

PS & EMU DIRECTORATE**LIST OF MODIFICATION SHEETS****Train Lighting & Air-Conditioning
Air-Conditioning Equipments**

S.N	Modification sheet No.	Brief description of modification	Reference & date of issue
1.	RDSO/AC/MS/15	To prevent fire near blower unit of AC coaches.	EL/7.1.83/TL&AC dt. 15.1.1984
2.	RDSO/AC/MS/19	Improvement in conditioned air velocity inside BG/AC sleeper coaches.	EL/7.1.83 dt. 20.12.89
3.	RDSO/AC/MS/23	To prevent corrosion in the liquid receiver of AC coaches.	EL/7.1.83 /J-9 dt. 20.9.91
4.	RDSO/AC/MS/25	Provision of vane relay in the blower motor circuit of AC coaches.	EL/7.1.83 /J-9 dt. 23.11.1992
5.	RDSO/AC/MS/26	To ensure working of RMPUs in the event of failure of one condenser fan motor.	EL/7.1.83 /J-9 dt. 10.3.97
6.	RDSO/PE/MS/AC/0028-99 (Rev. 0)	Provision for individual fuses in the AC control panel for individual condenser fan motor for under slung AC equipment.	EL/7.1.33/D9 31.03.1999
7.	RDSO/PE/MS/AC/0030-2004 (Rev. '0')	Modification to housing assembly of return and fresh air filter provided in RMPU.	EL/7.1.42 26.02.2004
8.	RDSO/PE/MS/AC/0040-2007 (Rev. '0')	Modification Sheet to prevent fire hazard in canvas duct in under slung type AC coaches.	EL/7.1.31 02.03.2007
9.	RDSO/PE/MS/AC/0041-2007 (Rev. '0')	Conversion of air-conditioning system of under slung type AC coaches from R-12 to R-134 refrigerant.	EL/7.1.106 March 2007
10.	RDSO/PE/MS/AC/0042-2007 (Rev. '1') with amdt No.2	Electrical scheme for provision of one window/split type AC, each in bed room and window trailing portion of non AC inspection carriage utilized by advisor level officer in Railway Board and AGGM/PHOD/CHOD in Zonal Railways.	EL/7.1.31 30.01.2008
11.	RDSO/PE/MS/AC/0044-2008(Rev-01)	Standardisation of Pre-cooling plug and socket assembly is SG coaches	May-2010
12.	RDSO/PE/MS/AC/0047-2009(Rev-0)	Checking the working of Emergency light unit in AC & Non-AC coaches	May-2010
13.	RDSO/PE/MS/TL/0049-2009(Rev-0)	Providing of MMR in 415VAC supply line in LHB coaches	May-2010
14.	RDSO/PE/MS/AC/0050-2010(Rev-0)AC TL TC MS\MS0050.pdf	Prevention of Reverse operation of scroll compressor during Pre-cooling in SG AC coaches	March-2011
15.	RDSO/PE/MS/AC/0051-2011(Rev-2)	Modification sheet for head on generation power supply system in LHB design power car and AC Coaches	Jan 2016
16.	RDSO/PE/MS/AC/0052-2011(Rev-0)	Modification sheet to implement 2x650Ah battery power supply scheme in the existing SGAC Coaches	Dec-2011
17.	RDSO/PE/MS/AC/0053-2011(Rev-0)	Modification sheet for providing cable looping in place of 415V Bus Bar in switch board cabinet of LHB Coaches & power cars	June-2011
18.	RDSO/PE/MS/AC/0045-2008(Rev-0)	Modification sheet for reducing the noise level in power cars under manufacturing at ICF/RCF	July-2008
19.	RDSO/PE/MS/AC/0054-2011(Rev-0)	Providing capacitor bank for power factor improvement in LHB Coaches	Sep-2011

20.	RDSO/PE/MS/AC/AC_TL_TC_MS\MS_0055.pdf/0055-2011(Rev-0)	Modification sheet for Provision of ICF design chimney with exhaust in LHB Pantry Car	August-2011
21.	RDSO/PE/MS/AC/0056-2011(Rev-0)	Modification sheet for providing 125 Amp fuse in primary circuit of 60KVA transformer in place of 63Amp fuse in LHB type AC coaches	Nov-2011
22.	RDSO/PE/MS/AC/0057-2011 (Rev-0)AC_TL_TC_MS\MS_057.pdf	Modification sheet for provision of manual switch for by passing microprocessor controller provided in LHB type AC coaches (EOG & SG) in case of emergency on a running train.	Feb-2012
23.	RDSO/PE/MS/AC/0060-2012(Rev-0)AC_TL_TC_MS\MS_060.pdf	Modification sheet for Isolation of electric heater in manual heating mode, setting of OHP and location of sensor of OHPs on the heater element provided in roof mounted AC package units (RMPUs) of conventional & Garibrath trains.	Nov-2012
24.	RDSO/PE/MS/AC/0063-2013(Rev-0)AC_TL_TC_MS\MS_63.pdf	Modification sheet for retro fitment scheme of R-22 refrigerant in roof mounted AC package unit already in service on conventional and garibrath AC coaches of Indian Railways	July 2013
25.	EL/7.2.2	Instruction related to blower motor and OHP	

