

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 other wise 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 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 upto that signal and shall act upon its indication only after he has reached it.

SR 9.02.01.- (a) When a Loco Pilot finds an Automatic Stop signal with an 'A' Marker at 'on', he shall, while bringing his train to a stop in rear of it, draw his train as close as possible in rear of the signal.

(b) (i) After the signal has been passed at 'On' and while taking the train under sub-rule (1) of General Rule 9.02, the Loco Pilot shall so regulate the speed of his train so as to be able to stop within half the distance upto which the line ahead can be seen clearly. But in any case, subject to the observance of speed limit prescribed under sub-rule (3) of General Rule 9.02, the speed of the train shall not exceed 15 kilometres per hour even in normal conditions of visibility until the next stop signal is reached looking out for any possible obstruction/train and be prepared to stop short of the same. In clear weather after passing an Automatic Stop signal at 'On', the Loco Pilot of the following train shall ensure that a minimum distance of 150 metres or two clear OHE spans is maintained between his train and the preceding train or any obstruction on line except in the case of EMU train following where the above distance may be reduced to 75 metres or one clear OHE span. However, during dense fog, after passing automatic stop signal at ON, the Loco Pilot/Motorman of the train hauled by any locomotive including EMU train, shall, while moving at a speed not exceeding 10 kmph should ensure that he maintains a 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. In special circumstances like floods, etc., the following train may of course, be pulled closure to the preceding train or obstruction.

(ii) a) The Guard of a train shall watch that the Loco Pilot/Motorman does not exceed the speed prescribed under sub-rule (3) of GR 9.02 and clause (i) sub-rule (b) of SR 9.02.01.

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

c) In case of other trains if the Loco Pilot exceeds the speed prescribed, the Guard shall take action as per GR 4.45.

SR 9.02.02.- When a Loco Pilot comes across an automatic stop signal which is flickering/bobbing, he shall treat the signal to be showing its most restrictive aspect and bring his train to a stop in rear of the signal. If the signal assumes a steady aspect and remains steady for at least 60 seconds, he shall act according to the steady aspect so displayed by the signal. But if the signal continues to flicker or bob and does not assume steady aspect for at least 60 seconds, he shall treat the signal as defective and take action in accordance with General Rule 9.02 and Subsidiary Rule 9.02.01.

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 signal 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 in 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 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 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 10 kilometres an hour. Under these circumstances, the Loco Pilot when not accompanied by an 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 lookout.

(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.

SR 9.07.01.- (a) When a Loco Pilot finds an Automatic Stop signal with an 'A' Marker at 'on', he shall, while bringing his train to a stop in rear of it, draw his train as close as possible in rear of the signal.

(b) (i) After the signal has been passed at 'on' and while taking the train under sub-rule(3) of General Rule 9.07, the Loco Pilot shall so regulate the speed of his train so as to be able to stop within half the distance upto which the line ahead can be seen clearly. But in any case, subject to the observance of speed limit prescribed under sub-rule(5) of General Rule 9.07, the speed of the train shall not exceed 15 kilometres per hour even in normal conditions of visibility until the next stop signal is reached, looking out for any possible obstruction/train and be prepared to stop short of the same. In clear weather after passing an Automatic Stop signal at 'On', the Loco Pilot of the

following train shall ensure that a minimum distance of 150 metres or two clear OHE spans is maintained between his train and the preceding train or any obstruction on line except in the case of EMU train following where the above distance may be reduced to 75 metres or one clear OHE span. However, during dense fog, after passing automatic stop signal at ON, the Loco Pilot/Motorman of the train hauled by any locomotive including EMU train, shall, while moving at a speed not exceeding 10 kmph should ensure that he maintains a 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. In special circumstances like floods, etc., the following train may of course, be pulled closure to the preceding train or obstruction.

(ii) (a) The Guard of a train shall watch that the Loco Pilot/Motorman does not exceed the speed prescribed under sub-rule(5) of General Rule 9.07 and clause (i) of sub-rule (b) of SR 9.07.01.

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

c) In case of other trains if the Loco Pilot exceeds the speed prescribed, the Guard shall take action as per GR 4.45.

