

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
RESEARCH, DESIGNS & STANDARDS ORGANISATION**

MANAK NAGAR,
LUCKNOW - 226 011

No. EL/3.2.5

MODIFICATION SHEET No. RDSO/WAM4/210

1. TITLE:

Adoption of Nylon Pinion for oil pump assembly of Traction Motor type TAO-659.

2. OBJECT:

Railways have reported few cases of failure of Traction Motor type TAO-659 due to the defect of gear in two halves used for driving pinion of oil pump assembly. The oil pump pinion is also getting damaged requiring replacement. However, cast base of the oil pump is getting worn out and damaged due to the excessive weight of the oil pump pinion.

Southern Railway, Arakonam Shed have provided nylon pinion to reduce the weight of the pinion and to avoid damage to the gear in two halves. This modification has been discussed during 24th and 25th MSG Meetings. It was decided during the 25th MSG meeting at South Central Rly. Secunderabad on 5th and 6th March, 1998 to adopt Nylon Pinion of the oil pump assembly of TAO-659 Traction Motors. These nylon pinions are working satisfactorily on Southern Rly. For more than one year. Southern Railway have developed these pinions through M/s R-MAN System, Chennai.

In view of the above, it is recommended to adopt nylon pinion for oil pump assembly of Traction Motor type TAO-659 by all Railways.

3. WORK OF THE CARRIED OUT:

- Remove the oil pump assembly and dismantle it.
- Remove the existing pinion.
- Provide the Nylon pinion
- Do the rest assemblies as per usual procedure.

4. APPLICATION TO THE CLASS OF LOCOMOTIVES:

TAO-659 traction motors fitted on AC Locos–WAM4, WAP 1 & 3, WCAM 1, WAG5

5. **MATERIAL REQUIRED:**

The dimension and the teeth characteristics of nylon pinion should be same as that of existing steel pinion (Drawing of CLW Drg. No.05/3/11/76 Alt-1 dated 22.5.90) except its material specification. Material of nylon pinion should be as per M & C Dte. /RDSO's Specification No. RDSO/m&C/RP-175/92 (Copy enclosed).

6. **MATERIAL RENDERED SURPLUS:**

Existing steel pinion – 6 nos. per loco of oil pump assembly.

7. **REFERENCE:**

Item No. 3.3 of 25th MSG (Elect. Loco) held at S. C. Rly., Secunderabad on 5th and 6th March, 1998

8. **MODIFICATION DRAWING:** Nil

9. **AGENCY OF IMPLEMENTATION:**

- All Electric Loco Sheds.
- All POH/Repair Shops

10 **DISTRIBUTION:** As per enclosed list



Encl: RDSO Specification
No. RDSO/M&C/RP-175/92

(R. K. Kulshrestha)
For Director General (Elec.)