/siding.

Proforma for competency certificate for working points & signals

**OP/TI/A**

Competency certificate for working Points & Signals.  
(Office Foil)

No ..... Date .....

Certified that Sri \_\_\_\_\_  
Designation \_\_\_\_\_ was examined on \_\_\_\_\_  
and found fit and qualified to perform the duties of \_\_\_\_\_  
at the following station/yard \_\_\_\_\_  
siding \_\_\_\_\_ section \_\_\_\_\_

No .....

Certified that Sri \_\_\_\_\_  
Designation \_\_\_\_\_ was examined on \_\_\_\_\_  
and found fit and qualified to perform the duties of \_\_\_\_\_  
at the following station/yard \_\_\_\_\_  
siding \_\_\_\_\_ section \_\_\_\_\_

Date .....

**OP/TI/A**

Competency certificate for working Points & Signals.  
(Station Foil)

SS/CYM/SM/YM/DTI  
(\* \_\_\_\_\_)

Date \_\_\_\_\_

SS/CYM/SM/YM/DTI  
(\* \_\_\_\_\_)

Date \_\_\_\_\_

'Write full name.

Note :- (i) The staff may be examined in the duties of more than one capacity (eg. a Pointsman as Shuntman, Shunting Jamarar etc.) and certified for the duties of different categories.

(ii) A staff may be examined in the working of more than one station/siding where he may be called upon to work and certified for all such stations/sidings.

(iii) In urgent cases the Station Master / AYM may examine the staff and if found competent, may temporarily put the staff to work in a particular capacity but he must be examined by the competent authority and certified fit within seven days. The SM/AYM must make a diary entry of his having examined such staff and found competent.

(iv) This certificate is valid for 3 years.

Proforma for competency certificate for working Panel/Route Relay /Electronic Interlocking (SSI)

**OP/TI/C**

Competency certificate for working Points & Signals at  
station provided with Panel/Route Relay /  
Electronic Interlocking (SSI)  
(Station foil)

No ..... Date .....

Certified that Sri \_\_\_\_\_  
Designation \_\_\_\_\_ was examined on \_\_\_\_\_  
and found fit and qualified to perform the duties in operation  
of Panel /Route Relay/ Electronic Inter locking (SSI)  
of \_\_\_\_\_ station.

\_\_\_\_\_ DTI  
(\* \_\_\_\_\_)  
Hd. Quarter \_\_\_\_\_  
SE/SSE (Signal)  
(\* \_\_\_\_\_)  
Hd. Quarter \_\_\_\_\_

\*Write full name

**OP/TI/C**

Competency certificate for Working Points & Signals at  
station provided with Panel/Route Relay /  
Electronic Interlocking (SSI)  
(Office foil)

No ..... Date .....

Certified that Sri \_\_\_\_\_  
Designation \_\_\_\_\_ was examined on \_\_\_\_\_  
and found fit and qualified to perform the duties in operation  
of Panel /Route Relay/ Electronic Inter locking (SSI)  
of \_\_\_\_\_ station.

\_\_\_\_\_ DTI  
(\* \_\_\_\_\_)  
Hd. Quarter \_\_\_\_\_  
SE/SSE (Signal)  
(\* \_\_\_\_\_)  
Hd. Quarter \_\_\_\_\_

\*Write full name

**3.40. Conditions for taking 'off' Home signal.-**

(1) When a train is approaching a Home signal otherwise than at a terminal station, the signal shall not be taken 'off' until the train has first been brought to a stand outside it,

unless-

(a) on a double line, the line is clear for an adequate distance beyond the Starter; or

(b) on a single line, the line is clear for an adequate distance beyond the trailing points, or under approved special instructions for an adequate distance beyond the place at which the train is required to come to a stand.

(2) Where a train has first been brought to a stand outside the Home signal, the signal may be taken 'off' if-

(a) on a double line, the line is clear upto the Starter, or

(b) on a single line, the line is clear upto the trailing points or under approved special instructions upto the place at which the train is required to come to a stand.

(3) Except under approved special instructions, the adequate distance referred to in sub-rule (1) shall never be less than-

(a) 180 metres at stations equipped with two-aspect lower quadrant or two-aspect colour light signals, or

(b) 120 metres in the case of stations provided with multiple-aspect signals or modified lower quadrant signals.

(4) Where a sand hump of approved design, or under approved special instructions a derailing switch, has been provided for the line on which a train is to be received, they shall be deemed to be efficient substitutes for the adequate distance referred to in sub-rule (3).

**SR 3.40.01.-** It is forbidden to obstruct a sand hump which is a substitute for the adequate distance for taking 'off' the Home signal, at any time whether a train is expected or not. If it is obstructed through an accident or other unavoidable cause, it ceases to be a substitute for the adequate distance.

**SR 3.40.02 - (a)** When trains are to be received on a loop or Goods loop with trap point isolation or on a loop or Goods loop with a trap siding, the far end of which terminates in a buffer stop which is less than the adequate distance required vide GR 3.40 (3) beyond the trailing points on the single line or beyond the Starter on the double line :- The trap point must be closed and the points at the far end of loop or Goods loop line shall be set to connect with the main line and the line shall be clear for an adequate distance as prescribed in GR 3.40 (3) beyond the starting signal on the double line or beyond the outermost trailing points on the single line or such other points as are specified in the Station Working Rules. When two trains are to be crossed at such station on the single line, the points at the far end of loop line, or Goods loop line shall still remain set for the main line and the line shall be kept clear as specified above. Signals may be taken 'off' for reception of the train to be received on the loop or Goods loop line provided signals for the train from the opposite direction are kept in the 'on' position. Signals are to be taken 'off' for the reception of only one train at a time.

**(b)** When trains are to be received on a loop or Goods loop line with a trap siding the far end of which terminates in a standard sand hump or buffer stop which is not less than the adequate distance as prescribed in GR 3.40 (3) beyond the trailing points on the single line or beyond the Starter on the double line :-

On a single line, the points at the far end of the loop or Goods loop shall be set for the sand hump siding or dead end siding as the case may be.

On double line, the points at the far end of the loop or Goods loop shall be set to connect with the main line and the line must be clear for an adequate distance as prescribed in GR 3.40(3) beyond the starting signal. If however, another train is to be despatched in the same direction from the main line, the points at the far end of the loop line shall be set for the sand hump siding or dead end siding and the line must be clear upto the sand hump or dead end, as the case may be .

**SR 3.40.03.**-Trains carrying passengers shall not be admitted into a goods yard or on the goods loop or the line for which a ringed semaphore signal has been provided. If for any reason a train carrying passengers is required to be admitted on goods loop or in goods yard, the Station Master, when time permits, shall advise the station in rear to issue caution order to the Loco Pilot and Guard stating that the train shall be received on Goods yard or Goods loop. In case the station in rear cannot be advised, the Station Master shall send a memo in duplicate to the Loco Pilot informing the facts and obtain his acknowledgement. In both the cases, the train shall be stopped at the first stop signal and then the signals shall be taken 'off'. The Loco Pilot must limit the speed to 10 KMPH while the train is entering in the Goods Yard or Goods loop.

### **3.41. Conditions for taking 'off' Outer signal.-**

(1) When a train is approaching the Outer signal otherwise than at a terminal station, the signal shall not be taken 'off' until the train has first been brought to a stand outside the signal, unless the line on which the train is to be received in the station is clear-

(a) in the case of double line, upto the Starter signal, and

(b) in the case of a single line, for an adequate distance beyond the first facing points.

(2) Where the train has first been brought to a stand outside the Outer signal, the signal shall not be taken 'off' unless the line is clear upto the first facing points, or upto the Home signal at a station where there are no facing points.

**SR 3.41.01.**- At stations having both Outer & Home, the Outer signal shall be taken 'off' only after the relevant Home has been taken 'off'.

**SR 3.41.02.- Procedure for reception of trains at a single line station having only Outer signals.-**

1. For trains booked to stop.-

(i) If the station section is clear the Outer signal shall be taken

'off' and a green flag (by day) or a green light (by night) shall be shown at the facing points. Should the facing points not be manned, Loco Pilots shall come to a stop before reaching the points and wait till the points are manned.

(ii) If the station section is not clear, the train shall be stopped at the Outer end, and, if necessary, be piloted into the station.

**3.42. Conditions for taking 'off' last stop signal or Intermediate Block stop signal.-** The last stop signal or Intermediate Block Stop signal shall not be taken 'off' for a train unless Line Clear has been obtained from the block station in advance.

**SR 3.42.01.** - (a) (i) On double line sections, where Block Instruments are installed in the Cabins, the Station Master on duty at the station shall direct the Cabin Master/Asstt. Station Master of the departure end cabin to obtain 'Line Clear' for the outgoing train giving the number and description of the train and the line from which the train is to be started and to set and lock the route for the train concerned on receipt of 'Line Clear'. These instructions shall be supported by a Private Number.

(ii) The Cabin Master/Assistant Station Master shall acknowledge the instructions of the Station Master by repetition. He shall stop all non-isolated shunting at his end and after ensuring clearance of the line, set and lock the relevant points, traps and derails etc. for the passage of the train, obtain 'Line Clear' for the train and give a Private Number thereafter to the Station Master as an assurance for the compliance of the actions mentioned above.

(iii) The Station Master on receipt of this assurance from the departure end Cabin Master/Assistant Station Master shall authorise him with a Private Number to take 'off' the departure signals.

(b) (i) On double line, where Block Instruments are not provided in the cabins or on single line, the Station Master on receipt of 'Line Clear' for outgoing train shall direct the departure end Cabinman to set and lock the route for outgoing train, giving the number and description of the train and line number from which the train is to be started.

(ii) The departure end Cabinman shall acknowledge instructions of the Station Master by repetition. He shall stop all non-

isolated shunting at his end and after ensuring clearance of the line shall set and lock the relevant points, traps and derails etc. for the passage of the outgoing train. After complying with the instructions the Cabinman shall give a Private Number to the Station Master as an assurance.

(iii) The Station Master on receipt of this assurance from the departure end Cabinman shall authorise him to take 'off' the departure signals by releasing his control slide for the last stop signal.

(c) (i) At stations having end cabins worked under Automatic Block system, the Station Master shall advise the departure end Cabin Master/Cabinman to set and lock the route giving the number and description of the train and the line from which the train is to start.

(ii) The Cabin Master/Cabinman after complying with the instructions given by the Station Master shall give a Private Number as an assurance of having carried out the order given by the Station Master.

(iii) The Station Master shall then give a Private Number to the departure end Cabin Master/Cabinman to take 'off' the departure signals.

**SR 3.42.02.** - Sequence of lowering through signals at stations for run-through trains provided with Advanced Starter.-

(a) (i) Where lower-quadrant signals are provided-

If the main line of station section and the section ahead are clear, Main Home, Outer, Advanced Starter, Main Starter and Warner signals may be taken 'off' in the order given.

(ii) Where multiple-aspect upper quadrant signals are provided-

The Main Home, Main Starter, Distant (raised to 90° from the horizontal) and Advanced Starter may be taken 'off'.

(iii) Where modified lower quadrant signals are provided-

Main Home Distant, Advanced Starter, Starter and Warner may be taken 'Off'.

(iv) Where Colour light signals are provided-

Main Home, Advanced Starter and Main Starter may be taken 'off'.

**SR 3.42.03.**-Sequence of lowering signals at a station for a stopping train—

If the station section is clear but the section ahead is not clear, only the reception signals shall be taken 'off' irrespective of type of signalling arrangements.

**SR 3.42.04.**- Procedure of taking 'off' departure signals after the train has stopped at the station.-

Where a train has been brought to a stand at Starter signal and on completion of its work at the station, if the section ahead is clear and 'Line Clear' has been obtained, the Advanced Starter and then Starter may be taken 'off'.

**SR. 3.42.05.**-Working of Intermediate Block Stop signals.-

The last stop signal of the station in rear shall be taken 'off' on the clearance of the line provided either with track-circuit or axle-counters between the last stop signal of the station in rear and the Intermediate Block stop signal. A train may be allowed to proceed upto the Intermediate Block Stop signal even when 'Line Clear' has not been received from the station in advance. The Intermediate Block Stop signal shall be taken 'off' by the station in rear, only when 'line Clear' has been received on the Block instrument.

**3.43. Conditions for taking 'off' Warner signal.-** A Warner signal shall not be taken 'off' for a train that is booked to stop or for a train that has to be stopped out of course.

**3.44. Conditions for taking 'off' gate stop signal.-** A gate stop signal shall not be taken 'off' until the concerned level crossing or crossings is or are free from obstruction and the gates of such level crossing or crossings are closed and locked against road traffic. Where a gate stop signal is interlocked with station signals it shall be worked in accordance with special instructions.

**SR 3.44.01.**-Where a gate signal is interlocked with station signals, the working of such signals shall be incorporated in the Station Working Rules.

**3.45. Condition for taking 'off' Calling-on signal.-** A Calling-on signal shall not be taken 'off' until the train has been

brought to a stand at the stop signal below which the Calling-on signal is provided.

### **3.46. Use of fixed signals for shunting.**

(1) The Outer, Home and the last stop signal of a station shall not be taken 'off' for shunting purposes.