SR 9.07.02.- When a Loco Pilot finds an Automatic Stop signal flickering/bobbing, he shall take action in accordance with SR 9.02.02 except that when the signal continues to flicker or bob and does not assume steady aspect for at least 60 seconds, he shall treat the signal as defective and take action in accordance with General Rule 9.07 and Subsidiary Rule 9.07.01.

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.

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.

SR 9.11.01.- The Station Master on receipt of signal failures shall atonce advise by telephone the Technician (Signal), the Controller and the Station Master in rear and other concerned giving correct number of the signal and time of failure in accordance with SR 3.68.01.

SR 9.11.02.- After failure has been rectified, the Technician (Signal) shall immediately advise the Station Master on duty of the nearest station who will inform the Controller and other concerned giving them the time when failure was rectified.

SR 9.11.03.- Whenever any Automatic Signal is passed at 'ON' the Guard shall record in his journal the time of passing the next signal. All such cases of passing the Automatic Stop signal at 'on' together with the timings of passing the two signals, shall be recorded in a special register to be maintained in control office, and this shall be periodically scrutinised by the Operating Officers to ensure that the Loco Pilots take not less than the minimum running time required for observing the speed restrictions and cautious driving.

SR 9.11.04. - When a Loco Pilot/Motorman finds an Automatic Stop signal with an 'A' Marker or a Semi-Automatic Stop signal when working as Automatic Stop signal displaying more than one aspect simultaneously other than what have been prescribed under General Rules 3.08(4) (b) in the three aspect signalling territory and 3.08(4) (c) in four-aspect out of the aspects displayed by the signal. He shall also make a report in this regard in terms of SR 9.11.01.

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 section concerned under special instructions.

SR 9.12.01.- Procedure for working of trains during failure of all or series of signals in the Automatic Block System (Double Line) likely to last for some time and cause serious delay while means of communications are available.-

In the event of failure of all or series of signals in an area consisting of two or more stations worked under Automatic Block System (Double Line), the concerned official of the Signal Department shall take immediate steps to inform all concerned, and the procedure detailed in these rules shall be adopted for train passing.

(a) The Station Master shall inform the controller and the concerned Station Master of the affected section.

(b) Before the 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.

(c) The Station Master on duty at the station in rear of the affected section shall obtain 'Line Clear' for each train by one of the following means indicated below in order of preference:

(i) Inter-cabin / Station to Station fixed telephone,

(ii) Railway auto telephone / BSNL Phone

(iii) Control phone

(iv) VHF set in compliance to SR 14.01.02.

(d) The Station Master on duty at the station in advance shall not give such 'Line Clear' unless-

(i) the whole of the last preceding train has arrived

(ii) the line on which it is intended to receive the train is clear upto the starter and for a distance of 180 metres beyond it,

(iii) all signals behind the said train have been put back to 'on'.

(iv) all points have been correctly set and all facing points locked for the admission of the train on the said line.

NOTE - The granting of line clear shall be supported by a Private Number and Identification Number.

(e) (i) The Station Master on obtaining 'line clear' from the station in advance shall give the Loco Pilot /Motorman of each train an Authority to proceed on Automatic Block System during prolonged failure of signals" (T/D 912)

(ii) A Caution order shall invariably be issued to the Loco Pilot/ Motorman and Guard as prescribed in sub-rule (g) (i) and (ii) below.

(f) Before handing over the 'Authority to Proceed' all the points over which trains will pass shall be correctly set and all facing points locked. Whenever any power operated points have to be operated for diverting trains these may be released and operated as per the instructions contained in the Operating Manual.

(g) (i) The Loco Pilot / Motorman of the first train entering the affected section shall proceed with utmost caution and shall not run

at a speed exceeding 25 KM per hour under any circumstances subject to other restrictions in force and continue to look out for any obstruction until he reaches the station ahead.

(ii) After ensuring that the first train has arrived safely at the station in advance, the Loco Pilot of the subsequent train may run at normal speed subject to the observance of any other speed restrictions in force exercising great caution, bearing in mind the possibility of level crossing gates being open to road traffic and other obstructions and stop short of any obstruction that he may encounter on the run.

(h) When approaching the next station the Loco Pilot / Motorman shall obey aspect of the first stop signal. The Station Master after satisfying himself that all is safe shall arrange to receive the train by taking 'off' the relevant reception signal or pilot the train if the situation warrants.

(i) Clearance of the section by each train shall be intimated to the station in rear supported by a Private Number.

