

CHAPTER VII

WORKING OF TRAINS UNDER AUTOMATIC BLOCK SYSTEM

(Note - These rules are to be read in conjunction with Chapter IX of General and Subsidiary Rules Book)

RULES APPLICABLE TO BOTH DOUBLE AND SINGLE LINE

7.01. Competency Certificate : —

(1) No person shall be allowed to hold independent charge of operating or issuing instructions for working points and signals at stations unless he holds a competency certificate issued in his favour under SR 3.39.08

(2) No person shall be allowed to operate independently the panel for establishing direction of traffic on single line unless he has passed a satisfactory examination and unless he holds a certificate of competency issued in his favour jointly by DOM and DSTE of the concerned division. This certificate of competency shall be valid for a period of three years.

7.02. Mode of running trains :—

Trains shall run in the direction of traffic obeying the aspects of signals governing the movement.

7.03. Means of Communication :—

Station to Station Telephone is provided between each pair of adjacent stations. In the event of failure of the same, communication may be established between the stations concerned by —

- (i) Railway auto telephone/BSNL phone.
- (ii) Control Phone
- (iii) VHF set which shall be used in the order given under SR 9.12.01, 9.12.03 and 9.12.07.

7.04. Train Log Register :—

(1) A train log register shall be kept by the Station Master or under his orders.

(2) All messages received or sent on the telephone concerning the movement of trains and the timings of receipt and despatch shall be entered therein immediately after acknowledgement by the person who maintains the same.

(3) The timings entered in the register shall be the actual timings except that any fraction of a minute shall be counted as one.

(4) All entries in the register shall be made in ink.

(5) No erasure shall be made in the register, but if any entry is found to be incorrect, a line shall be drawn through it, so that it may be read at any time and the correct entry shall be made above it which shall be initialled.

(6) The person who maintained the register for the time being shall be responsible for all entries made therein and for correctly filling in each column thereof.

I. DOUBLE LINE**7.05. Method of signalling trains :—**

(1) On double line section, during normal working, taking and granting line clear between adjacent stations is not required before despatch or reception of trains. Movement of trains into, through and out of a block station is governed by manual/ semi-automatic stop signal(s). The Section Controller shall regulate the movement of traffic between stations in the Automatic Signalling territory. Whenever it is necessary to control any train at a station either to give precedence to any other train(s) or for any other purpose, the Section Controller shall advise such station, at which the train is to be controlled, by issuing a control order giving detailed instructions. The Station Master shall, after recording the order so received, acknowledge the same supported by a Private Number. If no such order is received, the trains shall be allowed to run in the sequence in which they approach a station. It shall be the responsibility of the Station Master of the block station from which working of trains on automatic block system commences to consult and obtain verbal permission of the Section Controller before despatching a train. The Station Master of junction stations shall also consult and determine from the Section Controller the sequence in which trains approaching from different directions should be allowed to leave his block station. In the event of interruption of the Control Telephone, the Station Master of each block station shall regulate the movement of trains between stations in consultation with the Station Master at the other end block station.

(2) Subject to the provisions of sub-para (1) above and unless otherwise mentioned in the Station Working Rules, the following procedure shall be adopted for signalling trains to

run in the signalled direction of traffic from one block station to the other end block station:—

<u>Despatching Station – X</u>	<u>Receiving Station – Y</u>
1(a) Complies with SR 3.42.01 (c) at stations having end cabins. But at stations having Panel/Route Relay interlocking, takes off concerned departure signal(s) governing departure of trains.	2. Acknowledges supported by a Private number.
(b) As soon as a train starts, informs station 'Y' over telephone indicating the number and description of the train and its departure time.	3. Complies with SR 3.38.02 at stations having end cabins. But at stations having Panel/Route Relay interlocking, takes off the concerned reception signal(s) governing the approach of trains.
5. Acknowledge	4. On complete arrival of the train with last vehicle indicator, informs Station 'X' indicating the number and description of the train and its arrival time supported by a Private Number.

(3) At block stations having semi-automatic stop signals governing approach and departure trains, the Station Master may allow such semi-automatic stop signal(s) to work as Automatic Stop Signal(s) so long as there is no necessity to control a train or trains.

7.06. Recording Movement of trains :—

The messages exchanged for movement of trains under these rules and the time must be entered legibly in ink in the Train Log Register provided for the purpose. The Train Log Register shall have the columns as indicated in the station working rules.

7.07. Shunting :— (The following rules are to be read in conjunction with General Rules 5.13 to 5.14 and 5.16 to 5.23 with Subsidiary Rules thereto)

1. (a) Shunting may be performed on line/lines only when such line(s) is/are isolated from the main line and or other adjacent line(s) and when the movement of running trains is not affected by such shunting.

