

CHAPTER IX
AUTOMATIC BLOCK SYSTEM

A. Rules applicable to Double Line

9.01. Essentials of the Automatic Block System on double line.—

- (1) Where trains on a double line are worked on the Automatic Block system ---**
 - (a) The line shall be provided with continuous track circuiting or axle counters,**
 - (b) The line between two adjacent block stations may, when required, be divided into a series of automatic block signalling sections, each of which is the portion of the running line between two consecutive Stop signals, and the entry into each of which is governed by a Stop signal, and**
 - (c) The track circuits or axle counters shall so control the Stop signal governing the entry into an automatic block signalling section that -**
 - (i) The signal shall not assume an 'OFF' aspect unless the line is clear not only up to the next Stop signal in advance but also for an adequate distance beyond it, and**
 - (ii) The signal is automatically placed to 'ON' as soon as it is passed by the train.**
- (2) Unless otherwise directed by approved special instructions, the adequate distance referred to in sub-clause (i) of clause (c) of sub-rule (1) shall not be less than 120 metres .**
- (3) (a) Under special instruction, one of the automatic stop signal between two stations in the automatic block signaling territory in each direction may be made as modified Semi-Automatic stop signal;**
 - (b) The mid-section modified Semi-Automatic stop signal so provided shall be interlocked with the signals of the station ahead through track circuits or axle counters or both and shall be controlled by the Station Master of the station ahead, the relevant indications whether the signal is in normal automatic mode or modified Semi-Automatic mode shall be available to the Station Masters at both the ends;**
 - (c) Advanced Starter signal of the Station in rear shall be interlocked with the mid-section modified Semi-Automatic stop signal in such a way that when working with 'A' sign extinguished, the Advanced Starter shall assume 'OFF' aspect or be taken 'OFF' only when the line is clear upto an adequate distance beyond the mid-section modified Semi-Automatic stop signal; similarly the mid-section modified Semi-Automatic stop signal shall assume 'OFF' aspect automatically or be taken 'OFF' only when the line is clear upto an adequate distance beyond the Home signal of the station ahead;**

- (d) During abnormal conditions like fog, bad weather impairing visibility, the mid-section, modified Semi-Automatic stop signal may be worked by extinguishing 'A'**

marker in the manner prescribed under special instructions and this action shall also ensure that the 'A' marker of the Advanced starter signal of the station in rear and Home signal of the station in advance shall also be extinguished.

- (e) The adequate distance mentioned under clause (c) shall not be less than as prescribed under sub-rule (2);
 - (f) During normal conditions, mid-section modified Semi-Automatic stop signal shall work as normal automatic stop signal.
- (4) (a) when the Loco Pilot finds mid-section modified Semi-Automatic stop signal with 'A' marker extinguished in 'ON' position, he shall stop his train in the rear of the signal and inform this fact to the Station Master of the station ahead on approved means of communication as prescribed under special instructions;
- (b) The Station Master of the station ahead may authorize the Loco Pilot to pass the mid-section modified Semi-Automatic stop signal working with 'A' marker extinguished in 'ON' position through approved means of communication after ensuring conditions and procedure prescribed under special instructions;
 - (c) In case the Loco Pilot is unable to contact the Station Master of station ahead, he shall pass the signal at 'ON' after waiting for five minutes at the signal and proceed cautiously and be prepared to stop short of any obstruction, at a speed not exceeding 10 kilometers an hour upto the next Signal and act as per aspect of this signal; and
 - (d) The Loco Pilot shall report the failure of mid-section modified semi-automatic stop signal to the Station Master of the station ahead.
- S.R.9.01 (1) Each Signal is control by track circuit/axle counters between the Signals and the next signal ahead plus track circuit/axle counters in the overlap. The overlap track circuit/axle counter shall in no case be less than 120 metres beyond the signal. When a train is occupying the controlling track circuit/axle counters of a signal, that signal is held automatically at "ON" (Danger)
- (2) The Automatic Block System in double line is in force between Bengaluru city (SBC) and Whitefield (WFD) (CM No 56 dated 08.08.2018)
 - (3) A TSR shall be maintained by the Station Master of each block station and detailed timings of all the trains dealt with shall be recorded therein instantly. Detailed procedure for advising the block station regarding the train number, private number for scheduled / unscheduled trains and the timings of arrival, departure and clearance of trains shall be entered in Train Signal Register (TSR).
 - (4) Principal /MDRTI/DWR & Director STC/SBC is authorized to issue competency certificate whenever Loco Pilots, Motormen, Assistant Loco Pilots, Guards and Drivers of Tower Wagons/Track Machines attend Initial/Refresher training course at MDRTI/DWR & STC/SBC. (CM No 59 dated 12.10.2018)
 - (5) When the original Competency Certificate is lost, Principal/ MDRTI/DWR and Director/STC/SBC shall issue duplicate Competency Certificate with validity date of original certificate. However, in the meanwhile officers of the concerned Department of the Division is authorized to issue a "Provisional Competency Certificate" after satisfying himself about the Competency of the employee. This certificate is valid for 10 days. Within this 10 days period the Duplicate Competency Certificate shall be issued. Loco Pilot/ Asst. Loco Pilots/Motor man/Guards and Drivers of Tower Wagons and Track Machines shall not be allowed to work on such sections unless they are in possession of the Competency Certificate/ Duplicate Competency Certificate/ Provisional Competency Certificate.

The competency Certificates shall be renewed after conducting systematic checks by Loco Inspector/ Transportation Inspector at an interval not exceeding 6 months. (CM No 59 dated 12.10.2018)

If for any reason, the Competency certificate has not been renewed by the Loco Inspector/Transportation Inspector within a period of 6 months, the certificates shall be renewed for a further period of 6 months by Sr.DEE, DEE, AEE (OP), Sr.DME, DME, AME in case of LPs/ALPs Motorman/ Drivers of Tower Wagons and Track Machines and by DOM or AOM or any other officer of Traffic Transportation Department of the Division concerned only in the case of Guards, after testing their knowledge. Such renewals can be made till the employee attends the next refresher course. Records regarding the validity of Competency Certificates to work in Automatic Block System of Loco Pilot, Asst.Loco Pilot, Motorman, Guard and Drivers of Tower Wagon/Track Machines shall be maintained by concerned Department/Depot official in-charge. (CM No 59 dated 12.10.2018)

9.02. Duties of Loco Pilot and Guard when an Automatic Stop signal on double line is to be passed at 'ON':—

- (1) When a Loco Pilot finds an Automatic Stop signal with an 'A' maker at 'ON', he shall bring his train to a stop in the rear of the signal. After bringing his train to a stop in the rear of the signal, the Loco Pilot shall wait there for one minute by day and two minutes by night. If, after waiting for this period, the signal continues to remain at 'ON', he shall give the prescribed code of whistle and exchange signals with the Guard and then proceed ahead, as far as the line is clear, towards the next Stop signal in advance exercising great caution so as to stop short of any obstruction.**
- (2) The Guard shall show a Stop hand signal towards the rear when the train has been so stopped at an Automatic Stop signal, except as provided for in sub-rule (4)**
- (3) Where owing to the curvature of the line, fog, rain, dust storm, engine working the train pushing it or other causes, the line ahead cannot be seen clearly, the Loco Pilot shall proceed at a very slow speed, which shall under no circumstances exceed 10 Kilometres an hour. Under these circumstances, the Loco Pilot, when not accompanied by an assistant Loco Pilot, and if he considers necessary, may seek the assistance of the Guard by giving the prescribed code of whistle.**
- (4) When so sent for by the Loco Pilot, the Guard shall accompany him on the engine cab, before he moves forward, to assist the Loco Pilot in keeping a sharp look-out.**
- (5) When an Automatic Stop signal has been passed at 'ON', the Loco Pilot shall proceed with great caution until the next Stop signal is reached. Even if this signal is 'OFF', the Loco Pilot shall continue to look out for any possible obstruction short of the same. He shall proceed cautiously up to that signal and shall act upon its indication only after he has reached it.**

S.R. 9.02.(1) The 'ON' position of an Automatic Stop signal may be due to the presence of a train in the automatic signalling section ahead including the adequate distance beyond it or due to an obstruction on the track or any other cause.