(j) Train Signal Register Book shall be brought into use and all entries regarding train working recorded there in. Controller shall be kept advised of movement of all trains in the affected section.

(k) 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 with Private Numbers by the Station Masters concerned assuring that the section is clear. Controller's advice shall be obtained before resumption of normal working.

(l) All records in connection with Train working on this system shall be retained at the station for inspection by the Transportation Inspector of the section.

SR 9.12.02.- Failure of all 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 occurring in an area consisting of two or more stations working under Automatic Block System (Double Line) the following procedure shall be adopted for working of trains between stations :-

(a) (i) Before any train is allowed to enter in the interrupted section, it shall be brought to a stand and the Loco Pilot as well as the Guard of the train shall be advised of the circumstances by the Station Master.

(ii) All the points over which trains will run within the affected area shall be correctly set and facing points locked before the movement of any train is authorised over them. Whenever any power operated points have to be operated these may be released and operated locally as per the instructions contained in the Operating Manual.

(b) The Station Master shall give the Loco Pilot of each train

An Authority to proceed without line clear on Automatic Block Signalling territories (T/B 912) which shall include-

1) An Authority to proceed without line clear.

2) An Authority for the Loco Pilot to pass the intervening Automatic, Semi Automatic / Manually operated stop signals between the two stations at 'ON' provided that the Semi Automatic Signals and Manually operated signals shall be hand signalled past by a railway employee in uniform deputed for the purpose and the Loco Pilot after passing a gate stop signal, shall proceed continuously upto the level crossing where the Loco Pilot shall ascertain that the gates are locked and hand signals are displayed by the gateman before he proceeds further. The individual distinguishing number of each Automatic, Semi-Automatic, manually operated and gate signal shall be indicated on this authority.

(3) A caution order restricting the speed to 25 KM per hour over straight and to 10 KM per hour when approaching or passing any portion of the line where the view ahead is not clear due to tunnel, curve, obstacle, rain fog and dust storm or for any other cause subject to the observance of other speed restrictions in force.

(c) In the event of the Loco Pilot approaching or passing any portion of the line where the view ahead is not clear, the Asstt. Loco Pilot or the Assistant Guard /Guard with hand signals shall be sent in advance to guide the further movement of the train. A sharp look out ahead shall be kept and the engine whistle used freely.

(d) No train shall be allowed to enter the affected section until there is a clear interval of 15 minutes between the train about to leave and the train which has immediately preceded.

(e) Manually operated fixed signals with the exception of the last stop signal may be taken 'off' for the reception and departure of trains. First Stop signal shall, however be taken 'off' only after the train has been brought to a stand outside it.

(f) The Guard shall keep a sharp look out in the rear and be prepared to exhibit a Stop Hand signal and Waring signal as indicated in GR 3.65 to prevent the approach of a train from the rear and to protect it, if necessary as per extant rules.

(g) When approaching the station ahead the Loco Pilot shall bring his train / engine to a stop outside the First Stop signal and sound one long continuous whistle. If within 5 minutes neither the signal is taken 'off' nor any one turns up from the station, the Loco Pilot and the Guard shall take action as prescribed under GR 4.44 and Subsidiary Rules thereto.

(h) The Loco Pilot of all trains shall make over "Authority to Proceed without Line Clear" on Automatic Block Signalling Territories to the Station Master at the end of the affected section. These shall be kept by the Station Master in his personal custody for inspection by the Transportation Officials.

(i) Records of all trains worked over the affected section on "Authority to proceed without Line Clear" on Automatic Block Signalling Territories during the course of total interruption of communication, shall be maintained in the Train Signal Register books at both stations concerned.

(j) Trains shall continue to work on this system until either the signals are put right or any one of the authorized means of communications is restored by the competent authority.