(2) At stations where Advanced Starters are provided, Starters may be taken 'off' for shunting purposes, except where the interlocking interferes with this practice, in which case hand signals shall be used where Shunt signals are not provided.

**3.47. Taking 'off' signals for more than one train at a time.**-When two or more trains are approaching simultaneously from any direction, the signals for one train only shall be taken 'off', other necessary signals being kept at 'on', until the train for which the signals have been taken 'off' has come to a stand at the station, or has cleared the station, and the signal so taken 'off' for the said train have been put back to 'on', except where under special instructions, the interlocking or the layout of the yard renders a contrary procedure safe.

#### **SR 3.47.01.- Setting of Points during crossing of trains at stations on single line.**

(a) When 'Line Clear' has been given to two trains to approach a station on single line from opposite directions, the Station Master shall decide which train is to be received first and the line on which it is to be received.

(b) He shall set and lock the facing points in favour of and set the outermost trailing points against the first train at non-interlocked stations and at interlocked stations where the interlocking permits this being done. Station Working Rules of an interlocked station will show if interlocking permits the setting of trailing points to conform to this rule.

(c) When a stopping train is to be received on a loop line, the line shall be set for sand hump or the over-run line and dead-end where provided.

(d). At non-interlocked station where route locking is provided, the Station Master shall satisfy himself that the correct keys of both facing and trailing points as per rule above are in his possession before permitting the necessary signals to be taken 'off'.

(e) At a 3-line station if one of the lines is already occupied, care shall be taken to see that the trailing points referred to above are set for the clear line on which the second train is to be received.

**SR 3.47.02.- Berthing and crossing of passenger and goods trains at a station with only one platform.-**

(a) When two passenger trains cross at a station where there is only one platform having a height of over 46 cm, and both trains are booked to make a halt, the following procedure shall be followed in such cases.

The first train shall be admitted on the station platform line and after passengers have detrained and entrained it shall be backed and drawn forward on to non-platform line to enable the second passenger train to be admitted on to the station platform line. The first train shall thereafter be started from the non-platform line.

(b) When two passenger trains cross at a station having only one rail level platform or a platform of 46 Cm or less in height, and both trains are booked to make a halt, the train which is expected to arrive first shall be received on the platform line and that which is, expected to arrive next shall be received on the second line. Both the trains shall be taken forward far enough to leave a space between the rear brakevans without fouling the crossing at either end of the running line. If the train expected first is delayed and the train expected later actually arrives first, both trains shall still be received on the lines first arranged for them and no change in this arrangement is permissible. However, if owing to the train that is expected first being delayed the train in the opposite direction is actually received first, the delayed train which is to be received on the platform line shall be detained at the first stop signal until all passengers leaving by or alighting from the train on the second line have entrained or detrained and the platform line is clear of passengers and all carriage doors shut. Before shunting and prior to the receipt of the second train, passengers and vendors shall be warned about the movement by the Guard and the station staff.

(c) If one of the two crossing passenger trains is not booked to halt at the station, the train booked to halt shall be admitted first on the platform line and the train that is booked to run through shall then be passed over the other line.

(d) If one of the two crossing trains is a nonstopping passenger train and the other goods train, the passenger train shall always be received on the platform line and the goods train on the other line.

(e) If one of the two crossing trains is non-stopping passenger train and other a goods train, the non-stopping passenger train shall be passed through over the main line.

(f) Crossing of two non-stopping trains whether goods or passenger shall be arranged in the following manner without regard to the platform or non-platform line.

(i) The train which will arrive first shall be admitted and stopped on the loop and the other train shall be passed through on the straight.

(ii) When a passenger train is stopped on a non-platform line for this purpose the Guard of the train and the station staff should warn the passengers and vendors about the approaching through train.

**3.48. Stoppage of trains out of course at station provided with two-aspect signalling.** - When a train which is booked to run through has to be stopped out of course at a station equipped with two-aspect signals, it shall not be received until -

(a) at stations provided with working Warners but not provided with Starters, the working warner is kept at 'on',

(b) at Stations provided with Starters but not provided with working Warners, the relevant Starter is kept at 'on',

(c) at stations provided with both working Warners and Starters, both signals are kept at 'on'; and

(d) at stations provided with neither a working Warner nor a Starter, the first Stop signal is kept at 'on', and the train brought to a stand outside it.

**SR .3.48.01.** - Procedure for stopping a train out of course at stations provided with only one Outer. –

If a run through train is required to stop at the station, the Outer signal shall be kept at 'on'. When the train has come to dead stop at the Outer signal, the the Outer signal shall be taken 'off' and the train brought to a stand at the station by exhibiting Stop hand signal.

### **3.49 Care and lighting of signal lamps –**

(1) The Station Master shall see that lamps of fixed signals, indicators and boards such as Shunting Limit Board, Block Section Limit Board and Stop Board at his station are lighted at sunset, and are not put out until after sunrise, or at such earlier or later time as may be prescribed by special instructions.

(2) Sub-rule (1) shall not apply to

(a) approach lighted signals,

(b) colour light and position light signals which shall be kept lit throughout the day and night, and

(c) the sections where no trains is scheduled to run at night.

(3) The Station Master shall ensure that the lamps of fixed signals, indicators and boards such as Shunting Limit Board, Block Section Limit Board and Stop Board, when lit, are burning brightly and that the lenses of lamps and spectacle glasses are properly cleaned and back-lights clearly visible.

(4) Whenever night signals are used the Station Master shall not grant Line Clear unless he has ensured, either personally or in the manner prescribed under special instructions, that the lamps of fixed signals at his station which are not approach lighted and which apply to the train are burning. If signal lights cannot be kept burning he shall, before giving Line Clear, initiate action in accordance with the procedure prescribed in Rule 3.68 to 3.72.

(5) Before lighting a semaphore signal or indicator lamp, the railway servant deputed for lighting it, shall inspect the lenses and spectacle glasses. In case he finds the red roundel broken, cracked or missing, he shall not light the lamp and shall report the fact immediately to the Station Master who shall treat the signal as defective.

(6) Every railway servant incharge of signal shall see that the greatest care is taken in the focusing, cleaning and trimming of signal lamps.

**SR 3.49.01.** – Lighting and extinguishing of signal lamps.

(a) Except on certain branch line sections where no train runs during the night, all signal lamps, indicator and the lamps or boards as indicated in GR 3.49(1) are to be ordinarily lit and extinguished in accordance with the timings shown below –

Divisions	Lighting time				Extinguishing time			
	Feb to Apl H.M.	May to Jly H.M.	Aug to Oct H.M.	Nov to Jan H.M.	Feb to Apl H.M.	May to Jly H.M.	Aug to Oct H.M.	Nov to Jan H.M.
Khurda Road	17.30	18.10	17.30	17.00	6.10	5.20	5.55	6.00
Waltair	17.35	18.15	17.15	17.05	6.35	5.25	6.00	6.05
Sambalpur	17.30	18.10	17.10	17.00	6.30	5.20	5.55	6.10

(b) In the event of the weather not being clear due to storm, fog or for any other reason lighting and extinguishing of lamps shall be arranged earlier or later as necessary.

(c) Semaphore signals shall be tested by the Station Master when the lamps are first lighted.

(d) No signal is to be tested after giving line clear and taking 'off' for a train.

(e) The railway servant who lights the signals shall inspect the roundels for cracks or breakages and if any defect is noticed

immediately report the matter to the Station Master on duty who shall enter the report in the Station Diary and Signal Failure Register and Caution order Register, Such signals shall be treated as defective during the period they are required to be kept burning and action shall be taken in accordance with the procedure prescribed in General Rules 3.68, 3.69 & 3.70 and Subsidiary Rules made thereunder. In case of crack or breakage of red roundel, the signal shall not be allowed to remain lit and a railway man shall be deputed to show stop hand signal to the approaching trains from the foot of the signal.

(f) After heavy storms, particularly hail storms, cyclones etc. the Station Master on duty shall have the signals checked and note the conditions of the roundels. If any roundel is found cracked or damaged, the relevant signal shall be treated as defective and action taken in accordance with the rules applicable to defective signals.

**SR 3.49.02.** – Warning to lampman. –

Any direct contact of close proximity to 25 KV live conductor is dangerous. The Station Lampman climbing up the signal post for removal or fixing or cleaning or lighting the signal lamp shall not carry any long article which may accidentally touch or come in close proximity to live conductors. The lampman shall not bring any part of his body near live conductor (safe distance 2 meters).

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

**SR 3.50.01** – Except when the setting of Catch Siding or Slip Siding or derailing switch points is indicated by fixed signals, a Loco Pilot shall not pass over these points, whether facing or trailing, unless the points are manned and proper hand signal exhibited.

**SR 3.50.02** – Stopping of train short of catch siding controlled by stop signals. –

(a) It is not necessary to stop the train at the Stop signal

controlling points leading to the catch sidings provided the following conditions are satisfied :-

- (i) Line Clear has been obtained from the block station ahead.
- (ii) The train is to be received on the main line and the line is clear.
- (iii) The gradients in the block section ahead are such that the trains can be brought under control easily,
- (iv) Points leading to the catch sidings as well as points required for a run through train are set for the main line and the relevant facing points are locked immediately after granting line clear to the block station in rear, and
- (v) Warner signal in the lower quadrant signalling territory is not taken 'off' and Distant signal in MAUQ signalling territory is maintained in 'ON' position.

(b) In all other cases before the points leading to the catch sidings are set for the main line, it shall be ensured that the train has come to a Stop outside the Stop signal placed short of the Catch sidings.

However, in cases where run through is to be allowed the consent of Sr. DME/DME in regard to clause (iii) above, shall be obtained and incorporated in the Station Working Rules. In case of electrified section DEE (OP)'s consent shall also be obtained.

### **3.51. Points -**

(1) All Points shall normally be set for the straight except when otherwise authorised by special instructions.

(2) The railway servant concerned with the, operation of points and signals shall not while on duty, leave the place of operation of points or signals which are under his charge except under special instructions.

(3) No railway servant shall interfere with any points, signals, or their fittings, signal wires or any interlocking or block gear for the purpose of effecting repairs, or for any other purpose, except with the, permission of the Station Master.

**SR 3.51.01.** - (i) The railway servant operating points and signals in the cabins or at stations shall not leave his duty without being relieved by a competent person and without the knowledge and permission of Station Master.

(ii) If at any time during his duty hours, the Station Master/Cabin Master/Cabinman in charge of a Signal Cabin is required to go out of the cabin, he shall padlock the cabin before leaving.

**SR 3.51.02.** - A signal in the 'off' position indicates that the points are correctly set for the route to which it applies, and if the signal cannot be taken 'off', the setting of the points on the route and the wire adjustment of the signal shall be inspected by the Station Master/Cabin Master/Cabinman, as the case may be, before the signal is declared as defective.

**SR 3.51.03.** - Once the leading wheels of an engine or vehicle or any part of a train have entered the points the person responsible for operation of points and signals must not operate the points until the engine and all the vehicles have passed completely clear of such points. If however, he notices any unusual condition which is likely to endanger safety, he shall exhibit Stop hand signal and try to draw the attention of the Loco Pilot by shouting and gesticulating.

**SR 3.51.04.** - Repairing, renewal or installing signals and point gears :-

When it is necessary to do any work in connection with the repairing, renewing, overhauling or installing signals and point gears, either interlocked or non-interlocked, at any station which will endanger the safe working of trains the official in charge of signal department/Civil Engineering department shall prepare and hand over the 'Disconnection Notice' on form T-351 by S&T Official and/or a written memo (by engineering officials) and obtain signature of the Station Master on the record foil of the 'Disconnection Notice/Written Memo'. At stations having only Cabin Master the 'Disconnection Notice' shall be made over to the Cabin Master and his signature obtained. The official in charge of Signal/Civil Engineering department shall not interfere with any signal or point gear until the 'Disconnection Notice' has been acknowledged.

The Station Master or the Cabin Master shall not give his signature, if signals have already been taken 'off' for reception/despatch of a train until the said train has arrived/passed clear of the

signals and points mentioned in the 'Disconnection Notice' or if 'Line Clear' has been given for a train, until the train has passed the said signal(s) and points.

The Station Master/Cabin Master shall, immediately after signing the record foil of 'Disconnection Notice'/written memo make an entry in the Caution Order Register, Remarks columns of the Train Signal Register and Station Diary in red ink and the Disconnection Notice/Written Memo to be kept in a separate register specially maintained for the purpose.

The Station Master shall inform the Cabin Master/Cabin man on duty at either end of the station, giving details of the signal(s) and/or the points which are to be repaired, overhauled, renewed or in any way interfered with, supported by a Private Number. The Cabin Master/Cabinman shall acknowledge this information supported by a Private Number and place lever collar(s) on the concerned levers of the points and signals. The Cabin Master at either end shall make an entry in remarks columns of Train Signalling Register in red ink to this effect.

