Note-

1. Coaches should be offered in the lot of 7 to 8 Nos. (Ex. 04 Coaches in Stage-III + 02 Coaches in Stage IX + 01 to 02 Coaches in Final Testing), so that 5-6 days visit of 2 Engineers may be planned in one go accordingly.
2. Dedicated staff names of RCF for these Stages and Final activities are to be provided and to be accompanied during coach inspection activities.
3. Each Coach must be pre-inspected by RCF inspector as per RCF SIP (Self Inspection Plan) and by using these check sheets before offering the coach to RITES. Filled SIP and these check sheets of Stage-III, Stage-IX and Testing to be submitted to RITES.
4. 100% checks by RCF to be done unless otherwise specified in accordance with the check sheet mentioned below.
5. The Intensive Check specified in Part B and General Check specified in Part C to be done 100% by RCF & 25% and 5% by RITES on sample basis respectively.

Variant: **Power Car**
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES Inspector:
Name of RCF officials:

Part A – Document Check Checksheet- Design

Check Sheet-D1

Ref. RCF Kapurthala PO No.: 02259001101961 dated 18.10.2025.
"Safety Inspection of 02 model rakes at RCF Kapurthala as per spec EDML 269 Rev 0 issued vide Letter No. ED RCF/HSQ/ED/2129 (Audit) dated 01.10.2025"

Reference -

i) RITES Audit Report No. QA/NR/ISA/RCF/LPC/01 Rev.00 May 2025.
ii) RCF letter no. RCF/HSQ/ED/2129(Audit) dated 20.08.2025 issued with Document No. RCF/AUDIT/ISA/POWER CAR Rev.0 Annexure-A, dated 31.07.2025.

1. Check Specification RDSO/PE/SPEC/0184 of SBC – It should be as per RDSO revised Specification.
   Observation _____

2. Check Document for Rating / setting of following components used in SBC (please refer RCF letter under Ref.(ii).

S. No. of Annex A	S. No. of Audit	Action Points	Inspection points	RCF observations	RITES observation
2	2	Compressor Motor MPCB rating 7A - 10A. Setting at 10A	Check MPCB Rating in Design Document and record.		

3. Check line diagram, BOM and schematic diagram for corrections as Indicated in table 3.1.1 at Section 3.1 of Audit Report to check that minor discrepancies have been corrected as reproduced below-

S. No. of Audit	Observation on variation of rating/ nomenclature in drawings and specification	RCF observations	RITES observations (Corrected/Not Corrected)
1	Ferrule numbers for additional battery charger are not provided in Harness no. 30 A, 31A, 32A in Corr 3 to Specification no. EDTS-257, Rev-K.		
2	Wiring for Neutral reactor in Harness no. 20 & 21 as per Specification no. EDTS-257, Rev-K is shown for Alternator 1 & 2, however, presently neutral reactor is not provided with DA set.		
3	Harness No. 33, 34, 35, 38, 39, 40 for Ventilator fan motors 1 & 2 is provided in Harness specification no. EDTS 257, Rev-K. However, it is not applicable for Power Car as Ventilation fans are not provided presently.		
4	Ferrule numbers are not provided in Schematic diagram for LHB power Car to drawing no. LP70006 ALT-NIL, sheet 1 of 1 & drawing no. RDSO/PE/SK/AC/0206-2019 Rev (0) sheet 1 of 48.		
5	Harness no. 146 for Regulated cum emergency battery charger is shown in Harness spec no. EDTS 257, Rev-K. However, at present 4.5KW RBC is used in Power car. Therefore, harness no. 146 may be reviewed.		
6	Accident emergency light (AEL) circuit Harness details not shown in specification no. EDTS-257, Rev-K.		
7	No wiring details shown for fire detection and suppression system shown in specification no. EDTS-257, Rev-K.		

4. Check if revised work instructions have been issued for:
   - Manufacture of Model Rake (which essentially involves inclusion of this check sheet)
   - Testing of coach and rake as per Audit Report to include Illumination check.

5. Check for issuance of following documents by RDSO/RCF. (Ref. Table 6.1 Looping issues in SBC Specification no. RDSO/PE/SPEC/0184 of Document No. RCF/AUDIT/ISA/AC 2-Tier Annexure-A, Rev.1 dated 05.07.2025, applicable for Power car variant also)

SN of Annex A	S. No. of Audit	Clause no.	Operative part of Check	RCF Observations	RITES Observations (Accepted / Rejected)
52 & 54	1 & 4	1& 5(ii)	- Check document to see if RDSO modification sheet no. RDSO/PE/MS/AC 0097-2025 implemented in RDSO specification for SBC.		
53	2	2	There are three MCBs out of 15, at which three terminals are connected. RDSO has issued modification sheet for single input single output connection. - check documents to verify modification sheet.		
56	5	5(iii) & (iv)	- For improved loop wiring, check if RDSO has issued any modification to place RMPU MPCB/ MCB with a single three Pole bus bar.		

