

Documentation 6

GOVERNMENT OF INDIA MINISTRY OF RAILWAYS
RESEARCH DESIGNS AND STANDARDS ORGANISATION
MANAK NAGAR LUCKNOW 226 011

No. EL/3.2.13/6

MS/250

Dt.20.1.98

MODIFICATION SHEET NO. WAG7/4

IMPROVEMENT IN THE PERFORMANCE OF CENTRE PIVOT RUBBER BUSH
FITTED IN WAG7 LOCOMOTIVES

1. OBJECT

Railways have reported failures of rubber bush fitted in WAG7 locomotives due to defects like cracks, debonding and shearing of rubber causing premature failures of rubber bush fitted in centre pivot of WAG7 locomotives. As a result the centre pivot assembly slides down or sometimes even drops from the centre pivot pin. Rubber bush is predominantly subjected to compressive stresses due to traction and braking forces. Yaw motion of the bogies also impose some torsional stresses on the rubber bush.

Analysis of nature of defects in rubber bush indicate that they are mostly failing in torsional mode. Therefore it is necessary to give more clearance between rubber bush and the centre pivot pin to reduce torsional stresses on rubber bush.

2. WORK TO BE CARRIED OUT

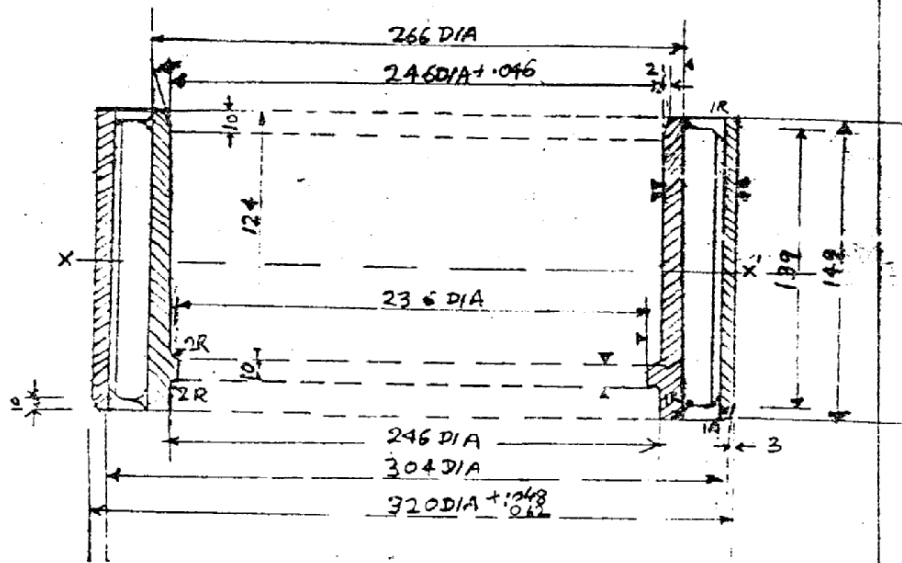
The rubber bush to RDSO Drg*No.WAG2-79 (item C) : Its internal diameter of inner sleeve should be increased from $246 + 0.046/+0.0mm$ to $247 + 0.05/+0.0mm$. This modification can be carried out by giving a light cut in the bore of the rubber bush in the loco shed machine shop (vertical lathe/boring machine will be preferred) whenever the loco is lifted.

3. APPLICATION TO CLASS OF LOCOS

- (i) WAG7 locomotives in service.
- (ii) For new locomotives the scheme to be followed by CLW is by incorporating manganese liners both on pivot pin and pivot housing in accordance with Drg. No.SKVL-128 Alt.1 issued vide letter No. SV.WDG2 dt. 17/20.3.97.

4. MATERIAL REQUIRED

Nil



WAG 7/4

1.2.2
1.2.3
1.2.4

REF. DRG. NO. WAG 279 SCALE: 1:2.5 APPROVED: 14.2.1954 FOR DS

ARRANGEMENT OF CENTRE PIN
DEVICE (WAG 7 LOCO)

RDSO. ELEC. DTE. DRG. No. SK. EL. 4437

5. MATERIAL RENDERED SURPLUS

Nil

6. REFERENCE

Drawing No. SKEL 4437 (Copy enclosed). Motive Power Directorate of RDSO have issued this modification vide their letter No. SV.Rubber dt.15.1.97.

7. AGENCY FOR IMPLEMENTATION

- (a) Electric Loco Shed holding WAG7 locomotives.
- (b) All POH Shops
- (c) Locomotives under manufacture by CLW with the arrangement as per 3(ii) above. The cut in point to be advised to RDSO and Railways.

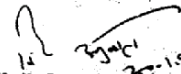
8. DISTRIBUTION

As per enclosed distribution list.

SKEL

Encl : RDSO Drg. No.4437

WAG 7/4


(V.K. Aggarwal)
for Director General/Elect