

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

No. EL/3.2.172

Dated 29.1.1996

Modification Sheet No.RDSO/WAG5/25

(New No. WAG5/280)

1. Title :

Provision of grease outlet i.e. drain hole in CE outer bearing cap of Traction Motor type HS 15250A and procedure for re-greasing of armature roller bearing(PE & CE).

2. Application : Traction Motor type HS 15250A.

3. Object :

Railways have reported large cases of failure of Traction Motor type HS 15250A due to heavy flash over. One of the reasons of the flash over is the accumulation of excess quantity of grease of CE bearing inside the commutator chamber which results the deposition of carbon in dust etc. In the commutator chamber during service and causes flash over. Further, Railways are reporting failure of CE bearing which may be due to overgreasing causing heating of the bearing and its consequent failure.

In the original design of Traction Motor type HS 15250A supplied by M/s Hitachi and further manufactured by M/s BHEL/M/s CGL/CLW, it has been observed that there is a grease outlet in the PE side bearing assembly but there is no provision of Grease outlet in the CE side bearing assembly. But grease outlet is variable on CE side also on imported Hitachi Traction Motor type HD:1050Er.

Whenever greasing is done in the electric loco sheds by the staff, the excessive grease comes out from the grease outlet from the PE side bearing assembly but due to absence of grease, instead of coming out, gets deposited inside the commutator chamber. This results in collection of carbon dust etc. on the grease resulting in flashover.

The matter has been discussed in details in the symposium on new development/improvement & service performance of ac Electric Loco Traction Motor hold at BHEL, Bhopal on 14.4.97 where when RDSO, CLW Zonal Railways participated and it was recommended to have a grease outlet on the CE bearing assembly also.

M/s BHEL has already implemented this modification on their Traction Motors S. No. 4673555 onwards.

This modification states the details of work required to be carried out on the existing as well as on the newly manufactured CE outer bearing cap of Traction Motor type HS15250A, and also furnishes the details of regreasing procedure.

4.0 Work to be carried out :

- 4.1 Remove the existing CE bearing cap from the Traction Motor.
- 4.2 Modify the CE bearing cap as per Fig. No. 1 (copy enclosed) by miling, drilling and taping 1/4th" (6mm) BSP hole and provide a plug to avoid entry of dirt and dust in the above hole.
- 4.3 Refit the modified CE bearing cap on the Traction Motor
- 4.4 Greasing in CE bearing assembly is to be carried out by the suitable grease gun till the grease comes out from the grease outlet.

5. Procedure of re-greasing for armature roller bearings PE & CE :

- 5.1 Remove the grease nipple from grease inlet of PE & CE bearing brackets.
- 5.2 Remove the plug from the grease outlet of CE bearing cap.
- 5.3 Add the grease during yearly inspection stage with the help of suitable grease gun.
- 5.4 The quantity and type of grease should be as follows :
 - Type of grease : Servogen RR3 of M/s IOC
 - Qty. of grease : PE side - 175 gms.
 - Periodicity of greasing : Annual
- 5.5 The greasing in armature bearing assembly (PE & CE) should be carried out by suitable grease gun till the grease comes out from their respective grease outlet. Refit the grease outlet plug in the CE bearing cap.

6. Periodicity of implementation :

For CE bearing Cap : Whenever the Traction Motors are taken out from the bogie for maintenance work or during IOH/POH.

7. **Agency of implentation :**

- TM manufacturers
- TM workshops
- POH repair shops
- Electric loco sheds

8. **Distribution :** As per enclosed list



(R. K. Kulshrestha)
for Director General/Electrical

Encl: As Above.

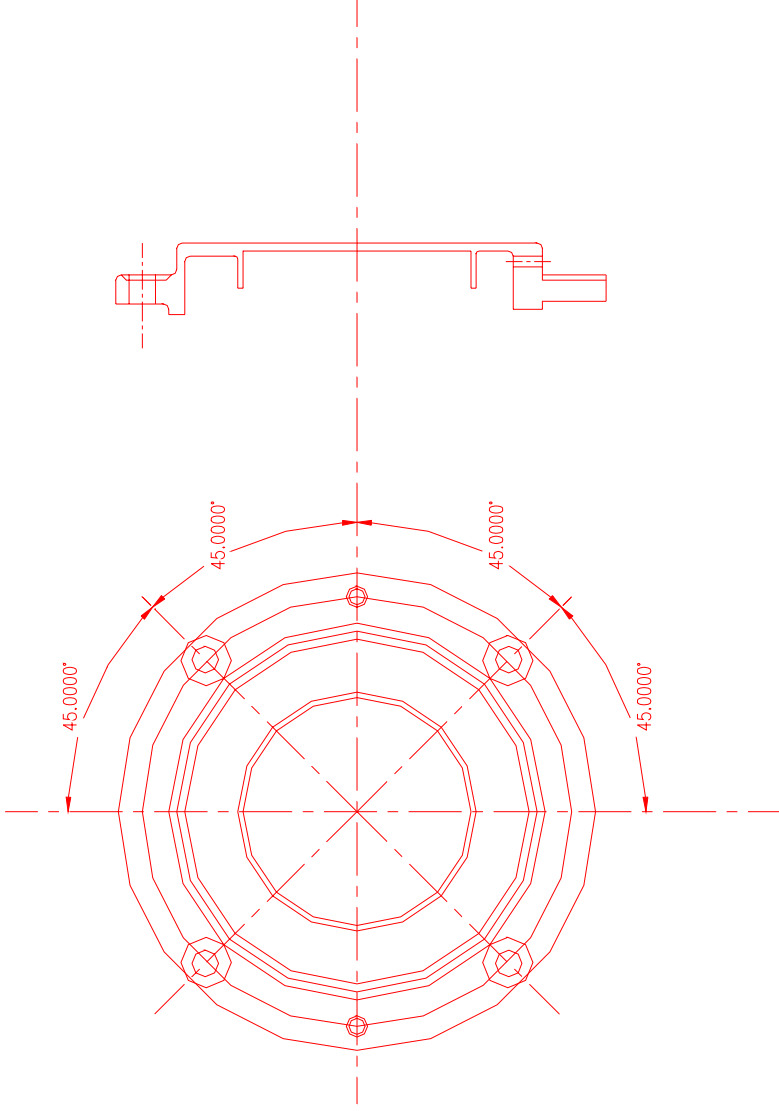


FIG (1)

REFHBB DRG. NO. SWT 5088	SCALE:- NTS	APPROVED BY:-	FOR D.G.
MODIFIED BEARING COVER (C.E.)			
HS-15250A			
RDSO.ELEC.DTE.		FIG (1)	

DT.	16.2.79
D	S.CHANDRA
T	
C	H.N.S. DHILLON

