



NORTHERN RAILWAY

Office of the Sr. DEE (OP),
N.R., DRM Office, Firozpur.

Date: - 06.08.2025

No.516-M/O/M-I/ Special Drive/24
DEE/OP/FZR
AEE/RSO/ASR
All CCC/ FZR, LDH, JUC & ASR
All CLIs FZR Divn, CTC/FZR.

Technical Circular No. (Elect. RSO) -04/2025

Sub: -Safe Train Operation- Brake Feel and Brake Power testing by Crew.
Ref:- HQ letter no-45-RS/9/Train Operation (e- 24499),dated-04.07.2025.

Vide above-referred letter, HQ had issued clear instructions regarding the proper conduct of Brake Feel Test (BFT) and Brake Power Test (BPT). It has come to notice that a significant number of cases of non-compliance and improper execution of BFT/BPT have been observed. This is a serious cause of concern and poses a potential threat to the safety of train operations. Under mentioned directives should be followed strictly: -

1. **BFT and BPT** should be conducted in all trains including light engine/Inspection cars/TWD etc. at starting station, crew change stations, in case of loco change/loco reversal, cab change in MEMU/EMU/DEMU and change in composition of train.
2. **Brake Feel Test (BFT)** should be conducted in first block section immediately after departure from the station/yard, once the train attains a speed of approximately 10-15 kmph. The Loco Pilot shall reduce the BP pressure by about 0.5 kg/cm² using A-9 and release to feel the application of brake. Application of loco brake through synchronization should be avoided during BFT. Train should not come to halt during this test.
3. **Brake Power Test (BPT)** should be conducted in the first block section or as soon as the train attains the 60-70 kmph speed in case of coaching trains and 30-50 kmph speed in case of Goods train. LP shall reduce the BP pressure by 1.0 kg/cm² in Coaching trains & loaded Goods trains and 0.5 kg/cm² in case of empty Goods trains through A-9 and release after a pause. Ensure the speed drops to 30-35 kmph in coaching train and 15-25 kmph in Goods trains by the time BP pressure comes back to 5.0 kg/cm² and observe the effectiveness of brakes and brake power of the train.
4. ALP shall keep watch and ensure that BFT and BPT tests are carried out by the LP and remind him, if required. Only tick marks to be made in BFT and BPT columns mentioned in LP diary, without mentioning details.

All officers and CLIs over the FZR division are hereby instructed to counsel their allotted/non allotted running staff regarding **Safe Train Operation- Brake Feel and Brake Power testing by Crew** as per points mentioned above in this letter. The compliance report submitted to the Division Office for further appraisal and submission to HQ.

D/A=03

7cc/
8/8/25
Sr. Divil. Elect. Engineer (OP)
N. Rly; Firozpur



NORTHERN RAILWAY

Office of the Sr. DSE (O&P),
N.R., DRM Office, Firozpur.

No.516-M/O/M-I/ Special Drive/25

Date: - 18.06.2025

DEE/OP/FZR & AEE/RSO/ASR
All CCC/ FZR, LDH, JUC & ASR.
All CLIs FZR & CTC/FZR

Technical Circular No. (Elect. RSO) -02/2025

Sub:- Necessary Instructions regarding making the dead loco and its operation.
Ref: - HQ office letter no. 230-Elect/TRS/202/Operational Circular, dated 27.09.2024.

In reference to the above, Instructions has already been issued by Divisional officers vide letter no 516-M/O/M-I/Safety Drive/24 dated 28.09.2024 regarding making the dead loco and its operation, Now, repeated instructions are being issued to ensure strict adherence to these guidelines.

All officers and CLIs over the FZR division are hereby instructed to counsel their allotted/non allotted running staff regarding **making the loco dead and its operation**. The compliance report submitted to the Division Office for further appraisal and submission to HQ.

D/A: - 30

JCL
18/6/25
Sr. Divil. Elect.Engineer (OP)
N. Rly; Firozpur

Copy to:- CMS In charge/FZR for upload in the CMS.

