

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

Ref : EL/3.2.30/DC2

27th January, 1978

Modification Sheet No. RDSO/WAM4/62

1. **Title of modification :**
Support for oil flow indicator of tap changer No.32.
2. **Application to class of locomotives :** WAM4
Applicable in principle to all electric locomotives in similar locations.
3. **Object of modification :**
Frequent cracking of oil flow indicator pipe has been reported by the railways. Investigations have shown that the failures due to resonant vibrations at high speeds. In order to minimise such vibrations, it is proposed to secure the oil flow indicator assembly by providing a support from the tap changer body, thereby increasing the resonant frequency.
4. **Modification Drawing :**
RDSO SKEL 2749
5. **Agency of implementation :**
Railways : All existing WAM4 locomotives.
CLW : Locos under production and future builds
6. **(a) Material required and specification :**
Two fixing clamps and support plate etc. as per drg.No.SKEL.2749.
(b) Material rendered surplus:
Nil
7. **Work to be carried out :**
The support should be fabricated and assembled as per RDSO drawing No.SK.EL.2749 and fixed on the graduator cover. The oil flow indicator should be secured by two clamps as shown.
8. **Reference :**
Nil
9. **Distribution :**
As per enclosed list



(S.Malaviya)
for Director General (Elec)

The drawing includes three views of the oil flow indicator support:

- Front View:** Shows the main body with a central slot and four mounting holes. Dimensions include a total width of 160mm, a central slot width of 40mm, and a mounting flange width of 60mm. A fillet weld is indicated at the base.
- Top View:** Shows the top surface with four mounting holes. Dimensions include a total length of 140mm, a central slot length of 40mm, and a mounting flange length of 60mm. A note specifies: "4 SLOTS OF 60x15mm TO BE DRILLED TO SUIT THE POSITION OF OIL FLOW INDICATOR."
- Side View:** Shows the side profile with a total height of 105mm and a mounting flange height of 40mm. A note specifies: "4 HOLES 11φ".

Notes:

- NOTE:- SUPPORT PLATE TO BE FIXED TO THE EXISTING BOLTS ON TAP CHANGER COVER.
- NOTE:- ALL DIMENSIONS IN mm.

Parts List:

PART No.	DESCRIPTION	QTY./ LOGO	MATL./SPEC
1	OIL FLOW INDICATOR	1	EXISTING
2	FIXING CLAMP	2	SI:42/62 IS:1079
3	HEX.HD.BOLT M5x20	4	STEEL IS:1364
4	HEX.NUT M6 SEMI-PRECISION	4	STEEL IS:1364
5	SPRING WASHER TYPE-B	8	STEEL IS:1363
6	OIL FLOW INDICATOR	1	EXISTING

Approval:

APPROVED:-
REF:-
SCALE : 1:1,1:2
RDSO. SK.EL-2749

