



CEE/OP Instruction No.16/2023

No. L.326.OP. Spl Drive / 33

Date: 20.10.2023

Sr. DEE/TRO/BB, BSL, NGP
Sr. DME /Fr & Op/CSMT,
DME /O&C/SUR,
DME /Op/PA

Sub: Winter preparedness

Ref: i. Railway Board's L. No. 2005/Elect(TRS)/440/23 dated 10.10.2023
ii. Railway Board's L. No. 98/Safety(A&R)/19/16 dated 11.10.2023
iii. Railway Board's letter No.98/Safety(A &R)/19/16 dated 25.10.2019

Railway Board vide letter under ref-i & ii has advised to ensure precautions for winter preparedness. Hence, following items to ensure by Loco Running Staff and Trip sheds:

A. For Loco Running Staff:

1. Adequate supply of detonators to be ensured.
2. Availability and working of adequate number of Fog Safe Device.
3. As per Para "F" of Railway Board's letter No.98/Safety (A &R)/19/16 dated 25.10.2019, 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 the 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, 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 "Green", the speed not to exceed 75 KMPH.
 - b) After passing Automatic stop signal "Double Yellow", the speed not to exceed 30 Kmph.
 - c) After passing Automatic stop signal "Yellow", to run at a further restricted speed so as to be prepared to stop at the next stop signal.

Note:

- i. ***If 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 LP (Follow the SR 4.08 -3, for both Absolute Block System and in Automatic Block Territory).***
- ii. ***As provided under GR 4.16 (1) (b), a red tail lamp of approved design displaying a flashing red light, during day & night, to indicate the last vehicle check device in foggy weather should be provided and lit on the last vehicle.***
- iii. ***First Stop Signal location kilometer chart of every station be provided to each LP either as an easy to carry card or in the WTT.***
- iv. ***Prevailing fog situation should be advised to crew and TM in lobby during "Sign ON".***

Further, Zonal Railways should ensure that the staff be advised and counseled regarding provisions in the G&SR and these instructions of the Board before the onset of fog. Each and every crew is to be imparted necessary training for up to 2 days about the systems of working of trains during fog.

For Loco Running Staff related to loco (Based on Railway Board's L.No. 2005/Elect (TRS) / 440/23 dated 10.10.2023):

1. Working of heaters/blowers in both cabs.
2. Air tightness of cab main doors, window shutters and sealing of ventilator covers.
3. Draining of moisture from all MR and free movement of drain cocks.
4. Air dryer must have been working order.
5. Availability of dry sand in all sand boxes and all covers must be air tight.

B. For Trip shed staff:

The important pre-winter precautions mentioned in ACTM para 30514 and related instructions issued by RDSO are reiterated as follows:

1. During all trip inspections or roof inspections whenever carried out, proper cleaning of roof-line & pantograph insulators with a wet & dry cloth for maintaining shining surface finish may be ensured. Instructions laid down in RDSO SMI No. RDSO/ 2012/ EI/SMI/0274, Rev.0, dated 29.03.2012 may be ensured by homing shed before onset of winter.
2. Ensure joint checking of loco roof equipment's (including pantographs, cleaning of roof insulators and roof bar etc.) with TRD staff at sheds & trip shed as a preventive measure.
3. Modification in mounting bracket of fixed contact and movable contact arm of HOM switch to increase the electrical clearance issued by RDSO vide RDSO/2012/EL/MS/0405 (Rev.0), dated 03.01.2012.
4. Re-greasing of pantograph servomotor to avoid jamming.
5. Working of heaters/blowers in both cabs.
6. Air tightness of cab main doors, window shutters and sealing of ventilator covers.
7. Proper level of oil to be maintained in TFP, GR and Traction Converter.
8. Silica gel for Transformer, Tap changer and Traction Converter must be in Good condition.
9. SMGR servomotor cylinders to be cleaned and re-greased.
10. Air dryer must be in working order and isolation should not be permitted.
11. Draining of moisture from all MR and free movement of drain cocks.
12. Proper level of oil to be maintained in compressors and ensure that un-loaders are in working order.
13. Availability of dry sand in all sand boxes and all covers must be air tight.
14. TM inspection covers to be provided with gasket and ensure no air gap & locked properly.
15. Cleaning of battery terminals and application of petroleum jelly.
16. Free movement of brake cylinders. If found sluggish, overhauling should be done.

