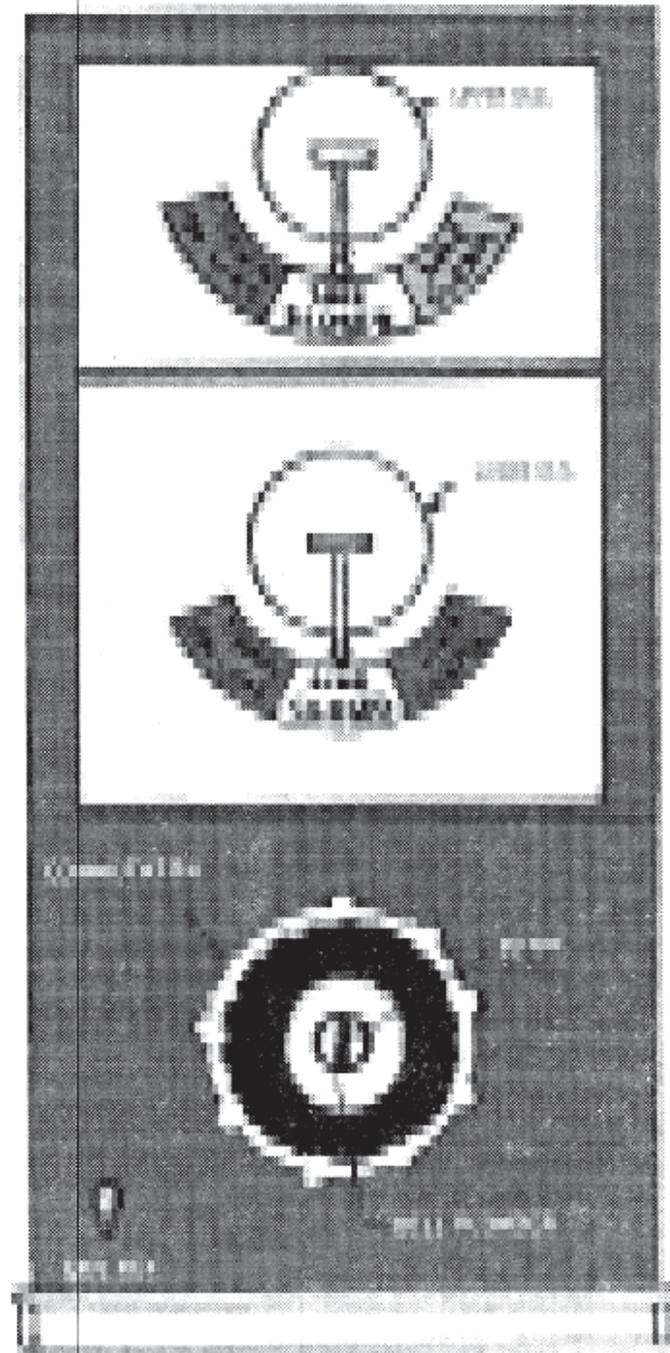


CHAPTER VI

DOUBLE LINE BLOCK INSTRUMENT.

- 6.1 (a) Type of block instrument in use:** S. G. E. Lock and Block Instruments are in use on all sections of double line on this Railway.
- (b)** They are electrically connected each other and control trains passing over the down or up Block Section between two consecutive Block Sections.
- 6.2 Authority to Proceed (G.R. 14.08).**
- (a)** When the Block instruments show 'Line Clear' indication in the TGT dial, the electric lock on the Last Stop Signal will be released and it is possible to take 'OFF' the Last Stop Signal, which constitutes the "Authority to Proceed" to enter the Block Section.
- (b)** During the failure/suspension of Block Instrument, the Paper Line Clear Ticket shall be issued as Authority to Proceed.

