

INDIAN RAILWAYS
CENTRE FOR DESIGN & DEVELOPMENT
CHITTARANJAN LOCOMOTIVE WORKS

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No.C-D&D/T/42, Vol-I

Date: As signed

Sr. DEE/Sr. DME

Electric/Diesel Loco Shed

All Zonal Railways

Sub: Revised Hardware modification for implementing Energy saving scheme.

Ref: (i) This office letter no. C-D&D/T/42, Vol-I/Siemens dated 07.11.2023

(ii) This office letter no. C-D&D/T/42, Vol-I/Medha dated 07.11.2023

(iii) This office letter no. C-D&D/T/42, Vol-I/Alstom dated 07.11.2023

(iv) This office letter no. C-D&D/T/42, Vol-I dated 14.11.2023

1. Vide ref. (i), (ii), (iii) and (iv), Competent Authority has accorded regular approval for implementing energy saving scheme in three phase electric freight locomotives. Further, Annexure-1 has been issued for carryout hardware modification for implementing energy saving scheme i.e. shifting of Machine room (MR) blower, Scavenge to MR blower and CAB AC to BUR-3 (Auxiliary Converter 3).
2. The Annexure-1 has been modified by this office after reviewing remarks from Shop-19/CLW and ELDO office/CLW. The copy of the same is enclosed herewith.

This has the approval of the competent Authority.

DA: Annexure-1, Rev.1 (01 page)

Saddam Hussain
29/02/2024
(Saddam Hussain)
SEE/D&D

Copy to :

Director/TPS,

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Saddam Hussain
29/02/2024
(Saddam Hussain)
SEE/D&D

Hardware modification to be carried out for implementing Energy Saving scheme**Shifting of MR blower 1&2 and scavenge to MR blower 1&2 to BUR-3****(A) Modification in HB1 panel**

1. Remove cable no. 1121A, 1122A and 1123A In between MCB 53.1/1 and MCB 54.1/1.
2. Connect cable no. 1131 from XH32A (2) 4 to MCB 54.1/1 (1), Connect cable no, 1132 from XH 32A (2) 5 to MCB 54.1/1 (3), Connect cable no, 1133 from XH 32A (2) 6 to MCB 54.1/1 (5). Cable size shall be 2.5 sq.mm. Cable length 1.5 meter each.
3. Connect cable no. 1131 from XH 32A (2) 4 to 56.1/1 (1). Connect cable no. 1132 from XH 32A (2) 5 to 56.1/1 (3). Connect cable no. 1133 from XH 32A (2) 6 to 56.1/1 (5). Cable size shall be 2.5 sq.mm. Cable length 1.5 meter each.

(B) Modification in HB2 panel

1. Remove cable no, 1121B, 1122B and 1123B In between MCB 53.1/2 and MCB 54.1/2.
2. Connect Cable no. 1131 from XH67A (2) 4 to MCB 54.1/2 (1), Connect Cable no, 1132 from XH67A (2) 5 to MCB 54.1/2 (3) and Connect Cable no, 1133 from XH67A (2) 6 to MCB 54.1/2 (5). Cable size shall be 2.5 sq.mm. Cable length 1.5 meter each.
3. Connect cable no. 1131 from XH 67A (2) 4 to 56.1/2 (1). Connect cable no. 1132 from XH 67A (2) 5 to 56.1/2 (3). Connect cable no. 1133 from XH 67A (2) 6 to 56.1/2 (5). Cable size shall be 2.5 sq.mm. Cable length 1.5 meter each.

(A) Modification in HB1 panel

1. Remove cable no. 1121A, 1122A and 1123A In between MCB 53.1/1 and MCB 54.1/1.
2. Connect cable no. 1131 from XH32A (2) 4 to MCB 54.1/1 (1), Connect cable no, 1132 from XH 32A (2) 5 to MCB 54.1/1 (3), Connect cable no, 1133 from XH 32A (2) 6 to MCB 54.1/1 (5). Cable size shall be 2.5 sq.mm. Cable length 1.5 meter each.

Shifting of CAB AC to BUR-3**(C) Modification in HB2 panel**

1. Remove cable no.1121B, 1122B and 1123B in between Contactor 52.5/1 and MCB 64.1.
2. Refer point no, B.2, Cable no. 1131, 1132 and 1133 can be obtained from XH67A (2) TBs.
3. Connect Cable no, 1131 from XH67A (2), 4 to MCB 64.1 (1), Connect Cable no. 1132 from XH67A (2) 5 to MCB 64.1/1 (3) and Connect Cable no. 1133 from XH67A (2) 6 to MCB 64.1/1 (5). Cable size shall be 2.5 sq.mm. Cable length 1.5 meter each.

(B) Modification in HB2 panel

1. Remove cable no, 1121B, 1122B and 1123B In between MCB 53.1/2 and MCB 54.1/2.
2. Connect Cable no. 1131 from XH67A (2) 4 to MCB 54.1/2 (1), Connect Cable no, 1132 from XH67A (2) 5 to MCB 54.1/2 (3) and Connect Cable no, 1133 from XH67A (2) 6 to MCB 54.1/2 (5). Cable size shall be 2.5 sq.mm. Cable length 1.5 meter each.
3. Connect cable no. 1131 from XH 67A (2) 4 to 56.1/2 (1). Connect cable no. 1132 from XH 67A (2) 5 to 56.1/2 (3). Connect cable no. 1133 from XH 67A (2) 6 to 56.1/2 (5). Cable size shall be 2.5 sq.mm. Cable length 1.5 meter each.

(A) Modification in HB1 panel

1. Remove cable no. 1121A, 1122A and 1123A In between MCB 53.1/1 and MCB 54.1/1.
2. Connect cable no, 1131 from XH32A (2) 4 to MCB 54.1/1 (1), Connect cable no, 1132 from XH 32A (2) 5 to MCB 54.1/1 (3), Connect cable no, 1133 from XH 32A (2) 6 to MCB 54.1/1 (5). Cable size shall be 2.5 sq.mm. Cable length 1.5 meter each.

(B) Modification in HB2 panel

1. Remove cable no, 1121B, 1122B and 1123B In between MCB 53.1/2 and MCB 54.1/2.
2. Connect Cable no. 1131 from XH67A (2) 4 to MCB 54.1/2 (1), Connect Cable no, 1132 from XH67A (2) 5 to MCB 54.1/2 (3) and Connect Cable no, 1133 from XH67A (2) 6 to MCB 54.1/2 (5). Cable size shall be 2.5 sq.mm. Cable length 1.5 meter each.
3. Connect cable no. 1131 from XH 67A (2) 4 to 56.1/2 (1). Connect cable no. 1132 from XH 67A (2) 5 to 56.1/2 (3). Connect cable no. 1133 from XH 67A (2) 6 to 56.1/2 (5). Cable size shall be 2.5 sq.mm. Cable length 1.5 meter each.

(A) Modification in HB1 panel

1. Remove cable no. 1121A, 1122A and 1123A In between MCB 53.1/1 and MCB 54.1/1.
2. Connect cable no, 1131 from XH32A (2) 4 to MCB 54.1/1 (1), Connect cable no, 1132 from XH 32A (2) 5 to MCB 54.1/1 (3), Connect cable no, 1133 from XH 32A (2) 6 to MCB 54.1/1 (5). Cable size shall be 2.5 sq.mm. Cable length 1.5 meter each.