The **compliance of above** should be given in the following format:

1. No. of Supervisors/CLIs involved
2. No. of locos examined:
3. No. of irregularities noticed:
4. No. of irregularities attended:
5. Nature of irregularities:

Divisions should provide the details of **FOG Safe devices** available in the following format:

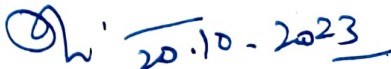
1. No. of FOG Safe Device allotted/available:
2. No. of FOG Safe Devices in working order:
3. No. of FOG Safe Devices defective and nature of defect:
4. Urgent action taken to repair defective FOG Safe Devices and it's TDC:
5. Arrangement of additional FOG Safe Device to be done, if required:

Division should provide information regarding **counseling of loco running staff** during foggy weather to be given in the following format:

1. No. of Officers/CLIs involved:
2. No. of staff counseled (Category wise):

Compliance of above to be reported to HQ.

DA - As above



(H.M.Sharma)
Chief Electrical Engineer /OP

**Government of India
Ministry of Railways
(Railway Board)**

No.98/Safety(A&R)/19/16

New Delhi, dt. 25.10.2019

The General Managers,
All Indian Railways,
Konkan Railway Corp., Navi Mumbai,
Metro Railway, Kolkata,
Railway Electrification, Allahabad.

Sub: Train Operation during Foggy & inclement weather – Precautions.

Ref: Board's letter of even number dated 22.11.2017.

Detailed instruction on the above subject were issued to Zonal Railways vide Board's letter of even no. 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 Signalling System as per G.R 9.01 (3) & (4) and G.R 9.03 (3) and (4) and G.R 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 Movements During Fog:-**

Rationalization 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 upto 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 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 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 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 Guards) on stationary duty should be utilized 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 continues 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 Loco Pilot 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 for Multiple Aspect Colour Light Signalling:-

- (a) Stations with MACLS shall have a prescribed VTO located at a distance of 180 metres from a nominated location where the SM shall stand.
- (b) When a prescribed VTO is not visible from 180 metres 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 meter 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 metres from the first stop signal to inform in advance the location of this signal to the Loco Pilot of the approaching train.
 - Engineering Department 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 Intermediate 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 signal 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;
- (b) At 'B' class station equipped with Lower Quadrant Signals - Detonators to be placed short of Outer signal.
- (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 judgement 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 an Automatic stop signal at 'Double Yellow', the speed not to exceed 30 Kmph.
- (c) After passing an Automatic stop signal at 'Yellow', the Loco Pilot to run at a further restricted speed so as to be prepared to stop at the next stop signal.

Note (i) In case fog safe device is not available in locomotives or the device fails enroute the maximum speed of 75 Kmph as indicated above shall be reduced to 60 kmph or less subject to judgement 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 kilometre 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 & 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 counseled 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 upto two days about the systems of working of trains during fog. This process be completed by 1st December every year positively.



(Ashish Kumar)
Executive Director/Safety-II
Railway Board

No.98/Safety(A&R)/19/16

New Delhi, dt. 25.10.2019

Copy forwarded for information and necessary action to :-

1. The Chief Commissioner of Railway Safety/Lucknow
2. The Chief Operations Managers, All Indian Railways
3. The Chief Safety Officers, All Indian Railways
4. The Director General, RDSO, Lucknow.
5. The Principal, Railway Staff College, Vadodara.
6. The Director, Indian Railways Institute of Transport Management, Manak Nagar, Lucknow.
7. The Principal, Indian Railways Institute of Civil Engineering, Pune.
8. The Principal, Indian Railways Institute of Mechanical and Electrical Engineering, Jamalpur.
9. The Principal, Indian Railways Institute of Signal, Engineering and Telecom, Secunderabad.
10. The Principals, Zonal Railway Training Institutes, Central Railway, **Bhusawal**, Eastern Railway, **Bhuli**, Northern Railway, **Chandauli**, North Eastern Railway, **Muzaffarpur**, Northeast Frontier Railway, **Alipurduar**, North Western Railway, **Udaipur**, Southern Railway, **Tiruchirapalli**, South Central Railway, **Maula Ali**, South Eastern Railway, **Sini**.
11. The General Secretary, NFIR, 3 Chelmsford Road, New Delhi.
12. The General Secretary, AIRF, 4 State Entry Road, New Delhi
13. The General Secretary, FROA, Room No.256-A, Rail Bhavan, New Delhi.
14. The General Secretary, IRPOF, Room No.268, Rail Bhavan, New Delhi.
15. The Indian Railways Conference Association, DRM's Building, Accounts Building, Chelmsford Road, New Delhi.