6.3 Diagram of S,G,E, Lock and Block Instrument :



6.4 (1) Description of S. G. E. Lock and Block Instrument

- a) “Train Going To”(T. G. T) dial with indicator having three positions.
 - (b) “Train Coming From” (T. C. F) dial with indicator having three positions.
 - (c) An Operating Handle.
 - (d) A Bell Plunger.
 - (e) A single stroke bell.
 - (f) A telephone.
 - (g) Station Master’s key
 - (h) Alarm Bell / Buzzer
- (a) **The “Train Going To” Dial:-** The indications of this dial refer to trains leaving the station and the dial serves as a visual indicator of the conditions of the Block Section in advance. These indications are electrically controlled by the Station Master at the block station immediately in advance and the indications can be altered only by him. The indications of the ‘Train Going To’ dial correspond with those of the ‘Train Coming From’ dial of the corresponding instrument at the station in advance. There are three indications viz;
- (i) ‘Line Closed’ indication which is shown on a white segment when there is no train in the Block Section and line clear has not been given for any train to enter it. The needle remains vertical on the white segment of the dial.
 - (ii) ‘Line Clear’ indication which is shown on a green segment when Line Clear has been received for a train to enter the Block Section. The needle deflects to the right and remains on the green segment of the dial.
 - (iii) ‘Train on Line’ indication which is shown on a red segment when the Block Section is occupied by a train or other obstruction and the needle deflects to the left and remains on the red segment.
- (b) **The ‘Train Coming From’ Dial:-** The indications of this dial refer to trains approaching a station and the dial serves as a visual indicator of the conditions of the Block Section in rear. It is worked entirely by the Station Master of the station at which the instrument is located. The indications of the TCF dial at a station correspond with those of the TGT dial of the corresponding instrument at the station in the rear. These indications are the same as those described against the TGT dial.

- (c) **The Operating Handle:-** The Operating Handle has three positions viz., 'Train on Line', 'Line Closed' and 'Line Clear'. The normal or middle position is 'Line Closed' with the arrow painted on the Operating Handle in vertical position. When turned to the right, it assumes the 'Line Clear' position and when turned to left, it assumes the 'Train on Line' position. When the Operating Handle at 'Y' is turned to the 'Line Clear' position, the TCF dial at 'Y' and TGT dial at 'X' will indicate 'Line Clear'. Simultaneously the lock on the Last Stop signal at 'X' will be released. When the Operating Handle is turned to the left or 'Train on Line' position, the TCF dial at 'Y' and the TGT dial at 'X' will indicate 'Train on Line'. The Operating Handle is free to be turned from 'Line Closed' to either 'Line Clear' or 'Train on Line', 'Train on Line' to 'Line Closed' and also from 'Line Clear' to 'Line Closed' or to 'Train on Line' position. However, when turned from "Line Clear" to "Train On Line" position the Handle gets locked in this position until the train has arrived, after actuating the Last Vehicle Track circuit and Home signal lever/knob has been put back to normal.
- (d) **Bell Plunger:-** The bell plunger is used to give bell signals to the station at the other end of the Block Section. Each time the plunger is pressed the bell or gong of the corresponding instrument at the other end of the Block Section will give a single beat. The bell plunger in its normal position locks the Operating Handle in any of its three positions. The plunger should, therefore, be pressed before the Handle is turned.
- (e) **Bell:-** The bell is intended to receive bell signals from the station at the other end of the Block Section. Each time the bell plunger is pressed at the adjacent station the bell will respond once.
- (f) **Telephone:-** A telephone is provided along with each instrument for communication with the station at the other end of the Block Section.
- (g) **Station Master's Key:-** This key is provided on the instrument, when locked prevents operation of the plunger and unauthorized operation of the instrument.
- (h) **Alarm bell/buzzer:-** When a train passes the Last Stop Signal actuating the first Vehicle Track a bell / buzzer sounds alerting the Station Master to replace the Last Stop Signal lever/knob to normal.

(2) Indoor Apparatus.

(a) Electric Lock on the Last Stop Signal.

An electric lock, provided on the Last Stop Signal lever to lock the lever in the normal position is released only when 'Line Clear' has been obtained from the Block Station in advance.

(b) Last stop signal lever/knob control key (Shunt key).

A mechanical/electrical key lock is also provided for the Last Stop Signal lever/knob. The key, when extracted locks the lever in the normal position, in case of panel/RRI this key prevents taking of 'OFF' Last Stop Signal and the key is used for shunt movements past the Last Stop Signal. The station code and the direction, Up or, Down to which it applies are inscribed on the respective keys.

Note: *Where there is no provision of Mechanical key Lock for the 'Last Stop Signal' lever, the Last Stop Signal has to be passed for shunting purposes on a written authority in the prescribed form (T/806). The key should be extracted for shunting purposes only when the instrument shows TOL indication and the instrument should be revealing only after the shunt key is restored.*

(3) Home Signal Lever/Knob Contacts

(a) The electrical contacts on the Home signal lever/knob are necessary for the release of the lock on the Operating Handle after the arrival of the train.

