

Rail Coach Factory, Kapurthala

Office of the
Principal Chief Elect. Engineer

RCF/HSQ/ED/LHB/2008

Dated: 04.05.2024

Chief Electrical Service Engineer

1. Central Railway, CST, Mumbai-400 001
2. Eastern Railway, Fairly Place , Kolkata-700 001
3. East Central Railway, Dighi, Disst- Vaishali, Hajipur-844 101
4. East Coast Rly., Chandra Shekharpur, Bhubneshwer-751 016
5. Northern Railway, Baroda House, New Delhi-110 001
6. North Central Railway, Hastings Road, Prayagraj – 211 001
7. North Eastern Railway, Gorakhpur-273 001
8. North East Frontier Rly., Maligaon, Guwahati-781 001
9. Northern Western Rly., Jaipur-302 006
10. Southern Railway, Park Town, Chennai-800 003
11. Southern central Rly., Rail Nilayam Secundrabad-500 371
12. South Coast Railway, Visakhapatnam-530004.
13. South Eastern Rly., Gardern Reach, Kolkata-700 043
14. South East Central Rly., Bilaspur-495 004
15. South Western Rly., 4th Floor, DRM Office, Sh. Laxmi Narayan Complex, Station Road Hubli-580 020
16. Western Railway , Church gate, Mumbai-400 020
17. West Central Rly., Jabalpur-482 001
18. Chief Electrical Design Engineer Integral Coach Factory Chennai.
19. Chief Electrical Design Engineer Modern Coach Factory Raebareli.

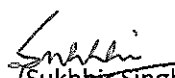
Sub: RODENT entry in SBC Panels of coaches.

Ref: RDSO letter no. EL/6.8.21/TL-AC committee dated 11.05.23.

RDSO vide letter under reference has issued the instructions to all Zonal Railways and Production units for taking corrective measure to prevent rodent entry in Switchboard Cabinet of the LHB coaches and the Power panel of the conventional coaches. To comply the RDSO guidelines, **Coach Alteration instruction sheet ED/CAI/034 Dated 02.05.24** is being issued for implementation by all Zonal railways.

This is for your information and necessary action pl.

DA: As above.


(Sukhbir Singh)
DYCEE/DP

RAIL COACH FACTORY, KAPURTHALA

CAI N O.: ED/CAI/034 Dated: 04.05.2024



**COACH ALTERATION INSTRUCTION SHEET TO
AVOID ENTRY OF RODENTS IN SWITCH BOARD
CABINETS IN LHB COACHES**

RAIL COACH FACTORY, KAPURTHALA

CAI NO.: ED/CAI/034, Dated: 02.05.2024

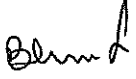
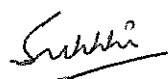
RDSO vide letter EL/6.8.21/TL-AC committee, dated 11.05.2023, addressed to all Zonal Railways had issued instructions and measures for implementation of Rodent entry prevention in LHB Coaches provided with Switch Board Cabinets of old design.

In terms of Railway board letter no. 2024/DG(Safety)/Inspection/8, New Delhi, dated: 16.04.2024 these instructions are being re-iterated for implementation by all user Railways to enhance electrical safety.

A. LHB AC COACHES

Old Design Switchboard cabinet:

1. The old design Disconnecting and Earthing device (750 volts) has a rectangular cut out for cable entry which needs to be covered with plate to avoid rodent entry detailed as under:
 - i) The existing 750 volts D&ED with rectangular slot shall be covered with FRP Grade polycarbonate sheet covering the cut-out (425 x 100 x 3 mm) with wire entry grooves for the cable entry suitable for cable size 4 x (4 x 50 Sqmm) and control cables size 8 x 1.5 sqmm .
 - ii) The grooves shall be sealed with RTV sealant.
 - iii) Subsequently during IOH or POH the sheet shall be replaced with metallic sheet with 4 nos of holes to suit end fittings of size PG48 for cables of size 4 x (4 x 50 Sqmm) and control cables 8 x 1.5 sqmm, 1.8/3.0 kV grade and 750/1000 Volts grade respectively to RDSO specification no ELRS/SPEC/ELC/0019, Rev-4.
 - iv) In case of burnout or arcing of Disconnecting device, the same shall be replaced with 1000 V D&ED in place of 750 Volts D&ED as per approved makes mentioned in RDSO letter no EL/7.1.108/MSSBC dated 17.09.2021 or any other make approved by RDSO.
2. The side wall in the HT Fuse compartment/ roof top & side wall sheet in the Switch Board Cabinet shall be suitably covered with FRP grade polycarbonate sheet 3mm or suitable thickness with cable entry grooves cut in it and sealed with RTV sealant.
3. All the FRP covers & End Fittings / grommets shall be ensured to be properly intact

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RAIL COACH FACTORY, KAPURTHALA


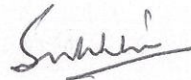
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B. LHB Non-AC COACHES

Underslung Switch board cabinets

1. LHB Non-AC coaches are provided with HT panels in the underframe and the disconnecting and Earthing device is enclosed in it, the panel is IP-65 protected.
2. It shall be ensured that all the covers and the PMA end fittings/ grommets are intact.
3. The hinges and the locks shall be checked for its condition and shall be replaced if required.
4. All the holes shall be suitably provided with end fittings and unwanted holes shall be blocked by means of blanking plugs.

