

Telegram: RAILMANAK,

Lucknow

Fax : 0522 - 2452581

Telephone: 0522 -2450374

e-mail: rsdso@railmanak.org



सत्यमेव

जयते

भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन

लखनऊ - 226011

Government of India - Ministry of Railways
Research Designs & Standards Organisation,
LUCKNOW - 226011

No. EL/3.2.19

Dated 26.05.2006

Chief Electrical Engineer,

- Central Railway, Mumbai CST- 400 001.
- Eastern Railway, Fairlie Place, Kolkata- 700 001
- East Cost Railway, Chandrashekharpur, Bhubaneswar- 751 016.
- Northern Railway, Baroda House, New Delhi-110 001
- North Central Railway, Hasting Road, Allahabad-211 001.
- Southern Railway, Park Town, Chennai-600 003
- South Central Railway, Rail Nilayam, Secunderabad -500 071
- South Eastern Railway, Garden Reach, Kolkata -700 043
- South Western Railway, Hubli.
- Western Railway, Churchgate, Mumbai-400 020
- West Central Railway, Jabalpur-482001
- South East Central Railway, Bilaspur-495004
- East Central Railway, Hazipur-844101 (Bihar)
- Chittaranjan Locomotive Works, Chittaranjan- 713 331

MODIFICATION SHEET NO. RDSO/2006/EL/MS/0346 REV. '0'

1. TITLE :

Pneumatic pipe line connection for RGCP pressure switch and VEAD Electro magnetic valve.

2. OBJECT :

To avoid chattering of compressor contactors in WAG7 and WAP4 class of locomotives.

3. EXISTING ARRANGMENT:

In the existing pneumatic pipe line arrangement for WAG7 and WAP4 type of locomotives, VEAD and RGCP the pneumatic connection for both are taken from the same pipe line which is tapped from main reservoir (MR-2). The pressure setting of RGCP is 9.5 kg/cm² for cut out and 8.0 kg/cm² for cut in. With this

arrangement, when the MR-2 pressure builds upto 9.5 kg/cm^2 , the RGCP cuts out and electromagnetic contactors of compressor i.e. C-101, C-102 & C-103 are 'OPEN'. Simultaneously the N/O contact of RGCP energizes the coil of VEAD Electro magnet valve. As in new locomotives, the pipe line length between VEAD and RGCP is less, as both the RGCP & VEAD valve are tapped from the same 'T' joint of MR-2 and are placed close to each other, when VEAD valve energizes, the air from the RGCP pipe line also gets drained out rapidly causing sudden drop of air pressure to less than 8 kg/cm^2 which operate the RGCP causing closing of compressor contactors. As actually the pressure of MR maintained 9.5 kg/cm^2 the RGCP again cut out and causes erratic operation of RGCP which leads to chattering of compressors contactors.

4. MODIFIED ARRANGEMENT:

To avoid the pressure drop in RGCP due to energizing of VEAD electro magnet valve, the pneumatic pipe line connection both for RGCP and VEAD valve are made separately (just after MR-2 for RGCP and just before MR-3 for VEAD). The pipe line length between RGCP and VEAD in modified arrangement is sufficient to ensure that the fluctuation of pressure as sensed by RGCP due to operation of VEAD is totally eliminated and the chattering of compressors contactor is thus avoided.

To carryout this modification the pneumatic pipe line connection taken from same point for RGCP and VEAD are to be disconnected and separate connection for RGCP and VEAD are to be taken as shown in the enclosed drawing placed in Annexure I.

5. APPLICATION TO CLASS OF LOCOMOTIVE :

All 25 KV AC Electric Locomotives.

6. MATERIAL REQUIRED :

Pneumatic pipe line and fittings 15 N.B. as per desired length and numbers.

7. MATERIAL RENDERED SURPLUS :

None

8. **REFERENCE :**

- i) Problems reported by CEE/South Central Railway vide letter No. E.221/AVB/Vol.3 dated 17.01.2006.
- ii) Sr. DEE/TRS/NKJ reported the problems vide their letter No. NKJ/TRS/32 (SC) dated 10.03.2006.


9. **MODIFICATION DRAWING :**

Annexure - I (Drawing)

10. **AGENCY FOR IMPLEMENTATION :**

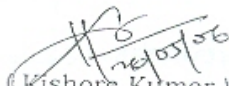
- i) Chittaranjan Locomotive Works /Chittaranjan -
All WAP-4 & WAG-7 class of Electric Locomotives.
- iii) All Sheds and POH Shops -
All the Locomotives having the problems of chattering of the
compressor contactors due to improper pipe length of RGCP
pneumatic connection.

