

CHAPTER – IX

THE 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 upto 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.

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' marker 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 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 necessary, may seek the assistance of the Guard by giving the prescribed code of whistle.
- (4) When so sent 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 upto that signal and shall act upon its indication only after he has reached it.

S.R.9.02/1. (a) The 'ON' position of an Automatic Signal may be due to a train in the Automatic Signalling section ahead including the overlap or due to an obstruction on the track or broken or displaced rail or any other cause.

When a Loco Pilot /Motorman passes an Automatic Signal with an 'A' marker at 'ON' he shall proceed exercising great caution to be able to stop short of any obstruction and at a speed, which shall not exceed 15 KMPH on a straight road when visibility is good. Where due to curvature of the line, fog, dust storm, or other causes line ahead cannot be seen clearly, the Loco Pilot /Motorman shall observe, the speed, which shall not exceed 10 KMPH. In case of Electric Multiple Units, the Motorman shall give 2 pause 2 rings and the same will be acknowledged by the Guard through same code of beats.

(b) (i) The Guard of a train shall watch that the Loco Pilot does not exceed the speed prescribed in item (a) above.

(ii) In case of EMU trains if the Motorman exceeds the speed prescribed the Guard (when not travelling with the Motorman) shall give 3 pause 3 rings on the bell code to warn the Motorman and take action as prescribed in Rule 4.45.

(iii) In case of other trains also if the Loco Pilot exceeds speed prescribed the Guard shall take action as per rule 4.45.

(c) The Guard of an EMU train shall watch that the Motorman does not exceed the speed prescribed in item (a) above. He shall give 000 — 000 rings on the bell code to warn the Motorman, if the prescribed speed limit is exceeded and if the Motorman continues to run in excess of the prescribed speed the Guard shall arrange to stop the train.

In case of trains hauled by electric locomotive, if the Loco Pilot exceeds the speed prescribed in item (a) above Guard shall attract the attention of the Loco Pilot by the application of vacuum/air brake and releasing it intermittently till such time the Loco Pilot observes the prescribed speed.

(d) Loco Pilot /Motorman to stop close to signals at 'On' - When a Loco Pilot /Motorman has to stop his train at the automatic, Semiautomatic or a Gate Signal which is in the 'On' position, he should bring the train to a halt as close to the signal as possible in rear of the signal.

S.R.9.02/2. The Loco Pilot shall give two long and two short whistles (— — 00) when the Guard is required to be called to the engine. In case of electric multiple unit trains, the Motorman shall give three rings (000) to call the Guard, which shall be acknowledged by the Guard.

S.R.9.02/3. The indication of an Automatic signal applies to the track beyond the signal and there is possibility of a train or obstruction on being inside the signal when it is showing 'Off'. A Loco Pilot having passed an Automatic signal at 'On' must not act on the indication of the Signal ahead until he has actually reached it.

S.R.9.02/4. (a) Whenever an Automatic or a Semi-Automatic signal changes its aspect from green/yellow to red and again to green/yellow or from red to red in succession, it shall be treated as a bobbing/flickering signal and shall be considered as showing the most restrictive aspect.

On seeing a bobbing/flickering signal, the Loco Pilot /Motorman shall bring his train to stop in rear of the signal and pass the same only when it assumes a steady aspect and remains so for one minute.

(b) If the signal continues to bob/flicker and does not assume a steady aspect it should be considered displaying the 'On' position and pass only after observing the stipulations contained in S.R.9.02/1. The Loco Pilot /Motorman shall report the defect to Station Master at the first reporting station.

(c) Whenever a manual stop signal shows more than one aspect or a misleading aspect, it should be treated as showing the most restrictive aspect and should be passed by observing instructions contained in Rule 3.74 and subsidiary rules appended thereunder.

(d) The Station Master, on receipt of information of flickering/bobbing signal, shall record the defect in the Signal Failure Register and advise Signal Inspector or Electric Signal Maintainer immediately to rectify the defect. All cases of failures bobbing, or flickering signal should also be reported to Section Controller who shall record the defect in the Signal Failure Register kept for the purpose.

