

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
RESEARCH DESIGNS AND STANDARDS ORGANISATION
Manak Nagar Lucknow - 226 011**

No. EL/3.1.3

Dated 31.3.98/11.08.98

Modification sheet No. ELRS/WAM4/0211

1. Title :

Auto regression of GR on energisation of over voltage (Q20) relay.

2. Object :

On 6p locomotives, when the voltage across traction motors exceed 865 volts, the relay Q20 energizes and 'SON' sounds as per existing circuit. Though operating instructions exist for the driver to regress the notch as soon as 'SON' sounds but there is no electrical interlock present in the circuit to ensure automatic regression of notches in case the driver fails. The proposed modification ensures auto regression of GR, whenever Q20 relay gets energised, however, the regression of GR will stop as soon as Q20 is de-energised.

3. Works to be Carried Out :

- a) Remove cable No.211 from N/O interlock terminal of Q 20 relay.
- b) Provide a VS diode in Q20 relay N/O interlock circuit and mark incoming (+ve) and outgoing (-ve) terminals as 1 & 2.
- c) Connect wire No.212 at diode incoming (+ve) terminal (No.1)
- d) Connect a spare wire at diode outgoing (-ve) terminal and mark it as 115-J. Connect other end of this wire to wire No.115 in TR/SB.
- e) Connect a spare wire at the other terminal of N/O interlock of Q20 relay and connect it to wire No.810 in SB/TR.

4. Application to the Class of Locomotives :

All class of electric locomotives.

5. Material Required :

- i) One diode same as VS diodes.
- ii) 3 mm sq. cable approximate length 5 mtrs.

6. Material Rendered Surplus :

Nil

7. Reference :

Suggestion given by ELS/BSL.

8. Modification Drawing :

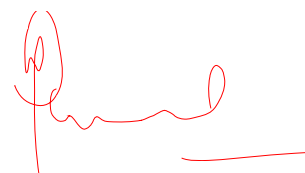
- i) Drg. No.SKEL 4473 & 4474 depicting existing & modified control circuit.
- ii) Annexure I, II & III describing cable index for carrying out above modification in WAG7 modular locomotives. For older series of locomotives, cable indexes may be finalised by the sheds/workshops.

9. Agency for Implementation :

CLW, all the Electric loco sheds & workshops.

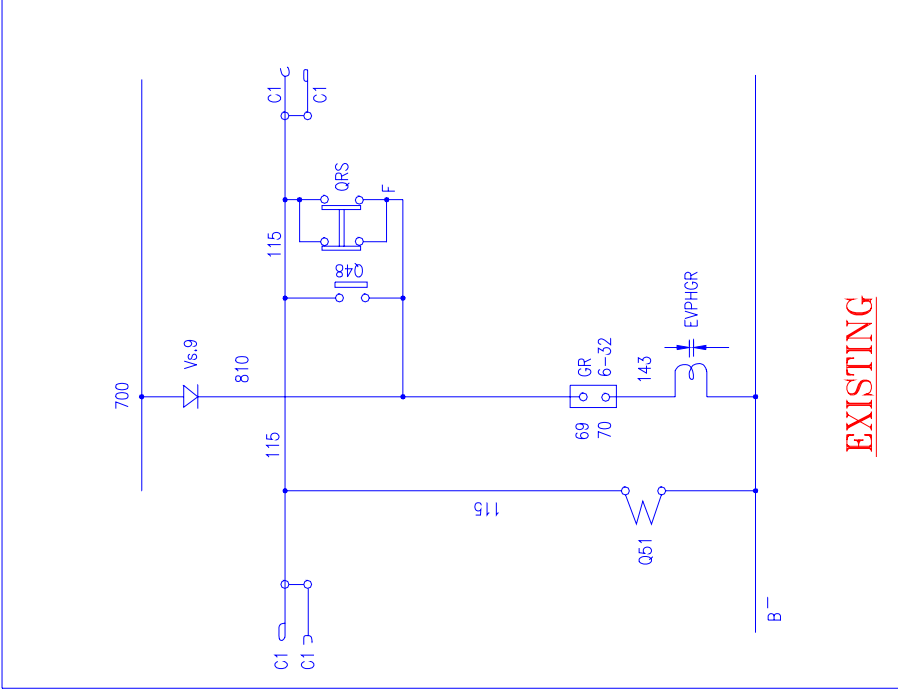
10. Distribution :

As per enclosed list.