(b) The Home signal lever/knob which has been operated for the reception of a train should be put back to normal only after the train has passed the Last Vehicle Track Circuit. The replacement of the Home signal lever/knob to normal together with the operation of the Last Vehicle Track circuit releases the lock on the Operating Handle.

Note: *The Home signal lever/knob should be pulled/turned for the reception of a train even if the signal has failed. However while reversing the lever/knob, if the defective signal assumes 'off' aspect it shall not be reversed which may leads to failure of Block Instrument .*

(4) Out Door Apparatus

- (a) **First Vehicle Track Circuit** : This is fixed slightly in advance of Last Stop Signal. As soon as the engine of first vehicle of a train Traveling away from the station passes over the first Vehicle Track Circuit, the signal is replaced to 'ON' automatically.
- (b) **Electric Signal Reverser on Last Stop signal** : This is controlled by the First Vehicle Track circuit and replaces the Last Stop Signal to 'ON' at the Station from where the train is started, immediately after the engine or first vehicle of the train passes over the First Vehicle Track Circuit.
- (c) **Last Vehicle Track Circuit** : This is fixed at an adequate distance in advance of the First Stop signal. When the last vehicle of the train arriving into the station passes over the circuit it permits the Operating Handle to be restored to normal, i.e., from 'Train on line' to 'Line Closed' position after the Home signal lever/knob has been replaced to its normal position.

6.5 Testing before taking over charge

- (i) The Station Master shall when taking over charge of the block instrument, test the instrument by attempting to take off the last stop signal without obtaining line clear. If the signal cannot be taken 'off' the instrument shall be considered to be in order. A record of this shall be made then and there in that Train Signal Register.
- (ii) If the signal can be taken 'off' block working shall be suspended immediately and advised all concerned accordingly.

6.6 Precautions before asking 'Is Line Clear' :-

- (i) The "Train Going To" dial shows line closed position.
- (ii) The Last Stop Signal referring to the train is at 'ON'
- (iii) All the entries relating to the previous train dispatched are complete on the "Train Going To" side of the Train Signal Register.
- (iv) A private number has been obtained for the train.
- (v) No line clear has been received for any other train by any other means.

6.7 Precaution before giving ‘Line Clear’:-

- (i) The “Train Coming From” dial shows line closed position.
- (ii) The Reception signal referring to the train is at ‘ON’
- (iii) The operating handle is in Line Closed position
- (iv) All the entries relating to the previous train received are complete on the “Train Coming From” side of the Train Signal Register.
- (v) A private number has been given for the train.
- (vi) No line clear has been given for any other train by any other means.

6.8 Granting Line Clear

- (i) After observing the precautions before giving line clear if ‘Y’ is ready to receive the train ‘Y’ shall hold his bell plunger on the last beat and turn his handle to Line Clear position. He will then release the bell plunger to normal.
- (ii) The action of ‘Y’ turning his Operating Handle to Line Clear position on his instrument will bring about the following:-
 - (a) Line Clear will be indicated on the ‘Train Coming From’ dial of “Y’s” instrument.
 - (b) Line Clear will be indicated on the ‘Train Going To’ dial of “X’s” instrument

6.9 ‘Train Entering Block Section’ Signal.

- (i) As soon as the train passes the last stop signal at ‘X’ and enters ‘X’ – ‘Y’ block section it actuates First Vehicle Track circuit controlling the Last Stop Signal and results the following changes.
 - (a) Last Stop Signal will go back to ‘ON’
 - (b) ‘Train on Line’ Buzzer actuates automatically (if any) and ‘X’ should give “Train Entering Block Section” signal.
 - (c) When so acknowledged, ‘Y’ keeping the plunger pressed operates handle to “Train on Line”. ‘The Train Coming’ dial will then indicate “Train On Line” and the Block Section shall deemed to be blocked against any other train.
 - (d) The needle in ‘Train Going To’ dial ‘X’ instrument and needle in ‘Train Coming From’ at ‘Y’ instrument moves to train on line segment automatically.
 - (e) An alarm bell starts sounding at ‘X’ until ‘X’ replaces the Last Stop Signal lever to its normal position.
 - (f) Continuous buzzer starts sounding at ‘Y’ until the Operatin Handle is turned to ‘Train On Line’.
- (ii) ‘X’ will transmit the “Train Entering Block” Section signal only after the Last Stop Signal returns to ‘on’ and the train has entered the ‘X’ - ‘Y’ Block Section. ‘Y’ will acknowledge the signal and

while doing so he shall press the bell plunger on the last beat and turned his Operating Handle to the Train On Line position.