S.R.9.02/5. Distance between two trains in Automatic Signalling territories after passing an Automatic Signal at 'ON' -

(a) After passing an Automatic Stop signal at 'ON' the Loco Pilot of the train hauled by any locomotive shall ensure that minimum distance of 150 metres or two clear OHE masts is maintained between his train and the preceding train if any or any obstruction on the line ahead. However, in the case of EMU trains the minimum distance of 75 metres or one clear OHE mast shall be maintained between EMU train and a preceding train if any or any obstruction on line ahead.

(b) In special circumstances like flood etc., or if necessary to assist a disabled EMU train the following EMU train may be drawn closer to the preceding EMU train, exercising great caution.

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 upto 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 upto 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.**

9.04. Minimum equipment of fixed signals in Automatic Block territory on single line - 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 signals 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 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 a Manual Stop signal for an adequate distance beyond it.
- (3) The adequate distance referred to in sub rules (1) and (2) shall never be less than 120 metres and 180 metres 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 sub-rule (1).

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 can not 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.

S.R.9.07/1. Duties of Loco Pilot and Guard when an Automatic signal on single line is to be passed at 'On'- When an Automatic signal is to be passed at 'On' on single line, the instructions contained in G.R. 9.02 and S.Rs., there under, should be complied with.

9.08. Person in charge of working trains in 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 sections 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 part, 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 comes to a stand in an Automatic signalling section and cannot proceed further due to an accident, failure or obstruction, the Loco Pilot /Motorman and Guard shall follow all the rules under S.R. 6.03/1 (a) to (h) and the occupied line shall be protected with detonators in rear as specified in General Rule 9.10.

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. Next reporting station/cabin will be next stopping station for the purpose of reporting such failures.

S.R.9.11/2. Failure of signals in the Automatic section - When the Signal Maintainer finds that the failure of a signal/signals in the automatic section is likely to last for sometime and cause serious delay to trains, he must advise by telephone the SSE/SE (Signal) concerned and the Section Controller.

S.R.9.11/3. Action to be taken during failure of signals in the Automatic section -

- (a) Whenever a failure of Automatic Signal has taken place, the Loco Pilot or the Motorman must, on approaching the next reporting station, sound his whistle and inform the Station Master on duty of failure, giving the correct number of signal that has failed.
- (b) An automatic signal should be considered to have failed when:
 - (i) The signal exhibits no aspect at all, or
 - (ii) The signal displays more than one aspect, or
 - (iii) The signal displays 'On' aspect with the block section, protected by it being clear.

Note: If an Automatic signal exhibits a dim light with only auxiliary filament burning, the Loco Pilot /Motorman should report this at the next reporting, station.
- (c) The Station Master of the reporting Station must at once advise on telephone the Signal Maintainer concerned, the Section Controller and the Station Master on duty at the reporting Station immediately in rear, giving the correct number of the signal that has failed.
- (d) The Station Master on duty at the reporting station in rear, must arrange for the issue of Caution Orders to the Loco Pilots or Motormen of all 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 G.R.9.02.
- (e) The Station Master of the reporting Station in rear must also maintain a register of signal failures that have been reported to him for the issue of Caution Orders.
- (f) After the failure has been rectified, the Signal Maintainer must immediately advise the Station Master on duty at the reporting station in rear who will inform the Section Controller, giving the time at which the failure was rectified. The Station Master at such reporting station must also arrange to stop issue of Caution Order for subsequent trains.
- (g) A register of signal failures shall be maintained in the Control Office and daily return of the signal failures will be submitted to the Divisional Railway Manager.

9.12. Procedure during failure of Automatic signalling - When a failure of Automatic signalling is likely to last for some time or 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. Failures of all signals on double or single line 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 in an area consisting of two or more stations worked under Automatic Block System, the officials concerned of the Signalling Department shall take immediate steps to inform all concerned, and the following procedure shall be adopted for train passing -

- (1) The section between the two block stations will be treated as a block section and the movement on the block section will be controlled by the Station Master on either side.
- (2) Before any train is allowed to enter the affected section, it shall be brought to a stand and the Loco Pilot of the train advised of the circumstances by the Station Master and the Guard of the train advised through a copy of the 'Authority to Proceed' as prescribed in Rule 5(a) below. The Controller and the Station Master concerned ahead of the affected section shall also be informed.
- (3) The Station Master on duty at the station in rear of the affected section shall obtain 'Line Clear' for the train by one of the following in the order of preference of means of communications, viz.
 - (a) Block Instruments, Track Circuiting or Axle Counters
 - (b) Telephones attached to Block Instruments
 - (c) Station to station fixed telephones wherever available
 - (d) Fixed telephone such as Railway autophones & BSNL phones
 - (e) Control telephone
 - (f) VHF sets