- (2) When it becomes necessary to stop a train in rear of an Automatic Stop signal at 'ON' it shall be brought to a stop as close as possible in rear of that Automatic Stop signal so as to provide the maximum possible margin for the Loco Pilot of a following train to stop clear of the train ahead.
- (3) When a Loco Pilot passes an Automatic Stop signal at 'ON'. He shall proceed at a speed not exceeding 15 kmph, to enable him to stop short of any obstruction. He shall continue to drive cautiously at 15 kmph, until he passes the next Automatic Stop Signal, even if that automatic signal is at 'OFF' position.
 - (i) For maximum speed of train during dense fog in Automatic Block System, refer S.R.3.61 (i) (i).
- (4) The indication of an Automatic Stop signal applies only to the track beyond the signal and there is a possibility of a train or obstruction standing in rear of the signal while it is showing 'OFF'. A Loco Pilot having passed an Automatic Stop signal at 'ON' shall not, therefore, act on the indication of the signal ahead until he has actually reached it.
- (5) After passing an Automatic Stop signal at 'ON' the Guard of a train shall watch that the Loco Pilot does not exceed the speed prescribed in S.R. 9.02.3. If the Loco Pilot exceeds the speed prescribed, the Guard shall take action as per S.R. 4.45.
 - (i).
- (6) In case of bobbing / flickering of signals, SR 3.74 shall be followed.
- (7) Distance between two trains in Automatic signalling territories after passing an Automatic Stop signal at 'ON'-
 - (i) After passing an Automatic Stop signal at 'ON', the Loco Pilot of the following train hauled by any locomotive, shall ensure a minimum distance of 150 metres or two clear OHE masts (on electrified sections) is maintained between his train and the preceding train or any obstruction on the line.
 - (ii) However, the above distance may be reduced to 75 metres or one clear OHE mast in case of EMU train following.
 - (iii) In special circumstances like floods etc., or during dense fog, after passing an automatic stop signal at 'ON' (red), the loco pilot/motor man of the train hauled by any locomotive including EMU train shell, while moving at a speed not exceeding 8 kmph, should ensure that he maintains reasonable distance at which he is able to observe the flashing tail lamp of the train ahead or the obstruction, as the case may be. The Loco Pilot shall control the speed of the train so as to be able to stop adequately short of the train or obstruction.
- (8) In case a train has come to an out of course halt in automatic signalling territory between two stations and is not in a position to move ahead and requires a relief engine, the Guard of the train shall guide the crew of a relief engine when it is to come to pick up the train, except in sub urban section.

B. Rules applicable to Single Line

9.03. Essentials of the Automatic Block System on single line.—

- (1) Where trains on a single line are worked on the Automatic Block System, ---**
 - (a) The line shall be provided with continuous track circuiting or axle counters,**
 - (b) The direction of traffic shall be established only after Line Clear has been obtained from the block station in advance,**
 - (c) A train shall be started from one block station to another only after the direction of traffic has been established,**
 - (d) It shall not be possible to obtain Line Clear unless the line is clear, at the block station from which Line Clear is obtained, not only up to the first Stop signal but also for an adequate distance beyond it,**
 - (e) The line between two adjacent block stations may, where required, be divided into two or more automatic block signalling sections by provision of Stop signals,**
 - (f) After the direction of traffic has been established, movement of trains into, through and out of each automatic block signalling section shall be controlled by the concerned Automatic Stop signal and the said Automatic Stop signal shall not assume 'OFF' position unless the line is clear up to the next Automatic Stop signal:
Provided further that where the next Stop signal is a Manual Stop signal, the line is clear for an adequate distance beyond it, and**
 - (g) All Stop signals against the direction of traffic shall be at 'ON'.**
- (2) Unless otherwise directed by approved special instructions, the adequate distance referred to in clauses (d) and (f) of sub-rule (1) shall not be less than 180 metres.**
- (3)(a) Under special instruction, one of the Automatic Stop signal between two stations in the automatic block signaling territory in each direction may be made as modified Semi-Automatic stop signal;**
 - (b) The mid-section modified Semi-Automatic stop signal so provided shall be interlocked with the signals of the station ahead through track circuits or axle counters or both and shall be controlled by the Station Master of the station ahead, the relevant indications whether the signal is in normal automatic mode or modified Semi-Automatic mode shall be available to the Station Masters at both the ends;**

- (c) Advanced Starter signal of the top signal in such a way that when working with 'A' sign extinguished, the Advanced starter shall assume 'OFF' aspect or be taken 'OFF' only when the line is clear upto an adequate distance beyond the mid-section modified Semi-Automatic stop signal; similarly the mid-section modified Semi-Automatic stop signal shall assume 'OFF' aspect automatically or be taken 'OFF' only when the line is clear upto an adequate distance beyond the Home signal of the station ahead;
 - (d) During abnormal conditions like fog, bad weather impairing visibility, the mid-section modified Semi-Automatic stop signal may be worked by extinguishing 'A' marker in the manner prescribed under special instructions and this action shall also ensure that the 'A' marker of the Advanced starter signal of the station in rear and Home signal of the station in advance shall also be extinguished;
 - (e) The adequate distance mentioned under clause (c) shall not be less than as prescribed under sub-rule (2);
 - (f) During normal conditions, mid-section modified Semi-Automatic stop signal shall work as normal automatic stop signal.
- (4) (a) When the Loco Pilot finds mid-section modified Semi-Automatic stop signal with 'A' marker extinguished in 'ON' position, he shall stop his train in the rear of the signal and inform this fact to the Station Master of the station ahead on approved means of communication as prescribed under special instructions;
- (b) The Station Master of the station ahead may authorize the Loco Pilot to pass the mid-section modified Semi-Automatic stop signal working with 'A' marker extinguished in 'ON' position through approved means of communication after ensuring conditions and procedure prescribed under special instructions;
- (c) In case the Loco Pilot is unable to contact the Station Master of station ahead, he shall pass the signal at 'ON' after waiting for five minutes at the signal and proceed cautiously and be prepared to stop short of any obstruction, at a speed not exceeding ten kilometers an hour upto the next Signal and act as per aspect of this signal; and
- (d) The Loco Pilot shall report the failure of mid-section modified Semi-Automatic stop signal to the Station Master of the station ahead.

(CM No. 56 dated 08.08.2018)

9.04 Minimum equipment of fixed signals in Automatic Block territory on single line—

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The minimum equipment of fixed signals to be provided for each direction shall be as follows—

(a) Manual Stop signals at a station -

(i) A Home,

(ii) A Starter,

(b) An Automatic Stop signal in rear of the Home signal of the station.

Note: – Under approved special Instructions, the Automatic Stop signal may be dispensed with.

9.05 Additional fixed signals in Automatic Block territory on single line—

(1) Besides the minimum equipment prescribed in Rule 9.04, one or more additional Automatic Stop signals, as are considered necessary, in between block stations, may be provided.

(2) In addition, such other fixed signals as may be necessary for the safe working of trains may be provided.

9.06 Conditions for taking 'OFF' manual Stop signal in Automatic Block territory on single line—

(1) Home signal-

When a train is approaching a Home signal, otherwise than at a terminal station, the signal shall not be taken 'OFF' unless the line is clear is not only upto the Starter but also for an adequate distance beyond it.

(2) Last Stop signal-

The last Stop signal shall not be taken 'OFF' for a train unless the direction of traffic has been established and the line is clear upto the next Automatic Stop signal or when the next Stop signal is Manual Stop signal for an adequate distance beyond it.

(3) The adequate distance referred to in sub rules (1) & (2) shall never be less than 120 meters and 180 meters respectively unless otherwise directed by approved special instructions. A sand hump of approved design or subject to the sanction of the commissioner of Railway Safety, a derailing switch shall be deemed to be an efficient substitute for the adequate distance referred to in sub-rule (1).

