Fax : (0522)-2452581
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Email: dell7@rdso.railnet.gov.in

भारत सरकार – रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ – 226011
Government of India - Ministry of Railways
Research, Designs & Standards
Organization, LUCKNOW – 226011

सं. ई. एल./3.2.29 दिनांक 25.06.2009

मुख्य विद्युत अभियंता,

1. मध्य रेलवे, मुम्बई सीएसटी –400 001
2. पूर्व रेलवे, फेयर्ली प्लेस, कोलकाता–700 001
3. पूर्व तटीय रेलवे, चन्द्रशेखरपुर, भुवनेश्वर 751 016
4. उत्तर रेलवे, बड़ौदा हाउस, नई दिल्ली–110 001
5. उत्तर मध्य रेलवे, मुख्यालय, ब्लॉक ए, सूबेदारगंज, इलाहाबाद–211 033
6. दक्षिण रेलवे, पार्क टाउन, चेन्नई–600 003
7. दक्षिण मध्य रेलवे, रेल निलयम, सिकंदराबाद–500 371
8. दक्षिण पूर्व रेलवे, गार्डन रीच, कोलकाता–700 043
9. दक्षिण पश्चिम रेलवे, हुबली
10. पश्चिम रेलवे, चर्चगेट, मुम्बई–400 020
11. पश्चिम मध्य रेलवे, जबलपुर–482 001
12. दक्षिण पूर्व मध्य रेलवे, बिलासपुर–495 004
13. पूर्व–मध्य रेलवे, हाजीपुर–844 101
14. चित्तरंजन रेल इंजन कारखाना, चित्तरंजन–713 331

विषय : एसी इलेक्ट्रिक लोको वर्टिकल डीबीआर पर क्यूवीआरएफ रिले के पोर्ट कनेक्शन को रीलोकेट करना – मॉडीफिकेशन शीट सं० आरडीएसओ/2009/ईएल/एमएस/0378, रिवीजन 0 का जारी होना।

उपरोक्त विषय में इस कार्यालय का दिनांक 25.06.2009 का समसंख्यक पत्र आपकी सूचना एवं आवश्यक कार्यवाही हेतु इस पत्र के साथ संलग्न है।

(एस. सी. महन्त)
कृते महानिदेशक/विद्युत

संलग्नक: यथोक्त।

प्रतिलिपि:–

मानक मेलिंग लिस्ट सं० ईएल/एम/0019, वर्जन 2 के अनुसार।

(एस. सी. महन्त)
कृते महानिदेशक/विद्युत

संलग्नक: यथोक्त।

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भारत सरकार - रेल मंत्रालय
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Government of India-Ministry of Railways
Research Designs & Standards Organisation
Lucknow - 226 011

AN ISO 9001
CERTIFIED
ORGANISATION

No. EL/3.2.29

Dated 23.06.2009

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/2009/EL/MS/0379, Rev.'0' Dated 15.06.2009

1. TITLE :

Relocation of port connection of QVRF relay provided on AC MVRF fitted vertical DBR.

2. OBJECT :

RDSO vide Modification sheet no. RDSO/2006/EL/MS/0348, REV. '0' dated 22.09.2006 have advised Railways for retro fitment of AC MVRF in place of existing DC MVRF provided in vertical DBR. Railways have reported burning of cable conduit of AC MVRF. Investigation reveals in some cases, due to reverse direction of rotation of MVRF hot air throws over the motor body causing burning of MVRF cable lead and damage to paint surface of MVRF. In normal working of MVRF the air is supposed to flow from bottom of DBR to top after cooling the motor and exchanging the heat from the resistor element.

However to ensure the normal functioning of MVRF, QVRF relay has been provided. The low pressure port of the QVRF relay is fitted at the location below the blower fan and due to negative pressure, the QVRF relay picks up.

During investigation it is observed that in reverse direction of rotation of MVRF also QVRF relay picks up. The pressure at the existing location during reverse direction of MVRF has been measured and found that a negative pressure of about 52 mm WC is developed, due to projection of nozzle of about 7.5 mm causing picking of QVRF relay. The present setting of QVRF relay as per RDSO's Technical Circular no.ELRS/TC/0072-2001 (Rev. '0') dated 28.09.2001 is to pick- up between 12 (+0, -2)mm WC.

To eliminate the above problem the following modification is to be carried out.

3. **EXISTING ARRANGEMENT :**

In the existing arrangement the negative air flow is sensed by QVRF relay through low pressure port of the QVRF relay connected to ⅛" nozzle through steel braided rubber tube, mounted 25 ± 5mm below the blower fan. Pressure setting of the QVRF relay is -12(+0,-2) mm WC.

4. **MODIFIED ARRANGEMENT :**

To eliminate the sensing of the QVRF relay during reverse direction of MVRF, the sensing location of the air flow has been shifted from bottom of the fan blade to top side of the fan on inspection cover of MVRF provided on blower surface.

For mounting of the nozzle following works are to be done:-

i) Drill 13mm Ø hole on the inspection cover for MVRF bolted on the casing of the blower as shown in the RDSO' Drawing no. SKEL – 4762 (Rev. '0').

ii) ½" elbow to be fixed up and ensure that 'L' portion should be vertically down ward position.

iii) Apply araldite on the fixing location to ensure that the elbow nipple should not rotate.

iv) Remove the flexible connection from the existing nipple and connect it to elbow nipple mounted on MVRF inspection cover.

v) Change the connection on QVRF from low pressure port to high pressure port.

vi) Ensure the QVRF relay connection.

vii) Check the direction of rotation of Blower, the air flows from bottom side of DBR to top of the DBR.

viii) Check the operation of QVRF relay it should pickup only in the direction of air flow from bottom to top side of the DBR. In case of reverse direction of rotation of MVRF, QVRF relay should not pick up.