(k) As soon as the signals are put right trains shall be worked in accordance with the instructions contained in SR 9.12.05. But where signals continue to remain inoperative and any one of the authorized 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 on the following form :-

From : Station Master 'A'

No..... Train (Number and description)
 arrived complete at Hours
 Last Train (Number and description) despatched
 to your station at Hours. Propose to cancel present
 method of working of trains. Line Clear shall hereafter be obtained by
 means of Acknowledge. Private Number

On receipt of the above message, the Station Master 'B' shall not acknowledge the same unless he is satisfied from his record about the complete arrival of the last train despatched from station 'A' and also the complete arrival at station 'A' of the last train despatched from station 'B'. On thus being satisfied he shall reply in the following form :-

From : Station Master 'B'

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 completed at my station at hours. Present system of train working is cancelled. Line Clear for the next train shall be obtained by means of Private Number

(1) The Station Master at Station 'A' shall not resume working of train by means of communication so restored unless he has verified from his records about the clearance of both Up and Down lines. The Section Controller shall also be informed about the trains worked on "Authority to proceed without Line Clear" on Automatic Block Signalling Territories whenever control working is resumed.

SR 9.12.03.- Working of trains under Automatic Block System (Double Line) during obstruction of one line when signals are operative and communications are available –

(a) Whenever an accident to a train or other obstruction precludes the use of the lines on a double line on obtaining Line Clear by means of the electrical communication instruments which shall be used in order of preference given below:

- (i) Inter-cabin/Station to Station fixed telephone,
- (ii) Railway auto telephone / BSNL phone
- (iii) Control telephone.
- (iv) VHF set in compliance to SR 14.01.02.

(b) When it is desired to introduce temporary single line working, the Station Master at one end of the affected section shall, on receipt of the information in writing from Guard/Loco Pilot/JE/SE/SSE (P way)/JE/SE/SSE (TrD) that one line is clear and on being satisfied that no train is on the section over that line, takes 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.

(c) (i) If there is reason to suspect that the line over which temporary single line working is to be introduced is fouled or damaged, such working shall not be introduced until a responsible engineering official of the rank not less than that of JE (P way) has inspected the section and certified that the line is safe for the passage of trains;

(ii) Single line working shall not be introduced on a section of double line on which engineering or OHE operations require display of engineering signals as laid down in GR 15.09 without the concurrence of the engineering or the OHE official in charge. Such concurrence shall be obtained by the Station Master by exchange of messages / memos with the concerned official.

(d) Single line working shall be introduced between the nearest stations provided with cross-overs between Up and Down lines on either side of the obstruction.

(e) If for any reason other than introduction of single line working it becomes necessary to run an engine or a train against the normal direction of traffic, the provision given in sub-rule (g) of SR 6.02.05. shall be followed.

(f) After ascertaining that one of the lines is clear for passage of traffic, the Station Master proposing to introduce single line working shall issue a message supported by a Private Number, containing the following information to the Station Master at the other end of the affected section-

(i) Cause of introduction of single line working

(ii) The line on which single line working is proposed ;

(iii) The source of information that the said line is clear ;

(iv) Place of obstruction with KM ;

(v) The number and timings of the last train which arrived/left the block station issuing the message, on the line on which single line working is to be introduced ;

(vi) enquiry regarding temporary speed restrictions if any on the said line.

(g) On receipt of the acknowledgement from the Station Master at the other end accompanied by the required particulars and confirmed by a Private Number, Single line working shall be introduced.

(h) (i) All trains running in the wrong direction shall be worked in accordance with the rules for the use of electrical communication

instrument on single line and line clear shall be obtained on the means of communication mentioned in sub-rule (a) above supported by Private Number and Identification Number.

(ii) Line Clear referred to in clause (i) above shall not be given unless the whole of the last preceding train has arrived complete and unless the line on which the train is to be received is clear upto the fouling mark or starter, if any, at the trailing end. All points at the approaching end are correctly set in favour of the intended line and the facing points are locked.

NOTE - For each first train to run in the wrong direction after the complete arrival of right direction train / trains, line clear shall neither be asked for nor given unless both the 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.

(i) For each first train to run in the right direction, line clear shall be obtained in accordance with the procedure laid down in sub-rule (h) above, except that line clear shall be given only when the line is clear for atleast 180 metres beyond the first stop signal and the last train running in the wrong direction has arrived complete at the station at the other end of the affected section for which Private Number shall be exchanged between the Station Masters concerned.

(j) Subsequent trains to run in the right direction shall be allowed to follow each other on Automatic Signals indications provided the Station Master of the station in rear has intimated the Station Master of the station in advance of the fact that former is permitting particular trains(s) to follow and has ascertained the latter's readiness to receive it/them and obtain Private Number for each such train.