- (4) The Station Master on duty at the station in advance shall not give such 'Line Clear' (as per clause 2 above) unless -
 - (i) the whole of the last preceding train has arrived,
 - (ii) the line on which it is intended to receive the incoming train is clear at least 180 metres beyond the Platform Starter or the place at which the trains usually come to a stand, and
 - (iii) all points have been correctly set and all facing points locked as per rules for the admission of the train on the said line.
- (5) (a) The Loco Pilot of the first train entering the affected section on 'Authority to Proceed', shall proceed with utmost caution and must not run at a speed exceeding 25 Kilometres per hour 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.

(b) After ensuring that the first train has arrived safely at the station ahead of the affected section, the Loco Pilots of all subsequent trains shall also proceed with great caution, subject to other speed restrictions in force and must continue to look out for any possible obstruction.
- (6) The S.M. shall give the Loco Pilot /Motorman of each train -
 - (a) An 'Authority to proceed on Automatic Block System during prolonged failure of signals' on prescribed form. The individual distinguishing number/numbers of each automatic, semi-automatic, manually operated and gate signal/signals shall be indicated on this authority.
 - (b) A Caution Order restricting the speed of all trains as per clause 5(A) above.
- (7) Before handing over the 'Authority to Proceed' all the points over which the train will pass, shall be correctly set and locked as per rules. Whenever any power operated points have to be operated for diverting trains, these may be released and operated locally under the written instructions of the Station Master on duty by the Signal Maintainer at stations where Signal Maintainers are provided.
- (8) When approaching the next station, the Loco Pilot shall bring his train to a stand outside the first Stop signal and sound one long whistle. The Station Master after satisfying himself that all is safe shall arrange for a man in uniform to pilot the train from this signal, who shall obey hand signals, if any, relayed from the station platform.
- (9) Clearance of the section by each train shall be intimated to the station, in rear under exchange of Private Numbers.
- (10) Train Signal Register shall be brought into use and all entries regarding train working recorded there in. The Controller shall be kept advised of all train movements taking place in the affected section, if possible.
- (11) As soon as signals are put right by competent authority, normal working of trains on Automatic Block System may be resumed, after exchanging messages with Private Numbers by the Station Masters concerned, assuring that the section is clear. Controller's permission, if possible, should be obtained before resumption of normal working.
- (12) All the records in connection with train working on this system shall be retained at the station and the Traffic Inspector of the section must scrutinise them and submit his report to the Divisional Railway Manager within seven days of the resumption of normal working.

S.R.9.12/2. Failure of all signals on double line likely to last for sometime and cause serious delay when no means of communication are available – In the event of failure of all signals occurring in an area consisting of two or more stations worked under Automatic Block System and when trains can not be worked by any of the following in the order of preference of means viz.-

- (a) Block Instruments, Track Circuiting or Axle Counters
- (b) Telephones attached to Block Instruments
- (c) Station to station fixed telephones wherever available
- (d) Fixed telephone such as Railway autophones & BSNL phones
- (e) Control telephone
- (f) VHF sets

The following procedure shall be adopted for train passing -

- (1) The movement of trains on the affected section shall be controlled by such stations and on such lines as are prescribed by special instructions.
- (2) All points over which the trains will run within the affected area shall be correctly set and locked before the movement of any train is authorised over them.

Whenever any power operated points have to be operated for diverting trains, these may be released and operated locally under the written instructions of the Station Master on duty by the Signal Maintainer at stations where Signal Maintainers are available.