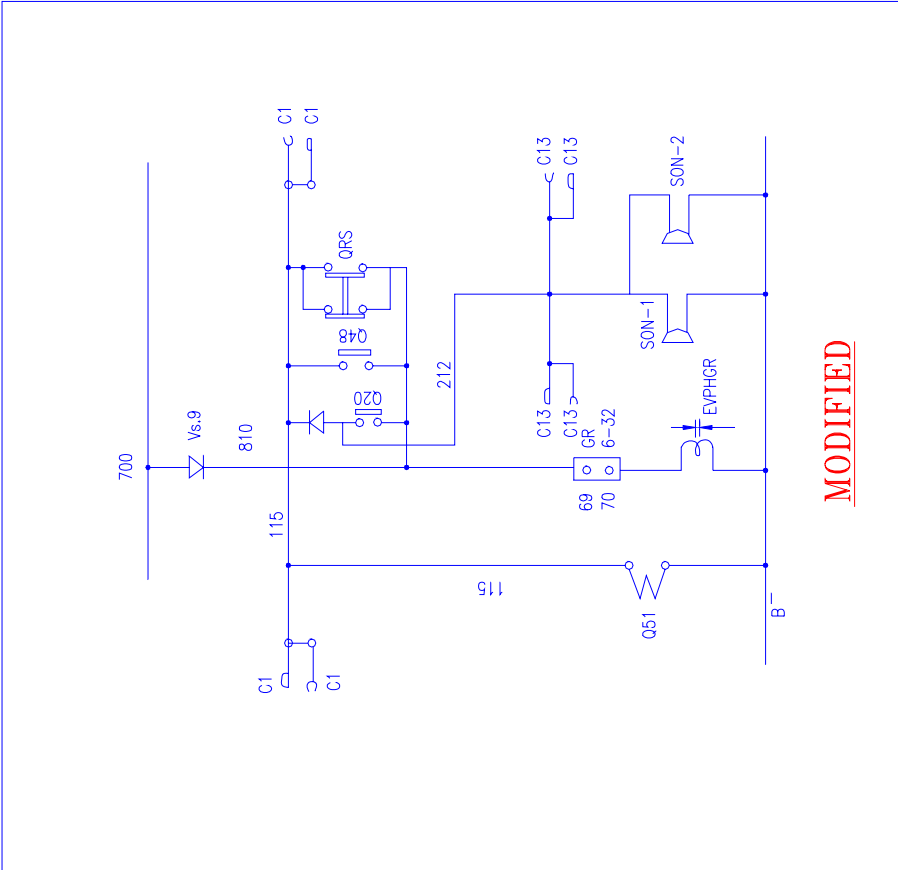


Encl : As above

(O.H. Pande)
for Director General/Elect.



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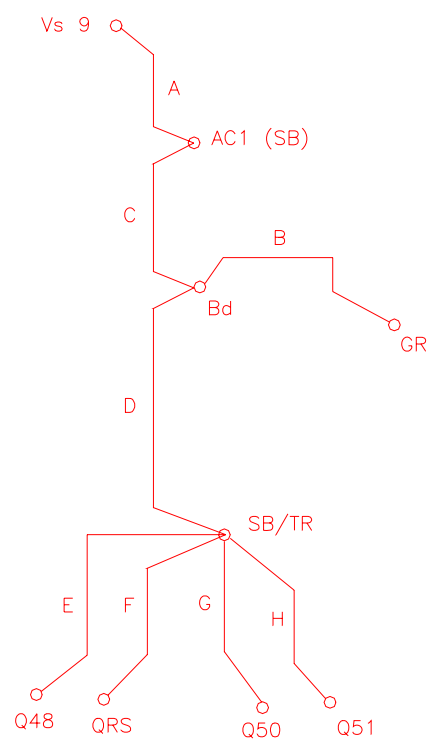


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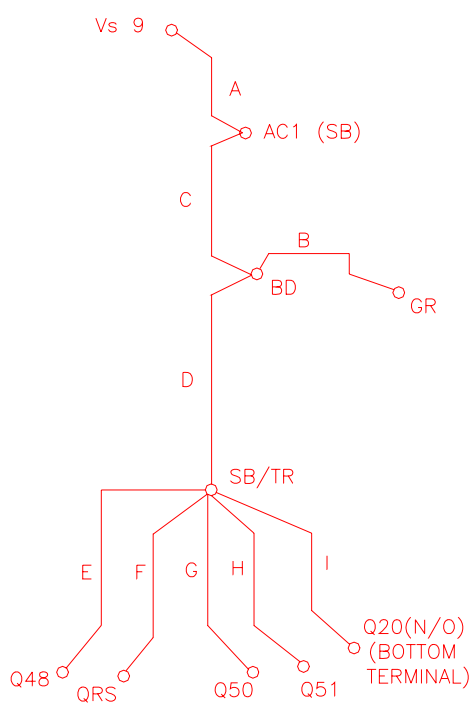
REF. NO.	IR PART NO.	DESCRIPTION	DETAIL DRG. NO.	NO./LOCO	MATL	DPEC.
REF. NO.			SCALE :	APPROVED BY		(FOR DG)
MODIFICATION OF PROVIDING Q20 INTERLOCK IN Q51 CIRCUIT						FIRST ISSUE 30.7.98
R.D.S.O. ELECT. DTE.						SUPERSEDES
SKEL-4473						SUPERSEDED BY