The Station Master/Cabin Master shall advise the Station Master of the Block Station and Notice Station in rear by issuing a message supported by a Private number, to issue caution orders to all Loco Pilots and Guards that the trains will be piloted in, if the signal(s) and points under repair, overhauling etc. related to the line on which the trains are required to pass. He shall obtain acknowledgement of this advice by a message supported by a Private Number from the block station and Notice station in rear. The points shall be clamped/through bolted and padlocked and trains will be piloted in during the period the reception signal(s) and points are disconnected on the route on which the trains are to be admitted. Similar procedure shall be followed for outgoing trains if departure signal(s) and any points on the departure route for a train are involved. However, during when specific instructions are issued, overhauling of lever frame or non-interlocking at an interlocked stations, signals may be taken 'OFF' for reception of trains provided the relevant points are set, clamped and padlocked for the nominated route. A competent railway staff shall also be deputed to display hand signal, at the foot of the stop signal. The Signal staff shall mention to this effect in the T-351 and assist traffic staff in setting the points in the desired position. The traffic staff shall be responsible for clamping and padlocking.

On completion of the work the official in charge of S & T/ Civil Engineering department will hand over the relevant portion of the 'Re-connection Notice' /memo to the Station Master/ Cabin Master and obtain his signature on the record foil of the 'Re- connection Notice'.

The Station Master or the Cabin Master shall not sign the record foil of the 'Disconnection Notice' until he has tested the signal(s) and points concerned and he is satisfied that they are in good working order.

He shall then cancel the entry in the Caution Order Register and make an entry in the Train Signal Register, Station Diary to this effect. The Station Master shall then advise completion of the work to Cabin Master/Cabinman (where end'Cabins are provided) and to Block Station and Notice Station in rear under a message by exchange of Private Numbers. The Reconnection Notice/Written Memo handed over by the S & T/Civil Engineering Official incharge, after the Completion of the work should be kept in the register specially maintained for the purpose along with the concerned Disconnection/ Written Memo.

**SR 3.51.05.-** The Station Master/Cabin Master while giving the key to S & T Maintainer for oiling and cleaning the interlocking gears inside the cabin shall obtain his signature in a Register which shall be maintained at the Station or Cabin. Signal Maintainer shall not carry out any test even if required, when a train has been signalled till the train passes the signal and then with the consent of Station Master or Cabinman.

**SR 3.51.06.-** (a) When a running line is blocked by stabled load, wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train at the station etc, the points in rear on double line sections and at either end in single line sections should be immediately set against the blocked line except when shunting or any other movement is required to be done on that line.

(b) If all the lines at a station happen to be blocked, when line clear has been granted to a train, the points should be set for the line occupied by a stabled load or a goods train in that order so that, in

case of mishap, the chances of casualties are minimised. In case all the lines are occupied by passenger train, points should be set for a loop line, to negotiate which the speed of the incoming train would be reduced which in turn, would minimise the consequences/casualties. While doing so, points may be set for a loop occupied by a train, if any, whose engine is facing the direction of approach of the incoming train rather than for a loop occupied by a train where a passenger coach, will, in the case of collision, receive the impact.

(c) These precautions shall be taken in addition to the observance of other precautions as contained in SR 5.04.01 and SR 5.23.01.

## **E. Hand Signals**

### **3.52. Exhibition of hand signals.-**

(1) All hand signals shall be exhibited by day by showing a flag or hand and by night by showing a light as prescribed in these rules.

(2) During day a flag or flags shall normally be used as hand signals. Hands shall be used in emergencies only when flags are not available.

(3) During night a hand signal shall normally be given by showing a red or green light. A white light waved violently shall be used as a Stop signal only when the red light is not available.

(4) Red or green light referred to in sub-rule (3) shall be either a static or flashing type.

**SR 3.52.01.** - Flags must be mounted on sticks, red and green separately.

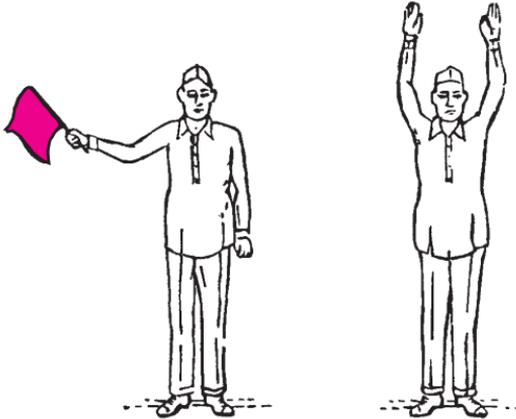
**SR 3.52.02.** - (i) The arrangement of Red and Green slides in Hand signal lamps must be in uniform. Holding the lamp with the front facing away, the Green slides should be on the left hand side and the Red on the right. Every railway servant using a lamp must see that the slides are in the correct sides.

(ii) Hand signal lamps should be cleaned daily for efficient working of their slides, burners, wicks and reflectors.

**3.53. Stop hand signal.-****Indication :****Stop dead**

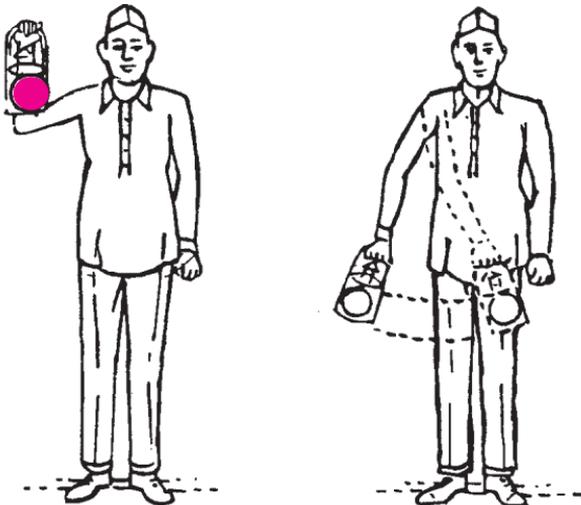
How given by day :

By showing a red flag or by raising both arms with hands above the head as illustrated below :



How given by night :

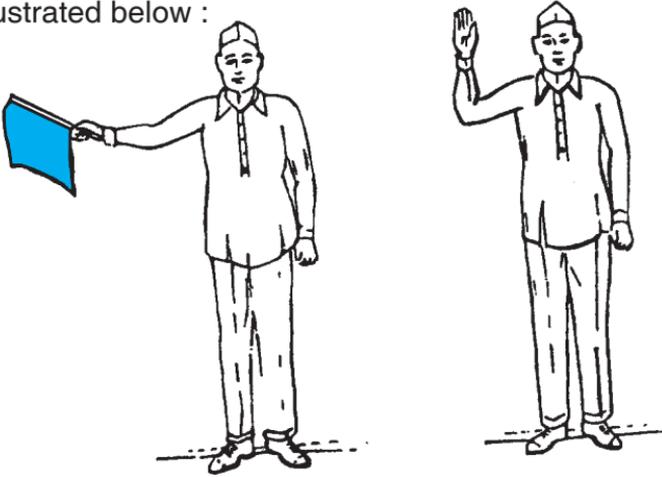
By showing a red light or by violently waving a white light horizontally across the body of the person showing the signal as illustrated below :



**3.54. Proceed hand signal.-****Indication : Proceed**

How given by day :

By holding a green flag or by holding one arm steadily as illustrated below :



How given by night :

By holding a green light steadily as illustrated below :

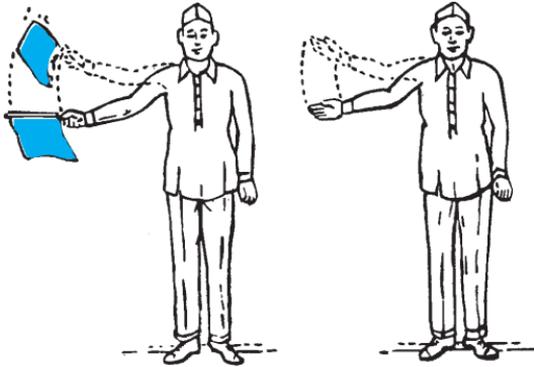


**3.55. Proceed with caution hand signal. –**

**Indication :** Proceed slowly reducing speed further if the signal is given at a progressively slower rate.

How given by day :

By waving a green flag vertically up and down or by waving one arm in a similar manner as illustrated below :-



How given by night :

By waving a green light vertically up and down as illustrated below :



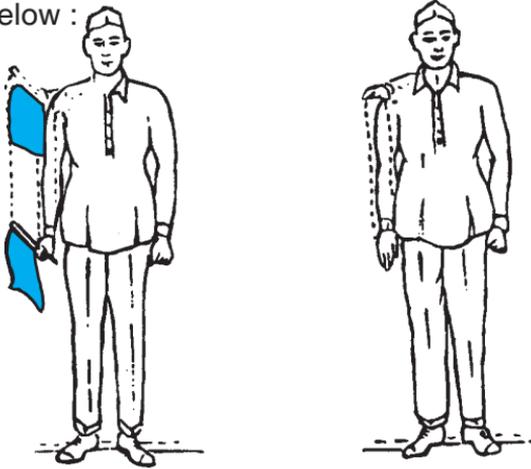
**NOTE :** When the speed is to be reduced further, this signal shall be given at a slower and slower rate and when a stop is desired, the stop hand signal shall be shown.

**3.56. Hand signals for shunting . -** The following hand signals shall be used in shunting operations in addition to the stop hand signal :-

- (a) **Indication :** Move away from the person signalling

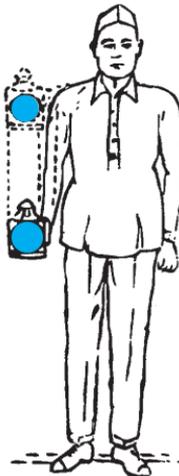
How given by day :

By a green flag or one arm moved slowly up and down as illustrated below :



How given by night :

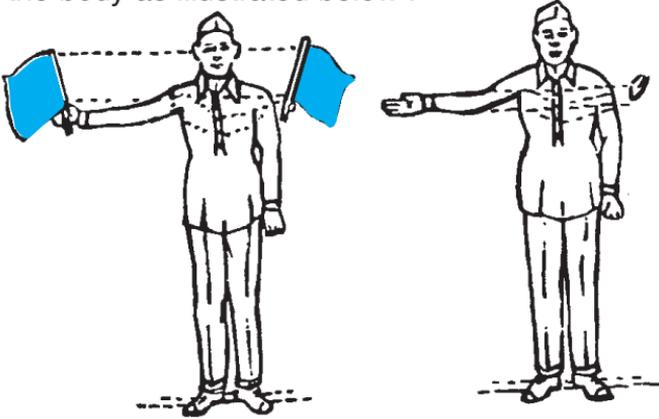
By a green light moved slowly up and down as illustrated below :



- b) **Indication :** Move towards the person signalling

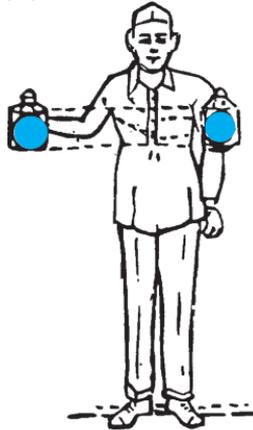
How given by day :

By a green flag or one arm moved from side to side across the body as illustrated below :



How given by night :

By a green light moved from side to side across the body as illustrated below :

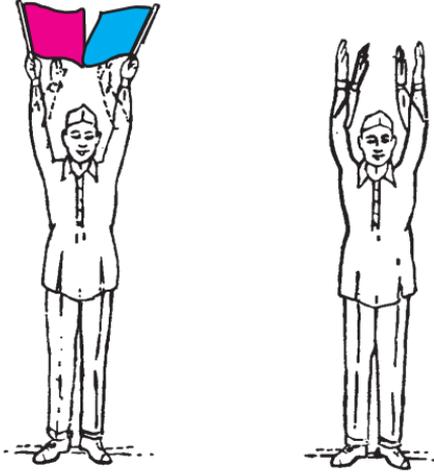


**NOTE :** The hand signals for 'Move away from the person signalling' and 'Move towards the person signalling' shall be displayed slower and slower, until the Stop hand signal is given if it is desired to stop.

(c) **Indication :** Move slowly for coupling

How given by day :

By a green and a red flag held above the head or both hands raised over the head and moved towards and away from each other as illustrated below :



How given by night:

By a green light held above the head and moved by twisting the wrist as illustrated below:



**SR 3.56.01.** - Shunting signals are to be given by the Station Master, Guard/Assistant Guard of a train, Yard Master, Shunting Jamadar or Pointsman, or such duly authorised person. To avoid conflicting signals only one such person at a time shall control the shunting of a train or engine by exhibiting signal which shall be clearly visible to the Loco Pilot.

**SR 3.56.02.** - A red or 'Stop' hand signal given by any one supersedes all other signals and bars movement beyond such danger signal.

**3.57. Banner flags.**-A banner flag is a temporary fixed danger signal, consisting of a red cloth supported at each end on a post and stretched across the line to which it refers.

### **3.58. Knowledge and possession of hand signal.-**

(1) Every railway servant connected with the movement of trains, shunting-operations, maintenance of installations and works of any nature affecting safety of trains shall have –

(a) a correct knowledge of hand signals; and

(b) the requisite hand signals with him while on duty and keep them in good working order and ready for immediate use.

