SOUTH CENTRAL RAILWAY

Safety.387/Fly Leaf/18/2025

Fly Leaf No. 18 / 2025

Attention..... All Concerned.....

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TRAIN OPERATION DURING FOGGY & INCLEMENT WEATHER – PRECAUTIONS.

(Railway Board's letter No. 98/Safety(A&R)/19/16 dated 22.11.2017, 15.03.2018, 23.10.2018, 25.10.2019, 14.10.2020, 11.10.2021, 12.10.2022, 11.10.2023 and 18.10.2024)

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Detailed instruction on the above subject were issued to Zonal Railways vide Board's letter No. 98/Safety(A&R)/19/16 dated 22.11.2017. Subsequent to issue of these instructions, Board had decided that with the use of fog devices in locomotives, the maximum permissible speed during foggy / inclement weather condition be enhanced from 60 Kmph to 75 Kmph. References have been received from some of the Zonal Railways seeking clarification on the subject. It has therefore, been decided that following precaution / preparation be done by Zonal Railways for train operation during foggy / inclement weather as under :

(A) Infrastructure / Additions / Alterations :-

(i) Provision of Fog Safe Device :-

Reliable Fog Safe Devices, if available, may be provided to the Loco Pilots in all Locomotives running in fog affected areas during fog. Placement of detonators under conditions as prescribed in Para E (ii) shall be dispensed with, where reliable Fog Safe Device is available and is in working order.

(ii) Modification of Automatic Signalling System :

Introduction of Modified Automatic Signaling System as per GR 9.01(3) & (4) and GR 9.03(3) and (4) and GR 5.18 to be followed strictly.

(B) Works to be completed before foggy weather to strengthen Rail Infrastructure :-

(i) Adequate supply of detonators to be ensured.

(ii) Lime marking across the track at the Sighting Board (or at Distant Signal in case of Double Distant Signals) must be done.

(iii) All Signal Sighting Boards, Whistle Boards, fog signal posts and busy vulnerable

level crossing gates which are accident prone should either be painted or provided with yellow / black luminous strips. The work of repainting for their proper visibility should be completed before onset of winter / foggy season.

(iv) Lifting barriers at busy level crossings, where necessary, to be provided with Yellow / Black luminous indication strips.

(v) The new existing SLRs are already being fitted with LED based flasher tail light, therefore, the existing SLRs with fixed Red lights should also be modified and fixed with LED lights. This will be a very important step to ensure safety in foggy weather. The Railways should undertake this work on war footing. When the train is held up in Automatic territory (on double and multiple section) in abnormal situation including fog, the Guard will put the LED light to "ON" position. This will be in addition to Flashing Red Tail Lamp.

(vi) It should be ensured that retro reflective strip in Sigma shape for identification of stop signal be provided as per existing instructions.

(C) The following points are to be kept in mind during operation of trains in foggy weather :-

(i) Reduced Movement During Fog :-

Rationalisation of movements in the Coaching yards, approach to terminals, and at/near terminals etc. has to be done to reduce pressure on congested areas; this may be achieved by reduction in loco changes, reduced shunting, etc. and cancellation of trains. 20% reduction in movements during the fog has to be ensured i.e., by reduced movement of locos from and to shed, shunting in major yards, etc. and mainly by cancellation of trains – Mail / Express and Passenger trains running in and via Delhi area as also up to an equal no. also in other fog affected sections (other than the trains passing via Delhi area) to be proposed to be cancelled. A review be done by all trains passing via Delhi area) to be proposed to be cancelled. A review be done by all Zonal Railways with mutual consultation to identify which Mail / Express and Passenger trains are to be cancelled and proposals sent to the Coaching Directorate, Railway Board. This will also help in tackling extra requirement of Loco Pilots / Assistant Loco Pilots and Train Managers (Guards) for changing enroute on sections where there is abnormal increase in duty hours of crew. This will also increase availability of spare rakes to cater to late running of

trains.

(ii) PME / Refresher Training and other Safety / Promotional Courses of Loco Pilots / Assistant Loco Pilots and Train Managers (Guards) in ZRTIs / STCs etc. who become due between 15th December and 31st January should be completed by 15th December.

(iii) Fog affected Railways should review the crew changing locations. In view of increased hours on road the Railways may create infrastructure at new / additional crew changing locations. Simultaneously the loco / crew / rake links be reviewed during the period of fog. All crews (Loco Pilots, Assistant Loco Pilots and Train Managers (Guards)) on stationary duty should be utilised for train working especially during fog.

(iv) The instructions on all matters including cancellation of train be made applicable from 20th December to 31st January every year subject to the provisions if the fog sets in early before 20th December and continuous beyond 31st January respectively as the case may be.

(D) Visibility Test Object (VTO) :

(i) The check of adequacy of visibility through the VTO is to guide the SM/ASM so as that he can decide when detonators are to be placed to warn the LP of the location of an approach Stop Signal.

(ii) VTO for Semaphore Signalling and for two aspect CLS :-

The VTO may be the light (or arm by day) of a Starter Signal (where exists) or the back light of the Home Signal etc. as defined in GR 3.61 (2) (b). In such cases, the VTO is normally located 300 – 350 meters at a place from where it is to be seen by the SM. During foggy or tempestuous weather, when such a VTO is not seen by the SM, it shall determine that fog has set in.