(CM No 56 dated 08.08.2018)

9.07 Duties of Loco Pilot and Guard when an Automatic Stop signal on single line is to be passed at 'ON'—

- (1) When a Loco Pilot finds an Automatic Stop signal with an 'A' marker at 'ON', he shall bring his train to a stop in rear of that signal and wait there for one minute by day and two minutes by night.**
- (2) If after waiting for this period, the signal continues to remain at 'ON' and if telephone communication is provided near the signal, the Loco Pilot shall contact the Station Master of the next block station or the Centralised Traffic Control Operator of the section where Centralised Traffic Control is provided, and obtain his instructions. The Station Master or the Centralised Traffic Control Operator, as the case may be, shall, after ascertaining that there is no train ahead upto the next signal and that it is otherwise safe for the Loco Pilot to proceed so far as is known, give permission to the Loco Pilot to pass the signal in the 'ON' position and proceed upto the next signal, as may be provided under special instructions.**
- (3) If no telephone communication is provided near the signal or if the telephone communication provided near the signal is out of order and cannot be made use of, the Loco Pilot shall give the prescribed code of whistle and exchange signals with the Guard and then proceed past the signal as far as the line is clear, upto the next Stop signal in advance, exercising great caution so as to stop short of any obstruction.**
- (4) The Guard shall show a Stop hand signal towards the rear when the train has been so stopped at an Automatic Stop signal, except as provided for under sub-rule (6).**
- (5) Where owing to the curvature of the line, fog, rain or dust storm, engine working the train pushing it, or other causes, the line ahead cannot be seen clearly, the Loco Pilot shall proceed at a very slow speed, which shall under no circumstances exceed 8 kilometres an hour. Under these circumstances, the Loco Pilot when not accompanied by Assistant Loco Pilot, and if he considers it necessary, may seek the assistance of the Guard by giving the prescribed code of whistle.**
- (6) When so sent for by the Loco Pilot, the Guard shall accompany him on the engine cab, before he moves forward, to assist the Loco Pilot in keeping a sharp look-out.**
- (7) When an Automatic Stop signal has been passed at 'ON', the Loco Pilot shall proceed with great caution until the next Stop signal is reached. Even if this signal is 'OFF', the Loco Pilot shall continue to look out for any possible obstruction short of the same. He shall proceed cautiously upto that signal and shall act upon its indication only after he has reached it.**

9.08. Person in charge of working trains on Automatic Block System on single line.—

- (1) Except where Centralised Traffic Control is in operation, the Station Master shall be responsible for the working of trains at and between stations.**
- (2) On a section where Centralised Traffic Control is in operation, the Centralised Traffic Control Operator shall be responsible for the working of trains on the entire section except as provided for in sub-rule (3).**
- (3) On a section where Centralised Traffic Control is in operation, the working of trains at a station or part of a station may be taken over by or handed over to the Station Master during emergency or as prescribed by special instructions. When such emergency control is transferred, the Station Master shall be the person in charge of working trains at the station or part of the station and the station shall be worked in accordance with sub-rule (1).**

C. Rules applicable to both Double and Single Lines

9.09. Working of trains on Centralised Traffic Control territory.—

On a section where Centralised Traffic Control is in operation, the working of trains shall be governed by Special Instructions.

9.10. Protection of a train stopped in an Automatic block signalling Section:—

- (1) When a train is stopped in an Automatic block signalling section, the Guard shall immediately exhibit a Stop hand signal towards the rear and check up that the tail board or tail light is correctly exhibited.**
- (2) If the stoppage is on account of accident, failure, or obstruction and the train cannot proceed, the Loco Pilot shall sound the prescribed code of whistle and the train shall be protected immediately as per Rule 6.03 except that for the protection of the occupied line one detonator shall be placed at 90 metres from the train on the way out and similarly two detonators, 10 metres apart, not less than 180 metres from the train or at such distance as has been fixed by special instructions.**

S.R. 9.10 (1) When a train is stopped in an automatic block signalling section between stations for any reason and the Loco Pilot finds that his train cannot proceed further and it is necessary to protect the train, the Loco Pilot shall give four short whistles repeatedly and switch on flasher light. He shall exchange hand danger signal with Guard or communicate using Walkie Talkie and by bell code in case of EMU/DMU trains.

- (2) The Guard, during day, fix a red flag on the side light bracket of his brake-van or on the handle of the door or at such place on the brake-van which can be easily seen by the Loco Pilot and at night the Guard shall rotate the side lights of his brake-van to show red towards the engine, wherever provided. He shall also ensure that during day, the tail board is in position and at night that the tail lamp and side lights are burning brightly. Thereafter, the protection shall be done as under:-**

- (3) Protection on Double Line/Multiple Lines
The Guard shall first ensure the protection of adjacent line, in front by the Loco Pilot/ Assistant Loco Pilot as per Rule 6.03. The Guard shall proceed to protect his train in rear duly placing one detonator at 90 metres from the train on the way out and similarly two detonators, 10 metres apart, not less than 180 metres from the train.
- (4) Protection on Double Line during TSL working on wrong line
On a double line section, during TSL working, when the train is proceeding on wrong line, the protection shall be done as per Rule 6.03 by the Loco Pilot/Assistant Loco Pilot in the front and in rear by the Guard.
- (5) Protection on Double Line during TSL working on right line
On a double line section, during TSL working, when a train is proceeding on right line, the protection in front shall be done as per Rule 6.03 by the Loco Pilot / Assistant Loco Pilot and in rear by the Guard duly placing one detonator at 90 metres from the train on the way out and similarly two detonators, 10 metres apart, not less than 180 metres from the train.
- (6) Protection when relief Loco is sought
 - (a) When relief Loco is sought and expected from the station in advance during day, the protection in front need not be done. However, the Guard shall stand at an adequate distance from the point of obstruction and display Stop hand signal.
 - (b) During night, the front portion shall be protected as per Rule 6.03. After relief loco comes to a stop, the Guard shall remove three detonators and allow the intermediate detonator to explode, which will alert the Loco Pilot that he is approaching the obstruction.
- (7) When the train is ready to leave, a long whistle shall be given to recall the Railway Servant deputed to protect the train in rear. The Railway Servant on hearing the long whistle shall proceed towards the train leaving the three detonators and picking up the intermediate detonator.
- (8) In case of a train without a Guard, the duties of the Guard, as laid down shall devolve on the Loco Pilot or Assistant Loco Pilot. In the case of disability of a train running without Assistant Loco Pilot, the duties of Assistant Loco Pilot shall devolve on the Guard.

9.11. Loco Pilot to report failures.—

- (1) When a Loco Pilot has to pass an Automatic Stop signal at 'ON', he shall stop his train at the next reporting station or cabin as prescribed by special instructions and report particulars of Automatic Stop signals passed at 'ON' by him.**
- (2) The Station Master or person in charge of the reporting station or cabin shall promptly report the fact to the signal and operating officials concerned.**

S.R.9.11(1) An automatic Stop signal should be considered to have failed when –

- (a) The signal exhibits no aspect at all, or
 - (b) The signal displays more than one aspect (bobbing / flickering) etc.
- (2) Whenever failure of Automatic signal has taken place, the Loco Pilot shall, on approaching the next reporting station, sound the prescribed whistle code and inform the Station Master on duty of failure, giving the number of the signal that has failed and passed by him at 'ON'.

- (3) For this purpose, the following block stations are treated as reporting stations – Bengaluru City (SBC), Bengaluru Cantonment (BNC), Baiyyappanahalli RRI, Krishnarajpuram (KJM) & Whitefield (WFD).
- (4) The Station Master on receipt of signal failure shall at once advise by telephone the Signal Maintainer concerned, the SCOR and the Station Master in rear, giving the correct number of the signal that has failed duly making suitable entry in the S&T failure register.
- (5) When the Signal Maintainer finds that the failure of signal / signals in the automatic section is likely to last for some time and cause serious delay to trains, he shall advise by telephone the Station Master at the station in rear, JE (Signals) and SCOR concerned.
- (6) The Station Master on duty at the block station in rear shall arrange for the issue of Caution Order to the Loco Pilots, of all the following trains in respect of the signal that has failed, giving its position and number and instruct them to proceed with caution in accordance with Rule. 9.02 and SRs thereunder.
- (7) The Station Master of the block station in rear shall also make an entry in the S&T failure register that have been reported to him for the issue of Caution Orders.
- (8) After the failure has been rectified, the Signal Maintainer shall immediately advise the Station Master on duty at block station, who will inform the SCOR giving the time at which the failure was rectified. The Station Master shall discontinue the issue of Caution Order for subsequent trains duly intimating the Station Master at the other end.

9.12 Procedure during failure of Automatic signalling.—

When a failure of automatic signalling is likely to last for some time and cause serious delay, trains shall be worked from station-to-station over the section or sections concerned under special instructions.

S.R.9.12 (1) Procedure for working of trains on double line during prolonged failure of all signals likely to last for some time and cause serious delay when means of communications are available.

