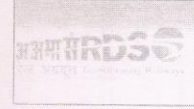




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No. EL/3.1.35/2 (brake lever)

Dated: 17.09.2015

Chief Electrical Engineer,

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2. East Central Railway, Hazipur-844101.
3. Eastern Railway, Fairlie Place, Calcutta-700001.
4. Northern Railway, Baroda House, New Delhi-110001.
5. South Central Railway, Secunderabad-500 071.
6. South East Central Railway, Bilaspur-495004.
7. South Eastern Railway, Garden Reach, Calcutta-700 043.
8. Southern Railway, Park Town, Chennai-600 003.
9. West Central Railway, Jabalpur-482001.
10. Western Railway, Churchgate, Mumbai-400 020
11. Chittaranjan Locomotive Works, Chittaranjan - 713 331

TECHNICAL CIRCULAR NO. ELRS/TC/0082 (REV. '1')

Sub: Bogie Clearances on WAG9/WAG9H & WAP7 3-phase electric locomotives.

Ref: Item no. 12 of 36th MSG

Based on the *tentative* values of bogie suspension clearance of WAG9/WAP7 locomotives as recommendation by Motive power directorate of RDSO, Technical Circular no. ELRS/TC/0082 (Rev '0') was issued.

CLW/Railways have been reporting of not being able to maintain primary/secondary vertical clearances as mentioned in the above circular. This issue was discussed at the 36th MSG meeting, wherein CLW and RDSO were asked to study the problem. Based on the MSG recommendation, CLW and RDSO has jointly studied the problem of abnormal clearances including audit of the manufacturing process at CLW, clearances specified in ABB drawing no.IB011-00192 and in maintenance and repair manual (Vol. D1) of WAG9. Also, clarification sought from OEM of the locomotives including study of clearances on more than 100 locomotives were analyzed.

Based upon the study and analysis and clarification given by the OEM following design/service limit of the bogie clearances are recommended. The design limits are to be maintained by CLW during manufacturing of locomotive. The service limits are to be maintained by the loco sheds. The values are applicable for WAG9/WAG9H and WAP7 types of locomotives as given in table -1

Table-1

SN	Clearance	Manufacturing (Design) Limits (mm)	Service Limits (mm)
1.	Vertical clearance between Axle box & Bogie frame	30 to 35	27 to 35
2.	Lateral clearance between Axle box and Bogie frame	15 to 19	15 to 22
3.	Vertical clearance between Bogie frame and Under frame	35 to 60	32 to 60
4.	Lateral clearance between Bogie frame and Under frame	45 to 50	45 to 55

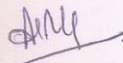
While measuring the clearances, it should be ensured that the bogies are not in tilted position. It is, therefore, essential that these clearances should be measured on a tangent and level track.

Measurement of lateral clearances between bogie frame & under frame may be taken at both ends of lateral stops and average should be taken. This is to average out variation in the lateral clearances of left hand side (LHS) and right hand side (RHS) of bogie if the bogie is shifted laterally. The measurement may be repeated at other location of track after movement of locomotive.

For adjustment of vertical clearances between axle box & bogie frame and between bogie frame & under frame, the necessary instructions as given in Maintenance & Repair Manual (Vol.D1) of Dec.2001 (Chapter-2) and in ABB Drawing No.IB011-00188 & IB011-00189 for pairing of springs should be strictly followed. Compensating plate of appropriate thickness as given in Maintenance & Repair Manual (Vol.D1) should only be used to achieve these clearances. CLW/Railways should ensure that the buffer height of the locomotive is maintained to the required limit.

Any feedback or observations may be sent to RDSO

Encl: Nil


(A. K. Rastogi)
for Director General Electrical

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