(b) In case the shunting obstructs or is likely to obstruct the main running line, the Station Master shall ensure that manually operated stop signal as also the last stop signal is maintained at 'ON'; and as for semiautomatic stop signal(s) the 'A' marker light is kept extinguished in addition.

(c) Shunting under sub-para (b) above, shall be performed between the outermost points at the approaching end and the last stop Signal of the Station on either direction.

2. No shunting shall be permitted outside the outermost points at the approaching end of a station unless :—

(a) The lines between the station at which shunting is to be performed and the block station in rear is clear of trains;

(b) Working of trains between the block stations concerned under Automatic Block system is suspended; and

(c) the line is blocked back.

3. No shunting shall be permitted outside the last stop signal unless :—

(a) the line between the block station at which the shunting is to be performed and the block station in advance is clear;

(b) working of trains between the block station concerned under Automatic Block system is suspended; and

(c) the line is blocked forward;

Provided that when the line between the block stations at which shunting is to be performed and the block station in advance is occupied by a train travelling away from the block station, shunting may be permitted behind the train if permitted under the provisions of station working rules which shall take into account the speed, weight, brake power of trains and gradient in the section and as soon as intimation has been received that the train has arrived at the other end block station, working of trains under Automatic Block system between the stations concerned shall be suspended and the line blocked forward, if it is still obstructed.

7.08. Authority for shunting :—

(1) While permitting shunting under sub-para (1) of para 7.07 above when such shunting cannot be controlled by fixed signals mentioned under SR 5.13.01 or while permitting shunting in Automatic signalling section the Loco Pilot shall be given authority for shunting in the prescribed form T/806.

(2) Whenever the authority mentioned in sub-para (1) above is issued after block back or block forward in terms of sub-para (2) or (3) of para 7.07 above, the Private Number received from the Station Master at the other end block station shall be recorded in it.

(3) Whenever the authority mentioned in sub-para (1) above is issued to permit shunting under the provision of sub-para (3) of para 7.07 above, i. e., in rear of a travelling away train, the circumstances under which such shunting is permitted shall be endorsed on the prescribed form T/806.

7.09. Suspension and resumption of working of trains under Automatic Block system :—

Whenever it becomes necessary to suspend working of trains under Automatic Block System between stations, the Station Master of the block station proposing to suspend working of trains under Automatic Block System say, 'A', and the Station Master of the block station at the other end block station say, 'B' shall exchange messages as under:—

From : SM 'A' To : SM 'B' Date..... Time.....

No. 1. I intend to suspend working of trains under Automatic Block System on Up/Down Line between(Stn.) and..... (Stn.) for..... (state purpose). Last train No.....Up/Down left/arrived here last at..... (Time or has become disabled at KM Acknowledge Private Number.....

The Station Master of the other end block station on receipt of the message indicated above shall verify from his log register about the complete arrival/departure of the last train

over the Up/Down line as the case may be or on being satisfied about the disablement of the train shall reply in the following :—

From : SM 'B' To : SM 'A' Date..... Time.....

No. 1. Your No. 1 of (date) last train No. Up/Down arrived/left here last at (time) or has become disabled at KM working of trains under Automatic Block System on Up/Down line between (Stn.) and will remain suspended as proposed Private No.

After removal of the cause of obstruction and on being satisfied that the Up/Down line as the case may be is clear, the Station Master of Station 'A' shall issue a message proposing to resume working of trains under Automatic Block System as under : —

From : SM 'A' To : SM 'B' Date..... Time.....

No. 2. My No. 1 your No. 1 of (date). Up/Down Line between (Stn.) and (Stn.) has been cleared on completion of shunting/on complete arrival of at (Stn.) at (time). Propose to resume working of trains between (Stn.) and (Stn.) on Up/Down Line under Automatic Block System. Acknowledge. Private No.....

The Station Master of Station 'B' shall reply as follows :—

From : SM 'B' To : SM 'A' Date..... Time.....

No. 2. My No. 1 your No. 2 of (date). Noted and acknowledged. Resume working of trains under Automatic block system between (Stn.) and (Stn.) on Up/Down line. Private No.....

The above messages shall be entered in the Train Log Register at the respective station in red ink.

7.10. Block Back/Block Forward :— Refer GR 1.02(8) and 1.02(9).

The procedure detailed under para 3.21 of this manual shall be followed.

7.11. Motor trolley :—

The rules contained under SR 15.25.08 shall be followed.

7.12 Equipment of fixed signals :—

Equipment of fixed signals for each direction shall be in accordance with GR 9.04 and 9.05 which shall be of colour light type and as indicated in the Station Working Rules. Where, however, an Automatic Stop signal in rear of the Home signal is not provided in terms of 'Note under GR 9.04, distant signal(s) as contained under sub-rules (4), (5) and (6) of GR 3.07 shall be provided under approved special instructions.