In the event of failure of all signals occurring between two block stations worked under Automatic Block System, the officials concerned of the signalling department shall inform all concerned that the failure of signals is likely to last for some time and cause serious delay. The Automatic Block Working shall be suspended by the Station Masters on either side of the affected block section. After ensuring that all the trains, which have entered the section, have arrived complete, the entire section between the two block stations shall be treated as one block section by the Station Masters under exchange of messages, supported by Private numbers. The trains shall be worked from block station to block station as per the following procedure:-

- (i) The Station Master shall inform the SCOR.
- (ii) Before any train is allowed to enter the affected section, it shall be brought to a stand and the Loco Pilot and the Guard of the train advised of the circumstances by the Station Master.

- (iii) The Station Master on duty at the station in rear of the affected section shall obtain "Line Clear" for the train by any one of the alternative means of communications in the order of priority indicated below:-
 - (a) Station to Station fixed telephones wherever available,
 - (b) Fixed telephone such as railway auto-phone and BSNL phone,
 - (c) Control Telephone, and
 - (d) VHF set.
- (iv) The Station Master on duty at the station in advance shall not grant such Line Clear unless:
 - (a) The whole of the last preceding train has arrived complete,
 - (b) All signals behind the said train have been put back to 'ON',
 - (c) The line on which it is intended to receive the incoming train is clear for at least 120 metres beyond the Starter or the place, at which the trains usually come to a stand, and
 - (d) All the points have been correctly set and locked for the admission of the train on the said line.
- (v) (a) The Station Master after obtaining 'Line Clear' from the station ahead shall give the Loco Pilot / Motorman of the train an —**Authority to Proceed on Automatic Block System during prolonged failure of signals (T/D 912)** with distinguishing number/numbers of the departure signal, gate signals and other intervening signals required to be passed at 'ON' indicated on this authority authorizing the Loco Pilot / Motorman to pass them.
 - (b) Before handing over the 'authority to proceed', all the points, over which the train will pass, shall be correctly set and locked and if there are any LC gates, the Gatemen shall be informed under exchange of private numbers.
 - (c) The Loco Pilot of the first train, entering the affected section on **Authority to Proceed on Automatic Block System during prolonged failure of signals (T/D 912)** shall proceed with utmost caution and shall not exceed 25 KMPH under any circumstances, subject to other speed restrictions in force. The Loco Pilot shall continue to look out for any obstruction until he reaches the station ahead.
 - (d) After ensuring that the first train has arrived safely at the station ahead of the affected section, the Loco Pilot of all subsequent trains shall be advised to proceed at normal speed subject to the observance of any other speed restrictions in force exercising great caution and shall continue to have good lookout for any possible obstruction. **(CM No 56 dated 08.08.2018)**
- (vi) While approaching the station ahead, the Loco Pilot shall act as per the aspect of the signal.
- (vii) All entries regarding train working shall be recorded in red ink in TSR. Clearance of the section by each train shall be intimated to the station in rear supported by a Private Number.
- (viii) The SCOR shall be kept advised of all train movements taking place in the affected section, who shall record the same.
- (ix) As soon as signals are put right by the competent authority, normal working of trains on Automatic Block System shall be resumed, after exchanging messages supported by Private Numbers by the Station Masters concerned assuring that the section is clear. The SCOR shall be informed of the resumption of normal working.
- (x) All the records in connection with the trains working on this system shall be retained at the station and the Traffic Inspector of the section shall scrutinize them and submit his report to the Sr. DOM / DOM within seven days of resumption of normal working.

SR 9.12(2) Procedure for working of trains on double line during prolonged failure of signals likely to last for some time and cause serious delay when no means of communications are available.

In the event of failure of all signals between two block stations worked under Automatic Block System and when Line Clear cannot be obtained by any of the following means, namely,

- (i) (a) Station to Station fixed telephones wherever available,
- (b) Fixed telephone such as railway auto-phone and BSNL phone,
- (c) Control Telephone, and
- (d) VHF set.

The following procedure shall be adopted for working of trains:—

- (ii) Before any train is allowed to enter the interrupted section, it shall be brought to a stop and the Loco Pilot/Motorman and the Guard of the train shall be advised of the circumstances by the Station Master.
- (iii) All the points over which the train will run within the affected area shall be correctly set and locked before the movement of any train is authorized over them.
- (iv) The Station Master shall give '**Authority to proceed without Line Clear on automatic block signalling territory**' on the prescribed form T/B.912 to the Loco Pilot/Motorman of each train, which includes —
 - (a) An authority to proceed without line clear,
 - (b) An authority to pass signals in 'ON' position authorising the Loco Pilot/Motorman to pass the Automatic signals intervening the two block stations at 'ON', the Semi-Automatic signals and manually operated signals at 'ON' being hand signalled past by a competent Railway Servant in uniform deputed for the purpose and observe the gate rules before passing the level crossing. The individual distinguishing number / numbers of each automatic/Semi-Automatic/manually operated and gate signal/signals shall be indicated on this authority.
 - (c) A Caution Order restricting the speed to 25 KMPH over the straight with clear view and 10 KMPH when approaching or passing any portion of the line where the view ahead is not clear due to curvature of the line, fog, rain, dust storm or any other cause, subject to the observance of other speed restrictions imposed and speed over facing points being restricted to 15 KMPH.
- (v) No train shall be allowed to enter an affected section until there is a clear interval of 15 minutes or running time between two stations, whichever is more, between the train about to leave and the train which has immediately preceded.
- (vi) In the event of a Loco Pilot approaching or passing any portion of a line where view ahead is not clear, the Assistant Loco Pilot where available or Pointsman deputed from station with hand signals shall be sent in advance to guide the further movement of the train. A sharp look-out ahead should be kept and the engine whistle freely used.
- (vii) The Guard shall keep a sharp look out in the rear and be prepared to exhibit a Stop hand signal to prevent the approach of a train from the rear and to protect it, if necessary, as per extant rules.
- (viii) When approaching the block station ahead, the Loco Pilot shall bring his train to a stop outside the FSS and sound one long whistle. The Station Master shall arrange to receive the train by taking 'OFF' the relevant reception signal or by taking 'OFF' Calling-on signal or after satisfying himself that all points have been correctly set and locked, pilot the train duly issuing (T/369(3b)).

- (ix) The Loco Pilots of all trains shall hand over the authority to proceed without Line Clear (T/B.912) to the Station Master of the block station at the other end of the affected section.
- (x) Record of all trains worked over the affected section on authority to proceed without Line Clear during the failure of signals and total interruption of communications, shall be maintained in the TSR in red ink at both the stations concerned.
- (xi) Trains shall continue to work on this system until any one of the means of communications is restored by the competent authority.
- (xii) As soon as both the signals and communication are put right, normal working of trains shall be resumed. But where signals continue to remain inoperative and any one of the means of communications is restored, trains shall be worked in accordance with the instructions contained in SR 9.12.01 after exchanging a message with the Station Master at the other end of the affected section in the following form-

Date:
Time:

From: SM 'A'.....
No.....

To: SM 'B'.....

Last Up/Down Train(Number and description) which left your station at ----hrs has arrived complete athours at my station. Last Up/Down train.....(Number and description) despatched from my station athrs and arrived complete athrs at your station. Cancel the present method of working of trains. Line Clear shall hereafter be obtained by means of..... Please acknowledge. My Private Number is

Signature of Station Master

On receipt of the above message, the Station Master at the other end of the affected section shall acknowledge the same only after he is satisfied from his TSR about the complete arrival of the last up/down train despatched from Station 'A' and also complete arrival at Station 'A' of the last up/down train despatched from Station 'B' in the following form:

Date:
Time:

From: SM 'B'.....
No.
Your message No.

To: SM 'A'

Understand that Up/Down train..... (Number and description) which was the last train to leave my station has arrived complete at your station at hrs. Train..... (Number and description) which was the last Up/Down train, left your station has arrived complete at my station at hours.

Present method of train working is cancelled and the Line Clear for the next train shall be obtained by means of..... My Private Number is

Signature of Station Master

S.R.9.12(2)(xiii) Line Clear shall not be obtained or granted by any means of communication which has been restored until both the Station Masters are satisfied from their records that all trains despatched from their stations have arrived complete at the other station and the block section of both up and down lines are free from obstruction as above under exchange of private numbers. Thereafter intimation about this shall be given to the SCOR, if possible.

(xiv) All the records in connection with the trains working on this system shall be retained at the station and the Traffic Inspector of the section shall scrutinize them and submit his report to the Sr. DOM / DOM within seven days of resumption of normal working.

S.R.9.12 (3) Procedure for working of trains during obstruction of one line when signals are operative and communications are available on double line.