- (3) Before any train is allowed to leave the station as prescribed in clause (1) above, it shall be brought to a stand and the Loco Pilot /Motorman and the Guard of the train shall be advised of the circumstances by the Station Master.
 - (4) The Station Master shall give the Loco Pilot /Motorman of each train -
 - (a) An “Authority to Proceed without Line Clear” on the prescribed form. The counterfoil shall be retained by the Station Master and the foil given to the Loco Pilot.
 - (b) A Caution Order restricting the speed to 25 Kilometres per hour over the straight with clear view and to 10 kilometres per hour when approaching or passing any portion of 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 restriction imposed and speed over facing points being restricted to 15 kilometres per hour, the Loco Pilot shall ensure that the speed is kept at the limit prescribed above and is not exceeded or, without any reason reduced.
 - (c) An authority on the prescribed form 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 signalled past by a Pointsman or any other railway servant in uniform deputed for the purpose and the Gate signals cautiously upto the level crossing where he must ascertain that the gates are locked and the hand signals are displayed by the Gateman before he proceeds further. The individual distinguishing number / numbers of each Automatic, Semi-Automatic, Manually operated and Gate Signal/signals shall be indicated on this authority.
 - (5) No train shall be allowed to enter an affected section until there is a clear interval of 15 minutes between the train about to leave and the train which has immediately preceded, unless a shorter interval has been prescribed under special instructions.
 - (6) In the event of a Loco Pilot approaching or passing any portion of a line where view ahead is not clear, Assistant Loco Pilot or Guard with hand signals must be sent in advance to guide the further movement of the train. A sharp lookout ahead should be kept and the engine whistle freely used.
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- (7) The Guard shall keep a sharp lookout in the rear and be prepared to exhibit a danger signal to prevent the approach of a train from the rear and to protect it, if the detention is likely to exceed 5 minutes.
- (8) When approaching the next station nominated under special instructions under clause(1) above, the Loco Pilot shall bring his train to a stand outside the first Stop signal and sound one long whistle. The Station Master after satisfying himself that all points have been correctly set and locked, shall arrange for a man in uniform, before the train arrives at the signal, to pilot the train from the signal without any delay.
- (9) The Loco Pilots of all trains shall make over the 'Authority to proceed without Line Clear' to the Station Master of the nominated station at the end of the section. These shall be kept by the Station Master in his personal custody for inspection by the Traffic Inspector of the section, who shall prepare a report on the working of trains and shall forward the same along with his report to the Divisional Railway Manager within 7 days of resumption of communication.
- (10) A record of all trains passed over the affected section on 'Authority to proceed without Line clear' during the course of total interruption of communications, shall be maintained in the Train Signal Registers to be opened at all the specially nominated stations under clause 1 above.
- (11) Trains must continue to work on this system until either the signals are put right or any one of the means of communications is restored by the competent authority.
- (12) As soon as the signals are put right, normal working of trains shall be resumed, but where signals continue to remain inoperative and any of the means of communications is restored, the Station Master shall immediately send a message to the Station Master at the other end of the affected section on the following proforma -

<p>From Station Master _____ to Station Master _____ _____ Train (Number and Description) _____ arrived complete at _____ hours. Last train _____ (Number and Description) despatched to your station _____ at _____ hours. Cancel the present method of working of trains. Line Clear shall be obtained by means of _____ Acknowledge.</p> <p>Private Number _____</p>

On receipt of the above message, the Station Master at the other end of the affected section shall acknowledge in the following form –

<p>From Station Master _____ to station Master _____ No _____ Your No. _____ Understand that train (Number and Description) _____ which was the last train to leave my station has arrived complete at your station. Train No. _____ which left your station has arrived complete at my station at _____ hours/not arrived. Present system of train working is being/will be cancelled immediately after the complete arrival of train No. _____ Line Clear for the next train will be obtained by means of _____</p> <p>Private Number _____</p>
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- (13) Line Clear shall not be obtained or given by any means of communication which has been restored until both the Station Master are satisfied that all trains and engines etc. despatched from their stations have arrived complete at the other station. When the trains referred to in clause 1 above arrive complete at the stations, their number and their arrival time will be communicated to the other Station Master concerned under exchange of Private Numbers. Thereafter an intimation about this shall be given to the Section Controller, if possible.

S.R.9.12/3. Rules and Regulations for working of trains under the Automatic Block System during obstruction of one or more lines, when signals are operative and communications are available - In the event of obstruction of one or more lines in an area consisting of two or more stations worked under the Automatic Block System when signals are operative and communications are available, the following procedure shall be adopted -

On the Double line section when one line is obstructed -

- (1) When it is desired to introduce temporary single line working on double line on electric communication instruments, the Station Master at one end of the affected section shall, on receipt of reliable information in writing that one line is clear, take steps to introduce temporary single line working on that line in consultation with the Section Controller and the Station Master of the station at the other end of the section.
- (2) If there is 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 below the rank of an JE/P.Way has inspected that section and certified that the road is safe for the passage of trains.
- (3) The movement of trains on the affected section shall be controlled by such stations and on such lines as are prescribed by special instructions.
- (4) All trains running in the wrong direction shall be worked in accordance with the rules for the use of electric communication instruments on single line and Line Clear shall be obtained by the means of communications provided at the station.

