

**GOVERNMENT OF INDIA MINISTRY OF RAILWAYS
RESEARCH DESIGNS AND STANDARDS ORGANISATION
MANAK NAGAR LUCKNOW - 226 011**

No.EL/3.2.19

Dated: 22-5-1997

**SPECIAL MAINTENANCE INSTRUCTIONS NO. RDSO/ELRS/SMI-
190**

1. Title :

Mal- Functioning of QRS relay due to wrong connection/setting of RGEB.

2. Brief history

During surveys conducted on line a number of locomotives were found with 'QRS' relay in wedged condition due to its mal functioning. Investigative studies conducted to find the cause revealed that N/O interlock of RGEB with different setting has been used in pure air brake locomotives in place of N/C interlock of RGEB in dual brake locomotives, in the circuit of QRS relay. Intermixing of two types of RGEB is basically resulting in the mal functioning of QRS relay and as a result drivers are forced to wedge QRS relay on line.

3. Application :

Locomotives provided with IRAVB2 and IRAB2 brake system.

4. Object:

Identification of RGEBs for dual and pure air brake locomotives to adjust them correctly.

5. Procedure:

1. The RGEBs used for pure air brake locomotives should be given identical identification mark.

2. The following different settings should be used for adjustment of two types of RGEBs.

2.1 Setting for RGEB to be used on dual brake locomotives.

i) Its N/C contact should open from 4.2 kg/cm² of brake pipe pressure during brake application through A9. (Direct setting- contact should open at 7.5 ± 0.1 kg/cm² pressure).

(ii) Its N/C contact should close from 2.8 kg/cm of brake pipe pressure during brake release through A9. (Direct setting- contact should open at 6.5 ± 0.1 kg/cm² pressure).

2.2 Setting for RGEB to be used on pure air brake locomotives.

- (i) Its N/O contact should break at 3.0 kg/cm^2 pressure during brake application through A9.
- (ii) Its N/C contact should 'make' at 4.2 kg/cm^2 pressure during brake release through A9.

6. **Drawing / Sketch:** None.

7. **Agency for implementation:**

All Electric Loco Sheds and Workshop of Indian Railways.

8. **Distribution:** As per enclosed list.



(O. H. Pande)

SMI/190

for Director General/ Elec.