In the event of obstruction of one line on double line in an area, consisting of two or more block stations when signals are operative and communications are available, the following procedure shall be adopted for working of trains-

- (i) When it is desired to introduce temporary single line working on double line, the Station Master at one end of the affected section shall, on receipt of reliable information that one line is clear, take steps to introduce temporary single line working on that line in consultation with SCOR and the Station Master of the station at the other end of the section.
- (ii) If there is a reason to suspect that the line over which temporary single line working is to be introduced, is also fouled or damaged, temporary single line working shall not be introduced until a responsible Engineering official not lower than the rank of an Inspector has inspected that section and certified that the line is safe for the passage of trains.
- (iii) The Temporary Single line working shall be introduced between the nearest stations provided with favorable cross-overs connecting up and down lines on either side of the obstruction.

S.R.9.12 (iv) After ascertaining that one of the lines is clear for the passage of traffic, the Station Master proposing temporary single line working shall issue a message to the Station Master at the other end of the affected section under exchange of Private Numbers, containing the following information -

- (a) Cause of introduction of single line working,
- (b) The line on which single line working is proposed,
- (c) The source of information that the said line is clear,
- (d) Place of obstruction with Kilometreage,
- (e) Speed restrictions, if any, on this line.
- (f) The number and timings of the last train which arrived at the block station.

(v) On receipt of acknowledgement from the Station Master at the other end accompanied by the required particulars and confirmed by a Private Number, single line working may be introduced as follows:

- (a) Line Clear shall be obtained by any one of the alternative means of communications in the order of priority indicated below:-
 - (1) Station to station fixed telephones, or
 - (2) Fixed telephones such as railway auto-phone and BSNL telephone, or
 - (3) Control telephone, or
 - (4) VHF sets.

(vi) Despatch of trains on the wrong line:

For each first train running in the wrong direction, Line Clear shall neither be asked for nor granted unless the two Station Masters have assured under exchange of Private Numbers that all trains running in the right direction have already arrived complete at the station in advance.

(a) Station Master shall ensure that the level crossings, if any, are closed before handing over the authority to the Loco Pilot of the train to enter into the block section.

(vii) The Loco Pilot of the first train running in the wrong direction shall be given an authority in the prescribed form Authority for Temporary Single line working on double line (T/D.602), which includes:

(a) Line clear ticket – Authority to Proceed,

(b) Authority to pass signal in on position,

(c) A Caution Order - on which it shall be clearly stated that -

(i) The line on which the train is to run,

(ii) The kilometres between which the obstruction exists on the obstructed line,

(iii) Any speed restriction which may have been imposed,

(iv) An assurance to the effect that trap points, if any, on the said line have been correctly set, spiked or clamped and padlocked.

(d) The authority – T/A.912 shall also be issued to ascertain that the points of outlying sidings, where provided are correctly set and locked and / or the level crossing gates are closed and hand signals are displayed by the Railway Servant in uniform at the points, level crossing gates before passing them.

(viii) All the points shall be correctly set and locked in the route over which the train will run before the movement of any train is authorized over them.

S.R.9.12 (ix) An endorsement shall also be made on the Caution Order in T/D.602 given to the Loco Pilot of the first train to stop and inform all Gatemen, Gangmen, Patrolmen, OHE staff, Telecom staff and any other staff on the way about the introduction of temporary single line working specifying the line on which the trains will run.

(x) The speed of the first train passing over the temporary single line shall be restricted to 25 KMPH subject to the observance of any other speed restriction already in force. Subsequent train(s) in wrong direction may run at normal speed subject to observance of any other speed restriction already in force.

(xi) Trains in the wrong direction shall be piloted out at the dispatching station on the following memo:

- (ii) On clearance of the first train into the next block station, subsequent trains to run in the right direction may be allowed to follow each other on Automatic Signal aspects provided the station in rear has intimated the station in advance of the fact that he is despatching particular train/trains to follow and has ascertained his readiness to receive it/them. Private Numbers shall be exchanged for this transaction.
- (iii) All fixed signals governing the movement of trains in the right direction shall be taken 'OFF'.
- (b) Reception of trains running on right line
 - (i) The trains approaching the block station in advance on right line shall be received by taking 'OFF' relevant reception signals.
 - (ii) Clearance of each train shall be intimated to the Station Master of the rear station supported by a Private Number.
- (xv) Resumption of normal working –
 - (a) On receipt of written certificate from a responsible Engineering official not lower than the rank of PWI that the obstructed track is free and safe for passage of trains or information about removal of cause for introduction of TSL working, the Station Master will issue a message to other station or stations, as the case may be, under exchange of Private Numbers and inform SCOR. Then the normal working shall be introduced.
 - (b) All entries regarding train working shall be recorded in red ink in TSR. An entry shall also be made in red ink in the TSR at the stations concerned showing the time double line working was suspended, the time single line working was introduced and the time normal working was resumed.
- S.R.9.12(3)(xvi) All the records in connection with the temporary single line working shall be retained at the station and the Traffic Inspector of the section shall scrutinize them and submit his report to the Sr.DOM / DOM within seven days of the resumption of normal working.
- SR.9.12(4) Procedure for working of trains during obstruction of one line on Double line / Multiple lines when no means of communications are available and signals have also failed.
 - (i) During one line or more lines on double line / multiple lines obstructed due to an accident to a train when no means of communications are available and signals have also failed, the trains shall be worked as under :
 - (ii) Temporary Single line working shall be introduced only after a responsible official of the engineering department not lower in rank than an Inspector, has certified that the other line on which single line working is to be introduced is free and safe for passage of trains. Such an Engineering official shall give the certificate only to the Station Master of the station at the end of the affected section for which the unobstructed line shall be the right line for dispatching train. On receipt of this certificate, the Station Master will follow the rules prescribed for opening of communications on single line (SR 6.02.(iv)).
 - (iii) Communications shall be opened for establishing the direction of traffic by sending the light engine / train engine / motor trolley / tower wagon / trolley / Cycle trolley / Moped trolley / Diesel Car / Rail Motor Car / EMU/MEMU/DMU/DHMU/DEMU in the order of preference after detraining the passengers. When motor trolley / trolley / cycle trolley / moped trolley is used for opening communications, Guard or Assistant Station Master shall accompany.

- (iv) The Station Master will hand over Authority for opening communication during total interruption of communication on single line section(T/B.602) to the Loco Pilot/Guard or Station Master going to open the communications. This authority includes:
 - (a) An authority to proceed without Line Clear ‘ ,
 - (b) An authority to pass signals in ‘ON’ position,
 - (c) A Caution Order restricting the speed to 15 KMPH over the straight with clear view and not exceeding 10 KMPH when approaching or passing any portion of the line where the view ahead is not clear due to curve, obstruction, rain, fog or any other cause, subject to the observance of other speed restrictions imposed and speed over facing points being restricted to 15 KMPH. The Caution Order shall also contain the line on which the light engine / train engine / motor trolley / tower wagon / EMU/ MEMU/DMU/DHMU/DEMU is to run, and the kilometres between which the obstruction exists.
 - (d) A line clear enquiry message addressed to the Station Master of the block station at the other end of the affected block section asking Line Clear for the train waiting to be despatched to his station.
 - (e) A conditional line clear message addressed to the Station Master of the block station at the other end of the affected block section permitting him to return the light engine / train engine either light or attached to a train waiting to be despatched from his station, or attached with another engine; or
 - (i) To return Tower Wagon / Diesel Car / Rail Motor Car / EMU / MEMU / DMU / DHMU / DEMU rake running by itself; or
- SR.9.12(4) (v)(e) (ii) To return motor trolley / trolley / cycle trolley / moped trolley either running by itself or loaded in a train waiting to be despatched from his station.
- (f) Authority T/A.912 shall also be issued - An authority authorising the Loco Pilot/Motorman to pass the Automatic signals intervening the two nominated stations at ‘ON’, the Semi-Automatic signals and manually operated signals on being hand signalled past by a Pointsman or any other Railway Servant in uniform deputed for the purpose and observe the rules for passing the LC gates. The individual distinguishing number/ numbers of each Automatic, Semi-Automatic, manually operated, and Gate signal/signals shall be indicated on this authority.
- (vi) An endorsement shall also be made on the Caution Order given to the Loco Pilot of the first train to stop and inform all Gatemen, Gangmen, patrolmen, OHE staff, Telecom staff and any other staff on the way, about the introduction of temporary single line working. The line on which the trains will run shall also be specified.
- (vii) The Station Master shall satisfy himself that the Guard and the Loco Pilot thoroughly understand about the stations between which and the line on which temporary single line working has been introduced and the relevant rules to be followed during total failure of communications on single line. He shall also obtain the signature of the Loco Pilot and the Guard in form T/B 602.
- (viii) All the points in the route over which the trains run within the affected area shall be correctly set and locked before the movement of any train is authorized over them.