Ashish

(Ashish Kumar)
Executive Director/Safety-II
Railway Board

No.98/Safety(A&R)/19/16

New Delhi, dt. 25.10.2019

Copy to :

AM/CE, AM/L, AM/Mech., AM/Signal and AM/Traffic.

Ashish

(Ashish Kumar)
Executive Director/Safety-II
Railway Board

gc

*Issued Pk.
29-10-19*

रेल मंत्रालय Ministry of Railways रेलवे बोर्ड / Railway Board अनुलग्नक सहित जारी Issued with Enclosure हस्ताक्षर Signature..... जारी की तिथि Date of Issue.....

Carl
29-10-19



भारत सरकार Government of India
रेल मंत्रालय Ministry of Railways
रेलवे बोर्ड (Railway Board)



No. 2005/Elect(TRS)/440/23

New Delhi, Dated: 10.10.2023

General Managers (Elect)
All Zonal Railways

Sub: Winter preparedness drive.

Ref: Railway Board's letter of even No. dated 17.10.2022

Instructions exist for undertaking essential precautions and special drive to check all locos prior to the commencement of winter season, so that typical failures attributed to low temperature and fog do not occur and the desired level of reliability is maintained.

With the ensuing winter season & foggy weather, it is advised that all Zonal Railways shall ensure its preparedness for safe train operation in fog by having adequate number of Fog Pass Devices for all crew (freight/passenger trains) in fog prone areas specifically. Zonal Railways shall ensure that Fog Pass devices given to crew, to alert crew in poor visibility condition while approaching signals, may be kept in healthy and working condition to ensure safety in train operation and training of crew for operation of the same during winter and foggy season.

The important pre-winter precautions mentioned in ACTM para 30514 and related instructions issued by RDSO are reiterated as follows:

1. During all trip inspections or roof inspections whenever carried out, proper cleaning of roof-line & pantograph insulators with a wet & dry cloth for maintaining shining surface finish may be ensured. Instructions laid down in RDSO SMI No. RDSO/ 2012/ EI/SMI/0274, Rev.0, dated 29.03.2012 may be ensured by homing shed before onset of winter.
2. Ensure joint checking of loco roof equipment's (including pantographs, cleaning of roof insulators and roof bar etc.) with TRD staff at sheds & trip shed as a preventive measure.
3. Modification in mounting bracket of fixed contact and movable contact arm of HOM switch to increase the electrical clearance issued by RDSO vide RDSO/2012/EL/MS/0405 (Rev.0), dated 03.01.2012.
4. Re-greasing of pantograph servomotor to avoid jamming.

5. Working of heaters/blowers in both cabs.
6. Air tightness of cab main doors, window shutters and sealing of ventilator covers.
7. Proper level of oil to be maintained in TFP, GR and Traction Converter.
8. Silica gel for Transformer, Tap changer and Traction Converter must be in Good condition.
9. SMGR servomotor cylinders to be cleaned and re-greased.
10. Air dryer must be in working order and isolation should not be permitted.
11. Draining of moisture from all MR and free movement of drain cocks.
12. Proper level of oil to be maintained in compressors and ensure that un-loaders are in working order.
13. Availability of dry sand in all sand boxes and all covers must be air tight.
14. TM inspection covers to be provided with gasket and ensure no air gap & locked properly.
15. Cleaning of battery terminals and application of petroleum jelly.
16. Free movement of brake cylinders. If found sluggish, overhauling should be done.

Besides the maintenance of electric locos, it is advised that a drive to counsel running staff regarding working of trains during poor visibility condition like foggy weather etc. should also be undertaken.

Zonal Railways are advised to take necessary action and send compliance to this office on completion of drive at the earliest.



Digitally signed by
VIKASH ANAND
Date: 2023.10.10
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(विकाश आनंद)

निदेशक विद्युत अभियांत्रिकी (चल स्टॉक)

फ्लोर सं : 4, कमरा सं. : 452

रेलवे बोर्ड

टेली : 011- 47845425

ई मेल: vikashanand.irsee@gov.in