Note : The Visibility Test Object to be defined in the SWR of stations, which qualify for placement of detonators, should be on each end of a station (for junction stations there may be more than two VTOs).

(iii) Prescribed VTO multiple aspect colour light signalling :

a) Stations with MACLS shall have a prescribed VTO located at a distance of 180 meters from a nominated location where the SM shall stand.

b) When a prescribed VTO is not visible from 180 meters or more during dense fog, the SM shall not use his discretion as per GR 3.61 (2) (a), but will arrange to place the detonators to warn the Loco Pilot, unless specified otherwise in these instructions.

Note : There should be one Visibility Test Post in MACLS territory (at stations which qualify for placement of detonators) located at a distance of 180 meters from the place where the SM shall normally stand to see the prescribed VTO.

(iv) When the VTO (or the prescribed VTO) provided under conditions laid down is not visible to the Station Master, he shall take action as under :-

a) Ensure that signals are lit during night as well as during day in Semaphore Signalling sections when visibility is impaired due to fog and VTO is also lit.

b) Observe the VTO before granting Line Clear to a train.

c) In case prescribed VTO is not visible, take action as under :-

- Depute fog Signalman with detonators to place detonators in situations prescribed under Para (E) (ii) at 270 – 280 meters from the first stop signal to inform in advance the location of this signal to the Loco Pilot of the approaching train.
- Engineering Dept. will make all efforts to provide fog signalman.
- No shunting should be carried out on non-isolated lines after granting Line Clear to an approaching train.

d) Provisions given as per GR 5.18 to be followed strictly and no train to be advanced beyond the Starter, or beyond immediate Starter Signal where these exists, upto the Advance Starter at stations which do not have track circuiting in this zone.

(E) Necessity of Placement of Detonators :-

(i) Where not necessary to place Detonators :

It is not necessary to place detonators to indicate 'location of a Stop signal' to the Loco Pilot in following circumstances:-

a) In sections where a reliable Fog Safe Device has been provided on Locomotives.

b) Where adequate pre-warning is provided, i.e. at stations where double distant signals are provided.

c) Where maximum speed allowed in the station section is upto 15 Kmph. even at stations where pre-warning is not available, but a Warning Board exists.

d) Where speed of the section is less than 50 Kmph. (but more than 15 Kmph.) and the first signal of a Station is not a stop signal.

e) In Automatic Signalling Territory.

f) On Gate Signal,

g) On Departure Signal,

h) At the site(s) of Temporary Speed Restriction imposed due to maintenance of Track/OHE/Signal.

(ii) Where it is necessary to place Detonators:

The Detonators should be placed at 270 meters short of the First Stop Signal at stations detailed as under:-

a) At 'A' Class stations where Warner exists – detonators to be placed short of Home Signal and not the Warner. *(Not available over SCR)*

b) At 'B' Class stations equipped with Lower Quadrant Signals - detonators to be placed short of Outer signal. *(Not available over SCR)*

c) In Multiple Aspect Signalling, where single Distant Signal is provided - Detonators to be placed short of Home Signal.

Note : The Fog Signal Posts will be provided only at stations where there may be a requirement for placing detonators. Such post may, therefore, be shifted suitably based on the above-mentioned position(s).

(F) Precautions by Loco Pilot :

The Loco Pilot shall take action in regard to speed of the train during fog as under :-

(i) During fog when the Loco Pilot in his judgment feels that visibility is restricted due to fog, he shall run at a speed at which he can control the train so as to be prepared to stop short of any obstruction, this speed shall in any case not be more than 75 Kmph.

(ii) Loco Pilot to whistle frequently to warn the Gateman (where provided) and road users of an approaching train at level crossings.

(iii) In Absolute Block System the speed should not exceed 75 Kmph. as detailed at Item (i) above.

(iv) In Automatic Block territory, the speed will be subject to the judgment of the Loco Pilot as mentioned in item (i) above and shall not exceed as under:-

a) After passing Automatic stop signal at 'Green', the speed not to exceed 75 Kmph.

b) After passing Automatic stop signal at 'Double Yellow', the speed not to exceed 30 Kmph.

c) After passing Automatic stop signal at 'Yellow', the LP to run at a further restricted speed so as to be prepared to stop at the next stop signal.

Note (i) : In case of fog safe device is not available in locomotives or the device fails enroute, the max. speed of 75 Kmph. as indicated above, shall be reduced to 60 Kmph. or less subject to judgment of Loco Pilot.

Note (ii) : As provided under GR 4.16 (1) (b) a red tail lamp of approved design displaying a flashing red light, during day or night, to indicate last vehicle check device in foggy weather should be provided and lit on the last vehicle.

Note (iii) : First Stop Signal location kilometres chart of every station be provided to each Loco Pilot either as an easy to carry Card or in the Working Time Table.

Note (iv) : Prevailing Fog situation should be advised to Crew & Train Manager (Guard) in lobby during "Sign ON".

Zonal Railways are advised to incorporate these instructions in their Subsidiary Rules to relevant GRs and comply the same accordingly.

Further, Zonal Railways should ensure that the staff be advised and counselled regarding provisions in the G&SRs and these instructions of the Board before the onset of fog. Each and every crew is to be imparted necessary training for up to two days about the systems of working of trains during fog. This process be completed by 1st December every year positively.

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SAFETY ORGANISATION **SOUTH CENTRAL RAILWAY**