(2) Every railway servant shall see that the staff under him concerned with use of hand signals are adequately supplied with all necessary equipment for hand signalling and have a correct knowledge of their use.

(3) A red flag and a green flag by day or a lamp, which is capable of showing red, green and white lights by night, shall constitute the requisite equipment for hand signalling.

(4) Every Station Master shall see that his station is adequately supplied with all necessary equipment for hand signalling.

## **F. Detonating Signals**

**3.59. Description of detonating signals -** Detonating signals, otherwise known as detonators or fog signals are appliances which are fixed on the rails and when an engine or a vehicle passes over them, they explode with a loud report so as to attract the attention of the Loco Pilot.

### **3.60. Method of using detonators. -**

(1) A detonator when required to be used shall be placed on the rail with the label or brand facing upwards and shall be fixed to the rail by bending the clasps around the head of the rail.

(2) In case of a mixed gauge, detonators shall be placed on the common rail or on one rail of each gauge.

### **3.61. Placing of detonators in thick, foggy or tempestuous weather impairing visibility.-**

(1) In thick, foggy or tempestuous weather impairing visibility, whenever it is necessary to indicate to the Loco Pilot of- an approaching train the locality of a signal, two detonators shall be placed on the line, by a railway servant appointed by the Station Master in this behalf, about 10 metres apart, and at least 270 metres outside the signal or signals concerned.

(2) (a) The Station Master may comply with the provisions of sub-rule (1) at his discretion; but shall always do so when visibility conditions from any cause prevent him from seeing a prescribed visibility test object from a distance of not less than 180 metres or a lesser distance if expressly sanctioned by the Railway Board.

(b) The visibility test object may be -

(i) a post erected for the purpose and lighted at night;

or

(ii) the arm by day and the light or the back-light by night of a fixed semaphore signal specified by special instruction;

or

(iii) the light of a fixed colour light signal both by day and night specified by special instructions.

**SR 3.61.01.** (a) The visibility test object shall be specified in the Station Working Rules.

(b) Visibility test post shall be provided at all stations except where Station Working Rules earmark a particular signal or the light or the back-light of a signal to serve as visibility test object. At stations, situated in localities where fog, or dust storms or heavy rains are generally prevalent, such posts shall be provided separately.

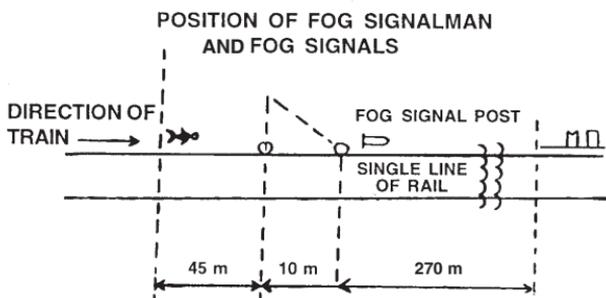
(c) Visibility test post shall be 2.1 metre in height and painted alternately black and white and illuminated during night, and fixed vertically in the ground 180 metres from the centre of Station Master's office at each end of the station.

(d) In foggy or tempestuous weather or in dust storm when station signals cannot be seen, the Station Master on duty shall personally ensure that the station signals are lit, and then send two trained men to act as Fog signalman, one in each direction, to the fog signal posts, which are erected at all stations 270 metres from the first stop signal. No fog signal posts are to be provided at stations with double distant signals and at stations which do not qualify for placement of detonators.

**NOTE :** Placing of detonators shall be dispensed with in following cases :

- i) In Automatic signaling territory.
- ii) At stations which are provided with double distant signals.
- iii) In sections provided with fog safe device.
- iv) On gate signal.
- v) On Departure signal.
- vi) At the sites of temporary speed restriction imposed due to maintenance of Track/OHE/Signal,
- vii) Where maximum speed allowed in the station section is upto 15 kmph even at stations where pre-warning signal is not available, but a warning board exists.
- viii) Where speed of the section is less than 50 kmph (but more than 15 kmph) and the first signal of a station is not a stop signal.

(e) Each of these men shall be provided with 20 detonating (fog) signals or such lesser number as shall be prescribed under special instructions. The Fog Signaller shall, on reaching the fog signal post, place two fog signals on the rail about 10m, apart so that the same on explosion under the wheels of an engine, will warn the Loco Pilot of his proximity to the first stop signal of the station. The position of the fog signal post, the fog signals and the Fog Signaller are shown in the diagram below -



(f) After the passage of each train over the detonating (fog) signals, which have been so placed on the rails, the Fog Signaller shall immediately replace them by the fresh detonators and collect the used cells.

(g) Each of the trained men sent out with fog signals, shall carry a lighted hand signal lamp. If the Fog Signaller be aware of any obstruction on the line, he shall show a stop hand signal in accordance with General Rule 3.53, in the direction in which a train is expected or approaching. On Single line sections for trains leaving a station, the Fog Signaller deputed to place detonators shall show to the Loco Pilot a 'Proceed' (Green) hand signal in accordance with GR 3.54.

(h) As soon as it is necessary for the Station Master on duty to take action under SR 3.61 (d) he shall immediately call on duty, two of Station class IV staff who are off duty. The Station Master on duty may either utilise the two men called from off duty or two of the men already on duty for the purpose of seeing the signals are lit and for sending two men trained in fog signalling duties to either end of the Station limits, or he may utilise, if available, two trained Trackmen detailed for the purpose by the JE/SE/SSE(P way), but in any event the trained men sent out to the fog signal posts shall be regular employees of the railway and not "Substitutes" or "Casual labour".

(i) The procedure in sub-rule (i) refers to action to be taken by the Station Master on duty in an emergency.

Divisional Railway Manager shall notify the names of stations at which fog prevails persistently. At each such station, four of the station Class IV staff (or if this number is not available it may be made up by one or a maximum of two Trackmen per station being deputed by the JE/SE (P way) shall be posted and detailed to work as a Fog Signalman. All four men shall be fully trained in fog signal duties and shall be regular employees of the railway, and not "Substitutes" or "Casual labour". The four employees detailed as Fog Signalman shall be replaced by the appointment of two or more class-IV staff at the station and by one or two temporary men in the engineering gang from which the permanent men have been withdrawn.

(i) At a double line station if the fog appears for about 7 days in the month, it shall be treated as persistent fog and separate fog signalman shall be appointed. If the fog is for less than 7 days in the month, the Station Master shall act according to sub-rule (i). The off duty staff who are utilised for such purpose, shall be paid overtime.

(ii) At single line station where the station porters are required to deliver token also, Divisional Operations Manager, shall examine both the duration of fog and the number of days in a month on which it appears. After taking into consideration the over all work, he shall determine whether separate Fog Signalmen are required or not. If fog appears on one or two days in a month and for a short duration, it shall not be necessary to engage separate Fog Signalmen and the procedure laid down in sub-rule (i), shall be followed.

(j) On branch lines or sections on which traffic is light instead of a Fog Signalman remaining continuously on duty at each fog-signal post, a Fog Signalman may be sent out to place detonators for each individual train. This procedure may only be adopted under "special instructions". In such cases, "Line Clear" shall not be given for a train, unless the Fog Signalman has been sent out at least 30 minutes before the train is due to leave station in rear.

(k) The Station Master shall ensure that fresh supplies of fog signals are sent to the man in replacement of those used.

(l) A "Station Detonator Register" in form OP/T124 (as prescribed) shall be maintained at each station and shall show the

names of Fog Signalmen on duty, periods of duty, the stock of detonators, the number of detonators sent out with each Fog Signalman, the number of each train under which detonators have been exploded, and the number of unused detonators and used cases (including those which have failed to explode) returned each time by Fog Signalmen to the Station Master on duty.

(m) The Station Master shall explain the procedure of placing detonators to all men deputed and/or posted at his station and obtain their signatures or thumb impressions in the "Station Detonator Register" as an acknowledgement that they have understood the rules relating to the fog signalling of trains.

Instructions for Fog Signalmen are contained in SR 3.64.07.

(n) In the case of temporary speed restrictions on account of the line being under repairs or due to any other engineering work being in progress, if thick fog or tempestuous weather is encountered which reduces the visibility distance of the caution indicator to less than 180 m. whether by day or by night, the JE/SE (P way) or the Gang Mate concerned shall promptly arrange for regular Trackmen to place two detonators on the rail, about 10m. apart, at a distance of 270. m. in the rear of the caution indicator, in each direction and to keep replacing the same after the passage of every train until the visibility conditions have improved sufficiently.

### **3.62. Placing of detonators in case of obstruction.-**

(1) Whenever in consequence of an obstruction of a line, it is necessary for a railway servant to stop approaching trains, he shall proceed, plainly showing his stop hand signal, to a point 400 metres from the obstruction and place on the line one detonator and then proceed to a point 800 metres from the obstruction and place on the line three detonators about 10 metres apart, at such place:

Provided that on the broad gauge the first detonator shall be placed at 600 metres and three detonators at 1200 metres from the obstruction about 10 metres apart from each other.

(2) If the said railway servant is recalled before the obstruction is removed, he shall leave down three detonators and, on his way back, pick up the intermediate detonator.

**3.63. Replacement of detonators on the line. -** Every railway servant placing detonators on the line shall see that they are,

when necessary, replaced immediately after a train has passed over them.

### **3.64. Knowledge and possession of detonators.-**

(1) (a) All Station Masters, Guards, Loco Pilots, Gangmates, Gatemen and all other railway servants on whom this duty is laid by the Railway Administration, shall keep a stock of detonators.

(b) The Railway Administration shall be responsible for the supply, renewal, periodical testing and safe custody of such detonators, and for ensuring that their use is properly understood.

(2) Every railway servant concerned with the use of detonators shall have a correct knowledge of their use and keep them ready for immediate use.

(3) Every railway servant shall see that the railway servants in his charge concerned with the use of detonators have a correct knowledge of their use.

**SR 3.64.01.- (a) Stock of detonators. -** A case containing 10 detonators shall form part of equipment when on duty, of every Guard, Loco Pilot, Gangmate, Gateman, patrolman, Keyman, Stationery Watchman, Lineman of Traction Department, Technician (S&T). Every Push trolley, motor trolley, lorry and tower Wagon shall be equipped with a case of 10 detonators.

(b) The Divisional Railway Managers shall prescribe the number of detonators which shall be kept in stock at stations, in each SE/SSE (P way) office and Running Sheds, OHE Depots, SE/SSE (S&T) office and also the minimum number below which the stock shall not be allowed to fall.

(c) Station Masters, Crew Controllers, Loco Inspectors, SE/SSE(TrD), SE/SSE (P way) and SE/SSE (S&T) shall be responsible for seeing that the stock of detonators is never allowed to fall below the minimum.

### **SR 3.64.02. - Supply of detonators. -**

(a) Station Masters shall supply detonators to Guards

headquartered at their stations and to Gatemen working under their control.

(b) SE/SSE (P way) shall supply detonators to Gangmates, Keymen, Gatemen of Engineering level crossing gates, Bridge Watchmen, Stationary Watchmen and Patrolmen.

(c) Crew Controllers & Loco Inspectors shall supply detonators to Loco Pilots.

(d) SE/SSE (TrD) shall supply detonator to Linemen, Drivers of Tower wagons and -such other staff working under them.

(e) SE/SSE (S&T) shall supply detonators to the Technicians (S&T) working under them.

(f) The users of push trolley, motor trolley, lorries etc. shall arrange to get the supply of detonators either from the Divisional Railway Managers/or through the Station Master, SE/SSE (P way) or Crew Controllers, Loco Inspectors or SE/SSE (S&T) of their Headquarters stations as may be prescribed by the Divisional Railway Managers.

### **SR 3.64.03.- Storage of Detonators. -**

(a) Detonators shall be handled with care as they are liable to explode if handled roughly.

(b) Detonators shall be kept in the tin cases in which they are supplied. They shall be stored in dry places and not left in contact with brick walls, damp wood, chloride of lime or other disinfectants, nor exposed to dampness or steam or other vapours. On sections where the climate is humid, "Silicagel" bags may be kept in the containers to absorb moisture. These 'silicagel' bags should be heated periodically in order to expel the absorbed moisture.

(c) Fog signals shall not be exposed to sun rays except when used .on the track, as this can be dangerous.

(d) The month and year of manufacture are shown on the label outside each tin case and are also stamped on each detonator. Detonators shall be used up in the order on the date stamped on them, those of the oldest manufacture being used first. They shall always be stored in such a way as to facilitate ready withdrawal in the correct sequence. This shall also apply to the arrangement of detonators in individual tin cases kept with the users like Gangmates,

Keymen, Trackmen and patrolmen, where the same tin case may, at any given time, contain detonators of different dates of manufacture.

**SR 3.64.04.- Use of detonators -**

(a) A detonator shall be placed over the rail closest to the inner side of the rail and be fixed with the help of lead strips bending inside the rail and the label/brand should face upward.