Line Clear shall not be given unless the line on which the train is to be received is clear at least 180 metres beyond the first Stop signal pertaining to the correct line or the last Stop signal pertaining to the wrong line whichever is earlier. For each first train running in the wrong direction.

Line clear shall neither be asked for nor given unless the two Station Masters have assured under exchange of Private Numbers that all the trains running in the right direction have already arrived complete at the station in advance.

Except for each first train running in the right direction for which the procedure laid down for the trains running in the wrong direction shall be followed, subsequent trains running in the right direction may be allowed to follow each other on Automatic Signal indications, provided the station in rear has intimated the station in advance of the fact that he is permitting particular train/ trains to follow and has ascertained the latter's readiness to receive it/them. Private Numbers shall be exchanged for this transaction.

- (5) Train Signal Register shall be introduced at the stations on affected section.
- (6) Loco Pilots of all trains on the affected area must be so advised in writing by the station immediately in rear of the affected section on which temporary single line working has been introduced.

A written authority should also be given to the Loco Pilots of trains running in the right direction to pass the last Stop signal which shall be kept at 'red'. The Loco Pilots of trains running in the wrong direction shall be given the prescribed Line Clear Tickets before entering the affected section.

- (7) All the points over which the train will run within the affected area shall be correctly set and locked as per rules before the movement of any train is authorised over them.

Whenever any power operated points have to be operated for diverting trains these may be released and operated locally under the written instructions of the Station Master on duty by the Signal Maintainer at stations where Signal Maintainers are available.

- (8) After ascertaining that one of the lines is clear for the passage of traffic, the Station Master proposing single line working shall issue a message under exchange of Private Numbers, containing the following information, to the Station Master at the other end of the affected section -
 - (a) the 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) the place of obstruction,
 (e) the restriction of speed, if any, on the line,
 (f) the number and timings of the last train which arrived/left the station nominated by Divisional Railway Manager under clause 3 above ,and
 (g) an enquiry about speed restriction in the opposite direction.
- (9) On receipt of acknowledgment and reply to the enquiry regarding speed restriction in the opposite direction, from the Station Master at the other end confirmed by a Private Number, single line working may be introduced. Line clear shall be obtained by the means of communications available at the station as the case may be, and trains run on the procedure set out above.
- (10)(a) A Caution Order shall also be handed over to the Loco Pilot of each train on which shall be clearly stated -
 (i) the line on which the train or light engine is to run,
 (ii) the kilometres between which the obstruction exists,
 (iii) any restriction of speed, and
 (iv) the instructions that Automatic signals in the wrong direction should be considered as out of use.
- (b) For trains running in the wrong direction, an authority on the prescribed form authorising the Loco Pilot/ Motorman to pass the intervening non-governing (i.e.relatng to the opposite direction) Semi-Automatic and Manually operated signals on being hand signalled past by a Pointsman or any other railway servant in uniform deputed for the purpose and the gate signals cautiously upto the level crossings where he must ascertain that the gates are locked and hand signals are displayed by the Gateman before he proceeds further.
- He must also ascertain that the points of the outlying sidings are correctly set and locked before passing over them. In such cases, the hand signals shall be displayed at such points/gates instead of at the signals. The individual distinguishing number including number of each Automatic, Semi-Automatic, Manually operated and gate signals shall be indicated on this authority.
- (11) An endorsement shall also be made on the Caution Order given to the Loco Pilot of the first train introducing temporary single line working in the wrong direction to stop and inform all Gatemen and Gangmen on the way about the introduction of temporary single line working. The road on which the trains shall run is also to be specified.
- (12) The speed of all trains running in the wrong direction shall not exceed 25 Kms.per hour.
- (13) When approaching the next station nominated under special instructions under clause 3, the Loco Pilot of the train running in the wrong direction shall bring his train to a stand opposite the first Stop signal pertaining to the correct line or the last Stop signal, pertaining to the wrong line on which he is running, whichever he comes across first, and sound one long whistle.
- The Station Master, after satisfying himself that all points have been correctly set and facing points locked, shall arrange for a man in uniform to pilot the train from this signal, who shall obey hand signals, if any, relayed from the station platform. Manual/Semi-Automatic signals, if any, shall, however, be passed on a written authority on the prescribed form to be issued by the Station Master.
- (14) Resumption of normal working -
 (a) On receipt of written certificate from a responsible engineering official that the obstructed track is free for passage of trains, the Station Master shall issue a message to other station or stations, as the case may be, under exchange of Private Numbers and decide, in consultation with Section Controller, the train after the passage of which the normal working has to be introduced.