MS TL List.doc **TRAIN LIGHTING**

26.	RDSO/PE/MS/TL/0038-2006 (Rev. '0')	Modification sheet for the cover for fuse distribution board used in general second class and 2nd class SL coaches.	EL/6.9.12 28.05.2006
27.	RDSO/PE/MS/TL/0039-2006 (Rev. '0')	Modification in battery charging terminal cum fuse box plate for provision of 40 Amp. HRC fuse instead of re-wire able fuse.	EL/6.9.12 13.07.2006
28.	RDSO/PE/MS/TL/0043-2007	Shifting of junction box from guards compartment to passenger area	EL 6.9.12 12.12.2007
29.	RDSO/PE/MS/TL/0059-2012(Rev-0)	To provide stopper around the cover of fuse distribution board in GS and SCN Coaches	June -2012
30.	RDSO/PE/MS/TL/0065-2013(Rev-0)AC_TL_TC_MS\MS_065.pdf	Modification to issue coach load from alternator during over generation in conventional self-generating type Non-Ac train lighting coaches.	EL/7.1.83/MS 27.09.2013

ALTERNATOR

31.	RDSO/PE/MS/TL/0020-2003 (Rev. '0')	Provision of modified terminal box cover for 4.5 kW 110 V TL Alternator	EL/1.6.9.15 20.02.2003
32.	RDSO/PE/MS/TL/0021-2004 (Rev. '1')	Provision of over voltage protection in rectifier-cum-regulator unit of 4.5 kW alternator used in SG AC coaches.	EL/1.6.9.15 19.08.2004
33.	RDSO/PE/MS/TL/0024-2003 (Rev. '0')	Provision of modified terminal board assembly in 4.5/18/25 kW alternators.	EL/1.6.9.15 31.07.2003
34.	RDSO/PE/MS/TL/0028-2004 (Rev. '1')	Modification in HMTD make RRU for train lighting coach.	EL/1.6.9.15 15.07.2004
35.	RDSO/PE/MS/TL/0033-2004 (Rev. '0')	Provision of filter circuit in rectifier cum regulator unit of 4.5 kW alternators used in SG BG coaches.	EL/1.6.9.15 18.08.2004
36.	RDSO/AC/MS/22	Modification to layout of connecting cables between 18 KW brushless alternator terminals and junction box terminals of AC coaches.	EL/7.1.21/K dt. 4.7.91
37.	RDSO/AC/MS/24	Procedure for brazing winding wire with flexible	EL/7.1.21/K 17.12.91

		lead wire on alternators of 18, 12, 4.5 & 3.0 KW capacity of 110 V & 24 V system.	
38.	RDSO/PE/MS/TL/ 0002 – 99 (REV.0)	Arrangement for anchoring of outgoing cables from alternator terminal board/box to rectifier-cum-regulator terminal box and under frame terminal board of 4.5kW brushless alternators used on SG coaches.	EL/1.6.9.15 dt.15.02.1999
39.	RDSO/PE/G/0002-2005 (Rev. 0)	Guideline for rewinding of TL/AC Alternator	EL/7.1.38/1 Aug. 2005
40.	RDSO/PE/MS/AC/ 0034-2005 (Rev. 0)	Modification Sheet for protection of lead wire in 4.5 kW/25 kW Alternator	EL/7.1.38/1 23.08.2005

TECHNICAL CIRCULARS

1.	RDSO/PE/TL/TC/0001-2008 (Rev. 0)	Technical circular for scope of work for electrical items during mid life rehabilitation (MLR).	EL/6.9.12 Jan 2008
2.	RDSO/PE/TL/TC/0002-2008 (Rev. 0)	Technical circular for emergency feed extension for TL coaches.	EL/6.9.12 25.06.2009
3.	RDSO/PE/AC/TC/0004-2010(Rev-0)	Technical circular for standardisation of log book for AC Coaches	July-2010