(k) Loco Pilot of all trains to run in the wrong direction, as also the first train in the right direction, shall be given-

(i) a paper line clear ticket on prescribed form (T/C 1425 or T/D 1425 as the case may be).

(ii) an authority on prescribed form (T/A-912) authorising the Loco Pilot to pass the intervening non-governing/governing Semi-Automatic and manually operated signals on being hand signalled past by a Pointsman/any other competent railway servant in uniform deputed for the purpose. The distinguishing number of each signal shall be indicated on this authority. In case of Semi-Automatic gate

signal the train shall be drawn cautiously upto the level crossing where the Loco Pilot shall ascertain that the gates are closed and locked and 'proceed' hand signal is displayed by the Gateman at the level crossing before he proceeds further. The Loco Pilot shall also ascertain that the points of the outlying sidings are correctly set and locked and proceed hand signal is displayed at such points by a competent railway servant before passing over them.

(iii) A caution order indicating-

(a) the line on which single line working has been introduced;

(b) the Kilometreage at which the obstruction exists on the other line ;

(c) speed restriction, if any

(l) An endorsement shall also be made in the Caution Order issued to the Loco Pilot of the first train after introduction of single line working to stop and inform all Gatemen, Gangmates and Keymen working on the line about the introduction of single line working specifying the line on which the trains shall run.

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

NOTE - In case there is any speed restriction on the line over which temporary single line working has been introduced, the Station Master concerned shall issue a message to the concerned JE/SE/SSE(P way) to arrange for showing of engineering signals as required vide GR 15.09 for trains in the wrong direction.

(n) All trains to run in the right direction, except the first train of a group of trains shall be given a caution order as detailed in clause (iii) of sub-rule (k) above.

(o) All trains in the right direction shall run at booked speed subject to the observance of speed restriction, if any.

(p) All fixed signals governing the movement of the trains in the right direction shall be taken 'off'. Trains in the wrong direction shall be piloted out at the despatching station in accordance with the procedures detailed in SR 3.70.01 except that in lieu of form T-369(3b), an authority on form T/A-912 shall be issued. These trains shall also

be piloted in, at the receiving station in accordance with the procedures detailed in GR 5.10 & SR there to.

(q) While approaching the station ahead Loco Pilot of each train proceeding in the wrong direction shall bring his train to a stop opposite to the first stop signal pertaining to the correct line or at the last stop signal pertaining to the wrong line on which he is running, whichever he comes across first, and whistle.

(r) Train Register Book shall be introduced at the stations for the duration of such working.

(s) Resumption of normal working:-

(i) On receipt of a written certificate from a responsible Engineering official not below the rank of JE(P way) or JE (TrD) in case of accident pertaining to OHE and Guard /Loco Pilot in case of engine failure, that the obstructed track is free for passage of trains, the Station Master shall issue a message to other stations as the case may be under exchange of Private Numbers and decide, in consultation with the Section Controller, the train after the passage of which normal working shall be introduced;

(ii) An entry shall also be made in the Train Signal Register books of the stations concerned the time at which double line working was suspended, signal line working was introduced and normal working resumed.

(iii) A message shall also be issued to the concerned JE/SE/SSE(P way) if action was initiated as per note below sub-rule (m) above for removal of the indicators which were provided temporarily,

(t) All records in connection with temporary single line working shall be retained at the station for inspection by the inspecting officials.

SR 9.12.04.- Procedure for working trains under Automatic Block system (Double Line)during obstruction of one line when no means of communication are available.

Whenever an accident to train or other obstruction precludes the use of one line on a double line (worked under Automatic Block system) during total failure of communications, traffic may be temporarily worked on the unobstructed line by introducing single line working in accordance with the procedure detailed below :-

(a) Before introducing single line working the Station Master at one end of the affected section must have an information in writing

from the Guard/ Loco Pilot/ JE/SE/SSE(P way)/JE/SE/SSE(TrD) that one line is clear.

(b) On receipt of information about the obstruction by the Station Master of the station in advance of the obstructed section, he shall arrange to send a message as indicated in SR 9.12.03(f) to the Station Master of the block station controlling the entry of trains into the said obstructed line through the Guard of any train which is to proceed to that station as per the procedure laid down in SR 9.12.02. In case no train is waiting or no train is expected, the message shall be sent through one of his station staff /gangman who may proceed either on foot or by using a push trolley or by using any public transport.