Note: RDSO letter no. EL/6.8.21/TL-AC committee, dated 11.05.2023 (copy enclosed) shall be referred to for any clarity. Railway Board letter 2024/DG(Safety)/Inspection/8, New Delhi, dated: 16.04.2024 is also enclosed.

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No. EL/6.8.21/TL-AC committee

Dated-11.05.2023

PCEE/PCME

All Zonal Railways & Production Units

Sub: Rodent entry in SBC panels of coaches.

Ref: (i) Railway Board letter no. 2022/Elect(G)/181/12 dated 16.01.2023.

(ii) Railway Board letter no. 2022/Elect(G)/181/12/TLAC dated 07.02.2023.

(iii) Railway Board letter no. 2022/Elect(G)/181/12/TLAC dated 09.05.2023.

Vide letter under ref(i), a standing committee on TL/AC coaches have been formed by Railway Board for streamlining the process of solving field problems and suggesting suitable technical and economically viable solutions. Further, vide letter under ref(ii), an issue regarding entry of rodents in SBC have been reported for examination by the standing committee. The issue has been examined by the committee and following instructions is issued for implementation with the approval of Railway Board (MTRS).

i. LHB Coaches:

- a) In old design of Switch Board Cabinets, there is a rectangular slot (as shown in Fig. 1 below) for cable entry in D&ED (Disconnecting and Earthing device) and it is prone for rodent entry in D&ED of Switch Board Cabinets. In order to overcome this problem, RDSO has redesigned the D&ED with proper slots & end fittings (as shown in Fig.2 below) and the same has been implemented in all SBC of AC LHB coaches.

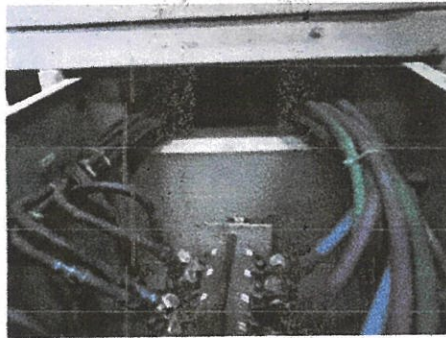


Fig.1: OLD D&ED

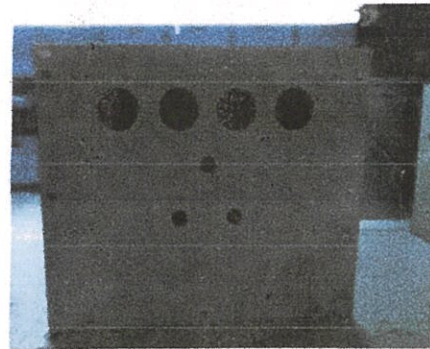


Fig.2: NEW D&ED

- b) At the time of failure or scheduled replacement, the 1000 V Disconnecting and Earthing device to be provided in place of 750V D&ED as per approved makes mentioned in RDSO letter no. EL/7.1.108/MSSBC dated 17.09.2021.
- c) Those existing 750V D&ED which are provided with rectangular slot, needs to be screwed with FRP grade polycarbonate sheet covering the cut-out with wire entry grooves cut in that and sealed with RTV sealant. This sheet can be replaced with proper end-fitting cut metallic sheet in IOH/POH. Further, the missing side wall in HT fuse compartment/missing roof top & side wall sheet in SBC may also be suitably covered with FRP grade polycarbonate sheet of proper thickness with wire entry grooves cut in that and sealed with RTV sealant.
- d) The Camtech maintenance manual for LHB coaches needs to be followed properly.
- e) All the FRP covers & end fittings/grommets to be properly intact.
- f) The underslung panels are already IP 65 protected therefore only the hinges locks and accessories to be checked and replaced if not in proper condition.

ii. Conventional Type coaches:

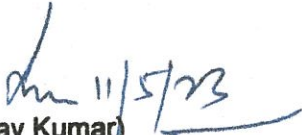
- a) All the cable entry points to the control panels, inverter panels and power panels to be provided with suitable end fittings/grommets as per specifications/drawings.
- b) All the hinges locks and accessories to be checked and replaced if not in proper condition.
- c) The inspection windows if provided on panel doors, to be covered properly with FRP grade transparent polycarbonate sheets/toughened glass as per specification.

This is for information and necessary action.

DA: Nil

Copy to:

OSD Electrical Engineering (G),
Railway Board, Rail Bhawan,
New Delhi-110001


(Manjay Kumar)
JDSE (TL-AC System Design)
for Director General/PS&EMU