5. APPLICATION TO CLASS OF LOCOMOTIVE:

All conventional Electric Locomotives having vertical DBR's with AC MVRF

6. MATERIAL REQUIRED :

½" brass elbow.

7. MATERIAL RENDERED SURPLUS :

½" brass nipple.

8. REFERENCE:

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9. MODIFICATION DRAWING:

As per RDSO' Drawing no. SKEL - 4762 (Rev. '0').

10. AGENCY FOR IMPLEMENTATION :

All Electric Loco Sheds, POH Shops & CLW/Chittaranjan.

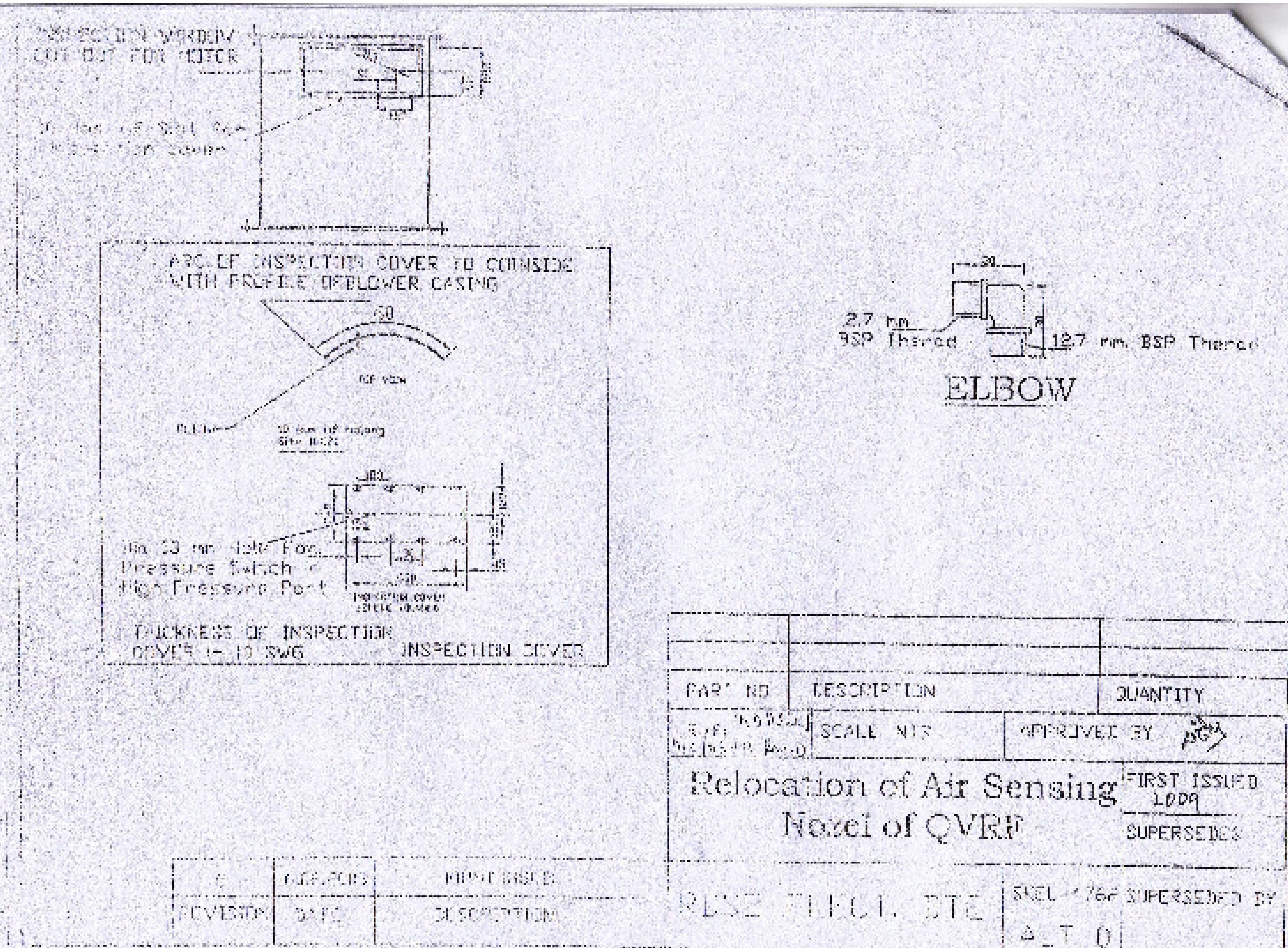
(Sandeep Srivastava)
for Director General/Elect.

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

23/01

(Sandeep Srivastava)
for Director General/Elect.

Encl: As above


INSPECTION WINDOW
CUT OUT FOR MOTOR
ARC OF INSPECTION COVER TO COINSIDE
WITH PROFILE OF BLOWER CASING
TOP VIEW
Dia. 13 mm. Hole For
Pressure Switch in
High Pressure Port
THICKNESS OF INSPECTION
COVER is 10 SWG
INSPECTION COVER
2.7 mm.
BSP Thread
12.7 mm. BSP Thread
ELBOW
PART NO
DESCRIPTION
QUANTITY
SCALE NTS
APPROVED BY
Relocation of Air Sensing
Nozel of QVRF
FIRST ISSUED
SUPERSEDES
SUPERSEDED BY
REVISION
DATE
DESCRIPTION
FIRST ISSUE