- (b) An entry shall also be made in the Train Signal Registers of all stations concerned showing the time double line working was suspended, time single line working was introduced and the time normal working was resumed.

- (15) All the records in connection with the temporary single line working shall be retained at the station and the Traffic Inspector of the section must scrutinise them and submit his report to the Divisional Railway Manager within seven days of the resumption of normal working.

S.R.9.12/4. Rules and Regulations for working of trains under the Automatic Block System during obstruction of one or more lines when no communications are available and signals have also failed - The following procedure shall be adopted for train passing -

On a double line section when one line is obstructed - In the event of total interruption of communications occurring on a section worked under Automatic Block System and when trains cannot be worked by any one of the following means:

- (a) Block Instruments, Track Circuiting or Axle Counters
 - (b) Telephones attached to Block Instruments
 - (c) Station to station fixed telephones wherever available
 - (d) Fixed telephone such as Railway autophones & BSNL phones
 - (e) Control telephone
 - (f) VHF sets
- (1) The movement of trains on the affected section shall be controlled by such stations and on such lines as are prescribed by special instructions.
 - (2) Before any train is allowed to leave the first controlling station prescribed under clause I above to enter the affected area, it shall be brought to a stand and the Loco Pilot and the Guard of the train shall be advised of the circumstances by the Station Master.
 - (3) The Station Master shall satisfy himself that the Guard and the Loco Pilot thoroughly understand the rules under which the trains are to be run during total failure of communications on single line. He will also obtain the signatures of the Loco Pilot and the Guard on the counterfoil of the form 'Authority to proceed without Line Clear' referred to in clause 6-(i). a record of this kept on the foil and counter foil of the 'Authority to proceed without Line Clear'.
 - (4) Communications shall be opened by an empty train, train engine, light engine, and Motor trolley or Tower wagon to be sent on the unobstructed line. In case a train consisting of EMU stock/Diesel car has to be sent to open communications all passengers must be detained before the train is despatched. The relevant provisions of the rules for single line working on double line during total failure of communication shall be adhered to.
 - (5) Loco Pilots of all trains approaching the affected area must be advised in writing by the first controlling station prescribed under clause 1 above about the stations between which and the line on which temporary single line working has been introduced. In addition, the Loco Pilots of trains which will run on the right road on temporary single line shall stop at the station immediately in rear of the affected section and proceed further only on receipt of the prescribed authority to proceed.
 - (6) The Station Master will handover to the Loco Pilot opening the communication the following documents -
 - (i) "An Authority to proceed without Line Clear" on prescribed form.
 - (ii) A Caution Order restricting the speed to 25 kilometres per hour over the straight with clear view and to 10 Kilometres per hour 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 Kilometres per hour.
The Caution Order shall contain:
 - (a) The line on which the train or light engine is to run.
 - (b) The kilometres between which the obstruction exists.
 - (iii) An authority on the prescribed form 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 signalled past by a Pointsman or any other railway servant in uniform deputed for the purpose and Gate signals cautiously upto the level crossing where he must ascertain that the gates are locked and the hand signals are displayed by the Gateman before he proceeds further. The individual distinguishing number/numbers of each Automatic, Semi-Automatic, Manually operated, and Gate signal/ signals shall be indicated on this authority.

