

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

No. EL/3.2.30/CG

Dated : 15.9.1982

**MODIFICATION SHEET NO. WAM4/128**

**MODIFICATION TO FIXING ARRANGEMENT FOR BLOW OUT COIL OF  
CGR TO ENSURE LOCKING - TAP CHANGER NO. 32 TYPE**

**1. OBJECT**

Railways have reported a few cases of loosening of Allen screws provided at locations 2316-17 and 2319-2317 for fixing the blow out coil of load switch (CGR) of tap changer type No. 32. Investigation has shown that HBB have provided only one number plain washer with allen screw. The original BBC practice was to provide 1 number spring washer with hexagonal bolt as shown in their Instruction Sheet No. AM 91018 E. This deviation from the original fixing arrangement caused the loosening of allen screws during service.

**2. WORK TO BE CARRIED OUT**

- Unscrew the allen screw provided at locations 2316-17 & 2319-2317
- Remove the allen screw (2316) and provide hexagonal screw (2316) with special locking washer, spring washer (2317) and necessary shim as shown in Fig. 1 of SK EL 3504.
- Provide the existing hexagonal socket head cap screw (2319) with spring washer (2317) and punched washer of dia 6.6/11 x 1.6 mm (Plain washer) as shown in Fig. 2 of SK EL 3504.
- Tighten fully the unscrewed hexagonal screws.

**3. APPLICATION**

All locomotives fitted with No. 32 tap changer.

**4. MATERIAL REQUIRED**

- |                          |                      |                 |
|--------------------------|----------------------|-----------------|
| - Hexagonal screw        | - 12 Nos..           |                 |
| - Special locking washer | - 6 Nos..            |                 |
| - Spring washer          | - 24 Nos..           |                 |
| - Shim                   | - As per requirement | for adjustment. |
| - Punched washer         | - 12 Nos..           |                 |

Material to be obtained from HBB works/Baroda.

5. **MATERIAL SURPLUS**

- Existing allen screws (12 Nos.) at location 2316
- Existing plain washer (12 Nos.) at location (2316-2317)

6. **REFERENCE**

- (i) HBB Drawing No. TC-83
- (ii) Modified fixing arrangement of blow out coil introduced from HBB tap changer No. 31281208.

7. **AGENCY FOR IMPLEMENTATION**

All electric locomotive sheds and POH shops.

8. **DISTRIBUTION**

As per list attached.

Encl: 1. SK EL 3504  
2. Mailing list.



(K. Vishwakumar)  
for Director General (Elect).

SKEL. 3504

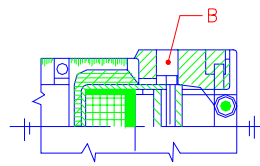
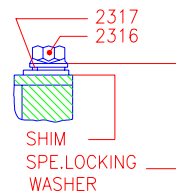


FIG.2

PUNCHED WASHER  
ø6.6/11x1.6

DETAIL AT B



DETAIL AT 'C'

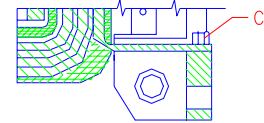
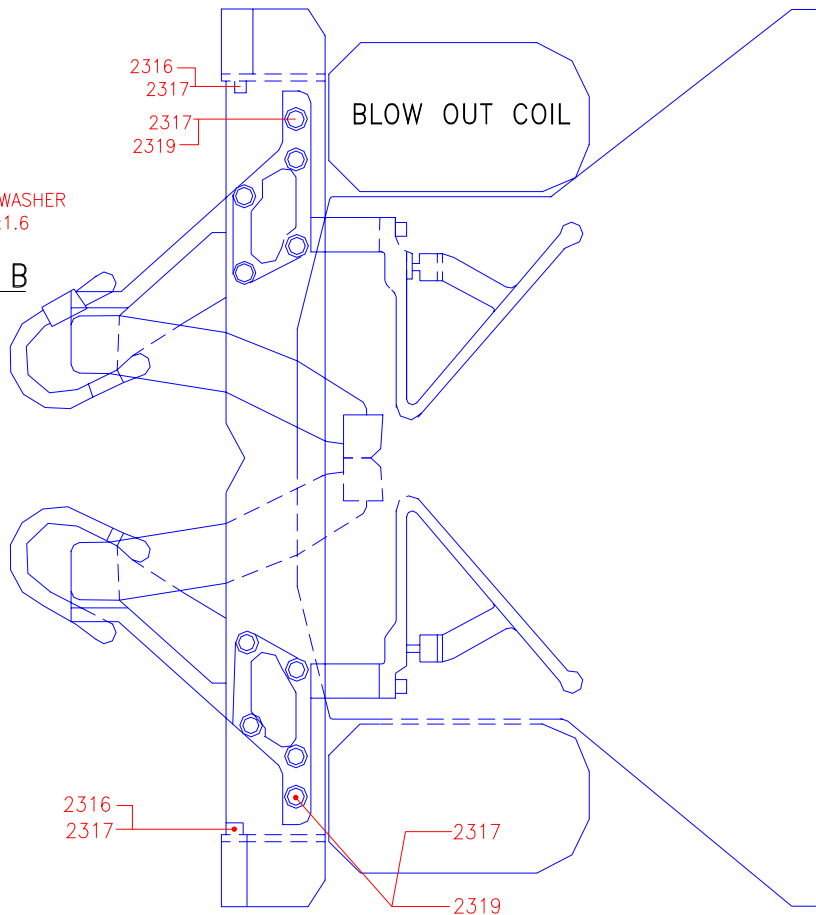


FIG.1



2319	HEX . SOCKET HD. CAP SCREW	12	
2317	SPRING WASHER	24	
2316	HEX . SCREW	12	
PART No.	DESCRIPTION	QTY.	MAT/SPEC

REF:- HBB DRG.NO.TC - 83

SCALE:- NTS

APPROVED BY:-

FOR D.G.

MODIFIED FIXING ARRANGEMENTS FOR  
BLOW OUT COIL OF TAP CHANGER  
(No.-32)

RDSO.ELEC.DTE.

SKEL. 3504

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