6.10 Precautions before closing the block section.

- (1) The train for which “Line Clear” has been granted should have arrived complete.
- (2) All the reception signals taken “OFF” for the train should have been put back to ‘ON’.

6.11 Condition for closing the block section (GR 14.10).

- (i) After the complete train has passed inside Last Vehicle Track Circuit at Y, Y will replace the Home Signal lever to normal position. The replacement of signal lever and the operation of the track circuit will release the lock on the Operating Handle at ‘Y’. ‘Y’ will then give ‘Train out of Block Section’ signal and keep the bell plunger pressed on the last beat and turned the Operating Handle to Line Closed position. The Train Coming From dial at ‘Y’ and the Train Going Dial at ‘X’ will then display ‘LINE CLOSED’ indication. ‘X’ will then acknowledge the “Train Out of Block Section” signal.
- (ii) Before ‘Y’ gives the “Train out of Block Section” or “Obstruction Removal” signal to ‘X’ he shall satisfy himself that the train has arrived complete by ensuring it as per the prescribed procedure. He shall also ensure that all the reception signal has been put back to ‘ON’.

(a) Sending a Train from One Block Station to another.

Sending Station ‘X’	Receiving Station ‘Y’
1) Call attention signal and on getting acknowledgement attend telephone	2) Acknowledge attention signal attend Telephone and give out station name.
3) After ensuring the correctness of the station, from which Line Clear is required give number and description of the train for which Line Clear is required and ask ‘Is Line Clear’.	4) After ensuring the correctness of the station, to which Line Clear is to be given, repeat the number and description of the train and if the conditions for granting Line Clear are complete, give PN for the train.
(5) Repeat the Private Number	
(6) Give ‘Call Attention’.	(7) Acknowledge Call Attention.

<p>8) Ask 'Is Line Clear' by giving two bell beats.</p>	<p>(9) Acknowledge with the two bell beats and hold the Bell Plunger pressed on the last beat and turn the Operating Handle to 'Line Clear' this will change the indication of the 'Train Coming From' dial at Y to 'Line Clear'</p>
<p>(10) At X the indication of the 'Train Going to' dial will change to 'Line Clear'</p>	<p>11) When the 'Train Going To' dial assumes the 'Line Clear' position, Take off the Last Stop Signal and allow the train to proceed.</p>
<p>(12) When the train passes the Last Stop Signal and operates the First Vehicle Track Circuit, Last Stop Signal will go back to 'ON' and the needle in TGT dial moves to train on line position automatically. As soon as the train passes the Last Stop Signal, the Last Stop Signal lever should be put back to normal to stop the alarm sound and then give the 'Train Entering Block Section' signal.</p>	<p>(13) (a) In the TCF dial needle automatically moves to 'Train On Line' and continuous buzzer starts sounding. (b) Acknowledge the 'Train Entering Block Section' signal and keeping the plunger pressed on the last beat, turn the Operating Handle to the 'Train on Line' position to stop the buzzer sound. (c) The operating handle will get locked in 'Train On Line' position.</p>
<p>(14) The 'Train Going to Dial' assumes 'Train On Line'</p>	<p>(15) (a) Reverse the Home signal lever/knob for the reception of the train. (b) After ensuring that the train has arrived complete inside the Last Vehicle Track circuit, put back the Home signal lever/knob to normal. (c) The restoration of the signal lever/knob and the train clearing the Track Circuit, releases the lock on the Operating Handle.</p>
<p>(17) As soon as the TGT dial changes to 'Line Closed' position, give 'Train Out of Block Section' acknowledgement.</p>	<p>(16) Give 'Train Out of Block Section' signal. Keeping the Bell plunger pressed on the last beat, turn the Operating Handle to 'Line Closed'. The TCF dial will now change to 'Line Closed' position.</p>

(b) To Cancel line clear :-

Sending Station 'X'	Receiving Station 'Y'
(1) Signal lever relating to the block section is in the normal position	(2) Signal lever relating to the block section is in the normal position
3) Give "Call attention" signal and on getting acknowledgement attend telephone	4) Acknowledge "Call Attention Signal" attend Telephone and give out station name.
5) Inform intention to cancel line clear with reason.	6) Give consent
7) Send Cancellation Signal	8) Turn the Operating Handle from Line Clear to Line Closed position. Acknowledge the Cancellation signal. 'Train Coming From' dial shows 'Line Closed' position.
9) 'Train Going To' dial shows Line Closed position. Acknowledge the cancellation signal again.	