II. SINGLE LINE

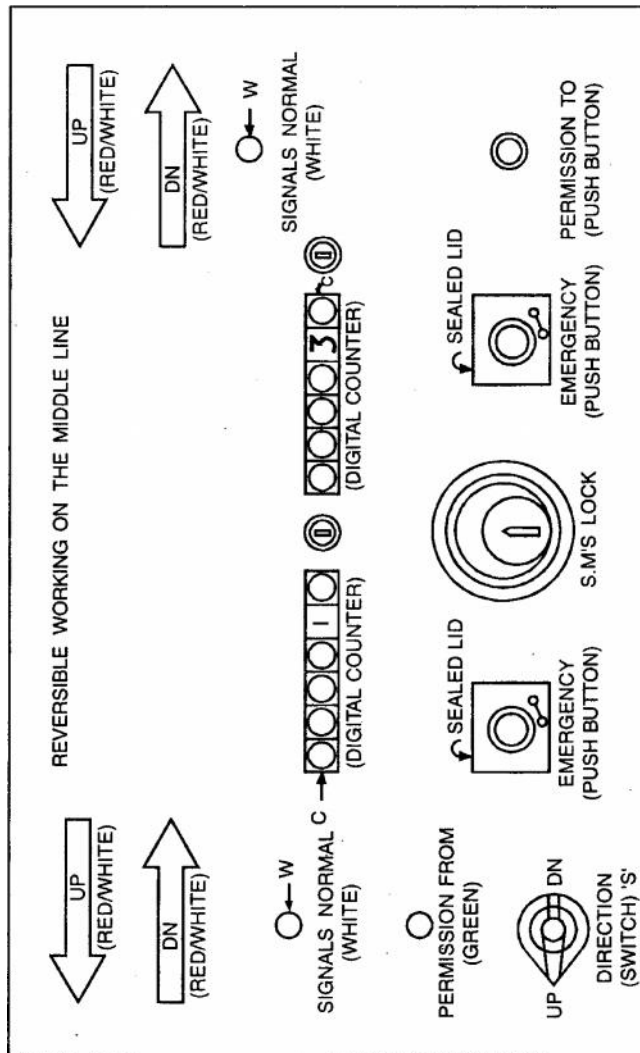
7.13 Authority to Proceed on single line:—

Except as otherwise mentioned in SR 15.25.08 for motor trollies, the 'off' aspect of the last stop signal shall constitute an authority to proceed as defined under sub-rule (6) of General Rule 1.02. The last stop signal shall not, however, assume 'off' aspect unless direction of traffic has been established and the line is clear upto the next Automatic Stop signal, or when the next stop signal is a Manual Stop signal for an adequate distance beyond it.

7.14. Description of Panel — Indications and controls.—

(1) Description :—

(a) The following is the diagram of a typical operating panel installed in the Station Master's Office for establishing direction of traffic.



(b) One half of the panel is the 'Controlled' side and the other half is the "Controlling" side. At Tikiapara and Santragachi of S.E. Railway, Down reception cabin, the panels shall contain only the "controlling" half while at Santragachi East Cabin and panskura these shall contain only the "Controlled" half. For the purpose of these rules, the block station at the Howrah end of a block section shall be the controlling station hereafter be referred to as 'A' and the block stations at the Kharagpur end of the same block section shall be the controlled stations and shall hereinafter be referred to as 'B'.

(2) Indications :—

(a) Two groups of arrows are provided on the panel, one on either side, the group on each side pertaining to the block section on that side. Each group consists of two arrows—one for Up direction and the other for Down direction. Each arrow will be illuminated by white or red lights. White light appears when the relevant block section is clear but changes to red when either the block section is occupied or there is a track circuit failure. Only the arrow corresponding to the direction of traffic established will be illuminated; the other arrow remaining extinguished.

(b) A white 'Signal Normal' lamp (W) on each half of the panel which when illuminated indicates that the signals of that side of the station for the middle line are at 'ON'.

(c) (i) A green "Permission from....." lamp(G) on the controlling half of the panel which when illuminated indicates to 'A' that 'B' has pressed the permission button on his panel and thereby permitting 'A' to establish direction of traffic from 'A' to 'B'.

(ii) Under emergency operation, this green lamp will also be illuminated when 'B' presses emergency push button on the controlled half of the panel to enable 'A' to establish direction of traffic from 'A' to 'B'.

(d) A digital counter on each half of the panel (C) is provided to record the number of emergency operations resorted to on that side of the panel. The SM/ASM who makes over as also who takes over charge shall record in the Train log register the number recorded by the digital counters.