- (iv) A conditional line clear message for a train to enter the affected section from the other end.
 - (v) An enquiry message addressed to the Station Master of the nominated station in advance seeking line clear for the next train to proceed to his station.
- (7) 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 and Gangmen on the way about the introduction of temporary single line working. The road on which the trains will run shall also be specified.
- (8) All the points over which the trains will run within the affected area shall be correctly set and locked as per rules before the movement of any train is authorised over them.
- Whenever any power operated points have to be operated for diverting trains, these may be released and operated locally under the written instructions of the Station Master on duty by the Signal Maintainer at stations where signals Maintainers are available.
- (9) (a) After sending forward a train engine / empty EMU train / light engine /Motor trolley/Tower wagon with enquiry and line clear messages, no other train or engine shall on any account be allowed to leave in the same direction until the return of that engine/empty EMU train/Motor trolley/Tower wagon.
- (b) No obstruction of the line at the station shall be allowed until the return of that engine/motor trolley or Tower wagon or empty EMU train.
- (10) The Loco Pilot of such an engine/empty EMU train/motor trolley /Tower wagon proceeding to open communications shall proceed at a speed not exceeding 25 kilometres per hour over the straight with a clear view and 10 kilometres per hour when approaching or passing any portion of the line by night or when the view ahead is not clear making free use of the engine whistle. In thick or foggy weather, the Loco Pilot must 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. One of these men will be provided by the Station Master from his class IV staff and the other will be Asstt Loco Pilot. Both these men will have their duties clearly explained to them by the Station Master who would satisfy himself that they thoroughly understand the same in the presence of the Loco Pilot.
- (11) In the event of an engine or Tower Wagon or Motor trolley or empty EMU train meeting any other engine, Tower wagon etc. sent from the other end in the mid section, the two Loco Pilots shall, taking into consideration the importance of the trains waiting, the distance from the nearest station, gradients to be encountered, the presence of catch siding etc., decide which engine/unit etc. should push back so as to allow the other to go through.
- (12) On arrival of the train etc. at the next station nominated under special instructions, under clause 1 above, the Loco Pilot shall hand over the Conditional Line Clear and Line Enquiry Message to the Station Master who shall record it in the Line Clear Message book.

- (13) The Station Master on the authority of the Conditional Line Clear shall despatch the waiting train from his station.

The Loco Pilot shall be given the following documents -

- (i) Conditional Line Clear ticket as per G.R. 14.25(1)
 - (ii) Conditional Line Clear Message for a train to leave from the station waiting at the other end of the affected section.
 - (iii) A Caution Order on which shall be clearly stated -
 - (a) The line on which train is to run.
 - (b) The kilometres between which the obstruction exists.
 - (c) Any temporary restriction of speed, which may have been imposed.
 - (d) An enquiry message addressed to the Station Master of the nominated station in advance seeking Line Clear for the next train to proceed to his station.
- (14) When approaching the next station nominated under special instructions, under clause 1 above, the Loco Pilot shall bring his train to a stand outside the first Stop signal pertaining to the correct line or opposite the last Stop signal pertaining to the wrong line on which he is running, whichever he comes across first, and sound one long whistle.
- The Station Master, after satisfying, himself that all points have been correctly set and points locked shall arrange for a man in uniform, to pilot the train from this signal who shall obey hand signals, if any, relayed from the Station Platform. Manual signals (including Semi-Automatic, signals working as Manual signals) if any, shall be, however, passed on a written authority on the prescribed form to be issued by the Station Master.
- (15) On arrival at the station, the Loco Pilot shall hand over the Line Clear Reply Message to the Station Master who shall record it in the Line Clear Message Book on its authority issue a conditional Line Clear Ticket for the waiting train.
- (16) The speed of all trains passing over the temporary single line shall be restricted to 25 kilometres per hour subject to observance of other speed restrictions imposed and speed over facing points being restricted to 15 Kilometres per hour.
- (17) If there be an even flow of trains in both directions, Enquiry and Line Clear Messages for each succeeding train may be sent with the Loco Pilot of the preceding train.
- (18) The arrival and departure time of all trains must be carefully recorded in -
 - (a) Line Clearly Enquiry and Reply Books,
 - (b) Counterfoil of the "Authority to proceed without Line Clear" (this applies to the first train only), and
 - (c) The Train Signal Register.
- (19) 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, shall mention in the Line Enquiry Message the numbers of trains he wants to send and also state therein that the latter trains will be despatched after the first train at interval of 15 minutes or full running time whichever is more.
- After the receipt of Line Clear 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 at a specified interval.
- While adopting this procedure the Guard and the Loco Pilot shall be instructed to keep a sharp look out and be prepared to stop short of any obstruction and if the view is restricted because of fog, curve or any other reason, speed shall not exceed 10 kilometres per hour.
- Note: If Line Clear is granted for a train or trains, no other train should be despatched from the opposite end until the arrival of the train or trains or the cancellation of the Line clear.

