

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

Note No. EL/3.2.61

Dt. 22-05-1998

MODIFICATION SHEET NO. RDSO/WAM4/209

**REPLACEMENT OF THE EXISTING LATCHING TYPE OF FIXING
ARRANGEMENT WITH BOLTED DESIGN OF CRADLE COVER ON
VACUUM CIRCUIT BREAKER TYPE 20CB**

1.0 OBJECT

1.1 ways have reported number of cases of water entry from cradle cover resulting in have y flashover on the live parts enclosed. During investigation, it is observed that the water entry from cradle cover is mainly due to the following reasons:-

- i) Breakage of catch spring
- ii) Breakage of catch clamp
- iii) age of catch clamp and welding
- iv) Improper sealing of cradle cover

1.2 In order to overcome the problem of water entry from cradle cover, it is proposed to:-

- Modify the existing latching arrangement to bolted type of cradle cover.
- Increase the thickness of the rubber gasket in the cradle cover from 3 mm to 6 mm.

2.0 WORK TO BE CARRIED OUT

- Open the clip, remove the remove the existing cradle cover (Pt.1) and modify the same as per new design (Ref, SKEL-4472) enclosed.
- Remove the toggle spring and clip assembly from cradle by cutting tubular rivet from the confer.
- Place the eye bolts (Pt.2) between the catch brackets (Pt.2a) on cradle and fix them by passing one number rivet (Pt.3) through holes in catch brackets and eye bolts.
- Rivet both ends of the rivet (Pt.3).

- Fit the cradle cover (Pt. 1) such that the threaded portion of eye bolts pass through the catch (Pt. 1b)
- Pass the support brackets (Pt.4) through the eye belts (Pt. 2) such that they rest on catch (s) (Pt. 1b)
- Lock the arrangement using M6 plain washer (Pt. 5) M6 single coil spring washer (Pt. 6) and M6 Hexagonal nut (Pt. 7)
- Finally seal the cradle cover in line with RDSO SMI No. 161 (Rev. I)

3.0 APPLICATION TO CLASS OF LOCOS

All electric locos fitted with CVBs type 20CB

4.0 MATERIAL REQUIRED

	Qty. /Set
i) Cradle cover (to be reused)	01
ii) Eye bolt (new item)	02
iii) Rivet (to be replaced by new one)	01
iv) Support bracket (new item)	02
v) Plain washer M6	02
vi) Single coil spring washer M6	02
vii) Hexagonal nut M6	02

3.0 REFERENCE

Item 10 of the Minutes of the co-ordination meeting held between Railways and M/s. GEC Alstom in July'97 and circulated vide RDSO LETTER No. SL/3.2.61 dated 18/19.08.97.

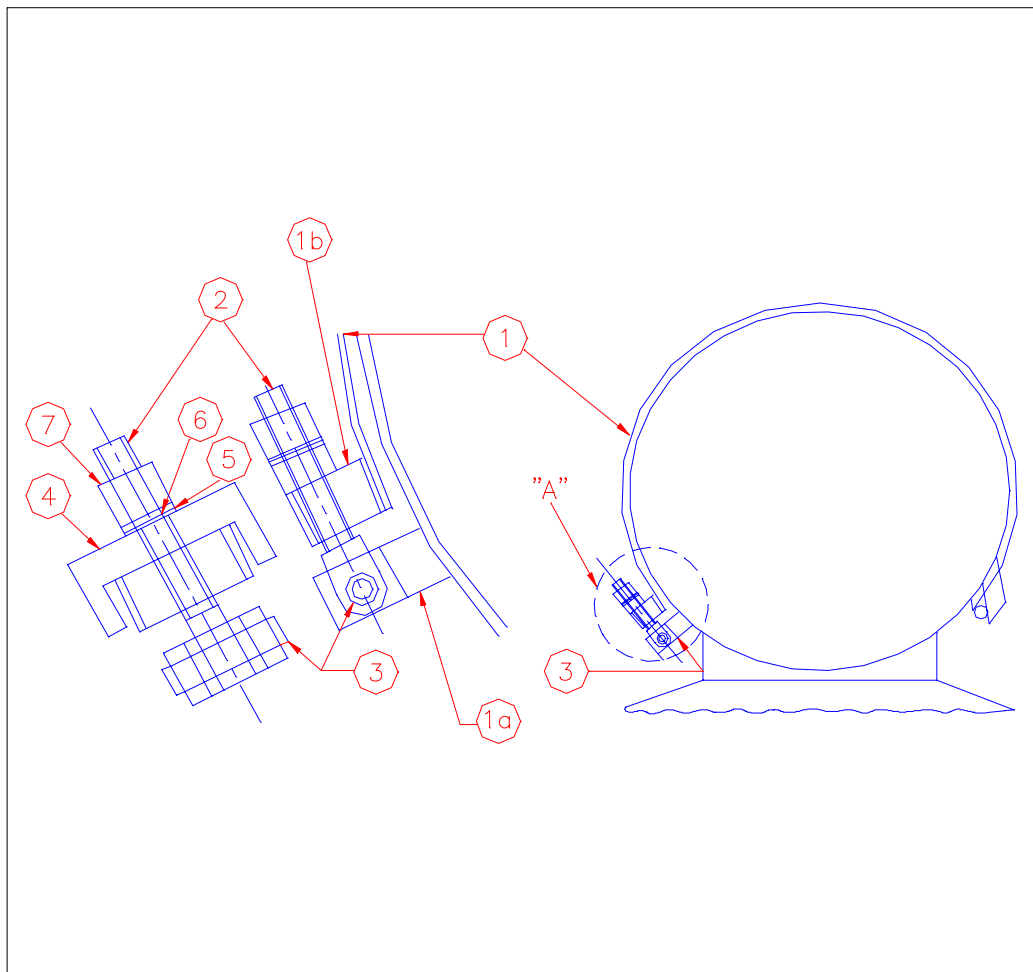
6.0 MODIFICATION DRAWING NUMBER

RDSO SKEL-4472

7.0 AGENCY OF IMPLEMENTATION

- Electric Loco Sheds/EMU Car Sheds and POH shops for existing ac locos/EMUs.
- GEC Alstom on new supply of VCB.

Encl : As above.



7	HEX NUT M6	2		
6	SPRING WASHER M6	1		
5	PLAIN WASHER M6	2		
4	SUPPORT BRACKET	2		
3	6.3 O/D,4.8 I/D X 200LG./RIVET	1		
2	EYE BOLT	2		
1b	CATCH	—		
1a	CATCH BRACKET	—		
1	CRADLE COVER	1		

REF. No.	PART No.	DESCRIPTION	DETAIL DRG.	No./EMU	MATL.	SPEC.
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REF.		SCALE:—NTS	APPD. BY <i>Syde</i> (FOR DG.)
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BOLTED DESIGN OF CRADLE COVER FOR VCB			FIRST ISSUED
			SUPERSEDES
RDSO.ELEC.DTE		SKEL-4472	SUPERSEDED BY

Dt.	21.5.88
D	AJAI
C	
T	