(3) Controls :—

(a) Permission button. —

This is mounted on the controlled side of the panel, when it is pressed at block station 'B' for granting permission to 'A' for establishing direction of traffic from 'A' to 'B', a green lamp indication will be illuminated on the panel at 'A'.

(b) Direction switch.—

Up/Down two-position, direction switch(s) is provided on the controlling side of the panel for enabling 'A' to establish direction of traffic from 'A' to 'B' or 'B' to 'A', as may be required.

(c) Emergency Push button (Red).—

There are two emergency push buttons—one on the controlled half and the other on the controlling half of the panel. If on account of failure of track circuit or for any other cause other than occupation of the block section between two block stations, it becomes necessary to change the direction of traffic already established when the direction arrow may show 'Red' indication, emergency push button shall be pressed at both

block stations and at controlling station the direction switch shall also be turned in conjunction to the required position. Each operation of emergency push button registers next higher digit on the digital counter of the respective half of the panel. Whenever such operation is resorted to, the SM/ASM at both stations shall record the same in the register specially maintained for the purpose under his initial.

(d) Station Masters Lock up key. —

Whenever it is necessary to operate the panel, this key shall be inserted in the key-hole and turned. Immediately after completion of every operation on the panel, this key must be taken out and kept in the personal custody of the Station Master on duty so as to prevent inadvertent or unauthorised operation of various controls in the panel.

7.15. Establishing direction of traffic :—

For the purpose of these rules 'Up' direction will mean to establish direction of traffic over a block section from controlling station i. e. 'A' to Controlled station i. e. 'B' and the 'Down' direction will mean to establish direction of traffic over a block section from controlled station i. e. 'B' to controlling station i. e. 'A'. The Controlling station shall, in all cases, establish the direction of traffic for the block section between 'A' and 'B' by turning the direction switch of the panel installed at that station to the required position viz. 'Up' or 'Down' as the case may be. The direction of traffic cannot be altered/established unless all signals pertaining to the middle line concerning to the same block section at both stations are at their normal position when turning the switch. Further, except when emergency operation is resorted to, the direction of traffic already established shall

not be changed unless the direction arrow pertaining to the same block section is illuminated while indicating the direction to which it was established. Messages ensuring clearance of the same block section supported by Private Numbers shall be exchanged between the Station Masters on duty at both end block stations before establishing direction of traffic as also for reversing direction of traffic already established. Private Numbers so exchanged shall be recorded in the Train log registers at both stations.

7.16. Mode of operation :—

(1) Normal operation.—

(a) Following sequence of operation shall be made in the panel to establish direction of traffic.

(i) For establishing 'Down' direction of traffic.

Controlling Station 'A'

(Controlling half)

Controlled Station 'B'

(Controlled half)

1. Ensures (a) 'Up arrow' illuminated white,
- (b) 'Signals normal' lamp illuminated.
2. Contacts SM on duty at 'A' and requests him to change the direction of traffic from 'Up' to 'Down' detailing the particulars about the complete arrival of the last Up train at his station supported by a Private Number.

3. Ensures (a) 'Up arrow' illuminated white.
(b) 'Signals normal' lamp illuminated.
4. Acknowledges on telephone and gives his consent to change the direction of traffic to 'Down' direction supported by a Private Number provided he is satisfied that the last up train which arrived at 'B' was actually the last Up train despatched from his station.
5. Turns the direction switch to the 'Down' position.
6. (a) Up arrow extinguishes.
(b) Down arrow illuminates in white.
- 7.(a) Up arrow extinguishes.
(b) Down arrow illuminates in white.

(ii) For establishing 'Up' direction of traffic. —

Controlling Station 'A'

(Controlling half)

1. Ensures (a) 'Down arrow' illuminated white.
(b) 'Signals normal' lamp illuminated.

Controlled Station 'B'

(Controlled half)

2. Contacts SM on duty at 'B' and seeks his permission to change direction of traffic from 'Down' to 'Up' direction detailing the particulars about complete arrival of the last Down train at his station supported by a Private Number.
3. Ensures (a) 'Down arrow' illuminated white.
(b) 'Signals normal' lamp illuminated.
4. Acknowledges on telephone and gives his consent to change direction of traffic to 'Up' direction supported by a Private Number and by pressing 'Permission to.....' button provided he is satisfied that the last Down train which arrived at 'A' was actually the last down train despatched from his station. The button shall be kept pressed till 'Down arrow' extinguishes and 'Up arrow' illuminates in white.
- 5.(a) On observing the green illumination of 'Permission from' lamp, turns the direction switch from 'Down' to 'Up' position.
- 6.(a) 'Down arrow' extinguishes.
(b) 'Up arrow' illuminates in white.
(c) Releases 'Permission to' button.