Encl: Annexure- I

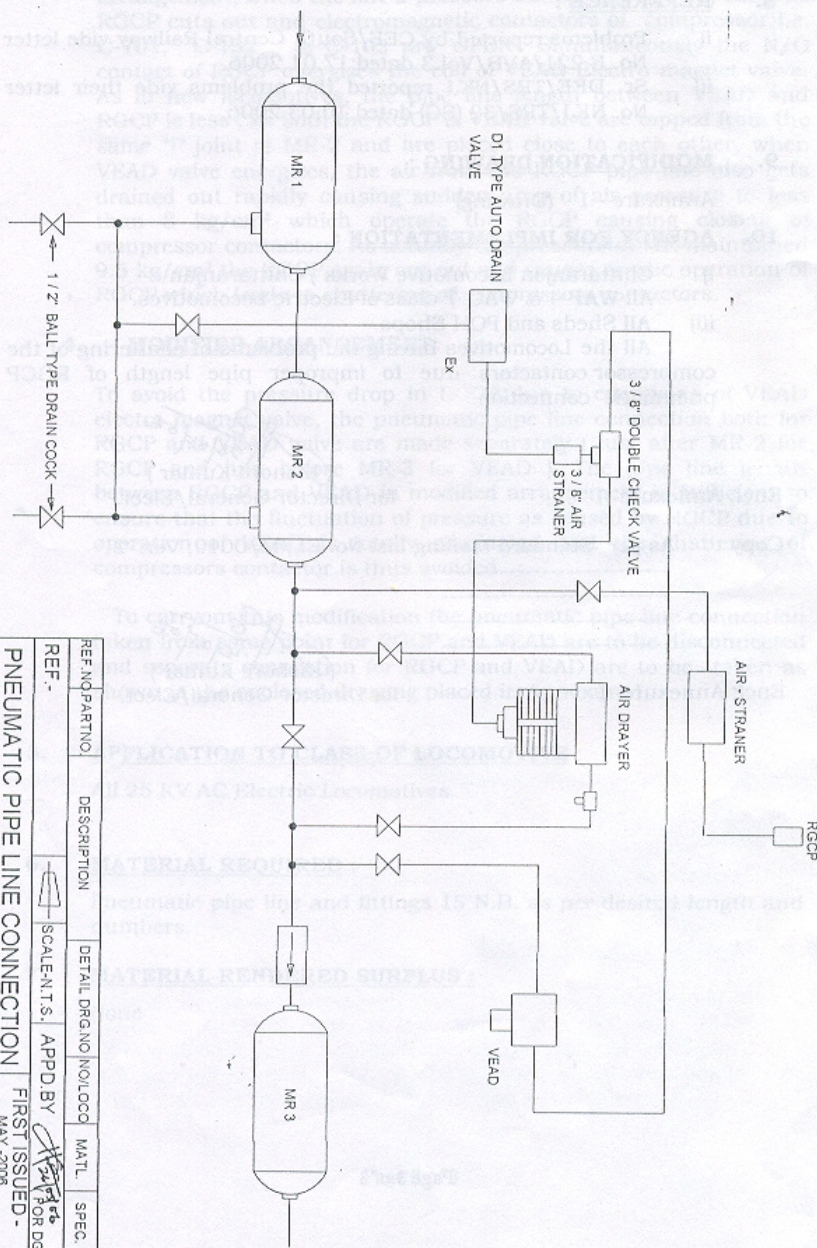

(Kishore Kumar)
for Director General/Elect.

Copy to : As per Standard Mailing List No. EL/M/0019, Ver. '2'

Encl: Annexure- I


(Kishore Kumar)
for Director General/Elect.

ANNEXURE - I



DL	24.05.06
D	K.P. NIGAM
C	M.C. M. ARANI
T	

STATUS	ALT/ REF. NO.	DESCRIPTION	APPD. BY	DATE

REF. NO.	PART NO.	DESCRIPTION	DETAIL DRG. NO.	NO.	LOC.	MATL.	SPEC.
REF. -							
PNEUMATIC PIPE LINE CONNECTION							
OF RGCP PRESSURE SWITCH							
RDSO. ELECT. DTE				ANNEXURE - I			
				SUPERSEDED BY -			

SCALE	N.T.S.	APPD. BY	FIRST ISSUED	SUPERSEDED