- (ix) After despatching a light engine / train engine / motor trolley / tower wagon / trolley / Cycle trolley / Moped trolley / empty Diesel Car / Rail Motor Car / EMU / MEMU/DMU/DHMU/DEMU for opening communication, no other train or engine shall on any account be allowed to leave in the same direction or no obstruction of the line outside the outermost facing points shall be allowed until the return of the light engine / train engine / motor trolley / tower wagon / trolley / Cycle trolley / Moped trolley/ empty Diesel Car / Rail Motor Car / EMU / MEMU/ DMU/ DHMU/ DEMU.
- (x) The Loco Pilot of such a light engine / train engine / motor trolley / tower wagon / trolley/Cycle trolley /Moped trolley / Diesel Car /Rail Motor Car / EMU /MEMU/DMU/DHMU/DEMU proceeding to open communications shall proceed at a speed not exceeding 15KMPH over the straight with a clear view and not exceeding 10 KMPH when approaching or passing any portion of the line when the view ahead is not clear making free use of the engine whistle. In thick, foggy or tempestuous weather, the Loco Pilot shall proceed at walking speed, whistling repeatedly, preceded by two men on foot at an adequate distance, one displaying a red light and the other carrying fog signals ready for immediate use. In such circumstances, one of these men will be provided by the Station Master from his Group 'D' staff and the other by the Loco Pilot. Both these men will have their duties clearly explained to them by the Station Master who would satisfy himself that they thoroughly understood the same, in the presence of the Loco Pilot.
- SR.9.12(4) (xi) On arrival of the light engine / train engine / motor trolley / tower wagon / trolley /Cycle trolley /Moped trolley /Diesel Car/ Rail Motor Car / EMU/ MEMU/ DMU/DHMU/DEMU at the next block station in advance, the Loco Pilot shall hand over T/B.602 to the Station Master who shall retain it in station records.
- (xii) The Station Master on the authority of the CLC message shall despatch the train waiting from his station. The Loco Pilot shall be given the following documents:
- (a) Conditional Line Clear ticket (T/G.602 up or T/H.602 down) as authority to proceed for the Light engine / train engine etc., to return,
 - (b) Line Clear reply message (T/F.602) for the train to leave from the station waiting at the other end of the affected section,
 - (c) A Caution Order clearly stating the line on which the train is to run, the kilometres between which the obstruction exists on the affected line, and any temporary restriction of speed which may have been imposed,
 - (d) A Line Clear enquiry message (T/E.602) addressed to the Station Master of the block station in rear seeking Line Clear for the waiting/expected train to proceed from his station after the arrival of the train for which reply message is given
 - (e) Trains in the wrong direction shall, however, be piloted out at the despatching station on the following memo:

SOUTH WESTERN RAILWAY

PILOT - OUT memo
(Loco Pilot / Record)

Date:
Time:

From
SM /

To
The Loco Pilot of

You are hereby authorized to start your train from line No. and to enter the wrong line. All the points on the route are correctly set and locked. Observe hand signals and proceed forward with the speed not exceeding 15 KMPH over points.

Signature of the Loco Pilot

Signature of Station Master
Station stamp

- (xii) On reaching the next station, the Loco Pilot shall bring his train to a stop opposite the FSS pertaining to the right line or at the LSS pertaining to the wrong line (on which his train is running), whichever he comes across first.
 - (a) After ensuring that all relevant points are correctly set and locked, the Station Master of the station shall depute a Railway Servant in uniform at the foot of the signal (whichever the train would encounter first) who shall stop the train on Stop hand signal and thereafter 'pilot in' into the station on the following memo issued by the Station Master.

SOUTH WESTERN RAILWAY

PILOT - IN memo
(Loco Pilot / Record)

Date:
Time:

From
SM /

To
The Loco Pilot of

You are hereby authorized to bring your train on to line No. All the points on the route are correctly set and locked. Observe hand signals and proceed forward with the speed not exceeding 15 KMPH over points.

Signature of the Loco Pilot

Signature of Station Master
Station stamp

-
- SR.9.12(4) (xiii) On arrival at the station, the Loco Pilot shall hand over the Line Clear reply message (T/F.602) to the Station Master who shall retain this document in station records and on its authority issue a Conditional Line Clear Ticket for the waiting train.
 - (xiv) The speed of trains passing over the temporary single line shall be normal subject to observance of other speed restrictions imposed and speed over facing points being restricted to 15 KMPH.
 - (xv) If there be an even flow of trains in both the directions, the LC enquiry message and LC reply message for each succeeding train may be sent with the Guard of the preceding train.

- (xvi) The arrival and departure timings of all trains shall be carefully recorded in the TSR in red ink.
- (xvii) If the Station Master, at one end, has more than one train to despatch in the same direction before another train is normally expected from the opposite direction, he shall mention in the Line Clear enquiry message the numbers of trains he wants to despatch and also state therein that the latter trains will be despatched after the first train at intervals of 15 minutes or full running time whichever is more. After the receipt of Line Clear reply, for the required number of trains the Station Master while despatching the first train shall endorse on the Line Clear ticket that a particular train (giving its number and description in full) shall follow after 15 minutes interval or full running time whichever is more. The Loco Pilots of second and subsequent following trains shall be given a Caution Order restricting the speed to 25 KMPH over the straight, when the view ahead is clear and 10 KMPH when approaching or passing any portion of the line, where the view ahead is not clear due to curve, obstruction, rain, fog or any other cause and also the information about the preceded and succeeding trains.

SR.9.12(4) (xviii) Resumption of normal working -

- (a) The normal working shall not be resumed unless -
 - Any one of the Station Masters of the affected block section, has received a written certificate from a responsible Engineering official that the obstructed track is free and safe for passage of trains, and
 - (b) Signals are put right and any one of the means of communications is restored by the competent authority.
- (xix) (a) In case, when obstruction is removed but signals continue to remain inoperative and any one of the means of communications is available, the trains shall be worked in accordance with instructions prescribed in SR 9.12 (i).
- (b) In case, when obstruction is removed but signals continue to remain inoperative and none of the means of communications are available, the trains shall be worked in accordance with the instructions prescribed in S.R. 9.12 (ii).
- (c) In case where the signals are put right and any one of the means of communications is available, but the obstruction continues, the instructions as prescribed in S.R. 9.12(iii) shall be observed.
- (xx) An entry in red ink shall also be made in the TSR of the stations concerned showing the time when normal working was suspended and the time when normal working was resumed.
- (xxi) All the records in connection with the train working under this system shall be retained at the station and the Traffic Inspector of the section shall scrutinize them and submit his report to the Sr. DOM/DOM within 7 days of the resumption of the normal working.

SR 9.12.5 Despatch of relief engine / relief train into an occupied / obstructed block section or relief engine to assist the disabled engine / train. (T/C 912)

- (i) When a block section between two block stations in Automatic Block System is occupied / obstructed due to accident / special works or disabled train and if it is required to despatch a relief engine / a relief train into such block section, it can be despatched only after ensuring that the section between the obstruction and the block stations is free of any train, by issuing Authority for Relief engine / relief train to enter into an occupied/obstructed Automatic block section (T/C 912), which contains the following:
- (a) Authority to proceed without line clear – authorising to proceed cautiously without Line Clear from station upto the point of obstruction at KM on up/down line and clear back the section to the block station from which it is started or to the station at the other end of the affected block section.
 - (b) Authority to pass signals in 'ON' position authorizing to pass the signal / signals (No. & description) in 'ON' position with speed not exceeding 15 KMPH observing hand signals at the foot of the signal post/s, if it protects the points.
 - (c) Caution Order to observe the speed of 15 KMPH over the straight with clear view and 10 KMPH when approaching or passing any portion of the line where the view ahead is not clear due to curve, obstruction, rain, fog or any other cause subject to the other speed restrictions in force in the section.

SR 9.12.5 (ii) If control is working, all operations shall be carried out in consultation with the Section Controller.