- (b) 'Down arrow' extinguishes and 'Up arrow' illuminates in white.
7. 'Permission from.....' lamp (Green) extinguishes.

(2) Emergency operation during track circuit failure. —

(a) Following sequence of operation shall be made in the panel to establish direction of traffic.

(i) For establishing 'Down' direction of traffic. —

<u>Controlling Station 'A'</u>	<u>Controlled Station 'B'</u>
(Controlling half)	(Controlled half)
	1.(a) 'Up arrow' illuminated in red.
	(b) 'Signals normal' lamp illuminated.
	2. Contacts SM on duty at 'A' and requests him to change direction of traffic from 'Up' to 'Down' detailing the particulars about complete arrival of last Up train at his station supported by Private Number.
3.(a) 'Up arrow' illuminated in red.	
(b) 'Signals normal' lamp illuminated.	
4. Checks the number and description of last Up	5.(a) Presses emergency release button and

train that left his station and if it agrees with that intimated by 'B', asks 'B' to press emergency release button. This shall be supported by a Private Number.

keeps the same pressed till 'Up arrow' extinguishes and 'Down arrow' illuminates in red.

(b) Digital counter registers next higher number.

6.(a) 'Permission from.....' lamp (green) illuminates.

(b) Presses emergency button and simultaneously turns the direction switch from 'Up' to 'Down' position. Keeps emergency button pressed till 'Permission from.....' lamp (green) extinguishes.

(c) Digital counter registers next higher number.

(d) 'Up arrow' extinguishes and 'Down arrow' illuminates in red.

7.(a) 'Up arrow' extinguishes and 'Down arrow' illuminates in red.

(b) Releases emergency push button.

8.(a) 'Permission from.....' lamp (green) extinguishes.

(b) Releases emergency push button.

(ii) For establishing 'Up' direction traffic. —

<u>Controlling Station 'A'</u>	<u>Controlled Station 'B'</u>
(Controlling half)	(Controlled half)
1 .(a) 'Down arrow' illuminated in red.	
(b) 'Signals normal' Lamp illuminated.	
2. Contacts SM on duty at 'B' and seeks his permission to change direction of traffic from 'Down to Up' direction detailing the particulars about complete arrival of last Down train at his station supported by a Private Number.	3.(a) 'Down arrow' illuminated in red. (b) 'Signals normal' lamp illuminated.
	4.(a) Checks his Train log register for the last down train despatched from his station, if it agrees with that informed by 'A', gives his consent supported by a Private Number and then presses emergency release button. (b) Digital counter registers next higher number.
5.(a) 'Permission from lamp (green) illuminates.	

- (b) Presses emergency button and simultaneously turns the direction switch from 'Down' to 'Up' position.
 - (c) Keeps emergency button pressed till 'Permission from' lamp (green) extinguishes.
 - (d) Digital counter registers next higher number.
 - (e) 'Down arrow' extinguishes and 'Up arrow' illuminates in red.
- 6.(a) 'Down arrow' extinguishes and 'Up arrow' illuminates in red.
 - (b) Releases emergency push button.
- 7.(a) 'Permission from lamp (green) extinguishes.
 - (b) Releases emergency push button.

7.17. Method of signalling trains. —

(1) Movement of trains into, through and out of a block station is governed by manual/Semi Automatic Stop signal(s). The Section Controller shall regulate the movement of traffic between stations in the Automatic Signalling Territory. Whenever it is necessary to control any train at a block station either to give precedence or to cross any train(s) or for any other purpose, the Section Controller shall advise such block station, at which the train is to be controlled, by issuing a control order giving detailed instructions otherwise trains shall be

allowed to run in the same sequence in which they approach a station. Similarly whenever it is necessary to change the established direction of traffic, the section Controller shall advise both the controlling as also the controlled block stations by issuing control order. Such control order(s) shall be acknowledged by the concerned Station Master(s) supported by a Private Number. It shall be the responsibility of the Station Master of the block station from which working of trains on Automatic block on single line commences to consult and obtain verbal permission of the Section Controller before despatching a train. The Station Master of stations where facilities exist for diverting trains from Automatic Block double lines to single line or vice versa shall consult and obtain permission from Section Controller before diverting any train. In the event of interruption of the control telephone, the Station master of each block station shall regulate the movement of trains between stations in consultation with the Station Master at the other end block station.

(2) Subject to the provision of sub-para (1) above and unless otherwise directed in the Station Working Rules, following procedure shall be adopted for signalling trains to run in the direction of traffic established in accordance with the manner detailed under sub-para (1) of para 7.15 of this chapter, from one block station to the other end block station.