(c) Procedure for Block forward

When 'X' requires to shunt a train into the 'X-Y' Block Section the procedure given below shall be followed.

Sending Station 'X'	Receiving Station 'Y'
1. Insert Station Master's key and unlock the instrument. Give Call Attention signal.	2. Insert Station Master's key and unlock the instrument. Acknowledge Call Attention signal.
3. Inform the intention to perform block forward with the details of train and duration and ask 'Is Line Clear' for block forward	4. Repeat the train particulars duration of block forward and if prepared to allow block forward give Line Clear and communicate a Private Number.
5. Repeat the Private Number and give 'Is Line Clear' bell signal.	6. Acknowledge the 'Is Line Clear' bell signal and operate the handle by pressing the plunger to 'Train On Line' position, then "Y's" TCF dial shows train on line condition.

<p>7. (a) The TGT dial of “X” shows ‘Train On Line’ (b) Ensure TGT – TOL condition . (c) Extract LSS lever/knob control key. (d) Handover the key with T/806 to Loco Pilot. (e) After the train has entered the block section send train entering block section signal.</p>	<p>8. Acknowledge the train entering Block Section signal.</p>
<p>9. On completion of shunting, ensure that the train has arrived complete and the ‘X’ – ‘Y’ section is clear. (a) Recover the LSS key from the Loco Pilot and insert it in the LSS lever/EKT. (b) Cancel T/806 and return it to Loco Pilot. (c) Inform the completion of block forward to SM/Y on block phone and then give cancellation signal to ‘Y’.</p>	<p>10. ‘Y’ shall turn his operating handle to the “Line Closed” position and acknowledge the canceling signal. “Y’s” TCF dial changes to ‘Line Closed’ position.</p>
<p>11. Ensure Line Closed position in TGT dial and acknowledge cancellation signal.</p>	

Note: (i) Last Stop Signal shall not be cleared to control this movement

- (ii) Loco Pilot can pass the Last stop signal at ‘ON’ on the authority of Form T/806 + private number.
- (iii) Whenever Material train is permitted on block forward SM shall issue a separate memo specifying the time by which the Material train shall return to the Station get the counter signature of the Guard and hand them over to Loco Pilot. Loco Pilot shall sign both the copies and return the duplicate to the Station Master. .
- (iv) Any train entering the Block Section on Block Forward shall return to the same station from which it was started.
- (v) On completion of shunting Station Master shall cancel T/806 entering time and date and return it to the Loco Pilot.
- (vi) During failure of Block Instruments serially numbered messages confirmed by a Private Number shall be exchanged between ‘X’ and ‘Y’ before commencement of shunting and on completion of shunting to ensure that while block forward is allowed no other train is allowed in to the Block Section in advance on Line Clear by mistake.

(d) Procedure for Block Back

When 'X' requires to shunt a train into the 'Y – X' Block Section the procedure given below shall be followed.

Sending Station 'X'	Receiving Station 'Y'
1. Insert Station Master's key and unlock the instrument. Give Call Attention signal	2. Insert Station Master's key and unlock the instrument. Acknowledge Call Attention signal.
3. Inform the intention to perform block back on 'Y – X' Block Section and give the details of train and duration of block back and ask SM 'Y' to apply 'Is Line Clear' for block back.	4. Repeat the train particulars duration of block back and if prepared to allow block back in to 'Y – X' block section ask 'Is Line Clear' for block back.
5. Confirm the 'Is Line Clear' is for block back and communicate a Private Number.	6. Repeat the Private Number and send 'Is Line Clear' signal.
7. Acknowledge the 'Is Line Clear' bell signal and operate the handle by pressing the plunger to "Train On Line" position, then "X's" TCF dial shows "Train On Line" condition.	8. The TGT dial of "Y" shows Train On Line
9. (a) Prepare T/806 in duplicate entering the private number and issue it to Loco Pilot. (b) After the train has entered the rear Block Section give Call Attention bell and intimate the SM/Y over block telephone. 'Y's' TGT dial needle changes to Train On Line position.	10. "Y's" TGT dial needle changes to Train On Line position.
	11. Acknowledge attention signal and note down receive the information of train entering the Block Section over telephone.
12. On completion of shunting, ensure that the train has arrived complete and the 'Y – X' section is clear. (a) Collect and Cancel T/806 and return it to Loco Pilot. (b) Inform the completion of block back to SM/Y on block phone .	13. Acknowledge attention bell signal and attend block phone.

