

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

No.EL/3.2.1/2/J6

22.4.1985

**MODIFICATION SHEET NO. RDSO/WAM4/143**  
**MODIFICATION TO COOLING AIR INSIDE THE TRANSFORMER**

**1. OBJECT**

The outlet pipe of the oil pump now extends inside the transformer tank-up to the middle of leg 2 winding. Since there have been cases of flash over of auto winding and formation of sludge inside the transformer at this location, it has been decided to extend this outlet pipe upto middle of leg 1 winding suitably drilling holes in this extended portion also. The end of this pipe, however, is to be located and oil comes out of the pipe only through the holes drilled as shown in the drawing enclosed. This, incidentally, brings down the winding temperature in auto adding also.

**2. WORK TO BE CARRIED OUT**

Replace the existing horizontal oil circulation pipe with a longer pipe upto leg1 of winding as shown in the drawing. (SK. EL.3820).

Block the end of the pipe.

-Throughout the length of the pipe holes should be drilled as shown in the enclosed drawing (SK. EL. 3280).

**3. PERIODICITY**

All ac electric locomotives.

**4. MATERIAL REQUIRED**

Longer pipe with the same material specification now being adopted (as given in the enclosed drawing).

**5. MATERIAL SURPLUS**

Old pipe.

**6. REFERENCE**

Minutes of the meeting held on 4.8.81 at Electric Loco Shed, Kanpur with M/s BHEL on failures and problems of BHEL transformers in Electric locos.

**7. AGENCY FOR IMPLEMENTATION**

POH Shops.

**8 DISTRIBUTION**

As per list attached.



(M. M. PRAKASAM)  
for Director General

Encl: SKEL.3820 Mailing list.  
(Elect.)

