

टेलैक्स : 0535-2424 RDSO-IN
फैक्स : 91-0522-458500
तार : 'रेलमानक' लखनऊ
Telegram : 'RAILMANAK', Lucknow
टेलीफोन/Tele : 451200 (PBX)
450115 (DID)



भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226 011
Government of India-Ministry of Railways
Research Designs & Standards Organisation
LUCKNOW - 226 011



No.EL/1.3.10

Dated : 19.3.1998

Distribution as per
enclosed list

AMENDMENT NO.1

Sub. : Amendment in SMI No.RDSO/ELRS/183-
procedure for proper tightening of
suspension tube fixation bolts fitted on
Traction Motor type TAO-659 & HS15250A.


Ref. : SMI/ELRS/183 issued vide this office letter
of even number dated 13.12.96.

Item Mo.3 : Object

"In the 2nd line"

"Please read HS 15250A in place of TAO-659"

DA : Nil


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

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

No. EL/1.3.10

Dated 13.12.96

SPECIAL MAINTENANCE INSTRUCTION NO.RDSO/ELRS/183

1. Title :

Procedure for proper tightening of suspension tube fixation bolts fitted on the Traction Motor type TAO-659 and HS-15250A.

2. Application :

All AC, BG-Electrical locomotives fitted with TAO-659 and HS-15250A Traction Motors.

3. Object :

Northern Railway has reported few cases of the failures of roller suspension tube of TAO-659 Traction Motors fitted on WAP4 locos. On the joint inspection carried at Electric loco Shed/N.Rly. Ghaziabad and Kanpur following observation are made :

- All the six studs of enclosure were found in broken condition.
- Enclosure has deep groove marks over its surface.
- Approximately 60% length of one side collar of suspension tube(PE side) broken completely
- All four holes on PE side became oval.
- CE side both side collar deformed.

However, both side roller bearing were all right. It is also observed that sheds are not using torque wrench for tightening of suspension tube fixation bolts.

To avoid such failure in future, it is advised that sheds should use only torque wrench for the tightening of suspension tube fixation bolts at the specified torque.

4. Procedure :

4.1 Mount the upper flange of suspension tube on the magnet frame and secure with 4 Hex.Head bolts size M36x110L.

4.2 Mount the lower flange of suspension tube in a slot provided in the magnet frame and also secure with 4 Hex.Head bolts, size M36x110L.

4.3 Tighten the Hex.Head bolts, size M36x110L with spring washer with torque wrench and use wire for locking them.

4.4 Use the following torque value :

Bolts size	Torque (Kg.m)	
	Standard	Max
M36	121	145

5. Material Required

- 5.1** -Torque wrench - 121 to 145 kg.m
- 5.2** -8 Hex head. bolts, size M36X110L
- 5.3** -Locking wire of HS size and 2 mm

6. Agency of Implementation :

- All electric loco sheds
- All POH shops
- All manufacturing Units/Rewinding shops

7. Periodicity of Implementation

For shed/POH shops only

Condition and tightness of Max.Head bolts size M36x110L alongwith their spring washers should be checked at the interval of 6 months/IC stage, AOH, IOH and POH.

8. Distribution :

As per enclosed list.



(R.K. Kulshrestha)

for Director General/Electrical