

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

No : EL/3.2.30/JCG

Dated : 28.7.1981
20.8.1981

Modification Sheet No. RDSO/WAM4/117

**Modification to Control Lever of SMGR of TAP CHANGER NO. 32 HBB
MAKE**

1. Object of modification :

A few cases of sticking of tap changer were reported by Railways due to malfunctioning of control lever (part No. 45) of new HBB design where the two components of the lever are fixed with a nut and bolt and one spring cotter. Investigation has revealed lateral movement between those two parts due to only one spring cotter resulting in jamming of the guide pin, which in turn results in sticking of the tap changer. It is proposed to fit 2 additional spring cotters to avoid the relative movement between the 2 components of control lever.

2. Work to be carried out :

- Dismantle the control lever assembly.
- Check the free movement of guide pin part No. 4521.
- Check the tightness of Nut locked with spring cotter Part No. 4503. If looseness is observed, change bolt, nut and spring cotter. Tighten the nut fully and provide 2 mm dia spring cotter after drilling a hole in the bolt.
- Keep the template as per SK EL 3590 on spring loaded pin bearing part No. 4522 so that the template matches its Profile. Mark and drill 3.9 +0.1/-0.0 dia holes as per the template marking and assemble the 2 additional spring cotters CS4x14 Part 4528.
- Fit back the control lever.
- Check for smooth operation.

3. Application :

Locos fitted with No. 32 tap changers having control lever of new HBB design.

4. Material required :

2 spring cotters CS 4x14 obtainable from M/s Hindustan Brown Boveri, Post Box No. 140, Manoj, Vadodara 390 001.

5. Material rendered surplus :

Nil

6. Reference :

Para 1.3.2 (page 4) of the minutes of the meeting held between RDSO and M/s HBB. Minutes circulated vide RDSO letter No. EL/3.2.30/JCG dt. 24.10.80.

7. **Modification drawing :**

RDSO SK EL 3590

8. **Agency for implementation :**

CLW CRJ : for locos under production.

Railway Maintenance Sheds) : for existing locos.

Elec Loco Workshops)

9. **Distribution :**

As per list attached.

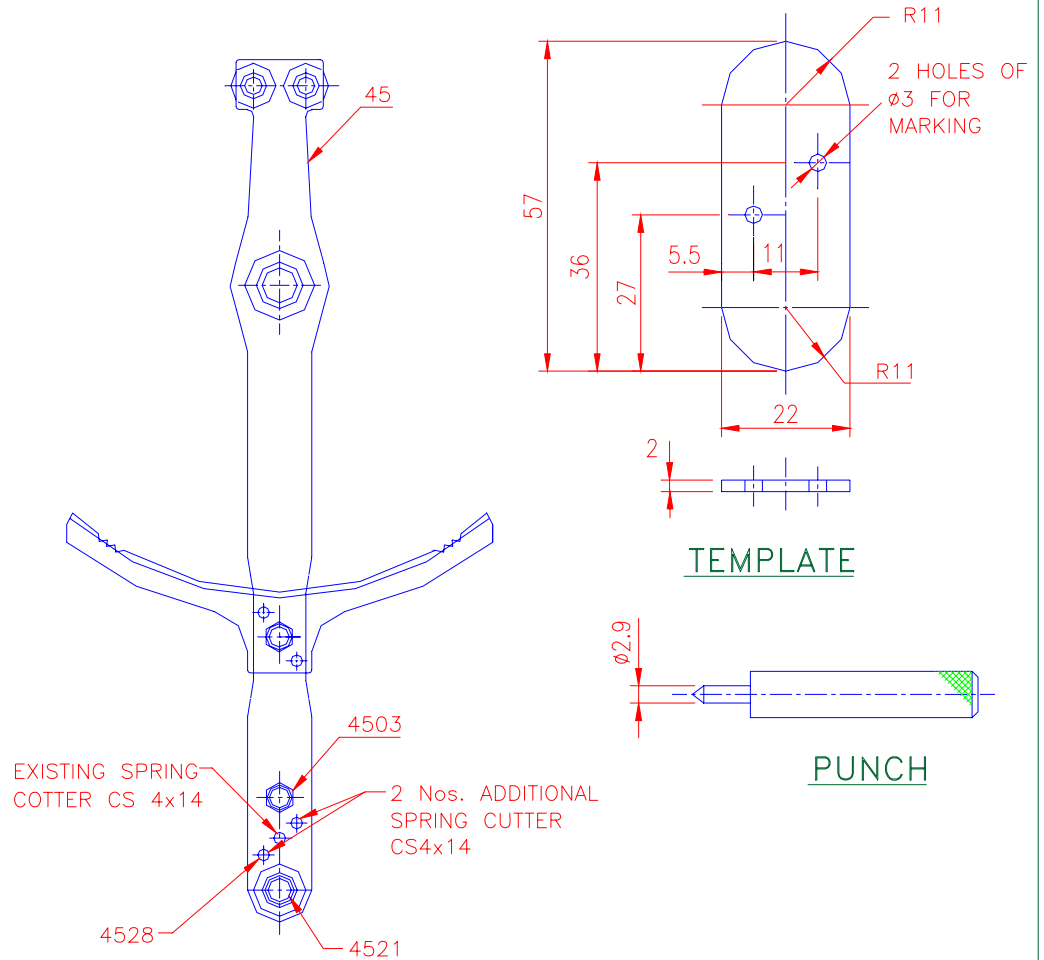


(Ramesh Chandra)
for Director General

(Elec)

Enc: SK EL 3590 & Mailing list

SK.EL-3590



REF:-

SCALE:- 1:2, 1:1

APPROVED BY:-

FOR D.G.

CONTROL LEVER FOR
N-32 TAP CHANGER

RDSO.ELEC.DTE.

SK.EL-3590

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