14. Give cancellation bell signal and turn the Operating Handle to 'Line Closed' position. TCF dial needle changes to 'Line Closed' position.	15. TGT dial needle changes to 'Line Closed' position. Ensure the above then acknowledge the cancellation bell code.
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Note:(i) *The Loco Pilot shall sign both the copies of T/806 retain the original and return the duplicate to the Station Master.*

(ii) *Any train entering the block section on Block Back shall return to the same station from which it was started except in case of motor trolley occupied by an officer and proceeding in an emergency..*

(iii) *Outer and Home shall not be cleared for Block Back movements.*

(iv) *Whenever Material train is permitted on Block Back SM shall issue a separate memo specifying the time by which the Material train shall return to the Station get the counter signature of the Guard and hand them over to Loco Pilot. Loco Pilot shall sign both the copies and return the duplicate to the Station Master.*

(v) *During failure of Block Instruments serially numbered messages confirmed by a Private Number shall be exchanged between 'X' and 'Y' before commencement of shunting and on completion of shunting to ensure that while block back is done no other train is allowed in to the Block Section in rear by mistake.*

(vi) *During Block Instrument failures when T/806 with Private Number is issued as authority for block back, the Station Master shall mention the failure of Block Instrument in T/806.*

(e) Procedure for shunting within station section:-

All shunt movements within station section shall be authorized as per procedure detailed under SR 8.15 (i)

(f) Procedure for testing the Block Instrument

Authorised S & T department official at 'X'	Station Master 'Y'
1. Insert Station Master Key and give Testing Signal (16 bell beats)	2. Insert Station Master Key and Acknowledge Testing Signal (16 bell beats)
3. Give 'Is Line Clear' signal	4. Acknowledge 'Is Line Clear' signal and give 'Line Clear' by turning the operating handle to 'Line Clear position'. 'Train Coming From' dial shows Line Clear.

5. 'Train Going To' dial shows Line Clear. Operate the Last Stop Signal lever/knob to see that the signal can be taken 'off'. Put back the Last Signal lever to normal. Give cancellation signal.	6. Acknowledge cancellation signal and turn the operating handle to Line Closed position. The 'Train Coming From' dial shows Line Closed position.
7. 'Train Going To' dial shows Line Closed position. Acknowledge the cancellation signal. Attempt to take off the Last Stop Signal and satisfy that it cannot be taken off.	

The above operation shall be repeated by the Station Master at 'Y' beginning with 16 beats.

Testing signals shall then be exchanged again between the Signal and Telecommunication Official at 'X' and the Station Master at 'Y' in token of the operation having been completed.

Whenever testing signals are exchanged, the Station Master at one end of the Block Section and the Signal and Telecommunication Official or other authorized person at the other end shall record in the train signal register.

Time: _____

Exchanged testing signal with the Station Master _____ Signal and telecommunication official or other authorized person at _____ station.

6.13 Failure of Block Instruments.(S.G.E)

The Block Instruments shall be considered to have failed and block working suspended in the following circumstances—

- (a) When the indications on the 'Train Going To' dial at 'X' do not correspond with the indications of the 'Train Coming From' dial or the position of Operating Handle at 'Y' .
- (b) When the indications on the 'Train Coming From' dial do not correspond to the position of the Operating Handle.
- (c) Whenever there is reason to believe that there is contact between the Block and any other circuit.
- (d) When a train arrives at a station without 'Line Clear'

Note: *In this case the irregularity shall be reported as an accident unless the Loco Pilot is in possession of an 'Authority to Proceed Without Line Clear'.*