NRHQ Operational Circular no. 21
No.230-Elect/TRS/202/Operational Circular

Dated: 27.09.2024

Sr. Divnl. Elect. Engineer/ RSO/OP,
Northern Railway,
D.R.M. Office,
EZB,UMB,DLI,MB & LKO,

Sub: Necessary instructions regarding making the loco dead and its operation.
Ref: RB's Letter no. 2007/Elect (TRS)/440/14 Pt. dated 00.02.2018

In order to ensure safe and smooth movement of dead electric locomotives, the following instructions based on RDSO bulletin no.MP.IB.BK-01.05.05(Rev.0.02), May, 2006, referred vide RB's letter above are issued for compliance by the divisions over Northern Railway.

A. Procedure of making a conventional loco dead:

- 1) Attach the working loco on top of the loco, planned to dispatch dead.
- 2) Action to be taken to make the loco dead:
 - 2.1) Open DJ, lower pantograph by putting ZPT at '0', close IP cock and dead the loco by putting HBA at '0' and take out keys of BL Key, ZPT & MPJ. J-1 & J-2 to be placed at centre & to be locked. All pressures of the dead loco to be drained by opening the drain cocks and close all drain cocks.
 - 2.2) Keep A-9 and SA-9 in released position in both cabs of dead loco and ensure that loco brakes are fully released.
 - 2.3) Close all cut out cocks of A-9 and SA-9 in both cabs.
 - 2.4) Close L&T cock of dead loco and put MU2B on trail position
 - 2.5) If the loco brakes of the dead loco are not in the released condition, then follow the following steps to release them.
 - Release the control pressure of DV by manually operating the release handle to get the loco brakes released completely.
 - If there is still brake cylinder pressure left in the brake cylinder line, then close the bogie isolating cocks in both the bogies and after releasing the BC pressure, make the bogie isolating cocks normal.

B. Procedure of dead movement of conventional loco:

- 1) If MR, BC equalizing pipes are available, then make the pipe connection between the dead loco and the working loco similar to multiple locos and open the angle cocks, make the cock position in both the locos similar to multiple locos and work normally.
- 2) If MR, BC equalizing pipes are not available, then only couple BP, FP pipes between dead loco and working loco and open angle cock to charge the pressure in MR-4 of dead loco. Check BP and MR pressures in gauge of dead loco and its quantity should be equal to that of working loco.
- 3) Drop BP pressure from A-9 of working loco and ensure that loco brakes are applied in both locos and by releasing A-9; brakes in both locos are released.
- 4) If the loco brakes are not released in the dead loco, then put the MU2B of the dead loco on lead and after the loco brakes are released, put it on trail again. If still not successful, then isolate the DV & close both the bogie cocks and ensure that the brakes are released. Now the loco will work like a vehicle without brakes and will affect the brakes in the train.

5) After running for 500 meters, ensure that brakes of wheels of dead loco are released.
 Note: Loco brakes in dead loco get release after about 1 min. of releasing back, therefore traction, if required, not to be taken before 1 min. of releasing the brakes.

C: Procedure for moving a 3ø loco in dead condition:

