

Telex : 0535 - 2424 RDSO -IN  
Fax : 91 - 0522 - 2452581  
Telephone : 2465713 & 2451200  
Telegram : 'RAILMANAK', Lucknow  
e-mail : dell1@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**

EL/3.1.3

Date: 30/05/2012

**Chief Electrical Engineers:**

Central Railway, Mumbai, CST-400 001.  
East Central Railway, Hazipur-844101.  
East Coast Railway, Chandrashekharapur, Bhubaneswar-751016.  
Eastern Railway, Fairlie Place, Calcutta-700001.  
North Central Railway, Subedarganj, Allahabad- 211033.  
Northern Railway, Baroda House, New Delhi-110001.  
South Central Railway, Secunderabad-500 071.  
South East Central Railway, Bilaspur-495004.  
South Eastern Railway, Garden Reach, Calcutta-700 043.  
Southern Railway, Park Town, Chennai-600 003.  
West Central Railway, Jabalpur-482001.  
Western Railway, Church gate, Mumbai-400 020.  
Chittaranjan Locomotive Works, Chittaranjan-713331.

**Modification Sheet No: RDSO/2012/EL/MS/0408 ( Rev'0' )**

**1.0 Title:**

Modification of terminal connection of heater cum blower assembly.

**2.0 Object:**

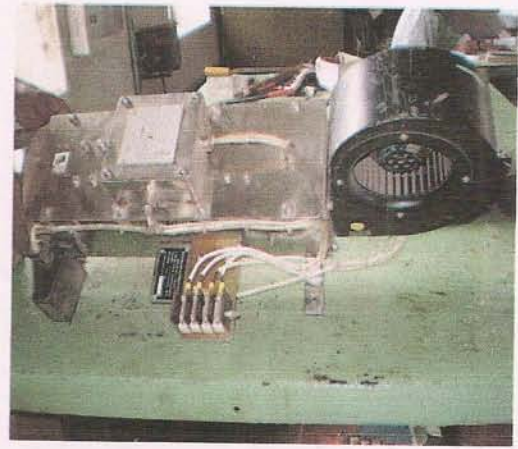
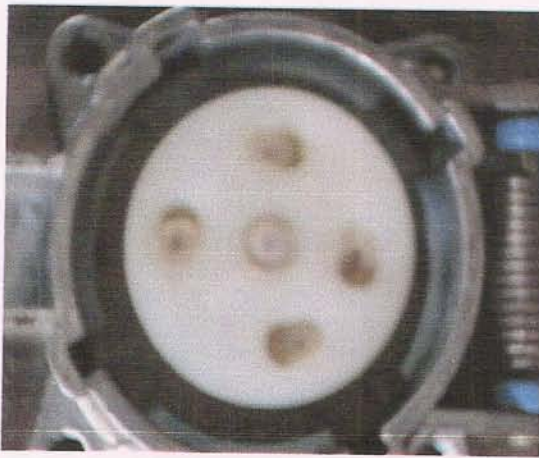
To avoid failures of blower cum heater assembly due to failure of plug and socket arrangement.

**3.0 Background:**

The blower cum heater assembly same as in three phase locos is now being provided by CLW in conventional locos. The item is being procured as per CLW specification no CLW.ES.03.0109 for both type of locos. SI unit tripping have been observed due to failure of this item. In existing plug & socket system, 440V AC supply for 2KW heater & 230V AC for 115W blower motor are available in same socket & very adjacent to each other. The terminals gets over heated & melted due to loose & improper connection caused by vibration of loco. Due to overheating, the Bakelite also melts causing short circuit of phase to phase & phase to neutral terminal thus leading to tripping of Static Inverter.

AJJ shed (SR) has modified the existing terminal connections by SB type terminals connections in few locomotives and performance has been found satisfactory. The photographs of existing and modified arrangement are shown below.





Existing arrangement-Plug & socket connection

Modified arrangement-SB terminal connection

The item was discussed during 34<sup>th</sup> MSG meeting vide new item No 17 and group agreed for implementing this modification. RB has also accepted the recommendation of group vide letter no 2011/Elect(TRS)/138/2 dated 16/08/2011. Draft modification sheet was circulated to railways vide RDSO letter of even no: dated 05/03/2012 for comments. CR, NCR, WCR and SCR has commented acceptability of modification.

**4.0 Work to be carried out:**

Remove Existing plug & socket and replace it by 6 SB terminal(2 spare terminals) as shown in above photographs.

**5.0 Applicable to the class of locomotives:**

All class of electric locomotives fitted with blower cum heater assembly as per CLW spec No CLW.ES.03.0109.

**6.0 Material required:**

SB terminals

**7.0 Material rendered surplus:**

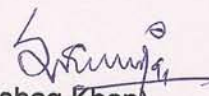
Plug and socket.

**8.0 Reference:**

New Item No 17 of 34<sup>th</sup> MSG (Elect Loco) meeting held at Jabalpur/WCR on 28<sup>th</sup> & 29<sup>th</sup> April'2011.

**9.0 Agency for implementation:**

- (i) All Electric Loco Sheds & All POH Workshops.
- (ii) Chittaranjan Locomotive Works, to revise the specification accordingly.

  
(Ishaq Khan)

For Director General Std/Elect