- (e) If the Block Instrument or its battery counter is found without seals or locks.
- (f) Whenever Single Line working is introduced.
- (g) When the dial indicator glass is broken.
- (h) If the Last Stop Signal lever can be reversed with no 'Line Clear' indication on the 'Train Going To' dial.
- (i) If the Operating Handle can be restored from 'Train On Line' position to 'Line Closed' position before complete arrival of the train.
- (j) Where the Operating Handle cannot be turned to "Train On Line" or 'Line Clear' or to 'Line Closed' in the process of granting or cancelling Line Clear.
- (k) Where signals on the bell are not received distinctly or fail altogether.
- (l) When a train for which Line Clear has been obtained and which has operated the First Vehicle Track circuit, changing the dial to Train On Line is backed for any reason in rear of the Last Stop Signal.
- (m) Whenever a material train etc., is required to be taken into the section after line block has been imposed.
- (n) When the Private Number book of the Station Master is lost or mislaid at the time of giving Line Clear.
- (o) When the Last Stop Signal does not go back to 'ON' even after the train has entered the Block Section and the Operating Handle at the other end has been turned to 'Train On Line' position.
- (p) When a Motor trolley, Motor Lorry, Ladder trolley is required to enter the Block Section.
- (q) If it is known that the instrument is defective in any way not specified above.

6.14 Occasion for Suspension of one dial of the Block Instrument (SGE)

- (i) When the indication on the TGT dial at 'X' do not correspond with the indication of the TCF dial or the position of the operating handle at 'Y'.
- (ii) When a train arrives at a station without Line Clear given for it.

- (iii) If the Last Stop Signal can be taken 'OFF' without 'Line Clear' indication on the TGT dial.
- (iv) If the Operating Handle which was turned from 'Line Clear' to 'Train On Line' position can be restored to 'Line Closed' before complete arrival of the train.
- (v) When a train for which 'Line Clear' has been obtained and which has actuated the FVT changing the dial to 'Train On Line' is backed for any reason in rear of 'Last Stop Signal'.
- (vi) Whenever a material train etc., is required to be taken in to the section after line block has been imposed.
- (vii) If the Last Stop Signal fails to assume 'ON' position after the train has entered the Block Section and Operating Handle at the other end is turned to 'Train On Line' position.
- (viii) When a Private Number book of the Station Master giving Line Clear is lost.

6.15 Restoration of Block Instruments by Station Masters themselves.

- (a) Working with Block Instruments which is suspended shall not be resumed until the instruments have been tested by the SE/JE/Signals except in the following cases where the Station Masters themselves may resume without such test
 - (i) In the case of Double Line, when the Block Instrument is suspended due to the introduction of Single Line working, block working may be resumed when Double Line working is restored.
 - (ii). When a train is ready to enter a Block Section once obstructed due to an accident but the cause of obstruction has since been removed and the Block Section is also clear of the obstruction.
 - (iii). When a train is ready to enter a Block Section after the clearance of Motor Trolley, Motor Lorry etc., allowed to proceed on the authority of "Line Clear Ticket".
 - (iv). When the Private Number book is lost or mislaid at the time of granting Line Clear and subsequently found.
 - (v) When SM's key is lost and subsequently found.

6.16 Block forward and block back at stations provided with modified S.G.E. Lock and block instruments

1. Block Forward:-

- (a) When 'X' requires to shunt a train into the 'X' – 'Y' block section i.e., on the line in advance of the Last Stop signal in the direction of 'Y', he shall intimate the fact by Telephone to 'Y' and give 'Y' the signal 'Is Line Clear'. If 'Y' is prepared to allow the block section to be occupied, he shall turn his Operating handle to the 'Train On Line' position and acknowledge the 'Is Line Clear' signal by repeating it. This will cause 'Train On Line' indication to appear on the 'Train Coming From' dial at 'Y' and 'Train Going To' dial at 'X'. This operation is called 'Block Forward'. Before turning the Operating Handle to 'Train On Line' position, Station Master 'Y' shall say 'Line Is Clear' and communicate a Private Number.
- (b) With lever of Last Stop signal in its normal position, 'X' shall extract the Shunt Key from the lock and give it to the Loco Pilot of the train along with a "Shunting Order" Form No.T/806. The Station Master 'X' shall prepare this form in duplicate and obtain the signature of the Loco Pilot on both the copies. The Loco Pilot shall retain the original and return the duplicate to the Station Master. In the case of a material train working on line, he shall prepare a memo also in duplicate specifying the time by which the Material train shall return to the station 'X' get the countersignature of the Guard and hand them over to the Loco Pilot. The Loco Pilot shall sign both the copies and return the duplicate to the Station Master.
- (c) Any train entering the Block Section on "Block Forward" shall return to the same station from which it was started.
- (d) The Shunt Key together with "Shunting Order" Form No.T/806 authorizes the Loco Pilot to pass the Last Stop Signal at 'X' at danger and shunt into the Block Section and return on the same line shunting in advance of the Last Stop Signal may then be performed.
- (e) When such shunting is over, after satisfying himself that the train has arrived complete and the 'X' 'Y' block section is again clear, 'X' shall collect the Shunt Key from the Loco Pilot and insert it in the lock of the Last Stop signal lever. He shall also get back the copy of "Shunting Order" Form No.T/806 from the Loco Pilot, cancel it marking "time" and "date" and return it to the Loco Pilot. He shall, then, intimate the completion of "Block Forward" to Station Master 'Y' on the Block