- (20) **Resumption of normal working-** The normal working shall not be resumed unless:
- (a) The Station Master has received a written certificate from a responsible engineering official that the obstructed track is free for passage of trains, and
 - (b) Either the signals are put right or any one of the means of communications as listed above in Rule-1 is restored by the competent authority.
- Note:** (i) In case when obstruction is removed but signals continue to remain inoperative and none of the means of communications is available, the train shall be worked in accordance with the instructions prescribed in S.R. 9.12/2.
- (ii) In case where either signals are put right or any one of the means of communications is available, but the obstruction continues, the instructions as prescribed in S.R. 9.12/3(1) shall be observed.
- (c) An entry shall also be made in the Train Signal Registers of all stations concerned showing the time when normal working was suspended and the time when normal working was resumed.
- (21) 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 must scrutinise them and submit his report to the Divisional Railway Manager within 7 days of the resumption of the normal working.

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.9.13/1. (a) The Guard of the train in consultation with the Loco Pilot /Motorman shall send written advice to the Station Master of the rear station explaining the circumstances necessitating the train to push back.

(b) The Station Master, after ensuring that the line in rear of the said train is clear upto his station shall send a written message authorising the Loco Pilot /Motorman to push back to his station. He shall also advise the Station Master of the station in advance and the Section Controller about the pushing back of the train. The Station Master shall ensure that there is no train on the same line between his station and the train to be pushed back.

(c) The Loco Pilot /Motorman and Guard shall observe provisions contained in S.R.4.12/2 (b) (g) and (h) while the train is pushing back.

(d) In case of an EMU train, the Motorman shall drive the train from the leading motor coach/driving cab.

(e) The Loco Pilot /Motorman shall whistle frequently by giving prescribed code of whistle (eleven short whistles).

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 authorised 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.

S.R.9.14/1. When a Loco Pilot passes a semi-automatic signal under the authority of calling on signal fixed below the Stop signal, which is at 'ON' he, shall follow the instructions laid down in G.R. 3.79.

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-

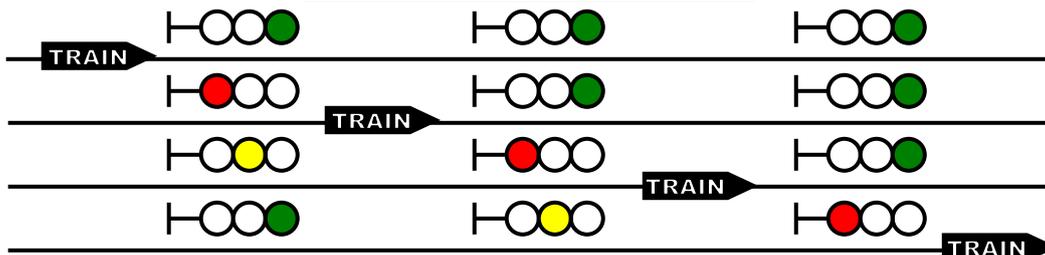
- (a) he shall comply with the provisions of Rule 9.02 or 9.07 as the case may be, if the ‘A’ marker is illuminated, or
- (b) (i) if the ‘A’ marker light is extinguished, he shall sound the prescribed code of whistle to warn the Gateman and bring his train to a stop in rear of the signal, and
 - (ii) 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 up to 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 the 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 up to the next stop signal complying with the rule 9.02 or 9.07 as the case may be.

S.R.9.15/1. (a) The Loco Pilot shall sound one continuous long whistle when the train comes to a stop at a gate signal and one long and one short whistle before passing the gate signal and also the level crossing gate.

(b) In case of EMU trains the Motormen shall give 2 pause 2 rings before passing the Gate signal in the ‘On’ position, and 2 rings before passing the level crossing gate, which shall be acknowledged by the Guard.

9.16. Illustrative diagrams - Automatic change of sequence of aspects being behind the train in three aspects and found aspects signalling is illustrated in the following diagrams which are not drawn to scale.

AUTOMATIC CHANGE OF SEQUENCE OF ASPECTS BEHIND THE TRAIN IN THREE ASPECT SIGNALLING TERRITORY



AUTOMATIC CHANGE OF SEQUENCE OF ASPECTS BEHIND THE TRAIN IN FOUR ASPECT SIGNALLING TERRITORY