(c) After sending out the message, the Station Master shall not despatch any train in terms of SR 9.12.02 before the arrival of any engine /engines with brakevan /empty rake of EMU stock from the opposite direction. He may, however, send a train engine / light engine / engine with brakevan /empty rake of EMU stock in the manner laid down in SR 9.12.06.

(d) On receipt of the message indicated in sub-rule(b) above, the Station Master of the station controlling the entry of trains into the obstructed section shall arrange to send the acknowledgement thereof through-

(i) The Loco Pilot of train engine / light engine / engine with Brakevan / Empty rake of EMU stock, if any is waiting / expected which may be sent in accordance with the procedure laid down in SR 9.12.06, or

(ii) The Loco Pilot of Engine / Empty rake of EMU stock sent by the Station Master at the other end which is to return to that station as per procedure laid down in SR 9.12.06.

(e) In case the information about the obstruction is received by the Station Master of the Block controlling the entry of trains into the obstructed section, he shall immediately arrange to send a message as indicated in SR 9.12.03(f) to the Station Master at the other end of the affected section. If situation necessitates, the Station Master shall also send a Line Clear Enquiry message for the train which may be waiting / expected at his station. The message and the Line Clear Enquiry message shall be sent through one of his station staff / Gangman who may proceed to such station either on foot or by push trolley or by using any public transport.

(f) On receipt of the message indicated in the sub-rule (e) above, the Station Master shall arrange to send the acknowledgement thereof by returning the said railway servant who shall proceed either-

(i) by any train / Engine which is to proceed to that station in accordance with the procedure laid down in SR 9.12.02, or

(ii) on foot / using public transport / push trolley if no train or engine is to proceed as indicated in clause (i) above.

(g) If Line Clear Enquiry has been sent by the Station Master at the other end, a Conditional Line Clear Reply message shall also be sent through such person mentioning the number & description of the last train after the complete arrival of which the line shall be considered as clear for the train for which Line Clear has been asked for.

(h) After the acknowledgement has been sent as indicated in sub-rule (f) above, trains over the line proposed for single line working may be worked in accordance with the instructions contained in SR 9.12.06. But if Conditional Line Clear Reply message has been given, no train or Engine shall be despatched until the arrival of the train for which Conditional Line Clear has been given.

(i) On receipt of the acknowledgement mentioned in sub-rule (f) above, the Station Master of the station controlling the entry of the train into the obstructed section, may resume working of trains over the un-obstructed line in accordance with the procedure laid down in SR 9.12.06. A caution order in accordance with clause (iii) of sub-rule (k) and sub-rules (l) and (m) of SR 9.12.03 shall also be issued.

j) After the Station Masters of the stations at either end of the obstructed section have become aware of the obstruction in the manner detailed above, trains shall continue to work in accordance with the procedure detailed in SR 9.12.06 over the unobstructed line between the stations concerned until-

(i) Both the Station Masters have been informed of the obstruction having been removed, in which case procedure detailed in SR 9.12.05 shall be observed, or

(ii) Any one of the means of communication is restored in which case the procedure laid down in SR 9.12.03 shall be observed.

SR 9.12.05.- Working of trains under Automatic Block System (Double Line) during failure of the means of communication when signals are operative.

(a) The Station Master of the station in rear of the affected section shall in consultation with the Section Controller, or with the Station Master of the station immediately in rear of his station, if Section Controller is not available, ascertain the number and description of train(s) in the section and the expected time of arrival at his station. He shall then decide the sequence for allowing the trains into the affected section keeping in view the order of precedence and make out a list in duplicate under his stamp and signature indicating the number and description of the trains in the sequence in which the trains shall be allowed to leave his station.

(b) Before the first train of the series so listed, is allowed to enter the affected section, it shall be brought to a stop. A caution order shall be issued to the Loco Pilot and the Guard detailing the circumstances and advising the Loco Pilot to bring his train to a stop outside the first stop signal of the station in advance and sound the prescribed code of whistle and thereafter be guided by the instruction of the Station Master of the station in advance. The Loco Pilot shall also be given a copy of the list (mentioned in sub-rule (a) to be handed over to the Station Master of the station in advance.

