



सत्यमेव जयते

भारत सरकार - रेल मंत्रालय
अनुसंधान अधिकल्प और मानक संगठन
लखनऊ - 226011
Tele/Fax : 2465754
e-mail : dse4cs@gmail.com

Government of India - Ministry of
Railways
Research, Designs & Standards
Organization, LUCKNOW - 226011



No. EL/3.1.35/2 (brake lever)

Date: 17.09.2015

Chief Electrical Engineer,

1. Central Railway, Mumbai, CST-400 001.
2. East Central Railway, Hazipur-844101.
3. East Coast Railway, Chandrashekharpur, Bhubaneswar-751016.
4. Eastern Railway, Fairlie Place, Calcutta-700001.
5. North Central Railway, Block-A, Subedarganj, Allahabad-211033.
6. Northern Railway, Baroda House, New Delhi-110001.
7. South Central Railway, Secunderabad-500 071.
8. South East Central Railway, Bilaspur-495004.
9. South Eastern Railway, Garden Reach, Calcutta-700 043.
10. Southern Railway, Park Town, Chennai-600 003.
11. West Central Railway, Jabalpur-482001.
12. Western Railway, Churchgate, Mumbai-400 020.
13. Chittaranjan Locomotive Works, Chittaranjan - 713 331.

MODIFICATION SHEET No. RDSO/2015/EL/MS/0443 Rev. '0', Date 17.09.2015

1.0 Title: Modification for improving the reliability of motor supports in bogie of WAP7/WAG9 locomotives.

2.0 Object: Railways have reported breakage of motor support in WAG9/WAP7 locomotives. On observation of the breakages in motor support lug, it is noted that the cracks generally initiates from motor support lug portion in fatigue manner and ultimately shears the lugs perpendicularly.

Failure investigation conclude that the motor lug not having 8R radius on the upper face results in stress concentration on the upper portion of the lug leading to its breakage.

To resolve the above problem, Railways were advised vide RDSO SMI no. 280 for making filet radius of 8R manually on the upper face of motor support using grinder. However, it is reported that breakage of rectified motor supports with 8R radius (made manually) on the upper face continues even after implementation of the SMI no. 280.

3.0 Existing Arrangement: Presently, the traction motor is suspended from motor support to CLW drawing no. 1209-01-112-009 Alt '1' through torque arm in WAP7/WAG9 Locomotives.

4.0 Modified Arrangement: The modified design of motor support has been developed based on FEA analysis having better factor of safety compared to its earlier design. Consequently, new drawings of motor support has been made as per CLW drawing no. 209-01.412-186 & 1209-01.412-187.

5.0 Work to be carried out:

- a. Motor support welded on bogie transom not having filet radius of 8R on upper face or the rectified motor support having 8R radius (made manually) on upper face after implementation of RDSO SMI no. 280 should be replaced with motor support having filet radius 15R as per CLW drawing no. 1209-01.412-186.

DMU

17
W.C.R.
20