- (iii) The Station Master on duty at the other end of the affected block section shall be advised of the relief engine / relief trains allowed into the section and the station to which they will clear.
- (iv) When a relief engine is sent, the Loco Pilot should be given clear instructions in the Caution Order regarding nature of obstruction as far as known, the station to which the disabled train / engine could be moved, the location of the train engine and brake-van of the disabled train. During night if electric head light is not working, the train or the light engine or any self propelled vehicle must be preceded at an adequate distance by a railway servant carrying detonators and exhibiting red light ahead to stop any other approaching train. The Loco Pilot must keep a sharp look-out at all times and be prepared to stop clear and short of any obstruction which may exist or crop up on the road and should use engine whistle freely. The Loco Pilot shall bring his train / engine to stop short of obstruction and thereafter will obey the hand signal of the employee / supervisor at the site.
- (v) In case the relief engine / relief train / any self propelled vehicle / the disabled engine / train approaching the station from which it is started or the station ahead, the Loco Pilot shall act as per the aspect of the signal if it is right line.
 - (a) If it is wrong line, the Loco Pilot must stop at the LSS of wrong line on double line and sound continuous long whistle. Further, the train can be piloted into the station on the authority by a competent Railway Servant duly setting and locking of the points for the line.
- (vi) On arrival at the block station, the authority (T/C.912) should be handed over to the Station Master on duty, who shall retain it in the station records.
- (vii) A record of trains / engines entering the section during its obstruction, timings of their clearance from the block section, obstruction clearance, and restoration of normal working shall be made in TSR in red ink.

- (viii) In case of an accident, 'Track-fit' certificate shall be obtained from engineering official not lower than Permanent Way Inspector before resumption of normal working.

Note:- If it is necessary to despatch a self propelled vehicle like TTM / Tower car into the obstructed / occupied block section, the Authority T/C.912 shall be used.

SR 9.12.6 Procedure for shunting in the block section.

(i) Station Section–

At a block station in the Automatic Block System, where Manual Stop Signals or Semi-Automatic Stop signals are provided and when they are kept in Manual Stop Signal mode, the station section is as under;

(a) On Double Line (MACLS)

- (i) Between the outermost facing point and the last Stop signal of the station; or
- (ii) Between the Block Section Limit Board and the last Stop signal of the station.

(b) On Single Line (MACLS)

between up and down Advanced Starters of the station.

SR 9.12.6 (ii) Shunting

(a) On Double Line.

(i) Shunting within station section in the face of an approaching train:

On double line section, shunting within the station section can be carried out generally and also in the face of an approaching train, provided the necessary signals are kept at 'ON'.

The Authority T.806 without PN shall be issued to the Loco Pilot and Guard unless notified by Sr.DOM as laid down in SR 5.14(i) (a) (1).

(ii) Shunting outside outermost facing points / BSLB: (block back)

- (1) Station Master of a block station, who intends to perform shunting into block section in rear (outside outer most facing points / BSLB), shall inform the Station Master of the block station in rear and ensure that all the trains, which entered into the section from the station in rear have arrived complete at his station. The entire block section between the two block stations should be treated as one block section.
- (2) Then the Station Master shall block back duly exchanging the messages with Station Master in rear and obtain private number in assurance that the shunting is permitted into the block section and no train will be despatched from his end till the block back is cancelled.
- (3) Then the Station Master shall issue T/806 with Private Number obtained from station in rear, to the Loco Pilot and Guard/Shunting Jamedar with the instructions that the Loco Pilot to push back the train into the station.
- (4) The Station Master shall ensure correct setting and locking of points before authorizing outward / inward movement.
- (5) The entries must be made in red ink in TSR. On completion of the movement, both the Station Masters shall exchange messages supported by private numbers for cancellation of block back after ensuring that the block section is free from any obstruction.

(iii) Shunting beyond LSS: (block forward)

- (1) The Station Master shall ensure that the block section in advance between both the block stations is clear and the entire block section in advance shall be treated as one block section.
- (2) Then the Station Master shall 'block forward' duly exchanging the messages with Station Master of the station in advance and obtain private number in assurance that the shunting is permitted into the block section and no train will be despatched until the 'block forward' is cancelled.
- (3) The Authority T/806 shall be issued to the Loco Pilot with the Private Number given by Station Master of station in advance authorizing the Loco Pilot to pass LSS at 'ON'.
- (4) The Guard /Competent Railway Servant, supervising the shunting shall accompany the train.
- (5) The SM shall ensure correct setting and locking of points before authorizing outward/inward movement.

SR 9.12.6 (6) While coming back, the Loco Pilot shall stop his train near LSS and thereafter piloted into the station.

- (7) The SM shall ensure complete arrival of the train and cancel 'block forward' duly exchanging messages with the SM at the other end supported by Private Numbers.
- (8) The entries shall be made in red ink in the TSR.

(iii) Shunting in rear of a train travelling away from the station.

- (1) The Station Working Rules shall permit such movement duly considering the local conditions like gradient, visibility and the speed, weight and brake power of trains.
- (2) If permitted, intimate the Station Master at the other end, issue T/806 without P.N. and authorize the Loco Pilot to pass LSS at 'ON'.
- (3) Guard / competent Railway Servant, supervising the shunting shall accompany the movement.
- (4) If the train traveling away clears into the station in advance, before the return of shunting train, the Station Master shall note down the clearance of the train and block forward if the block section is still obstructed.
- (5) If the train travelling away does not clear into the station ahead, but the shunting train returns to the station, Station Master shall intimate about the arrival of shunting train, under exchange of messages supported by Private Numbers. Then the trains can be dealt normally.

SR 9.12.7 Unusual occurrences:

- (i) In the event of a Loco Pilot experiencing a lurch, unusually slack or rough running, he should bring his train to stop immediately without clearing the automatic block signalling section, wherever possible.
- (ii) He should then immediately inform the Guard of the train and then the Station Master of the station controlling the movement of train service on to this line specifying the kilometrage where the defect was noticed, the nature of defect etc., on emergency portable telephone/VHF set/CUG mobile phone etc.

- (iii) The obstruction will be protected by the Guard of the train as per GR 9.10 and follow the instructions given in GR 6.01 and SRs thereunder if necessary or otherwise continue the journey. On approaching the block station in advance, Loco Pilot will hand over a written memo specifying the above.
- (iv) The Station Master receiving the message on phone should transmit it to the Station Master at the other end of the block section, SCOR and PWI.
- (v) The Station Masters at both the ends of the block section should stop all trains and issue Caution Order to the Loco Pilots / Guards specifying the kilometreage to observe special caution and reduce speed as necessary and in any case not to exceed a speed of 10 KMPH. On receipt of this information 'all concerned' should follow the instructions given in Rule 6.07 and SRs thereunder.
- (vi) On double line section, trains passing on the opposite line shall be issued with a Caution Order to be on the lookout for any unusual or dangerous condition on the track.
- (vii) Station Masters at both the ends of the section should discontinue the issue of Caution Order only after receipt of specific advice from the PWI of the section that the section is safe for trains to run at normal speed.

SR.9.12.8 Other Restrictions in Automatic territory:

- (i) Train Operation during fog:
Maximum speed of a train shall be restricted to 30 KMPH during dense fog. Depending upon severity of fog, the Loco Pilot shall control the speed of a train.
- (ii) Train without brake-van:
In Automatic block section, no train must be allowed to follow until the preceding train which has been allowed to run without brake-van has arrived complete at the next block station in advance.
- (iii) Train without Guard:
In Automatic block section, no train shall be allowed to follow until the preceding train which has been allowed to run without Guard, has arrived complete at the next block station in advance.

GR.9.13. Movement of trains against the direction of traffic on the Automatic Block System.–

In Automatic signalling territory, trains shall run in the established direction of traffic only. Movement of trains against the established direction of traffic is not permitted. When in an emergency it becomes unavoidably necessary to move a train against the established direction of traffic, this shall be done only under special instructions which shall ensure that the line behind the said train upto the station in rear is clear and free from obstruction.

- S.R.9.13. When the train is unable to proceed further due to unusual occurrences like floods, breaches, accidents etc., the following procedure shall be followed:
- (i) The train shall be protected in rear as per S.R.9.10,

- (ii) Inform Station Master in advance or Station Master in rear or SCOR or TPC and obtain permission only from Station Master in rear to push back,
- (iii) Such permission can be given only by Station Master of the block station in rear provided that no train has been despatched behind this train,
- (iv) The said permission can be obtained by establishing telephone contact or by sending a competent Railway Servant. If telephonically contacted, Station Master in rear shall give a Private Number. If the competent Railway Servant is sent, Station Master in rear shall give a Caution Order permitting pushing back of the train. He shall also intimate the Station Master at the other end about the occurrence.
- (v) Before authorising the movement, the SM shall ensure that the LC gates, if any, are closed against road traffic. The Loco Pilot, after obtaining permission from the Station Master in rear as above, shall follow the rules laid down under S.R.4.12.