Despatching Station

Receiving Station

- | | |
|---|---|
| 1.(a) To take off starter, at station having end cabins, complies with SR 3.42.01 (c) but | 2.(a) Acknowledges supported by a Private Number.
(b) Direction arrow |
|---|---|

- at stations having panel interlocking, operates the concerned control for the starter.
- (b) 'Signals normal' lamp (white) extinguishes.
- (c) As soon as the train starts, informs the block station in advance over telephone indicating number and description of the train and its departure time.
- (d) As the train enters the signalling section controlled by the starter. —
- (i) direction arrow illuminates in red.
- (ii) 'Signals normal' lamp (white) appears.
4. (a) Acknowledges
- (b) Direction arrow illuminates in white, indicating block section is clear of all trains.
- illuminates in red.
3. (a) To take off home signal at stations having end cabins, complies with SR 3.38.02 but at stations having panel interlocking operates the concerned control on the Home signal.
- (b) 'Signals normal' lamp (white) extinguishes.
- (c) On arrival of the train complete with Last vehicle indicator, informs block station in rear indicating number and description of the train as also its arrival time supported by a Private Number.
- (d) 'Signals normal' lamp (white) appears
- (e) Direction arrow illuminates in white, indicating block section is clear of all trains.

7.18. Shunting. — (Following rules are to be read in conjunction with General Rules 5.13, 5.14 and 5.16 to 5.23 with subsidiary Rules thereto).

(1) (a) Shunting may be performed on line/lines only when such line or lines is/are isolated from the main line and/or other adjacent line(s) and when the movement of running trains is not affected by such shunting.

(b) In case the shunting obstructs or is likely to obstruct the main running line, the Station master shall ensure that 'Home' and the 'Starter' signals are maintained at 'ON' and the 'A' marker light of Semi-Automatic Stop signal(s) is/are kept extinguished.

(c) Shunting under sub-para (b) above, shall be performed between the outermost points of the station.

2. (a) No shunting or any other obstruction shall be permitted outside the outermost points against the direction of traffic established unless the line has been blocked back.

(b) No shunting or any other obstruction shall be permitted outside the outermost points in the established direction of traffic unless. —

- (i) the line between the block station at which shunting is to be performed and the block station in advance is clear;
- (ii) Working of trains under automatic block system on single line between the concerned block stations shall be suspended; and
- (iii) the line has been blocked back :

Provided that when the line between the block stations is occupied by a train travelling away from the station, shunting

or obstruction may be permitted behind the train if permitted under the provisions of station working rules taking into consideration the speed, weight and brake power of trains and the gradients in the section. And once such shunting is permitted, no train shall be signalled into the Block Section. As soon as intimation has been received that the last train has arrived at the other end block station, working of trains under automatic block system on single line shall be suspended and the line shall be blocked back, if it is still obstructed.

7.19. Authority for shunting.—

The rules laid down under para 7.08 of this Chapter shall be applicable.

7.20. Suspension and resumption of working of trains under Automatic Block System on single line.—

Whenever it is necessary to suspend working of trains under automatic block system on single line between two adjacent block stations, the Station master of the block station proposing to suspend working of trains under automatic block system say 'X' and the Station Master of the block station at the other end block station say 'Y' shall exchange messages as under :—

From : SM 'X' To : SM 'Y' Date..... Time.....

No. 1 Intend to suspend working of trains under automatic block system on the Middle line between (Stn.) and (Stn.) for..... (State purpose) Last train No Up/Down Left/arrived here last at (Time) or has become disabled at KM
Acknowledge. Private Number.....

The Station Master of the other end block station on receipt of the message indicated above shall verify from his log register about the complete arrival/ departure of the last train as mentioned in the message above or on being satisfied about the disablement of the train, shall reply in the following form:—

From : SM 'Y' To : SM 'X' Date..... Time.....
 No. 1 Your No. 1 of (date). Last train No..... Up/Down .arrived/left here last at(Time) or being given to understand about disablement of last Train No. at KM I agree to suspend working of trains under automatic block system on the Middle line between (Stn.) and (Stn.) as proposed. Private Number.....

After removal of the cause of obstruction and on being satisfied that the Middle line between his station and other end block station is clear, the Station Master 'X' shall issue a message proposing to resume working of trains under automatic block system as under:—

From : SM 'X' To : SM 'Y' Date..... Time.....
 No. 2 My No. 1 Your No. 1 of(date). Middle line between (Stn.) and(Stn.) is clear due to (reason) at(Stn.) at(Time)
 Propose to resume automatic block system for working trains on Middle line between(Stn.) and.....(Station).
 Acknowledge. Private Number.....