810



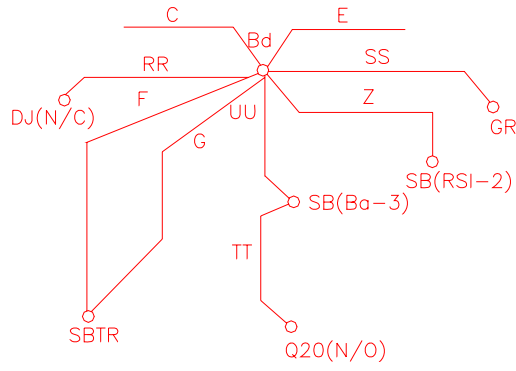
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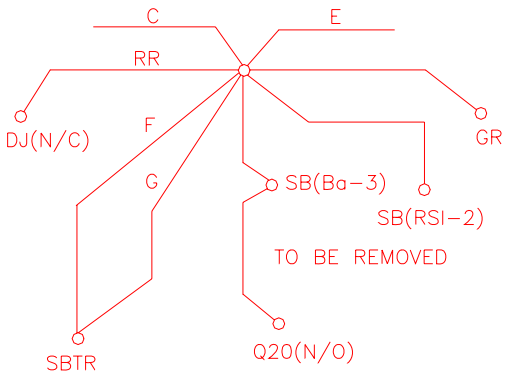
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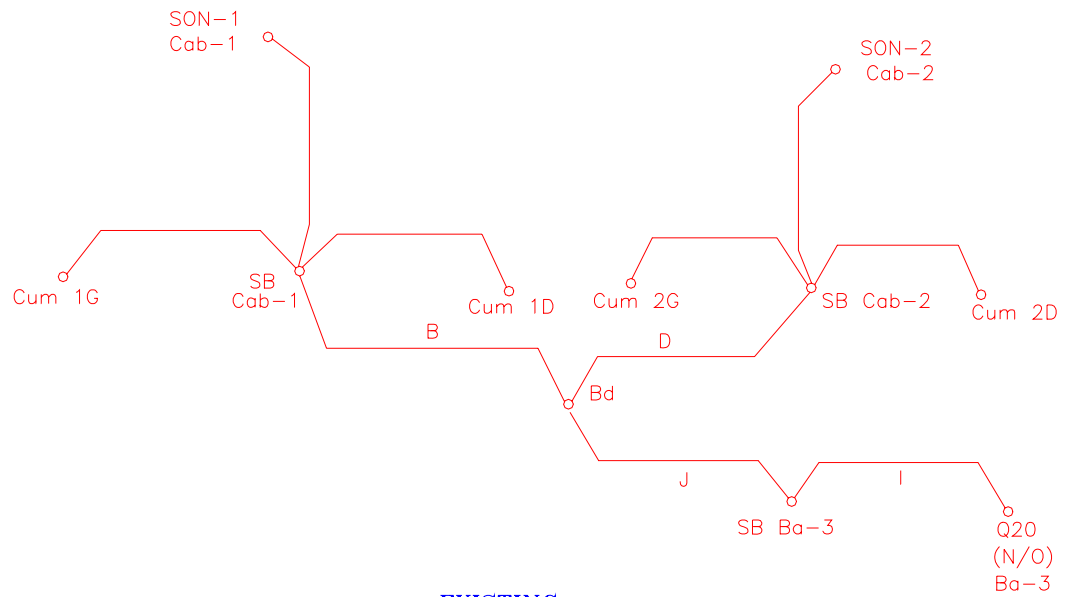
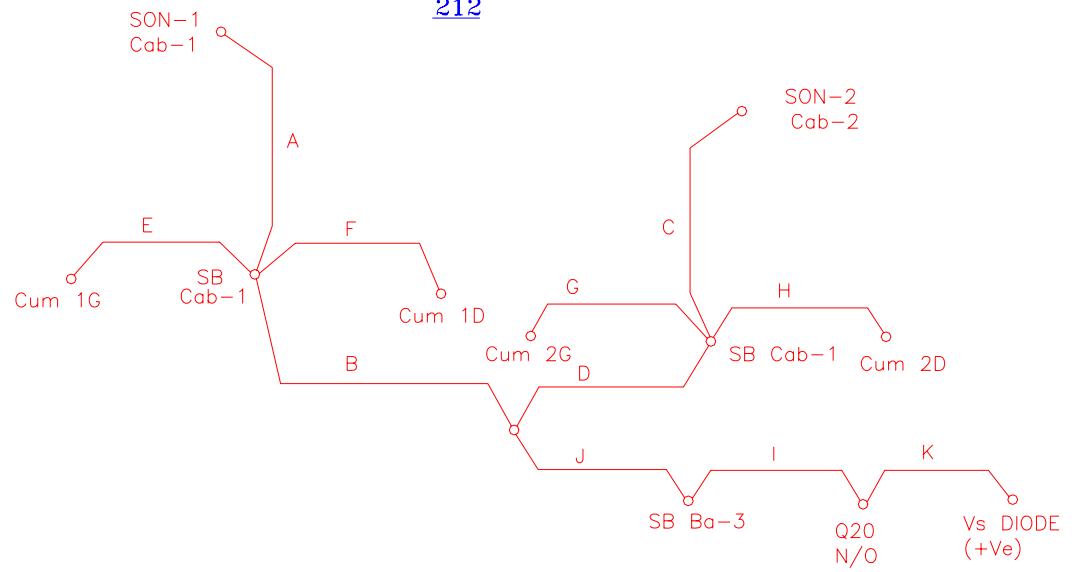