(b) When a railway servant has placed one or more detonators on the line, he shall withdraw beyond the safety radius of 45 metres from the detonator or detonators before they are exploded by an approaching engine or train. He shall be responsible for warning as far as circumstances permit, any person in the vicinity to stand beyond the safety radius.

Staff in observing the safety radius of 45 metres shall place themselves as far as possible in rear of the locomotive, train or wagon passing over the detonators.

(c) Station Masters, Loco Inspectors, Crew Controllers, SE/SSE (P way), Transportation Inspectors and SE/SSE (S&T) shall be responsible for ensuring that the detonators in the possession of the staff under their control are tested regularly as prescribed in SR 3.64.05 and that the staff know when and how to use them. All such staff as are expected to use detonators shall be tested once in three months by the controlling senior subordinates or by inspecting officials in regard to their knowledge of the use of detonators.

(d) Each station master, Loco Inspectors, Crew Controllers, SE/SSE (TrD), SE/SSE(P way) and SE/SSE(S&T) shall maintain a register of receipts, use and testing of detonators supplied to them.

(e) The life span of detonators is 7 years from the year of manufacture.”

(f) Railway servants in possession of detonators shall be responsible for ensuring that they are not put to any improper use.

**SR 3.64.05. - Testing of detonators. -**

(a) Station Masters, Crew Controllers, Loco Inspectors, SE/SSE (P way) and SE/SSE (S&T) and other officials holding stocks of detonators supplied to them for issuing to staff under their control as well as for their own' use shall be responsible for testing, once in 12 months, at least 2 detonators drawn at random from each batch of

detonators received by them. Particular care shall be taken to ensure that the oldest detonators remaining unused with the staff to whom they were issued are tested without fail..

(b) Detonators shall be tested under the wheels of any empty wagon pushed by a locomotive at a restricted speed of 8 to 12 kmph. The tests shall be carried out under the direct supervision of an official not below the rank of Transportation Inspector, SE/SSE (P way), Loco Inspectors, SE/SSE (TrD) or SE/SSE (S&T) Station Masters of Guards' Hd-quarters stations are, however, authorised to test detonators in their charge including those issued by them to the Guards.

(c) During testing no person shall be allowed to approach within a radius of 45mts. of the detonators being tested, except for the engine crew who shall also keep themselves well within the cab. The official incharge of the testing shall, before commencement of the operation, post sufficient men to ensure that no person trespasses the prescribed safety radius until the testing is completed. The men posted for this purpose shall also observe the prescribed safety radius and shall place themselves as far as possible in the rear of the wagon used for the test for greater safety against flying splinters.

(d) After the test is completed, the results thereof shall be communicated to the officer issuing the detonators by the official conducting the test.

(e) A record of the number of detonators tested shall be kept in a special register maintained for the purpose.

(f) Deficiencies resulting from withdrawal of detonators, for the purpose of testing, from the staff to whom they were issued shall be made good by issue of detonators from a lot which has been tested and found to be effective.

(g) If any of the detonators tested fails to explode, the entire batch it represents shall be withdrawn and replaced by fresh stock.

(h) Detonators bearing any sign of rust on the surface or appearing unsatisfactory in any way and those failing to explode in actual working shall also be returned promptly to the issuing officer for replacement.

**SR 3.64.06.** – Disposal/destruction of time expired Detonators (fog signals). -

Time expired detonators shall be destroyed by the following methods :-

(a) by soaking them in light mineral oil for 48 hours and throwing them one by one into fire with due precautions;

(b) by burning them in incinerator ;

(c) by detonating them under the wagons during shunting operations

(d) by throwing them in deep sea.

The destruction of time barred detonators shall be arranged in the presence of a Railway servant who shall preferably be a Gazetted Officer and in no case below the rank of a Senior Subordinate. He shall ensure that during destruction, every care is taken to see that the splinters of detonators do not cause any injury to life and property

It may be noted carefully that in no case the detonators, shall be burried or thrown in water at such places where they could be recovered by human beings.

**SR 3.64.07.-** Instructions for the supply and use of Fog signals at stations to indicate to the Loco Pilots of approaching trains, the location of a signal.

(a) Recruitment. - Fog Signalmen shall be detailed for duty at stations, being recruited partly from the Station Traffic staff and partly from Engineering Trackmen and must not be substitutes or casual labour but regular employees of the railway.

(b) Relief. - Divisional Operations Manager shall arrange for a Relief Force for relieving Fog Signalmen at stations in area in which fogs are prevalent when such men are absent on account of sickness or authorised leave.

(c) Supply and method of use. - (i) Each Fog Signalman, while being sent to the fog signal post, shall be given 20 detonating (fog) signals or less as may be prescribed under special instructions. The Station Master shall ensure that fresh supplies of Fog signals are sent out, as necessary, to the men in replacement of those used.

(ii) One Fog Signalman shall be sent to each of the fog signal posts which are erected at all stations in rear of (i.e. outside) the outermost signal.

(iii) Each Fog Signalman on reaching the fog signal post shall at once place and secure on the rails two fog signals about 10 metres from each other, one being opposite and on the rail next to the fog signal post and the other beyond it and in the direction from which the incoming train would come.

(iv) He shall then stand himself 45 metres behind the fog signal post.

(v) Fog Signalman shall never leave their post until relieved by another trained Fog Signalman except when he has to report to the Cabinman or the station.

(vi) A Fog Signalman shall never sleep while on duty at the fog signal post. He must realise that the lives of many people depend on his alertness and devotion to duty.

(vii) If a train is approaching at the time a Fog Signalman is being relieved at a fog signal post, both men shall allow the train to pass and explode the fog signals already placed and secured on the line. As soon as the train has passed or if no train is approaching, the Fog Signalman who is being relieved, shall pick up the last two detonators he had placed on the line and take them with any unexploded detonators or exploded cases he has, back to the station. The Fog Signalman coming on duty shall place two fresh detonators on to the lines.

(d) Exception for branch lines. - On branch lines or sections, on which traffic is light, the Station Master on duty may, under "special instructions", send a Fog Signalman to the fog signal post for reception of each individual train. This procedure shall only be permitted if it is provided in the Station Working Rules.

(e) Method of securing. - Fog signals shall be placed on the line with the label or brand upwards, and shall be secured by bending the clasps round the head of the rail.

(f) Placing Fog signals on a mixed gauge. - Where the use of Fog signals is necessary under these rules on a mixed gauge, Fog signals shall be placed on one rail of each gauge, or on the rail common to both.

## Examples

(i) Where one rail is common to both gauges.

(1) (1)     A ← 10 metres → A    

(2) (2) - (2) \_\_\_\_\_

(3) (3) - (3) \_\_\_\_\_

(1) Rail common to broad gauge and metre gauge

(2) Metre gauge rail.

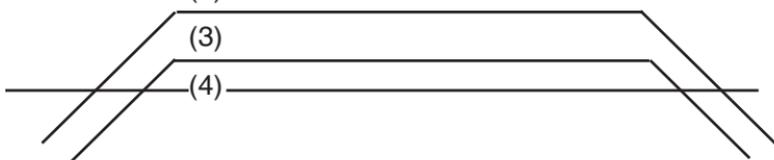
(3) Second broad gauge rail

(ii) Where there is no rail common to the two gauges.

(1)     A ← 10 metres → A    



(2)     B ← 10 metres → B    



1 & 4 Two broad gauge rails.

2 & 3 Two metre gauge rails.

(iii) In case (i) the fog signal shall be placed at

A ... .. A.

**NOTE** - The fog signals shall always be placed on the rail common to both gauges, irrespective of whether it is nearest to the fog signal post or not.

(iv) In case (ii) the detonating (fog) signals must be placed at A... .. A and B... .. B.

(g) To know the location of first stop signal of a station during foggy weather, the kilometer chart of first stop signal location of every station be mentioned in Working Time Table for information of loco pilot.

(h) Renewal of detonating (fog) signals.- On both double lines, detonating (fog) signals shall be placed on the rails for each train and shall be renewed each time a train passes over them.

(i) Hand signals. - (a) The Fog signalman shall always carry a lighted hand signal lamp in foggy or tempestuous weather or in a dust storm.

(b) If the Fog Signalman is aware of any obstruction on the line, he shall show a 'Stop' hand signal to an approaching train. Under no other circumstances shall a Fog Signalman show a hand signal to the Loco Pilot of an approaching train, but on single line sections, for a train leaving a station, the Fog Signalman shall show a "Proceed" (green) hand signal to the Loco Pilot.

(j) Acknowledgement of rules— The station Master shall explain to each Fog Signalman at his station relating to the duties of fog signalling and obtain his assurance in the month of October of every calendar year in the Fog Signal Register.

(k) Record of fog signals and exploded cases -

(i) The station Master on duty shall be responsible for ensuring that the Fog Signalman before going on duty to the fog signal posts, count the number of fog signals issued to them. This number shall be entered in the "Station Detonator Register" in part III of the register. Station Master on duty and the Fog Signalman shall jointly sign this entry.

(ii) As each train has passed over the fog signals placed for it, the Fog Signalman shall collect the exploded cases (not omitting the cases of detonators which have failed to explode) and when his period of duty is over, or when he is recalled on the weather clearing up he shall bring all the used fog signals and any unused he still has, and make them over to the Station Master on duty. The Station master on duty shall enter in the "Station Detonator Register" the number of used fog signals and unused fog signals and both the Station Master and Fog Signalman shall sign against this entry If the Fog Signalman .is illiterate, the Station Master shall take his thumb impression.

**STATION DETONATOR REGISTER.**

At .....

## Instructions

1. This register contains the following parts

- |           |  |
|-----------|--|
| Part I.   | Particulars of Fog Signalmen posted at the station from time to time.  |
| Part II.  | Particulars of receipt and stock of detonating (fog) signals at the station, to be filled in whenever detonators are used or received. |
| Part III. | Periods of fogs, Fog Signalmen on duty, and details of detonators used.  |
| Part IV.  | Particulars of issue and testing of Fog signals at Depot, Station, Loco Shed etc.  |

2. As soon as a man is posted to or detailed for duty at a station as a Fog Signalman, the Station Master must satisfy himself that the man is fully acquainted with and understands the rules relating to the placing of detonating (fog) signals at stations during thick or foggy weather. As an assurance of this, the Station Master shall take the signature or thumb impression of such men in the appropriate column of Part 1 of this register.

3. The Station Master, shall ensure that the information to be maintained in this register is kept upto date and is accurate in all respects.

4. Transportation Inspectors shall check the register, as also the stock of detonators on hand, each time they visit a station and initial with date as an indication of their having done so.

**EAST COAST RAILWAY**

OP/T124

**PART I**

Fog Signalman Posted at ..... Station

Period for which worked at the station		Name of Fog Signalman	Substantive post of Fog Signalman.	Assurance of Fog Signalman.	Signature of Station Master.	Date of testing of the Fog Signalman.	Signature of Fog Signalman	Signature of the Station Master
From	To							

**EAST COAST RAILWAY**

OP/T124

**PART II**

Stock of Detonators

Date	Opening balance of Fog signal.	Stock received on date.	Particulars of receipt	Stock used during day.	Closing balance of detonators on hand.	Signature of Station Master

# EAST COAST RAILWAY PART III

OP/T124

## SIGNALS

128

..... Station.

Date	Duration of Fog.		Name of Fog Signalman on duty.		Time Fog Signalman sent out.		Number of detonating (fog) signals issued		Signature/ thumb impression of fog Signalman		Signature of Station Master.		Train for which used.		
	Time comm-enced & control advised	Time cleared and control advised	To F/S man.		H/M	H/M	Sent out for renewal	No.	Time	H/M	H/M	H/M	H/M	H/M	H/M
			H/M												

Fog Signal Man returned to station.	Number of detonators returned to Station Master on duty				Signature/ thumb impression of		Remarks	
	Unused detonators.	Shells of exploded detonators which failed to explode	Balance of detonators not ac-counted	Explanation for not accounted for detonators.	Fog signal-man			Station Master on duty.
					Signature/ thumb impression of			
H/M								



## **G. Signals to warn incoming train of danger ahead**

**3.65.** - The signals to be used to warn the incoming train of an obstruction shall be a red flashing hand signal lamp at night or a red flag during day.

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

### **3.67. Knowledge and possession of Warning signals.-**

(1) (a) All concerned railway servants on whom this duty is laid by the Railway Administration shall keep a stock of such signal as may be prescribed by special instructions under GR 3.65.

(b) The Railway Administration shall be responsible for the supply, renewal and safe custody of such signals as may be prescribed by special instructions under GR 3.65 and for ensuring that their use is properly understood.

(c) The Railway Administration shall supply every Guard, Loco Pilot, Patrolman and Gateman working on the Double or Multiple line, Ghat, suburban or Automatic Block Territories with such signals as may be prescribed by special instructions under GR 3.65.

(2) Every railway servant concerned with the use of signals as prescribed by special instructions under GR 3.65 shall have a correct knowledge of their use and keep them ready for immediate use.

(3) Every railway servant shall see that the railway servants in his charge concerned with the use of Warning signals as prescribed by special instructions under GR 3.65 have a correct knowledge of their use.