The Station Master of Station 'Y' shall reply as follows:—

From : SM 'Y' To : SM 'X' Date.....Time.....
 No. 2 My No. 1 Your No. 2 of..... (date) noted and
 acknowledged. Resume automatic block system of working
 trains of Middle line between..... (station) and
 (station). Private Number.....

The message shall be entered in the Train Log Register
 at the respective stations in red ink.

7.21. Block back.— [Refer GR 1.02(8)]

The procedure detailed under para 3.15 of this manual
 shall be followed.

7.22. Motor Trolley.—

The rules contained under SR 15.25.08 shall be followed.

7.23. Failure of indications on the Panel.—

**(1) Failure due to which panel working need not be
 suspended :**

(a) At Controlling Station :

**(i) No illumination for direction of traffic
 established.**—

(a) If there is no illumination on the direction arrow after
 direction switch has been turned to a particular position, the
 controlling station shall ascertain from the controlled station over
 telephone about the indication actually shown on the controlled
 portion of his panel. The controlled station shall intimate the
 particulars regarding indication on his panel as follows :—

"The direction arrow on the controlled side of my panel is
 Up/Down—White/Red. Private Number....."

(b) If the direction of traffic set up in the controlled portion
 of the controlled station is in consonance with the position of

the direction switch at the controlling station, normal panel working may be resorted to.

(ii) "Signals normal" Lamp not illuminated :—

If before change of direction of traffic, the controlling station observes that "Signals normal" lamp at the controlling portion of his panel is not illuminated, he shall ascertain from the Cabinmaster on duty in his Cabin or at station having panel interlocking from the signal indication on his panel that the Down Home and Up Starter signals pertaining to the middle line are at 'ON'. If the said signals are at 'ON', normal panel working may be resorted to by the controlling station.

(iii) "Permission from" Lamp not illuminated :—

This lamp shall be illuminated by the operation of 'Permission to.....' button by the controlled station. If this lamp fails to get illuminated, the controlling station shall ascertain from the controlled station if the 'Permission to' button is being kept pressed by him. If the controlled station has kept the 'Permission to.....' button pressed and the 'Permission from.....' lamp does not get illuminated at the controlling station, the controlling station shall turn the direction switch to the 'Up' position after observing the sequence of operation listed under sub-clause (ii) of clause(a) of sub-para (I) of para 7.16 of this chapter without the green illumination of 'Permission from.....' lamps mentioned under sequence No. 5(a) of para 7.16 (1)(a)(ii). Normal panel working may be resorted to by the controlling station, if the 'UP' arrow illuminates in white on his panel after turning the direction switch to the requisite position.

(iv) Direction arrow illuminated in white but starter defective.—

Though the panel may indicate that the section between the controlling station and the controlled station is clear, it may not be possible to take 'off' up starter signal, being defective. Under such circumstances normal panel working may be resorted to by the controlling station. In such a case the controlling station shall after ensuring that the Up arrow for the block section concerned is illuminated in white and take action in terms of SR 3.70.01 except that in lieu of T/369(3b), written authority in the prescribed form T/A 912 and T/512 shall be issued.

(v) The section between two adjacent block station is clear of all trains but the direction of traffic established last i. e. 'Down is continuing to be illuminated in red.—

Under such circumstances, direction of traffic is to be changed from 'Down' to 'Up' direction after complying with the sequence of operations laid down under sub-clause (ii) of clause (a) of sub-para (2) of para 7.16 of this chapter. The Controlling Station after ensuring that the Up arrow for the block section concerned is illuminated in red, shall take action in terms of SR 3.70.01 except that in lieu of T/369 (3b), written authority in the prescribed form T/A 912 and T/C1425 shall be issued.

(vi) Block section clear of all trains but the 'Up' direction arrow illuminated in red.—

After ensuring arrival of the last Up train at the controlled station confirmed by a Private Number, the Controlling station shall take steps in accordance with the instructions contained

under SR 3.70.01 except that in lieu of T/369(3b), written authority in the prescribed form T/A 912 and T/C 1425 shall be issued.

(vii) Position of direction switch not in correspondence with the direction of traffic established.—

If the position of direction switch does not correspond with the direction of traffic established as indicated by the direction arrow, the Station Master of the Controlling station shall ascertain from the Station Master of the Controlled station as also from the Cabinmaster of the cabin at the controlled station end about the indication of traffic set up at their respective places. If the direction of traffic as indicated by the direction arrow at the controlling station agrees with those indicated at the said Cabin as also at the controlled station, the controlling station shall then turn the direction switch to the appropriate position. He shall again confirm from the controlled station as also from the Cabinmaster of the said Cabin as to whether there is any change in the indication of direction of traffic set up. If there is no change in the indication of direction of traffic set up at these places, it shall be assumed that the direction switch was turned inadvertently before and normal panel working will be continued.

