

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

No. EL/3.2.5

Dated 30.05.1996

**SPECIAL MAINTENANCE INTRUCTION NO.RDSO/
ELRS/SMI/181 OF MAY 1996.**

1. Title :

Neutral setting of brush holder revolving ring of Traction Motor by electrical method known as 'KICK METHOD'

2. Application :

All electric locomotive fitted with TAO- 659/HS 15250A Traction Motor.

3. Object :

It has been reported by Zonal Railways during the MSG meeting at Vadodra on 28th Feb. and 29th Feb.96 that brush holder revolving ring of Traction Motors are getting intermixed during rehabilitation in the workshops and sheds. Interchanging of the brush holders revolving ring of one motor with another Traction Motor is not desirable. In this connection RDSO has issued a SMI No.RDSO/ELRS/SMI/42 of January 1979.

It is essential that the brush box should be located on the magnetic neutral axis, which should also coincide with geometrical neutral axis to have sparkless commutation.

Bad commutation may lead to damage to the commutator assembly and earth fault in the Traction Motors.

Production units like CLW are using special parallelism jig for setting the neutral axis of brush holder revolving ring. But Railways are not having such facilities and therefore the following method described below, which is known as KICK METHOD can be followed by them for setting the brush holder revolving ring to the neutral axis.

One cycle of tests on all the motors may be done to set the brush holder revolving ring to the neutral axis subsequently such tests may be carried out during rehabilitation of the Traction Motor only.

4. Procedure :

KICK METHOD :

- Make the test circuit as shown in RDSO drg. SKEL.-4374
- Pull out carbon brushes during the test . (Enclosed)
- Put the probe 'A' on the segment under brush holder (1)

- Put the probe 'B' on each segment under brush (2) and measure induced voltage by switch 'on' and 'off'
- Neutral position is on the segment with minimum induced voltage comparatively.
- After setting the neutral position, tighten the brush holder revolving ring properly as per the usual process.

5. **Agency for Implementation :**

- All Electric Loco Sheds
- All POH Shops
- All Rewinding Shops

6. **PERIODICITY OF IMPLEMENTATION :**

During rehabilitation of Traction Motors.

7. **Distribution :**

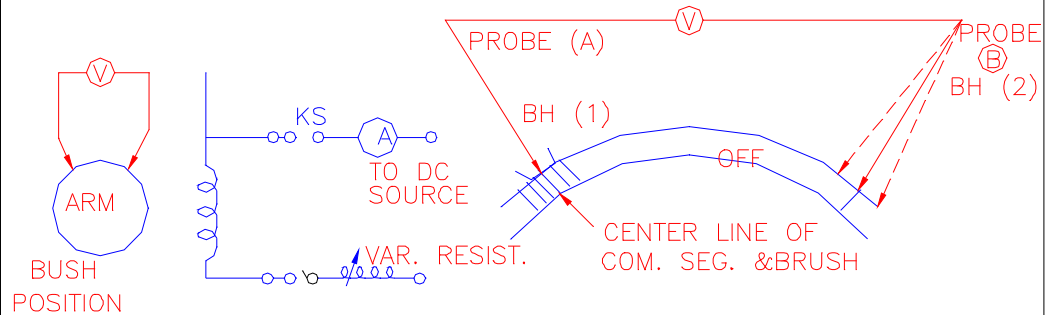
As per enclosed list

DA: As Above.



(R. K. Kulshrestha)
for Director General/Electrical

SK.EL- 4374



NOTE :-

ARM :	AMRATURE	MP :	MAIN POLE COIL
CM :	COMMUATOR	BH :	BRUSH HOLDER
KS :	SWITCH	A :	AMMETER (50A)
V :	VOLT METER (100mv)		

MEASURING DEVICE

SWITCH-----1
 VOLT METER (DC 100 mv) -----1
 AMMETER (DC 50 A) -----1
 D.C. SOURCE (D.C.50 A) -----1
 VARIABLE RESISTANCE (0.5 --1 kw)-----1

REF:-	SCALE:- NTS	APPROVED	FOR D.G.
TAO - 659 T. M. KICKMETHOD TEST TO DETERMINE THE ELECT. NEUTRAL POSITION OF BRUSH BOX			
RDSO.ELEC.DTE.		SKEL- 4374	

Dt.	16.2.79
D	
T	
C	