GR.9.14. Procedure when Semi-Automatic Stop signal is 'ON'—

- (1) When a Semi-Automatic Stop signal is worked as an Automatic Stop signal, Rule 9.02 or 9.07 shall apply as the case may be.**
- (2) When a Semi-Automatic Stop signal is working as a Manual Stop signal and becomes defective, it may only be passed under relevant rules detailed in Chapter III, Section 'H'.**
- (3) When a Loco Pilot is authorized to pass a Semi-Automatic Stop signal at 'ON' by taking 'OFF' the Calling-on signal fixed below it, he shall follow the precautions stipulated in Rule 9.02 or 9.07 as the case may be.**

SR 9.14.(i) A fixed signal which can be operated either as an Automatic Stop signal or a Manual Stop signal, as required, is called Semi-Automatic Stop signal. Semi-Automatic Stop signals are provided at the block stations in Automatic Block System in order to avail the facility to divert the trains from the main line to other lines or required to stop the train at the signals when need arises and also to pass through the trains on the main line in automatic mode of block working without necessitating operation of the signals for every train.

- (ii) A king knob is provided to make Semi-Automatic Stop signal to work either as an Automatic Stop signal or as a Manual Stop signal. When king knob is in reverse position, Semi-Automatic Stop signal works as an Automatic Stop signal and when the king knob is in normal position, it works as a Manual Stop signal. 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.

- (iii) The working instructions regarding the operation of Semi-Automatic Stop signals in respect of reception and despatch of trains and run through of trains shall be detailed in the respective SWRs. On double line, at the block stations, where the facility for passing the trains through the stations on main line is available, with the provision of Semi- Automatic Stop signals, Station Master on duty, shall ensure that all the point knobs are kept in normal position and all the Semi Automatic Stop signals are kept in automatic mode of working by keeping the up and down king knobs in reverse position. The control panel should be locked and the panel key should be kept under the personal custody of the Station Master on duty. In conjunction with the reverse position of king knobs, the Semi Automatic Home, Starter and Advanced Starter signals work as Automatic Stop signals for main line, facilitating the run through of trains without necessitating the operation of signals for every run through train in automatic mode of working.
- (iv) Whenever the trains are required to be received on lines other than main line, the manual mode of Semi Automatic signals shall be switched over by on duty Station Master by normalizing the relevant directional king knob duly unlocking the panel with Station Master's key, to operate the signals manually for required route.

SR 9.14 (v) When a Loco Pilot finds a Semi-Automatic Stop signal with illuminated 'A' marker at 'ON', he shall bring his train to a stop in rear of it and follow the instructions given in Rule 9.02 and SRs thereunder.

- (i) When a Loco Pilot finds a Semi-Automatic Stop signal with extinguished 'A' marker at 'ON', he shall pass such signal only on assumption of 'OFF' position or on receipt of written authority T/369 (3)(b) and PHS.

GR. 9.15. Passing a gate Stop signal at 'ON' in Automatic signalling territory.—

If the Loco Pilot finds a gate Stop signal at 'ON' in an Automatic signalling territory,—

- (a) He shall comply with the provisions of Rule 9.02 or 9.07 as the case may be, if the 'A' marker is illuminated, or**
- (b) (i) If the 'A' marker light is extinguished, he shall sound the prescribed code of whistle to warn the Gateman and bring his train to a stop in rear of a signal and**
 - (ii) If after waiting for one minute by day and two minutes by night, the signal is not taken 'OFF', he shall draw his train ahead cautiously upto the level crossing and**
 - (iii) If the Gateman is available and exhibiting hand signals, proceed further past the level crossing gate cautiously or**

(iv) if the Gateman is not available or is available but not exhibiting hand signals, stop in rear of the level crossing and after ascertaining that the gates are closed against road traffic and on getting hand signals from the Gateman and in his absence from the Assistant Loco Pilot, the Loco Pilot shall sound the prescribed code of whistle and cautiously proceed upto the next Stop signal complying with the Rule 9.02 or 9.07 as the case may be.

SR 9.15.(i) Automatic signals interlocked with level crossing gates are distinguished by the provision of 'G' marker i.e., letter 'G' in black on yellow circular disc and white illuminated letter 'A' against black background. When the gate is in open condition, the gate signal exhibits danger aspect with extinguished 'A' marker. When the gate is in closed condition, it works as Automatic Stop signal with illuminated 'A' marker.

(ii) On being advised by the Station Master, and immediately on getting the 'approach' indication and the buzzer indicating the train entering the section, the Gateman on duty shall close the gate against the road traffic by lowering lifting barriers and lock in the lowered condition. On closing the gate, the buzzer stops and the 'A' marker will be illuminated on the gate signal and the gate signal will assume the aspect depending on the condition of the section ahead. After the passage of the train/trains, the free indication on becoming available, the Gateman can open the gate for the road traffic.

SR 9.15.(iii) If the gate signal is at 'ON' and the 'A' marker is extinguished, the Loco Pilot has to follow the gate rules [Rule 9.15(b)]. If the 'A' marker is illuminated and the signal is at 'ON', the Loco Pilot shall follow the rules for the automatic signalling. (Rule 9.02 and 9.07 and SRs thereunder)

(iv) In case of non-availability of the 'free' indication even after the passage of the train and disappearance of the approach indications, the Gateman can open the gate after obtaining the permission of Station Master and by operating emergency rotary switch provided in the gate lodge for this purpose duly making an entry and recording the changed consecutive number in the register meant for this.

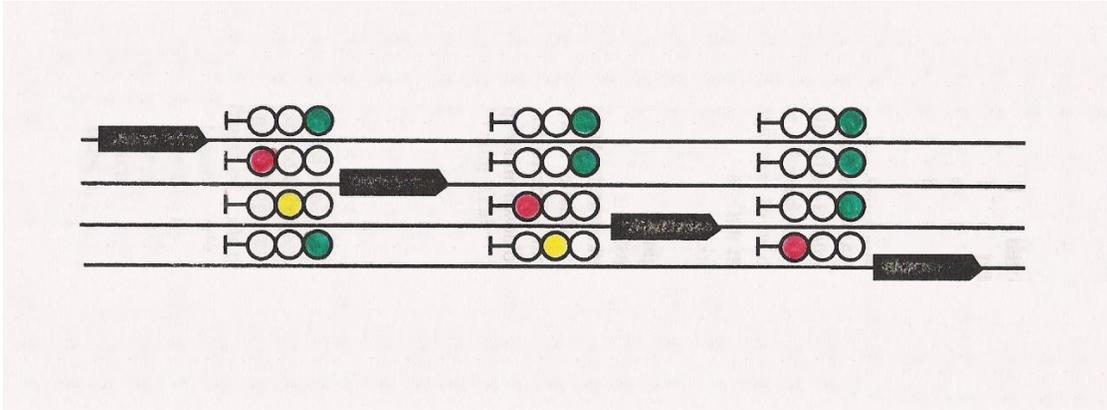
(v) Even after the gate is closed, if the gate signal continues to be at 'ON' and the 'A' marker is also not illuminated, the Gateman shall inform the Station Master of the controlling station. On receipt of this information, the Station Master shall inform the S&T officials concerned for rectification and the Station Master at the other end of the affected block section. Until the failure is rectified, Station Master will treat the gate as non-interlocked and exchange private numbers with Gateman as an assurance of closure of gate before despatching a train. Station Master of the block section will issue Caution Order to the Loco Pilots of the trains entering into the section to observe Rule 9.02 and 9.07 and SRs thereunder from the gate signal. On rectification of the defective gate signal, the issue of Caution Orders will be discontinued.

(vi) The particulars shall be recorded in the register kept for this purpose both at the station and the gate lodge as per the proforma given in Appendix-II.

GR. 9.16. Illustrative diagrams.—

Automatic change of sequence of aspects behind the train in three-aspect and four-aspect signalling is illustrated in the following diagrams, which are not drawn to scale.

- 1. Automatic change of sequence of aspects behind the train in three aspect signalling territory**



- 2. Automatic change of sequence of aspects behind the train in four-aspect signalling territory**