(b) At the Controlled Station :

(i) No illumination for direction of traffic established.—

If there is no illumination on the direction arrow after direction switch has been turned at the controlling station from 'Up' to 'Down' position, the controlled station shall ascertain

from the controlling station whether the direction arrow at his station is illuminated in white for 'Down' direction. If this is so, the controlling station shall confirm the same supported by a Private Number. The controlled station shall then take off down starter signal.

(ii) 'Signals normal' lamp not illuminated.—

If the controlled station finds that 'Signals normal' lamp at the controlled portion of the panel is not illuminated at the time of giving permission to the Controlling station for establishing direction of traffic from 'Down' to 'Up' direction, he shall ascertain from the Cabinmaster on duty of the concerned Cabin or at stations, having panel interlocking from the signal indication on his panel that the Up Home and Down Starter signals are at 'ON'. If the said signals are at 'ON', the controlled station shall be in a position to give permission to the controlling station to enable the later to set direction of traffic for 'Up' direction.

(iii) Direction arrow illuminated in white, but starter defective.—

Though the panel may indicate that the section between the controlled station and the Controlling station is clear, it may not be possible to take off Down Starter signal, being defective. Under such circumstances normal panel working can be resorted to by the controlled station. In such a case the controlled station after ensuring that the down arrow for the block section concerned is illuminated in white, take action in terms of SR 3.70.01 except that in lieu of T/369(3b), written authority in the prescribed form T/A 912 shall be issued.

(iv) Block section clear of all trains, but the direction of traffic established last i. e. 'Up' is continuing to be illuminated in red.—

Under such circumstances, direction of traffic is to be changed from 'Up' to 'Down' in accordance with the instructions contained under sub-clause(i) of clause(a) of sub-para(2) of para 7.16 of this chapter. The controlling station after ensuring that the Down arrow for the block section concerned is illuminated in red shall take action in accordance with the instructions contained under SR 3.70.01 except that in lieu of T/369(3b), written authority in the prescribed form T/A 912 and T/D 1425 shall be issued.

(v) Block section clear of all trains, but the 'Down' arrow is illuminated in red.—

After ensuring complete arrival of the last Down train at the controlling station confirmed by a Private Number, the controlled station shall take steps in accordance with the instructions contained under SR 3.70.01 except that in lieu of T/369(3b), written authority in the prescribed form T/A 912 and T/D 1425 shall be issued.

(2) Failures due to which panel working shall be suspended –

(a) Conflicting indications of direction arrows :—

When the direction arrows pertaining to a particular block section on the panel at the controlling station and the controlled station indicate different directions or one of them is illuminated in white while the other is red.

(b) Double indication.—

When more than one indication appear on any one direction arrow i. e. red and white both or when both 'Up' and 'Down' direction arrows pertaining to a particular block section illuminated at the same time.

(c) Digital counters at the controlling station and/or at the controlled station not registering next higher number during emergency operation of the panel.—

When the digital counters at the controlling station and/or at the controlled station does not register the next higher number while carrying out any of the operations under sub-para(2) of para 6.16. of this chapter.

(d) Any other abnormality.—

If there is reason to suspect any other abnormality not mentioned above.

7.24. Report of failure.—

Whenever the panel is suspended due to any of the causes mentioned under sub-para(2) of para 7.23 above or on observing any of the failures mentioned under sub-para(1) of para 7.23 above, which does not necessitate suspension of the panel, action shall be taken as in the case of block failure mentioned under sub-para(2) of para 5.24 of this manual.

7.25. Method of working trains during suspension of panel working.—

During the period of suspension of Panel, trains shall be worked between stations in accordance with the rules contained under SR 9.12.07 or SR 9.12.06 as the situation may demand.

But before such procedure is adopted the Station Master at either end of the concerned block section shall ensure by exchange of messages supported by Private Numbers that the block section is clear of Up/Down train(s).

7.26. Resumption of working trains under automatic block (single line) by means of panel.—

(1) When the panel working with the adjacent block station has been again put in working order after suspension, working of trains by means of panel shall not be resumed unless—

- (i) The panels have been tested by an authorised official of the signal and telecommunication branch not below the rank of a Technician/Sr. Technician (Sig),
- (ii) A certificate to the effect that the panel has been put to proper working order is handed over to the concerned Station Master by the authorised official mentioned above; and
- (iii) The procedure detailed under sub-rule (i) of SR 9.12.07 is observed by the Station Masters concerned.

(2) Whenever normal working is resumed, a message shall be issued cancelling the messages issued under para 7.24 of this chapter and action taken as per clauses(e) and (f) of sub-para(2) of rule 5.24 of this manual.

★★★