(c) On arrival of the train at the station in advance of the affect section, the Loco Pilot shall hand over the list to the Station Master and the latter shall paste the same and make necessary entries in the log-register about the number and description of the trains according to the sequence shown therein. As and when the train actually passes/arrives his station he shall score out the train number and description from the list indicating the time of its arrival / passing, until and unless he is advised otherwise by the Station Master of the station in rear in the similar manner.

(d) After sending out the list through the Loco Pilot as per sub-rule (b) above, the Station Master of the station in rear shall paste the other copy in his Train log-register. Subsequent train(s) of the list need not be stopped out of course, provided they are allowed to enter the affected section in the same sequence as detailed in the list. As each train enters the section, he shall also score out the train number and description from his list.

(e) If due to any operational exigencies, it becomes necessary to change the sequence for running of the trains in the affected section or on the completion of the movement of all the trains in the list already sent, a fresh list shall be prepared with necessary remark for any change in the sequence of the previous list and action taken for working of the subsequent trains as per fresh list in the same manner as indicated in sub-rule (b) to (d) above.

SR 9.12.06.-Procedure for working of trains under Automatic Block System (Single line) during suspension of the panel working and when no means of communications are available.

In the event of suspension of the panel working between two consecutive block stations when direction of traffic cannot be established and when no means of communication are available, trains shall be worked between the stations concerned in the manner laid down in SR 6.02.04 along with the Authority (T/B602) in which authority to pass signals in 'ON' position may be scored out. In order to pass the automatic signals in 'ON' position, an authority in the prescribed form T/A-912 shall be issued. This form shall indicate the individual number of Automatic / Semi-Automatic signal passed by the Loco Pilot. In case of departure signal(s), the Loco Pilot shall pass such signal(s) only on being hand signalled past by a competent railway servant. In case of Gate signal(s), the Loco Pilot shall pass such signal(s) cautiously upto the level crossing where he shall ascertain that the gates are closed and locked against the road traffic and proceed hand signal is displayed by the Gateman before he proceeds further.

SR 9.12.07.-Procedure for working of trains on Automatic Block system (single line) during suspension when direction of traffic cannot be established but line clear can be obtained from the block station in advance by one of the following means which shall be used in the order of preference laid down below:

- (i) Inter- cabin/ station to station fixed telephone.
- (ii) Railway auto telephone / BSNL phone
- (iii) Control telephone.
- (iv) VHF set in compliance to SR 14.01.02.

Whenever line clear is obtained by using the communication instrument listed above, Identification Numbers shall be exchanged

in addition to the use of Private Number. Line Clear Enquiry and reply books in the prescribed form T/A-1425 or T/B-1425 shall be brought into use.

The following procedure shall be adopted for train passing:

(a) Before any train is allowed to leave the block station, it shall be brought to a stand and the Guard and the Loco Pilot of the train shall be advised of the circumstances by the Station Master.

(b) The Station Master shall ask for and obtain "Line Clear" for the train from the Station Master of the block stations immediately in advance of the affected section.

(c) The Station Master of the block station at the other end of the affected section shall not grant "Line Clear" unless the conditions prescribed under sub-rule (2) of General Rule 8.03 are complied with.

(d) On receipt of "Line Clear", the Station Master shall deliver of each train :-

(i) A "Line Clear Ticket" on the prescribed form i.e., T/C-1425 or T/D-1425 as the case may be.

(ii) An authority on the prescribed form T/A-912 indicating individual number of Automatic /Semi Automatic /Manually operated departure and Gate signals which are to be passed by the Loco Pilot. In case of departure signal(s), the Loco Pilot shall pass such signal(s) cautiously upto the level crossing where he shall ascertain that the gates are closed and locked against the road traffic and proceed hand signals is displayed by the Gateman before he proceeds further.

(iii) A Caution Order shall also be issued advising the Loco Pilot to be on the look out for any possible obstruction and exercising greater caution. Speed of the first train entering the affected section shall be restricted to 25 KM/h subject to other restrictions in force.

(e) Before the authorities mentioned in subrule (d) above are handed over to the Loco Pilot, it shall be responsibility of the Station Master to ensure that the points over which the train shall run are correctly set and facing points are locked.

(f) Except the first train, the Loco Pilot of the subsequent train(s) may run at normal speed subject to the observance of any other speed restriction in force exercising great caution bearing in mind the possibility of level crossing gates being opened to the road traffic and other obstructions and stop short of any obstruction that he may encounter on the run.