E-70 LOCO	Knorr Bremse Loco (CCB 1.5)	Knorr Bremse Loco (CCB 2.0)
Couple the dead loco in rear of the working loco.	Couple the dead loco in rear of the working loco.	Couple the dead loco in rear of the working loco.
Open the VCB and lower the pantograph, turn off the CE as per the rule and remove the BL key.	Open the VCB and lower the pantograph, turn off the CE as per the rule and remove the BL key.	Open the VCB and lower the pantograph, turn off the CE as per the rule and remove the BL key.
Close the cock (Vertical) of PAN-1/PAN-2.	Close the cock (Vertical) of PAN-1/PAN-2.	Close the cock (Vertical) of PAN-1/PAN-2.
Trip the MCB-112.1 (in SB-2).	Trip the MCB-112.1 (in SB-2).	Trip the MCB-112.1 (in SB-2).
Remove the A-9 handle in both the cabs by putting it in neutral.	Lock the A-9 in both the cabs on FS. Turn the Mode switch from lead to trail position.	Lock the A-9 in both the cabs on FS. Turn the Mode switch from lead to trail position.
Put on SA-9 release of both the cabs. Drain all MR and AR and close their cocks.	Put on SA-9 release of both the cabs. Drain all MR and AR and close their cocks.	Put on SA-9 release of both the cabs. Drain all MR and AR and close their cocks.
Check BC pressure to be '0'. If BC is not released, release it through DV. If loco brakes are still not released, close 'BC' cock and release it. Make bogie Isolating cocks in "Normal" position after releasing the BC pressure.	Check BC pressure to be '0'. If BC is not released, release it through DV. If loco brakes are still not released, close BC cock and release it. Make bogie Isolating cocks in "Normal" position after releasing the BC pressure.	Check BC pressure to be '0'. If BC is not released, release it through DV. If loco brakes are still not released. Release the loco brake by pressing test nipples 16TP and 20TP available at pneumatic panel.
Close cocks - 70, 74, 136 and open cock - 47.	Close cocks SIFA-74 and 136 and open cock - 47.	Close cocks SIFA - 74 and 136 and open cock - 47.
Open the BP/FP angle cocks between the locos.	Open the BP/FP angle cocks between the locos.	Open the BP/FP angle cocks between the locos.
To release the parking brake, release it by pressing the release button of solenoid-30 and lock it on release position. If the parking brake is not released, release it by pulling the release spindle fitted on the parking brake activator.	To release parking brake, turn parking brake cock (PBBUS) on pneumatic brake manifold from horizontal to vertical. Parking brake will be released, check parking brake gauge for 5.0 kg/cm ² pressure.	Release parking brake, if not release then release it by pressing the release button of solenoid 30. Check parking brake gauge for 5.0 kg/cm ² pressure.
Drop BP pressure from A-9 of working loco and ensure that loco brakes are applied in both locos and by releasing A-9, brakes in both locos are released, keep in mind that it takes 1 minute for loco brakes to release in dead loco.	Drop BP pressure from A-9 of working loco and ensure that loco brakes are applied in both locos and by releasing A-9, brakes in both locos are released, keep in mind that it takes 1 minute for loco brakes to release in dead loco.	Drop BP pressure from A-9 of working loco and ensure that loco brakes are applied in both locos and by releasing A-9, brakes in both locos are released, keep in mind that it takes 1 minute for loco brakes to release in dead loco.
If the loco brakes are not	If the loco brakes are not	If the loco brakes are not

released in the dead loco, then isolate the DV & close both the bogie cocks and ensure that the brakes are released. Now the loco will work like a vehicle without brakes and affect the brakes in the train.	released in the dead loco, then isolate the DV & close both the bogie cocks and ensure that the brakes are released. Now the loco will work like a vehicle without brakes and affect the brakes in the train.	released in the dead loco, then isolate the DV & close both the bogie cocks and ensure that the brakes are released. Now the loco will work like a vehicle without brakes and affect the brakes in the train.
As a final check, run the coupled locos for about 500 meters; check the release of wheel brakes and parking brake of dead loco.	As a final check, run the coupled locos for about 500 meters; check the release of wheel brakes and parking brake of dead loco.	As a final check, run the coupled locos for about 500 meters; check the release of wheel brakes and parking brake of dead loco.

The compliance report of above instructions is to be submitted to this office at the earliest.

NK Agarwal
27/09/2024
(Naveen Kumar Agarwal)
Chief Electrical Engineer/Operations

Copy to:

- 1) PCEE/NR: for kind information please.
- 2) DRM/FZR, UMB, DLI, MB & LKO: for kind information please.



NORTHERN RAILWAY

Office of the Sr. DME (O&P),
N.R., DRM Office, Firozpur.

