

**Government of India
Ministry of Railways
Research, Designs & Standards Organisation
Manak Nagar, Lucknow - 226 011**

No. EL/3.2.30/CG

Dated : 10.6.1983

**SPECIAL MAINTENANCE INSTRUCTIONS NO.
RDSO/ELRS/SMI/106**

**Cleaning of the selector after 10,000 km run of tap changer
No. 32 HBB make**

1. Object

Railways have reported a few cases of flashing of contacts of tap changer selector assembly. In some cases, railways also reported unusual/excessive copper deposits in the tap changer selector. Investigations have shown that such failures are due to excessive copper deposits in addition to the reason indicated in RDSO/ELRS/SMI/63 and 82 dt. 25.7.80 and 7.7.81 respectively. The copper deposits during the first 10,000 km run, are required to be checked to overcome flashover failures, as per procedure given below.

2. Instructions

Procedure for cleaning the selector of tap changer after first 10,000 km run by flushing of the oil, without opening (dismantling) of the selector assembly.


- Before draining the existing oil, the contact arm (Part 15) to be run from 0-32 and 32-0 notch atleast 25 times. Immediately after this open the 3-way cock for the drainage. While draining the oil, run the contact arm from 0-32 and 32-0 notch.
- Fill the fresh/treated insulating transformer oil through the selector over opening (Pt. 1314) upto the normal oil level. Run the oil pump atleast for one hour. Then notching up and down of contact arm atleast 25 times may be carried out. Immediately after this, open the cock (Pt. 1312) to drain the oil. Notch up and down of contact arm 15 times during draining operation.
- Fill with fresh/treated insulating (transformer oil) oil in selector.

Note :- Cleaning is essential as the oil in the selector side gets contaminated mainly with small metal particles, especially at the beginning of the tap changer working till such time the contact rollers get set.

Reference

- i) Para 2.1.2 (b) (Page 4) of the minutes of the meeting held between railways and M/S HBB held in march 1982 and minutes circulated vide RDSO letter no. EL/3.2.30/CG dt. 8/21-4-1982
- ii) Deputy Railway Adviser/Paris letter no. PAR/RLY/565 dt. 2.11.82.
- iii) HBB's letter No. PWSAS/S43/5/TAP/DAJ DT. 16.3.1983.
- 3. **Periodicity of implementation**
During 1st IA schedule (after first 10,000 km run).
- 4. **Instruction Drawing**
Nil
- 5. **Application**
 - i) Locomotives fitted with new No. 32 tap changers.
 - ii) Locomotives fitted with tap changers in which so far no overhauling/cleaning of selector assembly carried out.
- 6. **Agency of implementation**
All electric loco sheds.
- 7. **Distribution**
As per list attached.

Encl : Mailing list.


(K. Vishwakumar)
for Director General (Elec)