## H. Defective fixed Signals and Points

### 3.68. Duties of Station Master generally when a signal is defective.-

(1) As soon as a Station Master becomes aware that any signal has become defective or has ceased to work properly, he shall-

(a) immediately arrange to place the signal at 'on' if it is not already in that position;

(b) depute competent railway servants with such hand signals and detonators as may be required to give signals at the foot of the defective signal until he is satisfied that such signal has been put into proper working order;

(c) take action in accordance with Rules 3.69 and 3.70 as may be required for movement of trains past the defective signals; and

(d) report the occurrence to the railway servant responsible for the upkeep of the signals, and if the section is controlled, the Controller also.

(2) When the Station Master receives information of any defect in a signal not pertaining to his station from the Loco Pilot or the Guard or any other railway servant, he shall immediately inform the Station Master concerned of the fact and keep the Controller advised, where the section is controlled.

(3) In case of signals becoming defective at stations situated on Centralised Traffic Control territories, the Centralised Traffic Control Operator on becoming aware of such defects, shall take action in accordance with special instructions.

**SR 3.68.01.**-(a) Station Masters are strictly prohibited from interfering or allowing the station staff to interfere with Signalling & Interlocking equipment, except for the provision laid down in SR 3.68.02(a).

(b) In no circumstances may a signal be taken 'off' by pulling the wires by hand or in any way other than the prescribed method.

(c) A signal in the 'off' position is the final indication that the points are correctly set for the route for which it applies, and if it is found impossible to take 'off' a signal, the setting of points on the route to which it applies shall be inspected by Station Master/ Cabin Master/Cabinman before the signal is declared as defective irrespective of what is indicated by the position of the switches and route levers, points levers or lock lever.

(d) If on inspection it is found that the defect is due to presence of ballast or other obstructions causing a gap in the points, the obstruction shall be removed and the signal taken 'off' and normal working continued.

(e) In case of failure of track circuit for the line to which the signal applies, the aforesaid railway servant shall also inspect the entire route so as to ensure that the route is clear of all obstructions.

(f) If a signal which is not relevant to the operation comes 'off' while taking 'off' the signal for a relevant route, both these signals shall be deemed as defective.

**SR 3.68.02.-** As soon as the Station Master has become aware that any signal has become defective or has ceased to work properly, the following procedure shall be followed :-

(a) The Station Master shall take measures either by disconnecting the wire or by other means to place the signal at 'on' position if not already in that position;

(b) If this signal cannot be kept in the 'on' position, a competent Railway servant in uniform shall be deputed to exhibit a stop hand signal at the foot of the defective signal post and to place a detonator 90 metres outside it provided it is a stop signal. The aforesaid railway servant shall replace the detonator every time it is passed over by a train. He shall not leave his post until relieved by another competent railway servant. Relief shall be arranged every four hours in such cases. If this condition happens at night or if it continues after dark, the green glass of the signal arm in question shall be so broken as to prevent a green light being seen, to ensure that a Loco Pilot may not mistake it for a signal lowered for his train. If it is a Routing signal (not Home), Starter or Advanced Starter, a detonator need not be used. If it is a Warner/ Distant GR 3.71 shall be complied with.

**SR 3.68.03.-** If the defective signal is in 'on' position a competent railway servant in uniform shall be deputed if action is to be initiated to receive trains in accordance with the provision prescribed in SR 3.69.02.

**SR 3.68.04. -** (a) As soon as the Station Master becomes aware that any signal at his station governing the movement of trains, has become defective he shall immediately report such defect with complete particulars either in writing or by telephone to the Technician (Sig) concerned, JE/SE /SSE (Sig) Asstt. Signal & Telecom. Engineer (where posted). Divisional Transportation Inspector, Station Master of the adjacent Block station in rear and Notice stations concerned shall also be informed. On controlled section the Section Controller shall also be informed over phone.

(b) He shall make necessary entries in Signal Failure-Register, Train Signal Register, Diary and Caution Order Register.

(c) On receipt of a written or telephonic report from the Station Master, the concerned staff of the Signal department shall attend to the reported defects and issue disconnection notice in form T-351 where necessary and obtain acknowledgement from the Station Master and then carry out the work.

(d) When the defect has been rectified, the official of the signal department shall issue a reconnection memo on the relevant portion of the form T-351 to the Station Master as a certificate for rectification of the defect and obtain his signature. The Station Master before acknowledging such memo shall test the signal and satisfy himself that the signal is in proper working order.

(e) Thereafter the Station Master shall make necessary entries in the Failure Register, Train Signalling Register, Diary and Caution Order Register.

(f) Station Master and official of the Signal department who rectifies the defect shall issue rectification message to the officials mentioned in para (a).

**SR 3.68.05 -** Failure of signal lights, where colour light signals are provided :-

(a) At station provided with colour light signals where lights can not be kept burning due to power failure including failure of stand by arrangements, the Station Master must inform the station on either

side and the section controller, immediately, who shall inform the Sr. DEE/DEE and Sr. DSTE/DSTE concerned.

(b) Before despatching a train to such a station, Station Master of the station in rear shall issue T-409 (Caution Order) to the Loco Pilot advising him of the absence of any light on the signals and therefore for keeping a good vigil and look out and to stop at the foot of the first stop signal post of the station where signal lights are out.

(c) T-369(3b) (Authority to pass defective reception Signals) should be issued to the Loco Pilot by the Station Master of the station where the failure has occurred, at the foot of the first stop signal and T-369(3b) Authority to pass defective departure signal) at the foot of the starter signal.

Provision of GR 3.69 (1) for the issue of Authority to pass defective signals T-369 (1) by Station Master in rear and the last nominated station shall not be applicable in such a case.

It will be worth mentioning that as and when supply is resumed and signal is "lit" again, the advise as indicated in (a) above shall be cancelled and the Loco Pilot of the train shall be guided by the aspect of the signal.

### **3.69. Duties of Station Master when an approach stop signal is defective.-**

(1) In the event of an Outer or a Home or a Routing signal becoming defective, the Station Master shall advise the station in rear and the nominated station in rear, save in a case where a signal post telephone or a Calling-on signal is provided on the defective signal, in order that the Loco Pilots of approaching trains may be warned of the defective signal and issued a written authority to pass such signal on receipt of Proceed hand signal at the foot of the defective signal.

(2) The Station Master in rear as referred to in sub-rule (1), on receiving the advice of the defective signal, shall immediately acknowledge it and advise the Station Master of the station where the signal has become defective, of the number of the first train which will be notified of the defective

signal and again on receipt of the advise that the defective signal has been put into proper working order, shall advise the number of the train so notified last.

(3) The Station Master of the station where the signal has become defective shall, before authorising a train to pass the defective signal, ensure that the conditions for taking 'off' that signal have been fulfilled. He shall then authorise the Loco Pilot to pass the defective signal at 'on' in one of the following manners-

(a) When the Loco Pilot of an approaching train has been advised of the defective signal at a station in rear by deputing a competent railway servant in uniform under clause (b) of sub-rule (1) of Rule 3.68 to exhibit Proceed hand signal at the foot of the defective signal to the approaching train. In such cases, the Station Master shall not give Line Clear to the station in rear unless the conditions for taking 'off' the signal which has become defective, have been complied with; or

(b) When the Loco Pilot of an approaching train has not been advised of the defective signal at a station in rear-by having a written authority, authorising the Loco Pilot to pass the defective signal at 'on', delivered at the foot of the defective signal through a competent railway servant; or

(c) by taking 'off' the Calling-on signal where provided;

or

(d) by authorizing the Loco Pilot to pass the defective signal at 'on' over the signal post telephone where provided, in accordance with special instructions.

(4) When the Home signal becomes defective, the Outer shall also be deemed to be out of order and the procedure prescribed in sub-rules (1), (2) and (3) shall be followed.

**SR 3.69.01.**- If at an interlocked station, the Home signal for any route is out of order and it remains in the 'ON' position but does not affect the interlocking of any other route, it is permissible to admit trains direct into the station on to the other lines by taking 'off' the other relevant Home signals and (in conjunction there-with) the outer signal, where provided.

**SR 3.69.02.** - (a) (i) The Station Master of the station at which Outer, Home or Routing signal has become defective shall advise the station in rear and also the last stopping stations for Mail/Express and Passenger trains, except in case where a signal post telephone or Calling-on signal is provided on the defective signal so that the Loco Pilot s of all approaching trains may be issued with the written authority on form T-369(1). The stations receiving the message shall acknowledge the same supported by a private number and also intimate the number of the first train to which T-369(1) is being issued;

(ii) If the station in rear of the affected station, happens to be a Block-Hut, the advice for issuing T-369(1) shall be sent to the station in rear of such Block-Hut or Block-Huts;

(iii) in case of goods trains, form T-369(1) shall be issued and handed over to the Loco Pilot at the station preceding the station at which the signal is out of order. For this purpose, such trains shall be stopped out of course;

(iv) the Station Master after sending the advice to the station in rear, shall depute a Jamadar/pointsman/Token Porter in uniform at the foot of defective signal with hand signals;

(v) If the Outer is defective, the railway servant mentioned in sub-rule (iv) shall display hand signal according to the aspect of Home signal i.e. if the Home is in 'off' position, he shall display proceed hand signal to the approaching train;

(vi) if both the Outer and Home become defective or Home itself is defective, the aforesaid railway servant shall display stop hand signal from the foot of the Outer signal till such time proceed hand signal is displayed from the facing end cabin or from the station platform where end cabins are not provided. The exhibition of proceed hand signal by the aforesaid railway servant as well as from the Cabin/ Station platform as the case may be, shall continue till such time the train has passed the place of showing such signals.

Possession of T-369(1) and exhibition of proceed hand signal at the foot of first stop signal by the railway servant shall be authority for the Loco Pilot to pass such signals in defective position;

(vii) When the station in rear or the last stopping station has been advised to issue T-369(1), the Station Master shall not give 'Line Clear' to the station in rear for any train unless all points have been set correctly and facing points clamped and locked for the nominated route which shall be clear of all obstructions upto the distance prescribed in GR 3.40 (1).

(b) The procedure detailed in sub-rule (a) (i) to (vi) shall not apply to stations worked under Automatic Block system or when the signal becomes defective in 'off' position. In such case trains shall work in accordance with the procedure detailed in SR 3.69.03 and 3.69.04.

**SR 3.69.03.** - At a station where Outer/Home/Routing signal is defective and the stations in rear have not been advised to issue T-369(I) to the approaching trains in terms of GR 3.69 (2) (b), the following procedures shall be adopted for reception of a train .-

(a) When it is necessary to admit a train past fixed signal/signals which are defective, except in case of shunting operation, the Station Master on duty shall depute a Jamadar/Pointsman/Token Porter to pilot the train giving him a written authority on form T-369(3b). Before handing over the written authority to the Pilotman the Station Master shall have the correct point set, clamped and padlocked for the nominated line and take possession of pad-lock key. The railway servant deputed shall not hand over the written authority to the Loco Pilot unless the train has been brought to a stop outside the first stop signal. Thereafter the Loco Pilot shall proceed provided he is in possession of the T-369(3b) and the Pilotman has boarded the engine and displays proceed hand signal to pass the defective signal/signals in defective position.

(b) At station where cabins are provided at either end, before handing over the written authority to the Pilotman, the following procedure shall be observed -

(i) The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of the facing points and clearance of the nominated route for admission of a passenger train or a goods train when a passenger train is standing on the adjacent line.

(ii) The Cabin Master/Cabinman shall be responsible for correct setting, locking (by lock bar where possible), clamping, padlocking and clearance of the nominated route for admission of a goods train. After complying with the procedure stated above, the Cabin Master/ Cabinman shall give a Private Number to the Station Master as an assurance of having done so. The Station Master shall, then hand over the written authority T-369(3b) to the Pilotman for piloting the train.

(c) At a station where end cabins are not provided, the correct setting, clamping and padlocking of facing points on nominated line shall devolve on the Station Master for all trains except where Line Label and Badge system has been brought into force, in which case the procedure as laid down in SR 3.69.02 shall be followed.

(d) The procedure detailed in sub-rule (a), (b), (c) shall also apply for receiving a train on a non-signalled line.

**SR 3.69.04.** Where telephone is provided below the first stop signal which has become defective, the train shall be stopped outside such signal and Loco Pilot shall contact the Station Master on telephone who shall after complying with the procedure laid down in SR 3.69.03 (b), (c) give a private number to the Loco Pilot and arrange to display proceed hand signal either from station platform or from the cabin till the train has arrived complete. The Loco Pilot on receipt of private number and on seeing the proceed hand signal, as mentioned above, shall pass the defective signal as prescribed in GR 3.80 (2).

**SR 3.69.05.** (a) When the Home or Inner Home signal becomes defective, the Outer shall also be treated as defective.

(b) When the outer signal is defective (in case when advice has not been sent to the station in the rear to issue written authority in advance), the Station Master shall depute a Jamadar/Pointsman/Token Porter in uniform with a written authority on form T-369(3b) to Loco Pilot in the train. After the train has come to a stop at the Outer signal, the Pilotman shall exhibit 'proceed' hand signal to the Cabin Master/ Cabinman who shall then take 'off' the Home signal. After the train has stopped at Outer signal and on seeing the Home signal in 'off' position, the Pilotman shall hand over the written authority on form T-369(3b) to the Loco Pilot to proceed, and give a proceed hand signal.

