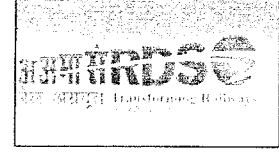


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No. EL/6.11.1

Dated: 29.04.2016

Chief Electrical Engineer,	मुख्य विद्युत अभियंता,
1. Central Railway, Mumbai, CST-400 001.	1. मध्य रेलवे, मुंबई सीएसटी -400 001
2. East Central Railway, Hazipur-844 101.	2. पूर्व मध्य रेलवे, हाजीपुर-844 101
3. East Coast Railway, Chandrashekharpur, Bhubaneswar-751 016.	3. पूर्व तटीय रेलवे, चन्द्रशेखरपुर, भुवनेश्वर-751 023
4. Eastern Railway, Fairlie Place, Calcutta-700 001.	4. पूर्व रेलवे, फेयर्ली प्लेस, कोलकाता-700 001
5. North Central Railway, Block-A, Subedarganj, Allahabad-211 033.	5. उत्तर मध्य रेलवे, ब्लॉक ए-2, सुबेदारगंज इलाहाबाद - 211 033
6. Northern Railway, Baroda House, New Delhi-110 001.	6. उत्तर रेलवे, बड़ौदा हाऊस, नई दिल्ली-110 001
7. South Central Railway, Secunderabad-500 071.	7. दक्षिण मध्य रेलवे, रेल निलायम, सिकंदराबाद-500 371
8. South East Central Railway, Bilaspur-495 004.	8. दक्षिण पूर्व मध्य रेलवे, विलासपुर - 495 004
9. South Eastern Railway, Garden Reach, Calcutta-700 043.	9. दक्षिण पूर्व रेलवे, गार्डनरीच, कोलकाता-700 043
10. Southern Railway, Park Town, Chennai-600 003.	10. दक्षिण रेलवे, पार्क टाउन, चेन्नई-600 003
11. West Central Railway, Jabalpur-482 001.	11. पश्चिम मध्य रेलवे, जबलपुर-482 001
12. Western Railway, Churchgate, Mumbai-400 020	12. पश्चिम रेलवे, चर्चगेट, मुंबई- 400 020

## MODIFICATION SHEET NO. RDSO/2016/EL/MS/0453 'Rev-0' Dated 29.04.2016

### 1. Title:

Modification to improve intensity level of twin beam head light in conventional Electric Locomotives.

### 2. Object:

Illumination intensity of head light has been a cause of concern for Railways and therefore twin beam head lights were introduced for improving illumination. However, safety department has advised many times about further improving the illumination intensity of head light. This modification seeks to further improve illumination level of twin beam head light by reducing the voltage drop in the circuit.

### 3. Existing Arrangement:

Presently, cable from DC-DC converter to head light in both cabs is of 2.5 sq. mm cross section. The current to the bulb is fed through BL switches namely BLPRD, BLPRF and BLPRR. In this arrangement, it is observed that the voltage available at the bulb terminals is 2-4 volts less than the output port of DC-DC converter.

#### **4. Modified Arrangement:**

In order to reduce voltage drop the following steps needs to be taken:

- (i) Replacing the 2.5 sq. mm cables from DC-DC Converter to SB (Cab-1 and Cab-2) by 10 sq. mm cable.
- (ii) Replacing the 2.5 sq.mm cables between SB to head light by 4 sq.mm cable.
- (iii) Paralleling the interlocks of BLPRD, BLPRF & BLPRR by using spare interlock in the switches.

#### **5. Application to class of locomotive:**

Conventional Electric Locomotives with twin beam head light.

#### **6. Material Required:**

1. Elastomeric cable size 4 sq.mm, as required.
2. Elastomeric cable size 10 sq.mm, as required.

#### **7. Material Rendered Surplus: Nil**

#### **8. Reference:**

1. East Central Railway letter no. ECR/ELF/RS/026/1502 dated-17.06.2015
2. Item no. 13 of 37<sup>th</sup> MSG.

#### **9. Modification Drawing: Nil**

#### **10. Agency of Implementation:**

1. POH workshops
2. Electric Loco shed.

Encl: Nil

  
(Mohit Sonakiya)  
for Director General/Electrical