Telephone and then give the “Cancelling” signal to ‘Y’ and ‘Y’ shall turn his Operating Handle to the “Line Closed” position, and acknowledge the signal. This will cause the “Line Closed” indication to be displayed on the “Train Coming From” dial at ‘Y’ and “Train Going To” dial at ‘X’.

- (f) All entries in the Train Signal Register shall be made in Red ink.
- (g) During failure of the block Instrument, serially numbered messages confirmed by Private numbers shall be exchanged between ‘X’ and ‘Y’ before commencement of shunting and after completion of shunting to ensure that while “Block Forward” is allowed, no other train is allowed into the Block Section in advance on “Line Clear” by mistake.

2. Block Back –

- (a) When ‘X’ requires to shunt a train into the ‘Y’ – ‘X’ block section, i.e. on the line in rear of the Home signal in Two Aspect signaling territory or in rear of the outermost facing points or Block Section Limit Board in Multiple Aspect signaling territory in the direction of ‘Y’ he shall intimate the fact by Telephone to ‘Y’ and ask the latter to apply for “Line Clear”. If ‘Y’ is prepared to allow the Block Section to be occupied, he shall give the signal “Is Line Clear”. ‘X’ shall then turn his Operating Handle to the “Train on Line” position. This will cause “Train on Line” indication to be displayed on the “Train Coming From” dial at ‘X’ and on the “Train Going To” dial at ‘Y’. ‘X’ shall then acknowledge the “Is Line Clear” signal, he shall say “Line is Clear” and communicate a Private Number to Station Master ‘Y’.
- (b) The Station Master ‘X’ must then issue to the Loco Pilot a “Shunting Order” Form No.T/806 prepared in duplicate. The Loco Pilot shall sign both the copies, retain the original and return the duplicate to the Station Master. “Shunting Order” Form No.T/806 authorizes the Loco Pilot to shunt into the Block Section in rear of Home signal in two aspect signaling territory or in rear of the outermost facing points or Block Section Limit Board in Multiple Aspect signaling territory. In the case of material train working on line, the Station Master shall prepare a memo also in duplicate specifying the time by which the material train shall return to Station ‘X’, get the countersignature of the Guard and hand them over to

the Loco Pilot. The Loco Pilot shall sign both the copies and return the duplicate to the Station Master.

- (c) Any train entering the block section on “Block Back” shall return to the same station from which it was started except in the case of a Motor Trolley occupied by an Officer and proceeding in an emergency.
- (d) When shunting is over, after satisfying himself that the train has arrived complete and the ‘Y-‘X’ Block Section is again clear, ‘X’ shall intimate completion of “Block Back” to ‘Y’ over the Telephone, turn his Operating Handle to the “Line Closed” position. This will cause “Line Closed” indication to be displayed on the “Train Going To” dial –‘Y’ and “Train Coming From” dial at ‘X’. ‘X’ shall then give the “Cancellation” signal. When ‘Y’ sees on the “Train Going To” dial “Line Closed”, he shall acknowledge the signal by repeating it. Station Master ‘X’ shall get back the copy of “Shunting Order” Form No.T.806 from the Loco Pilot cancel it marking “Time” and “Date” and return it to the Loco Pilot.

Note –*The Outer or Home signal shall not be taken “Off” for the train for which the section has been “Block Back” as the movement of the train in such cases is only a shunt movement. Shunt signals, if any, shall be taken “Off”.*

- (e) All entries in the Train Signal Register shall be made in red ink.
- (f) During failure of the Block Instrument, serially numbered messages confirmed by Private Numbers shall be exchanged between stations ‘X’ and ‘Y’ before commencement of shunting as well as after completion of shunting operations to ensure that while “Block Back” is done, no other train is allowed to enter into the Block Section in rear by mistake.