(c) In case the Station Master has advised the station in rear to issue a written authority in advance and acknowledgement has been received, the Jamadar or Pointsman or Token Porter shall be deputed to the Outer signal. The Pilotman shall display proceed hand signal at the foot of the Outer signal to the approaching train only after seeing the Home signal in 'off' position. If the Home signal is in the 'on' position, the Jamadar or Pointsman or Token Porter shall exhibit stop hand signal to stop the train till the Home signal is taken 'off'.

### **3.70. Duties of Station Master when a departure Stop signal is defective. -**

(1) In the event of a Starter becoming defective, the Station Master may authorise the Loco Pilot to pass such signal by a written authority which shall be handed over to the Loco Pilot at the station where the defective signal is located and in addition thereto, a competent railway servant shall show hand signals to the departing train in accordance with the instruction of the Station master or by taking 'off' the Calling-on signal, if provided under sub-rule (2) of Rule 3.13, after the train has been brought to a stand at the defective signal.

(2) In the event of an Advanced Starter becoming defective, hand signals may be dispensed with and the Station Master may authorise the Loco Pilot to pass such signal by a written authority, which shall be handed over to the Loco Pilot at the station, where the defective signal is located;

Provided that in exceptional circumstances where under approved special instructions, an Advanced Starter protects any points, hand signals shall not be dispensed with,

(3) For the purpose of handing over the written authority mentioned in sub-rules (1) and (2) the train shall be stopped at the station where the defective signal is located. The written authority to pass a defective departure stop signal shall not be

handed over to the Loco Pilot unless all the conditions for taking 'off' such signal have been fulfilled.

(4) Where under approved special instructions a Calling-on signal has been provided below a departure stop signal, other than the last stop signal, the Calling-on signal shall not be taken 'off' unless the conditions for taking 'off' the departure stop signal above it have been fulfilled.

**SR. 3.70.01.-** At a station when the Starter signal has become defective, the Station Master shall issue a Written authority in form T-369(3b) to the Loco Pilot to pass the defective Starter and in addition he shall depute a Jamadar/Pointsman/Token Porter at the foot of such signal to exhibit proceed hand signal to the Loco Pilot . (Before handing over the written authority to the Loco Pilot , the procedure detailed in SR 3.69.03 (b) (i), (ii) and (c) shall be complied with.)

**SR.3.70.02.-** In case the Advanced Starter becomes defective, such signal shall be passed on the written authority in form T-369(3b). Proceed hand signal, in this case, shall be dispensed with only where the Advanced Starter does not protect any points.

### **3.71. Warner or Distant signals defective in the 'off' position.-**

(1)(a) If a Warner signal on a post by itself or a Distant signal is out of order and cannot be kept in the 'on' position, a stop hand signal shall be shown at the foot of the signal. At night, the light or lights of the signal shall be extinguished and the train, after being first brought to a stand, may then be hand-signalled past the signal. Advice of the defective signal shall be given to the Loco Pilots of trains at the station in rear warning them to stop at such signal.

(b) If a warner signal placed below a stop signal becomes defective and cannot be kept in the 'on' position, the stop signal above it shall be treated as defective and by night the light of the Warner signal shall be extinguished.

(2) if the Warner or Distant signal of an Intermediate Block Post is defective and cannot be kept in the 'on' position, the intermediate Block Stop signal shall also be kept at 'on' and treated as defective and action taken as per Rule 3.75.

**3.72. Warner not to be used when stop signal is defective.** - Whenever a stop signal is defective or ceases to work properly at a station provided with warners, the warner applying to the line to which the defective stop signal applies shall be kept at 'on' until the defective stop signal is rectified.

**3.73. Passing of a gate stop signal at 'on' . -**

(1) When a Loco Pilot finds a gate stop signal at 'on', he shall sound the prescribed code of whistle and bring his train to a stop in rear of the signal.

(2) (a) If the gate stop signal is provided with a 'G' marker, the Loco Pilot shall wait at the signal for one minute by day and two minutes by night, and if the signal is not taken 'off' within this period, he may draw his train ahead cautiously up to the level crossing, and

(b) If the gateman is available and exhibiting hand signals, proceed further past the gate cautiously, or

(c) If the gateman is not available, or, is available but not exhibiting hand signals, he shall stop short of the level crossing, where he shall then be hand-signalled past the gate by the gateman, if there is one or in the absence of a gateman, by one of the members of the engine crew of the train after ascertaining that the gates are closed against road traffic.

(3) If the Loco Pilots finds, after stopping at the signal, that there is no 'G' marker, he shall proceed further only in accordance with the procedure laid down under special instructions .

**3.74. Absence of a fixed signal or a signal without a light. -**

. (1) (a) if there is no fixed signal at a place where a fixed signal is ordinarily shown, or

(b) if the light of a signal is not burning when it should, or

(c) if a white light is shown in place of a colour light, or

(d) if the aspect of a signal is misleading or imperfectly shown, or

(e) if more than one aspect is displayed the Loco Pilot shall act as if the signal was showing its most restrictive aspect:

Provided that during night, if in the case of a semaphore stop signal for approaching trains only, the Loco Pilot finds the signal light extinguished, he shall bring his train to a stop at such signal. If he finds that the day aspect of such signal is clearly visible and is satisfied that the signal is in the 'off' position, he shall proceed past it upto the station cautiously at a restricted speed obeying all intermediate stop signals, if any, relating to him, and report the matter to the Station Master for necessary action.

(2) At stations equipped with a colour light signal provided with a 'P' marker, the Loco Pilot shall bring his train to a stand if it does not show any light or shown an imperfect aspect and having satisfied himself that the signal is provided with a 'P' marker, shall proceed preparing to stop at the next Stop signal and shall be guided further by its aspect.

**SR 3.74.01.-** Conflicting signals.- (a) Conflicting signals shall be treated as defective and as such equivalent to danger signals. For instance, if the Warner is 'off' while the Outer, or the Main Home is 'on' or when the Warner is taken 'off' in conjunction with loop line Home signal, the signal shall be treated as defective. Similarly in case of colour light signal, if the Distant shows 'proceed' aspect when the Home signal displays 'yellow' with route indication, such signals

shall also be treated as defective. The Loco Pilot of train noticing such conflicting signals shall bring his train to a stand at once.

(b) In case of colour light signal, if any signal is found to be flickering/bobbing, the Loco Pilot shall treat the signal to be showing the most restrictive aspect and bring his train to a stop short of the same. The Loco Pilot shall obey the aspect of the signal only if it assumes steady aspect and remains steady for a period of not less than 60 seconds. But if the signal continues to flicker or bob and except in the case of Automatic Stop signal if any signal shows more than one aspect simultaneously, it shall be deemed to be a defective signal.

(c) The train shall then be piloted after a careful examination of points etc. provided there is no danger in doing so.

### **3.75. Passing of Intermediate Block Stop signal at 'on' . -**

(1) When a Loco Pilot finds an Intermediate Block Stop signal at 'on', he shall stop his train in rear of the signal and contact the Station Master of the block station in rear on the telephone, if provided on the signal post.

(2) The Station Master shall authorise the Loco Pilot to pass the Intermediate Block Stop signal, if defective, as prescribed by special instructions.

(3) If the telephone is not provided or is out of order, the Loco Pilot after waiting for 5 minutes at the signal shall pass it at 'on' and proceed cautiously and be prepared to stop short of any obstruction, at a speed not exceeding 15 kilometres an hour if he has a good view of the line ahead, otherwise at a speed not exceeding 8 kilometres an hour and report the failure to the Station Master at the block station ahead.

(4) The Station Master of the block station working the Intermediate Block Stop signal on becoming aware that such a signal is defective shall, before despatching a train, treat the entire section upto the block station immediately ahead of the

Intermediate Block Post as one block section and issue a written authority to the Loco Pilot to pass the defective Intermediate Block Stop signal at 'on', without stopping at the signal, in accordance with the procedure prescribed by special instructions.

**SR 3.75.01.** - (i) if the Intermediate Block Stop signal is 'on' the Loco Pilot shall stop at the signal and advise the Guard of the fact by sounding a long continuous whistle and shall then contact the Station Master in rear over the signal post telephone.

(ii) If the Station Master, on being contacted over telephone by the Loco Pilot, finds that the signal is defective, he shall, after obtaining 'Line Clear' for the train from the station in advance, authorise the Loco Pilot on telephone to pass the Intermediate Block Stop signal at 'on' and enter the block section ahead. He shall give the Loco Pilot the Private Number and Identification Number under which he has received 'Line Clear' for the train from the station in advance.

The Loco Pilot shall then sound one short, one long and one short whistle and, on receipt of Guard's signal, shall proceed ahead, duly exchanging signals with him.

(iii) The Station Master on being contacted by the Loco Pilot on signal post telephone, if he is unable to obtain 'Line Clear' for the train due to total interruption of communications, shall call for the Guard through the Loco Pilot and on being contacted by the Guard, he shall advise the Guard of the circumstances and give a Private Number for the train to proceed upto the next block station. The Guard shall prepare a memo in duplicate authorising the Loco Pilot to proceed with the Private Number received from Station Master. In such case the speed of the train shall be restricted as prescribed in GR 3.75 (3).

**SR 3.75.02.** - While complying with the instruction contained in GR 3.75 (3), when the Loco Pilot has to pass an IBS Signal at 'ON' after waiting for 5" minutes at the signal, he shall proceed cautiously preparing to stop short of any obstruction at a speed not exceeding 15 Kmph when view ahead is clear and 8 Kmph when view ahead is not clear due to curve, obstruction, rain, fog or any other cause until he reaches the foot of first stop signal of the block station in advance obeying any gate stop signal in between the IBS Signal and first stop signal of the block station in advance as per rules and even if the

signal is 'OFF' the Loco Pilot shall continue to look out for any possible obstruction short of the same and will act upon its indication only after he has reached it. Before starting, the Loco Pilot shall sound one long whistle which may be repeated as necessary and shall then start his train on receipt of guard's signal. There after he shall exchange signals with the Guard.

**SR 3.75.03.** - The written authority as mentioned in GR 3.75 (4) shall be in form T-369(3b) in which the Private Number and Identification Number obtained from the station in advance in support of 'Line Clear' shall be recorded. Display of 'Proceed' hand signal at the foot of defective Intermediate Block Stop signal may be dispensed with.

**SR 3.75.04.** - Backing of train on the portion of line after passing the Intermediate Block Stop signal.

(a) When the Loco Pilot of a train finds it necessary to back his train after clearing an Intermediate Block Stop signal, on the portion of the line provided with axle-counters/track-circuit, due to unavoidable circumstances, he shall not do so without drawing the attention of the Guard by sounding four short whistles, whereupon the Guard shall check up that the tailboard/tail lamp is correctly exhibited and shall proceed to protect the train as prescribed in GR 6.03.

(b) The Guard shall then check the location of the train and enquire from the Loco Pilot the distance upto which backing is required and ensure that the distance is not likely to foul the track section provided with axle-counter/track-circuit. In order to clearly demarcate the track section, a board with legend "Backing is not permitted beyond this point" shall be fixed at an adequate distance beyond the track section.

(c) If the backing is not likely to foul the axle-counter/track-circuit section, he shall give a written permission to the Loco Pilot for backing indicating the approximate distance and after protecting the train with reference to the point upto which train is to be backed.

(d) If the train which has passed the portion of the line controlled by axle-counters/track-circuit is to be backed and while doing so is likely to foul the above portion of the line, the Guard shall, before giving such permission, walk to the telephone provided on the Intermediate Block Stop signal post and contact the Station Master on duty of the station in rear over the telephone and confirm by a

Private Number from the Station Master that no train has been allowed behind his train or shall be allowed from the station in rear till the Guard informs the Station Master that his train has cleared the section.

(e) The Private Number so received shall be recorded on the memo to be issued to the Loco Pilot.

### **3.76. Intimation to officials when defects remedied.-**

As soon as a defective signal has been put into good working order, the Station Master shall intimate the fact to the officials who were advised of its being defective.

### **3.77. Defective or damaged points etc. -**

(1) Whenever points, crossings or guard rails are defective or damaged, the railway servant in charge of operation of points shall protect them and immediately arrange to report the circumstances to the Station Master.

(2) The Station Master, on becoming aware of such defective or damaged points etc. shall -

(a) immediately arrange to have the defect rectified by the railway servant responsible for their maintenance,

(b) arrange to ensure the safe passage of trains, and

(c) keep the signal or signals concerned at 'on' until the defect is rectified.

**SR 3.77.01.-** (a) While following GR 3.77 (in case of defects or damage to crossings or guard rails or points), the Station Master shall inform the SE/SSE (P WAY), Sectional AEN & DEN and Technician (Sig), SE/SSE (Sig) and the DSTE and the Divisional Transportation Inspector and Divisional Operations Manager. After the defects or damages are rectified, the same officials shall also be advised by the Station Master.