(g) When approaching the next station, the Loco Pilot shall obey the aspect of the First Stop signal. The Station Master after satisfying himself that all is safe, shall arrange to receive the train by taking "off" the relevant reception signal(s) or pilot the train if the situation warrants.

(h) Train Signal Register Book shall be brought into use and all entries regarding trains working under this system shall be recorded therein.

(i) As soon as the panel is put right by the competent authority, normal working of trains on Automatic Block system (Single line) shall be resumed after exchanging messages with Private Numbers by the Station Masters concerned, assuring that the section is clear. Controller's permission shall be obtained before resumption of normal working unless control is suspended.

(j) All records in connection with train working on this system shall be retained at the station for inspection by the Transportation Inspecting officials.

SR 9.12.08. - Rules and regulations for working of trains on the obstructed line in case of obstruction or accident on the authority of "Authority to proceed for Relief Engine /Train into an Automatic Block Signalling section" (T/C-912).

When it becomes necessary to work trains on the obstructed line on the authority of 'Authority to proceed for Relief Engine / Train into an Automatic Block Signalling Section', all the instructions contained in SR 6.02.05 shall be followed except, in lieu of prescribed form No. T/A-602, T/C-912, shall be used.

9.13. Movement of trains against the direction of traffic on the Automatic Block System.- In Automatic signalling territory, trains shall run in 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.

SR 9.13.01.- When a train is required to be pushed back, the procedure laid down in SR 4.12.01 shall be followed. The Station

Master before giving the assurance referred to in SR 4.12.01 (a) (i) shall ensure that no train has been allowed or shall be allowed in rear of the train for which permission is being given to push back.

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.

SR 9.14.01.- (a) In case of Semi-Automatic Stop signal governing the approach of a train to a station when working as a manual stop signal and becomes defective it shall be passed only in accordance with the procedure detailed in SR 3.69.03.

(b) At stations on the Automatic Signalling territory (Double Line) when the last stop signal which may either be. a Manual Stop signal or a Semi-Automatic Stop signal working as a Manual Stop signal governing the departure of a train from a Station becomes defective, the Station Master shall hand over to the Loco Pilot a written authority on the prescribed form T/A-912 authorising him to pass such signal at 'on' or when defective the written authority shall not be given, unless all the points for the departure of the train have been set and the facing points locked. Hand signal shall also be shown to the departing train in accordance with General Rule 3.70. The Loco Pilot after passing such signal at 'on' or when defective, shall take his train upto the next signal in advance in the manner as laid down in General Rule 9.02 and Subsidiary Rule 9.02.01 (b).

Provided that, where there is/are no intervening Automatic / Semi-Automatic Stop signal(s) between two consecutive stations, action shall be taken in accordance with Subsidiary Rule 9.12.01 for passing trains.

SR 9.14.02.- When a Loco Pilot finds a Semi Automatic Stop signal with illuminated 'A' Marker to flicker/bob, he shall act in accordance with SR 9.02.02 or 9.07.02 as may be applicable.

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 upto the level crossing, and

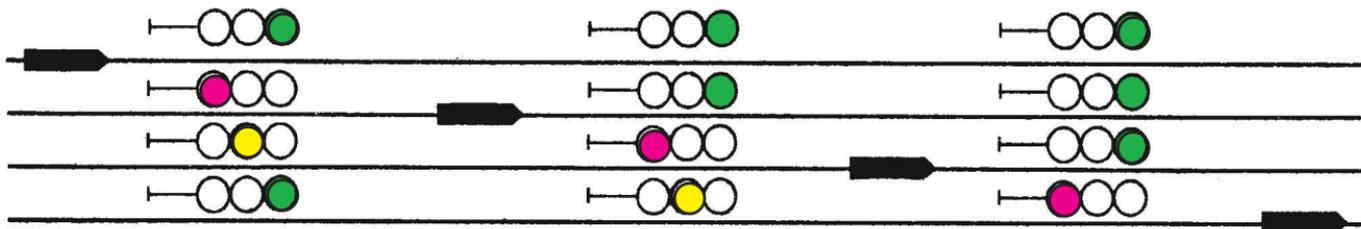
(iii) If the gateman is available and exhibiting hand signals, proceed further past the level crossing gate cautiously, or

(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 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.

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.



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

