

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

No. EL/3.2.10/8/JCG  
1981

Dated :14th Aug

**MODIFICATION SHEET NO. RDSO/WAM4/111/A**

**Mounting arrangement of the capacitor to be connected across cutler  
Hammer Relay coil (Q48).**

**1. OBJECT**

In view of repeated failures of self interlock of Q48 relay, provision of one capacitor of rating 1  $\mu$ F, 630/600V (dc) across the relay coil was advised vide modification sheet No. RDSO/WAM4/111 dt.8/11th May 1981. This modification sheet gives the details of fixing arrangement of the capacitor in addition to para 2.3 of the above modification sheet.

**2. WORK TO BE DONE:**

- 2.1 Prepare the items required as per SK.EL3407
- 2.2 Remove the SPDT switch cover (Part No. 5) and stick the base plate centrally over the top surface with two part araldite adhesive. For this purpose scrap the contacting surfaces thoroughly. Apply thin layer of araldite mixture to each contacting face. put the two parts together under pressure. maintain the pressure to set for 24 hrs. undisturbed.
- 2.3 Clamp the capacitor over the base plate with two sets of fasteners. Avoid excessive tightening.
- 2.4 Replace the cover in position on the SPDT micro switch and reconnect the interlock cables. check for normal operation and reset the time delay.

**3. Application**

- 3.1 All locos fitted with Cutler Hammer Q48 time delay relays having economy resistance.

**4. Material required:**

- No. Bkelite sheet.
- No. clamp made of aluminium/brass/copper strip-gauge 20/22 swg, 15mm wide.
- 2 nos. cheese head screws, M3x.35x10 with a set of washer, spring washer and nut.
- Araldite as required.

**5. Material rendered surplus:**

Nil.

**6. Modification Drawings:**

SK. EL.3407

**7. Agency for implementation:-**

- Chittaranjan Locomotive Works
- for locos under production.
- Railways
- Electric Loco Shed and POH shops for locos in service..

**6. Distribution:-**

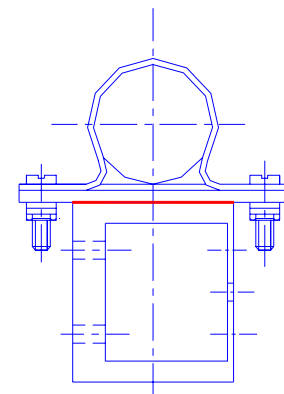
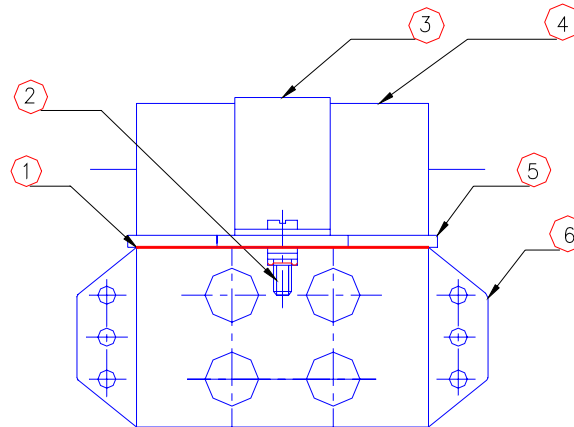
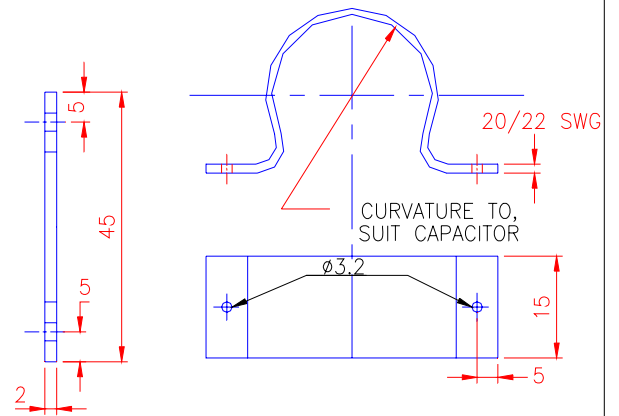
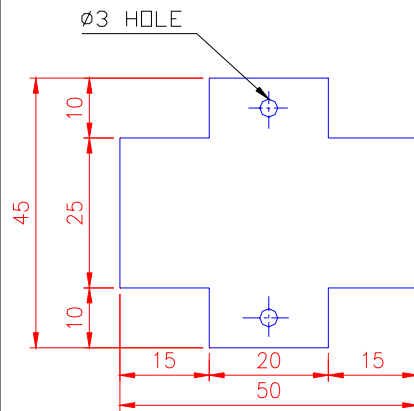
As per mailing list



Encl: SK EL 3407  
Mailing list.

(H.B. SINGH)  
for Director General (Elect).

SK.EL-3407



6	SPDT SWITCH COVER	-	EXISTING
5	BAKELITE SHEET	1	
4	CAPACITOR 1UF,600V DC	1	
3	CLAMP STRIP	1	AL/BRASS/COPPER
2	CHEESE HEAD SCREW M3x0.35x10	2 SETS	
1	LAYER OF ARALDITE	-	
PART No.	DESCRIPTION	QTY	MAT/SPEC

REF:- MS No. RDSO/WAM4/III SCALE:-1:1 APPROVED BY:- FOR D.G.

## MOUNTING ARRANGEMENT OF CAPACITOR FOR Q48

RDSO.ELEC.DTE.

SKEL-3407

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