(b) If interlocked points go out of order or become defective in any way, no train or vehicle is to be allowed to pass over them, and

no train is to be permitted to approach such points, within a distance sufficient to ensure safety until they have been inspected, and

(i) the defect has been rectified, or

(ii) the points have been secured by a clamp or a through bolt and padlocked. The speed shall be restricted to 15 km/h over the defective points and caution orders shall be issued to the trains from station in rear or notice station until the defect has been rectified by the authorised staff of Signal Department.

(iii) As soon as repairs are completed and points are tested and found in working order, all concerned shall be notified.

**SR 3.77.02.** - In case any motor operated points become defective, trains may be received or despatched on signal as per the procedure detailed in the Operating Manual.

**SR 3.77.03.** - In the event of any points being burst through, the Loco Pilot shall immediately bring his train to a stop, and shall not move until ordered to do so by the Station Master. The Station Master shall, if necessary, order the train to move to clear the points and shall not permit any movement to be made in a facing direction until the points have been correctly set and secured by clamp or through bolt and padlocked.

### **3.78 Duties of Engine crew in respect of signals,-**

(1) (a) The Loco Pilot shall pay immediate attention to and obey every signal whether the cause of the signal being shown is known to him or not.

(b) The Loco Pilot shall not, however, trust entirely to signal, but always be vigilant and cautious.

2(a) The Loco Pilot shall whistle intermittently when his engine explodes detonator(s) and take every possible caution including reduction of speed as necessary so as to have the train well under his control and be able to stop short of any obstruction on the line;

(b) After proceeding 1.5 km from the place where his engine exploded detonator(s), if his engine does not explode

any more detonator(s), he may then resume authorised speed and;

(c) report the incident to the next station or cabin.

(3) If in consequence of fog or storm or any other reason, the view of the signal is obstructed, the Loco Pilot shall take every possible precaution so as to have the train well under control.

(4) When the Loco Pilot notices a signal warning of an obstruction except detonator(s), he shall stop his train immediately and act on advice of the person exhibiting warning signal or on the basis of obstruction noticed by him.

(5) In case no further details of exhibition of warning signal are noticed after stopping for one minute by day and two minutes by night to ascertain the location and/or cause of warning, he shall proceed cautiously upto the next block station keeping a sharp look out.

(6) The Loco Pilot shall acquaint himself with the system of working, location of signals and other local conditions affecting the running of trains on a section or sections of the railway over which he is to work and if he is not so acquainted with any portion of the railway over which he is to work, obtain the services of a qualified railway servant who is conversant with it to assist him.

**SR 3.78.01.** - (a) (i) A Loco Pilot/Motorman and Asstt. Loco Pilot shall operate a minimum number of three trips initially including trips guided by either Loco Inspector or a Loco Pilot for learning the road over which he has to work, so as to acquaint himself with the system of working, location of signals and other local conditions as required under GR 3.78(6). A competency certificate shall be issued, if found qualified, by a competent Railway official as may be nominated by the DME/DEE (OP). A record of all Competency Certificates issued

to these categories of staff shall be maintained by the Crew Controller of their respective lobbies.

(ii) In case a staff has not operated on a section for more than three months, he shall be given 'road learning trips' to refresh his knowledge of the road before he is allowed to work on the section, as per the schedule given below :

<u>Duration of absence</u>			<u>No. of trips</u>
3 to 6 months	...	...	One trip.
6 months to two years	...	...	Two trips.
Over two years	...	...	Three trips.

However, the learning road for engine crew in respect of siding should be as follows :-

6 months and above - One trip.

(iii) Any additional trips considered necessary should be given with the approval of the controlling branch officer of the division.

(iv) The scale of trips mentioned in sub-rule (i) and (ii) above would apply to all systems of working.

(v) A register should be maintained at the crew booking point wherein before a Loco Pilot/Motorman, Assistant Loco Pilot takes over, he shall indicate and certify the date of his previous trip or learning trip on the section. A record of the date of the last trip performed by the Loco Pilot/Motorman and Assistant Loco Pilot on different sections should also be maintained by the Crew Controller at the head quarters of these staff and updated every 1st of the month. On the basis of these records, the Crew Controller should book the staff for learning road on the section wherever required.

(b) The Crew Controller and Loco Inspector shall before booking any engine crew to work any train, satisfy himself that the concerned staff is/are acquainted with the section over which he/they is/are required to work.

**SR 3.78.02.** - All Loco Pilots/Motorman/Asst. Loco Pilot who are required to work trains on sections having Automatic Block System of working shall be imparted one day's intensive course once in every

six months, about the rules pertaining to this system. There after, they shall be examined, and if found qualified, a certificate of competency shall be issued to each Loco Pilot/Motorman/ Asst. Loco Pilot by a competent Railway official as may be nominated by DME/ DEE (OP) A record of all such certificates issued in token of their knowledge and proficiency in these rules, shall be maintained by the Divisional Mechanical Engineer/Divisional Electrical Engineer (OP). No. Loco Pilot/Asstt. Loco Pilot/Motorman shall be put on duty on such section unless he possesses this certificates.

**SR 3.78.03.-** In thick, foggy or tempestuous weather impairing visibility or when the view of a signal is obstructed, the Loco Pilot shall whistle continuously (as per item 9 (a) of SR. 4.50.01) and take every possible precaution including reduction of speed as necessary so as to have the train well under control and be able to stop short of any possible obstruction on the line. In any case, speed of trains during foggy weather shall not exceed as mentioned in SR 4.08.01.

**3.79. Duties of Loco Pilot in respect of a Calling-on signal.** The Loco Pilot of a train shall be guided always by the indication of the stop signal below which the Calling-on signal is fixed. If this stop signal is at 'on', he shall bring his train to a stop. If he finds that the Calling-on signal is taken 'off', he shall, after bringing his train to a stop, draw ahead with caution and be prepared to stop short of any obstruction.

**3.80. Duties of Loco Pilot when an approach stop signal is 'on' or defective.-**

(1)The Loco Pilot of a train shall not pass an Outer, a Home or a Routing signal that refers to him when it is 'on' or defective, unless-

(a) He has, at a previous station, received notice in writing that the signal is out of order and unless he also receives a proceed hand signal from a railway servant in uniform at the foot of such signal; or

(b) After coming to a stand, he is either given a written authority by the Station Master to proceed past such signal or is authorised by a Calling-on signal in the 'off' position or is

authorised by the Station Master over the signal post telephone in accordance with special instructions.

(2) The Loco Pilot of a train while passing an Outer, a Home or Routing signal, when it is 'on' or defective, shall ensure that the speed of his train does not exceed 15 kilometres an hour.

**SR 3.80.01.** - Except in case of Automatic Stop signal, Intermediate Block Stop signal and Gate signal with 'G' marker, Loco Pilots shall not pass a stop signal in 'on' position or a defective signal unless authorised in accordance with GR 3.69 and/or GR 3.70 and Subsidiary Rules thereto.

**SR 3.80.02.**- At a non-interlocked station on single line, if after a train has left the station, but before it has passed the Outer signal, any danger be reported which should necessitate the stopping of the train, the Outer signal of the opposite direction, where possible, shall be worked up and down to attract the attention of the train staff. The Loco Pilot and Guard shall be watchful for this.

### **3.81. Duties of Loco Pilot when a departure stop signal is 'on' or defective -**

(1)The Loco Pilot of a train shall not pass a departure stop signal that refers to him, when it is 'on' or defective, unless his train has been brought to a stop at the station where the defective signal is situated and he is authorised to do so-

(a) by a written permission from the Station Master, in addition, in the case of a starter, or Advanced Starter protecting points, he shall not pass such signals, when "ON" or defective, unless he also receives a "Proceed" hand signal from a duly authorised member of the station staff posted at the signal, or,

(b) by taking 'off' the Calling-on signal, if provided under approved special instructions, vide sub-rule (2) or Rule 3.13.

(2) In the case of a last stop signal, he shall not pass such signal, when 'on' or defective, unless he is also in

possession of a proper authority to proceed under the system of working.

**SR. 3.81.01.-** The written permission to pass the defective departure signal shall be in the prescribed form T-369(3b).

**3.82. Permission before entering on or crossing a running line.** - No Loco Pilot shall take his engine on or across any running line until he has obtained the permission of the Station Master and has satisfied himself that all the correct signals have been shown.

**SR 3.82.01.-** Authority to enter or cross running line. - No engine shall leave the Locomotive Yard for traffic lines or viceversa, unless accompanied by and under the orders of a Pointsman. The Pointsman may be dispensed with when such movements are controlled by fixed signals.

**3.83. Assistance of the engine crew regarding signals.-**

(1) The Loco Pilot and the Assistant Loco Pilot, as the case may be shall identify each signal affecting the movement of the train as soon as it becomes visible. They shall call out the aspects of the signals to each other.

(2) The Assistant Loco Pilot shall, when not otherwise engaged, assist the Loco Pilot in exchanging signals as required.

(3) The provisions of sub-rule (1) and (2) shall, in no way, absolve the Loco Pilot of his responsibility in respect of observance of and compliance with the signals.

**SR 3.83.01.-** (a) Where two or more lines diverge, the route indicated by the signal such as 'Main Home', 'Loop Home', 'Main Starter', 'Loop Starter', etc. shall be called out and repeated.

(b) The Loco Pilot and the Assistant Loco Pilot shall also call out the speed limits as indicated in engineering caution indicator and speed indicator boards.

(c) While identifying each signal and the engineering indicators pertaining to the train the first Assistant Loco Pilot shall call out the aspect sighted by him to the Loco Pilot who, after checking the aspect himself, shall repeat the same.

**3.84. Duties of Loco Pilots as to signals when two or more engines are attached to train.** - When two or more engines are attached to a train, the Loco Pilot of the leading engine shall be responsible for the observance of and compliance with the signals and the Loco Pilot or Loco Pilots of other engine or engines shall watch for and take signals from the Loco Pilot of the leading engine, except in cases where special instructions, are issued to the contrary.

**SR 3.84.01.-** When two engines are attached to a train, the Loco Pilot of the leading engine shall be in charge of the train and shall receive the Line Clear Token or Starting Order. The second Loco Pilot shall, however, satisfy himself that everything is in order, correct signals given etc.

**SR 3.84.02.-** When an extra engine is attached to any train in rear or front of the train engine, the Loco Pilot of the leading engine when ready to start shall sound one short whistle which shall be acknowledged by the Loco Pilot of the engine in rear. Thereafter the rear engine shall start after sounding one long and one short whistle. The Loco Pilot of the leading engine shall not start unless the rear engine has left whole weight of the train, whereupon the Loco Pilot of the leading engine shall put the engine on motion after sounding one long & one short whistle.

**SR 3.84.03.-**(a) On electrified sections extra electric engine may be attached to a train either for double heading or for banking. The leading Loco Pilot, who is in charge of the train, shall in such cases notch up until the train moves, the rear Loco Pilot assisting as required. As far as possible the leading Loco Pilot should be 4 notches ahead of the second Loco Pilot so as to ensure that field tap notch is not entered simultaneously and thus to reduce surges. The rear Loco Pilot shall primarily observe his vacuum gauge and be prepared to switch 'off' power (if this is being applied at the time) should the needle make any movement back.

(b) If however, the two engines work as multiple unit, the same shall be driven by only one Loco Pilot with single control and the normal rules of single engine shall apply.

**SR 3.84.04.-** Double heading or banking by electric and diesel locomotives. -

Except in special circumstances when it may not be possible to do so, the following procedure shall be adopted-

(a) In case of double headed electric locomotives, the electric locomotives shall be placed at the front.

(b) In case of banking the rear electric locomotive shall be coupled to the train.

(c) In both the cases the Loco Pilot of the assisting engine should also observe the signals relating to electric traction same as the leading Loco Pilot.

**SR 3.84.05.-** For synchronising the raising and lowering of the pantographs the conventional code of communication between the leading and trailing Loco Pilots is to blow the whistles as follows ..-

One long, one short and one long whistle ( \_\_\_0 \_\_\_) for lowering the pantograph, to be acknowledged by the other engine. Two long whistle (\_\_\_\_) for raising the pantographs, to be acknowledged by the other engine.

**SR 3.84.06. -** Movement of diesel locomotives on Electrified section shall be governed in accordance with the instructions laid down in the rule 0901-0908 of Manual ACTM and Operation.

### **3.85. Reporting of defects in signals.-**

(1) Should a Loco Pilot or a Guard observe that the signal is rendered imperfectly visible by branches of trees or by any other cause, or that a signal light is partially obscured or not burning brightly enough to give a clear aspect, he shall report the matter to the Station Master at the next station at which the train stops.

(2) When such a report is made by a Loco Pilot or a Guard, the Station Master shall take immediate steps to advise the Station Master concerned who shall get it rectified.

**SR 3.85.01.-** Loco Pilots, on observing any signal imperfectly showing its aspect, or on noticing any defect with a signal shall report the matter in the combined train report (T34 - HF) as also in the register maintained for this purpose in the crew lobby. The Crew Controller shall bring the fact to the notice of Station Master, SE/SSE (P way) & SE/SSE (Sig) and Divisional branch officers concerned.

