

OFFICE OF THE
S. DEE (OP) S.E. RLY CKY

On 18.10.2024

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TECHNICAL CIRCULAR No: 06/2024

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दक्षिण पूर्व रेलवे
South Eastern Railway



स./No. TRS/TRG/TATA/T/403/602

कार्यालय / Office of the,
प्रधान्य/विलोप्र.क. का कार्यालय
Principal / ELTC
TATANAGAR / टाटानगर

दिनांक / Dated. 17.10.2024

To

The Sr. DEE (OP) CKP, ADA, KGP, DEE (OP) RNC,
S. E. Railway

Sub: - Technical Circular on "Operational Instructions of A-9 Handle in 3-Phase Locomotives during BP Overcharge Cycle"

Technical circular No.05/24-25 dated 17.10.2024 issued by ELTC/TATA on "Operational Instructions of A-9 Handle in 3-Phase Locomotives during BP Overcharge Cycle." is hereby circulated for further necessary action from your end.

Encl: Technical Circular No.05/24-25.

Sr. DEE (OP) CKP
18.10.24

for, 
प्रधान्य/विलोप्र.क. / टाटानगर
PRINCIPAL/ELTC/TATA

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Operational Instructions of A-9 Handle in 3-Phase Locomotives During BP Overcharge Cycle**Case Study: -**

- **Date of Failure:** 21.08.2024
- **Locomotive No.:** 38411/WAG9/BNDL **Train No.:** N/BIRP **Load:** 4992T
- **Section:** MKO-RNTL (KGP Division)
- **Reason for Failure:** Abnormal sound from undergear.

Incident Description:

Train departed from RNTL (Ranital) Line No. 8 at 22:34 hrs. Abnormal sound was experienced from undergear. After passing RNTL starter signal, train was stopped at 22:38 hrs. After checking the loco brake cylinder (BC) was found not released. PVEF was pressed but BC did not release. Then BCCP was pressed in pneumatic panel & BC was found released. But again, BC was found applied after releasing BCCP. So, the train was moved back to line no. 8 by pressing BCCP in pneumatic panel. After that all pressure was drained and re-built up. Further, working of BC was found normal.

Shed Analysis:

An analysis of the continuous event recording data indicated that the BP was overcharged at 20:53:34 hrs. At 20:54:28 hrs, the A-9 handle was moved into the Service Zone (Brake Application Zone) while the BP was still overcharged, i.e., before the BP pressure had stabilized to its normal value of 5.0 kg/cm². As per the loco pilot (LP), an emergency brake was applied by the assistant loco pilot (ALP) using the emergency cock at the home signal of RNTL to check the brake application in emergency conditions. Afterward, the A-9 handle was set to the 'RELEASE' position to quickly recharge the BP.

If the A-9 handle is moved to the Service Zone during an ongoing BP overcharge cycle (which lasts about 4 minutes), the brake will engage. Once moved back to the "RUN" position, the brake will release, but the BP pressure will start a new overcharge cycle. In this state, if the A-9 handle is moved to the "MIN" position, the BP gauge will show approximately 5.0 kg/cm², but the brake will remain applied. This led to the train being operated with the brakes applied, causing the abnormal sound from the undergear. **Brake System:** KBIL

Conclusion

The incident was caused by the A-9 handle being moved to the Service Zone during an ongoing BP overcharge cycle, followed by its movement to the "MIN" position, which resulted in the brakes being applied. The train was operated in this condition, leading to the abnormal sound from the undergear.

Instructions for Loco Pilots (LP) and Assistant Loco Pilots (ALP)

- If the A-9 handle is moved to the application position during the LPO (BP overcharge cycle) cycle, the brakes will apply. Once the A-9 handle is moved back to the 'RUN' position, the brakes will release, but the BP will re-initiate another overcharge cycle.
- If, during this process, the A-9 handle is mistakenly set to the 'MIN' position, the BP gauge may display a pressure of around 5.0 kg/cm², but the brakes will remain applied (the BC gauge will show applied pressure).
- **LPs must ensure that the A-9 handle is in the 'RUN' position and the BP is 5.0 kg/cm² before proceeding with operations.**
- In CCB locos, if the CE (control electronics) is turned OFF and then ON during an overcharge cycle, the BC gauge will display a pressure of approximately 1 kg/cm² after the loco is re-energized and BP is charged to 5.0 kg/cm². In this situation, LP should first move the A-9 handle to the 'RELEASE' position to release the BC pressure, and then shift it to the 'RUN' position.