No.516-M/O/M-I/ Special Drive/25

Date: - 18.06.2025

DEE/OP/FZR & AEE/RSO/ASR
All CCC/ FZR, LDH, JUC & ASR.
All CLIs FZR & CTC/FZR

Technical Circular No. (Elect. RSO) -01/2025

Sub:- JPO for securing and release of vehicle/load/train/Loco in station/yard or in block section.
Ref: - 1.RB Letter no- 2024/TT-IV/12/30, dated 24.01.2025.
2.HQ letter no-45-RS/9/Train Operation, Dated 28.01.2025.

In reference to the above, Instructions have already been issued by Divisional officers vide letter no 516-M/O/M-I/Safety Drive/24 dated 29.01.2025 regarding JPO for securing and release of vehicle/load/train/Loco in station/yard or in block section. Now, repeated instructions are being issued to ensure strict adherence to these guidelines. The Running staff shall take action in regard to precautions during train operation as under:-

1. Action by Station Master/Train Manager/ Assistant Loco Pilot/Traffic Staff when vehicles/load/train is to be stabled at Station: -

- a) The vehicles/load/train shall be stabled inside the fouling marks. Train Manager should ensure that train is stopped after clearing fouling mark.
- b) The vehicles/load/train be chained and padlocked using at least two chains, one at either end;
- c) At least four sprags/wooden wedges/Skids be used, two each below the outermost pair of wheels at either end.
- d) Hand brakes of at least 6 wagons from either end of train and in case of coaching train, hand brakes of SLRs of both ends must be fully tightened by Assistant loco pilot/ Train Manager/Points man as per the extant instructions issued over the Zonal Railways. In absence of Train Manager, hand brakes will be applied by Points man.
- e) The vehicles of stabled load/train should be coupled together. In case the stabled load has to be split for any reason, each such split part should be treated as a separate load for the purpose of securing.
- f) The points must be set, clamped and padlocked against the blocked line and towards dead end or trap point (if available). Scotch blocks must be used, if available. If a station is equipped with SSI/EI, blocking of point, route and signals to be done through Control Panel/VDU. It is not necessary to clamp and pad lock the point in such case.
- g) Stop Collars must be placed on relevant point buttons/slides/levers etc.;
- h) Remarks should be made in TSR and/or SM diary in Red ink to the effect that 'Line No. ___ is blocked and all the precautions for securing the load have been taken as prescribed above;

- i) After any load/train/loco is stabled, station master must inform the section controller supported by a private number that all laid down precautions for stabling and securing the load/train/loco have been taken.

2. Additional precautions to be taken while stabling vehicles/load/train at a station with gradient of 1 in 400 or steeper may have been prescribed under approved special instructions (by CRS) and mentioned in SWR of respective station. These should be followed scrupulously. In addition, following precautions must also be observed over and above those prescribed under approved special instructions:-

- a) Before vehicles are uncoupled, the hand brakes should be applied, sprags/wooden wedges/skids, should also be used to prevent vehicles from rolling down;
b) As far as possible, the vehicles/load/train should be stabled on a line which is isolated from other lines, particularly running lines.

3. Action by Loco Pilot/Assistant Loco Pilot before leaving the loco in case load/train is stabled with locomotive attached or light engine(s) is/are shut down or stabled:

- a) Stop train on A-9 and bring A-9 to Emergency position (i.e., BP pressure = 0) and the SA-9 to an Applied position. Physically ensure that trains brakes are applied.
b) Apply the hand brake/parking brake on the locomotive. In case of multi / consist locomotives, hand brake of all the locomotives should be applied. Physically verify that hand brake's chain is tightened/parking brake(s) are applied.
c) Place 4 wooden blocks on the outmost wheels of locomotive(s). Record this action in the loco log book, noting the wheel numbers clearly. If less than four wooden wedges are available on the locomotive(s), inform SM for requisite wedges, and then secure the loco.
d) Shut down the locomotive, turn off the battery switch and submit the loco keys and the locomotive logbook at the SM office.

4.

