

## 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 up to the next Stop signal in advance but also for an adequate distance beyond it, and
    - (ii) the signal is automatically placed to `on` as soon as it is passed by the train.
- (2) Unless otherwise directed by approved special instructions, the adequate distance referred to in sub-clause (i) of clause (c) of sub-rule (1) shall not be less than 120 metres.
- (3) (a) under special instruction, one of the automatic stop signal between two stations in the automatic block signaling territory in each direction may be made as modified semi-automatic stop signal;
- (b) the mid-section modified semi-automatic stop signal so provided shall be interlocked with the signals of the station ahead through track circuits or axle counters or both and shall be controlled by the Station Master of the station ahead, the relevant indications whether the signal is in normal automatic mode or modified semi-automatic mode shall be available to the Station Masters at both the ends;
- (c) Advanced starter signal of the station in rear shall be interlocked with the mid-section modified semi-automatic stop signal in such a way that when working with ‘A’ sign extinguished, the Advanced starter shall assume ‘off’ aspect or be taken ‘off’ only when the line is clear upto an adequate distance beyond the mid-section modified semi-automatic stop signal; similarly the mid-section modified semi-automatic stop signal shall assume ‘off’ aspect automatically or be taken ‘off’ only when the line is clear upto an adequate distance beyond the Home signal of the station ahead;

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

*(Existing SR 9.01.1 is deleted vide S. No. 2 of AS 07 of G&SR 2020 dated 19.01.2023 and subsequent numbers are renumbered).*

S.R. 9.01.1. A TSR shall be maintained by the Station Master of each block station and detailed timings of all the trains dealt with shall be recorded therein. Detailed procedure for advising the block station regarding the train number, private number for scheduled / unscheduled trains and the timings of arrival, departure and clearance of trains shall be incorporated in the SWR.

S.R. 9.01.2. Principal / ZRTI / MLY is authorized to issue competency certificate whenever Loco Pilots, Motormen, Assistant Loco Pilots and Guards attend Initial/Refresher training course at ZRTI/MLY.

S.R. 9.01.3. Thereafter, all Loco Pilots, Motormen, Assistant Loco Pilots and Guards, who are required to work on Automatic Block System area shall be imparted orientation course for one day, once in every six months, about the rules pertaining to this system and thoroughly examined in their knowledge and proficiency and the competency certificates shall be renewed.

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S.R. 9.01.4. Station Manager/Station Superintendent/Traffic Inspector shall renew the competency certificates for the Guards headquartered at his station and Loco Inspectors for Loco Pilots, Assistant Loco Pilots and drivers of tower wagons and track machines every six months after imparting one day's orientation course till the next refresher course duly advising the DOM, DME or DEE as the case may be.

S.R. 9.01.5. A record of such competency certificates issued shall be maintained by the DOM, DME and DEE concerned. No Loco Pilot, Motorman, Assistant Loco Pilot and Guard shall be put on duty on Automatic Block System unless he possesses such certificate.

*(Existing SR 9.01.7 is deleted vide S. Nos. 8 of AS 07 of G&SR 2020 dated 19.01.2023).*

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

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

S.R. 9.02.1. While proceeding ahead, after stopping as per GR 9.02 (1), even if the subsequent signal is "off", the Loco Pilot shall under no circumstances exceed 15 Kilometres an hour, so as stop short of any obstruction. The "On" position of an Automatic Stop signal may be due to the presence of a train in the automatic signalling section ahead including the adequate distance beyond it or due to an obstruction on the track or a broken or a displaced rail or any other cause (Item no. 28 of AS-12 dt. 28.12.2023).