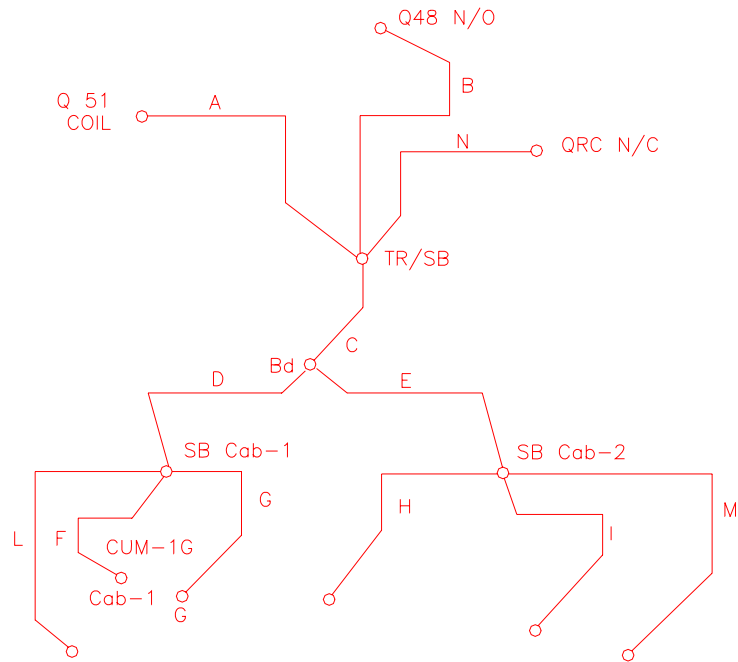
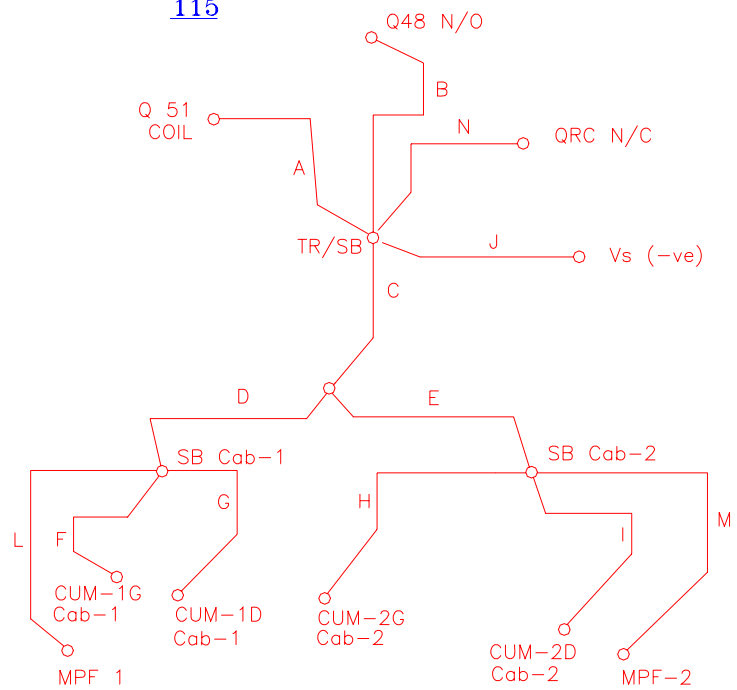
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