- a). Loco Pilot while on duty should not leave loco unmanned. In case he is required to leave the locomotive unmanned, he should do so only after receiving written authority from the Station Master/Yard Master and ensuring actions mentioned para 3 above;
b). Before leaving the station/yard, the Loco Pilot and Train Manager should jointly record in a register to be maintained with Station Master that the load & loco has been secured as prescribed above.

5. Action to be taken by Loco Pilot/Assistant Loco Pilot and Train Manager when the train is stalled in block section due to accident, failure, obstruction or any other reasons:

- a) Loco Pilot/Assistant Loco Pilot and Train Manager should protect the train as per provisions of G&SRs 6.03.
b) The train should be secured by applying loco brakes (SA-9, A-9 & hand brake) and hand brakes of at least six wagons at either end of the train. The hand brake should be operated by Assistant Loco Pilot from the leading end and by the Train Manager from the rear end. In case the train is being worked without the Train Manager, the duties of the Train Manager shall devolve on the Assistant Loco Pilot. In case of coaching trains, the Train Manager should apply hand brakes of the rear SLR and front SLR by ALP, if not locked.
c) If MR pressure starts dropping while train is stationary, loco pilot has to secure the loco with the wedges. Since MR pressure cannot be noticed by Train Manager as there is no such gauge in SLR unlike engine therefore, the Loco Pilot shall immediately inform the Train Manager regarding dropping of MR pressure and thereafter the Train Manager will secure the train with wedges in the last vehicle.

6. Action by Station master/Train Manager/Loco Pilot/Assistant Loco Pilot/Traffic Staff for clearing of stable vehicle/load/train/locomotives from station/yard :

- a) LP and ALP collect loco keys, logbook, etc from the SM office. Check the loco logbook for any irregularities. If any are found, inform the TLC and act according to their advice.
- b) Then LP and ALP to energize the loco, bring A-9 on release position and build BP pressure to 5 kg/cm², keeping SA-9 applied.
- c) Perform a BP Continuity Test to ensure BP pressure continuity in the load/formation.
- d) Apply train brake i.e. keep the A-9 at full service application position, and check a few wagons to confirm that the brakes are applied (excluding those with hand brakes applied).
- e) ALP to release the hand brake/parking brake in the loco(s) with assistance of LP, if required. Then remove the wooden wedges from the loco wheels, returning wedges taken over from station, if any.
- f) Once train brakes are applied, securing arrangements of load shall be removed as per following sequence - removal of chain, followed by removal of wooden wedges/metal skids and then hand brakes. Safety Chain, Wooden Wedges/Skids to be removed by Pointsman and Hand Brakes of SLRs/Brake vans/Wagons to be removed by Assistant loco pilot/Train manger/ Pointsman as per the extant instructions issued over the Zonal Railways. In absence of Train manager, hand brake will be released by Pointsman.
- g) In case of difficulty in release of hand brakes, TM shall advise LP for partial release of train brakes (A-9) till hand brakes are released.
- h) If it is necessary to make a TMLP Report (Train Manager & LP), inspect the load as per rules. In case of any irregularities, report them to SM. During the preparation of the TMLP Report, either LP or ALP must be present in the loco cab.
- i) After the above steps if everything is in order, TM upon consulting LP shall inform SM that the train is ready.
- j) Once the signal is taken off for the train, release A-9 and then SA-9. On gradients, release A9 & take traction and as it rolls forward release SA-9 to avoid roll down.
- k) Before starting the train, ensure BP is at 5.0 kg/cm² and that Air Flow Indicator (AFI) is in its predefined position.
- l) After starting the train, check for free movement of the load. If it feels jammed, notify SM or TLC.
- m) Immediately after starting the train, perform Brake Feel Test (BFT).

All officers and CLIs over the FZR division are hereby instructed to counsel their allotted/non allotted running staff regarding JPO for securing and release of vehicle/load/train/Loco in station/yard or in block section. The compliance report submitted to the Division Office for further appraisal and submission to HQ.

D/A: - 06

7cc
18/6/25
Sr. Divil. Elect.Engineer (OP)
N. Rly; Firozpur