Part B- Manufacturing Inspection Checksheet - Quality

Check Sheet-Q1

Variant: **Power Car**
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Intensive Check (100% by RCF & 25% by RITES)

Reference -

i) RDSO Code of Practice for 'Prevention of Fire in AC Coaches – Doc. No. RDSO/PE/O/0008-2005 (Rev-0)'.
ii) RDSO Specification and Code of Practice for Wiring In 750 V EOG System Coaching Stock - Doc. No. ELPS/SPEC/EOG/01, March 1994.
iii) RCF work instructions as mentioned.
iv) RITES Audit Report No. QA/NR/ISA/RCF/LPC/01 Rev.00 May 2025.
v) RCF letter no. RCF/HSQ/ED/2129(Audit) dated 20.08.2025 issued with Document No. RCF/AUDIT/ISA/POWER CAR Rev.0 Annexure-A, dated 31.07.2025.

S. No. of Annex A	S. No. of Audit	Clause No.	Operative Part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
7	5	Sheet-1/Clause.no 2.2 and Sheet-4/Clause 3.21 (Sr.no.9 of observation)	- Check the PMA hose on the 6 sqmm cables located at the floor area on the front side of the radiator room door. - Check that the PMA hose is continuous and free from any joints.		
8	6	Sheet-1/Clause.no 2.4 (Sr.no 11 of observation)	Check the 110 V DC circuit positive and negative cables in the engine room roof cable tray. They should not be routed together in the same PMA hose or PMA jacket.		

S. No. of Annex A	S. No. of Audit	Clause No.	Operative Part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
14	12	Sheet-1/Clause 5.4, Sheet-2/S.No 7, Sheet-7/Clause 3.1.2, 3.1.5 and 3.1.6 (Sr.no 20, 24,25 of observation)	- Check the crimping of power and control cables of all phases connected at the HOG-A contactor bottom terminal area and the phase power cables connected inside SBC-2 at the HOG-B contactor bottom terminal area. - Check that crimping is proper and no excess insulation is removed from the cables.		
19	17	Sheet-1/Clause 1.2 and Sheet 2/S.No 9 (Sr. no 29 of observation)	- Check ferrules of Input cable at SBC-2 inside HOG-A and HOG-B contactor input cables. All ferrules should be as per drg/spec.		
20	18	Sheet-1/Clause 1.2, Sheet 2/S.No 9, Sheet-7/Clause 3.1.1, 3.1.17 and 3.1.18 (Sr. no 31 of observation)	- Check the ferrules and crimping of the Alternator-1 neutral cable inside SBC-2. - Check that the crimping is proper and ferrules are provided as per the specification		

Check Sheet-Q2

Inspection Checksheet on Work Instructions for Cabling and Harness

Reference -

i) EDTS 257 Rev-K
ii) ELRS/SPEC/ELC/0019 Rev-4,
iii) RDSO/PE/SPEC/AC/0138-2009, Rev-1,
iv) Work instruction EDW 003, EDW006, EDW007
v) RITES Audit Report No. QA/NR/ISA/RCF/LPC/01 Rev.00 May 2025.
vi) RCF letter no. RCF/HSQ/ED/2129(Audit) dated 20.08.2025 issued with Document No. RCF/AUDIT/ISA/POWER CAR Rev.0 Annexure-A, dated 31.07.2025.

Variant: **Power Car**
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

S. No. of Annex A	S No. of Audit	Clause No.	Check point	RCF Observations	RITES Observations (Accepted / Rejected)
3	1	Sheet-2/S.No. 8 (Sr. no. 1, 2, 3 & 4 of observation)	Check securing and routing of the PMA hose at the top side of the Guard Room door, back side of the SBC panel, and bottom area of the SBC-2 panel and SBC-1 back side. Proper routing and securing shall be ensured, and no bulging of the hose should be there.		
4	2	Sheet-2/S.No. 8 (Sr. no 5 of observation)	Check PMA hose routing and securing at the engine door top side. It should be properly routed and firmly secured with appropriate clamps		

S. No. of Annex A	S No. of Audit	Clause No.	Check point	RCF Observations	RITES Observations (Accepted / Rejected)
			along the engine door roof area.		
5	3	Sheet-2/S.No 8 and Sheet-4/Clause 3.21 (Sr. no 6 of observation)	Check the PMA hose of the 60 KVA onboard transformer primary cables. There should be no joint on the tuff floor near the 60 KVA transformer cable entry point.		
9	7	Sheet-2/S.No 8 and Sheet-4/Clause 3.23 (Sr.no 12 & 14 of observation)	- Check the hardware on all engine room roof cable trays and crew room roof cable trays. - Check that all hardware is of adequate size and properly fitted with bolts, nuts, plain washers, and spring washers		
10	8	Sheet-2/S.No 8 (Sr.no 13 of observation)	- Check the hardware of the Radiator-A motor mounting. - Check that all hardware is of adequate size and properly fitted with bolts, nuts, plain washers, and spring washers		
11	9	Sheet-2/S.No 8 (Sr.no 15 of observation)	- Check the PMA hose of the RMPU Power and control cables. - Check that proper end fittings are provided at the cable entry area for the Guard Room RMPU input cables. The PMA hose should		

S. No. of Annex A	S No. of Audit	Clause No.	Check point	RCF Observations	RITES Observations (Accepted / Rejected)
			be continuous without any joints, and end fittings must be properly installed.		
15	13	Sheet-2/S.No 10 and Sheet-7/Clause 3.1.2 (Sr.no.21 of observation)	- Check crimping In between S2K2 to S2K3 contactor bus bar area cable. It should be proper (strands should be visible through inspection hole)		
17	15	Sheet-2/S.No 8 (Sr. no 27 of observation)	- Check the routing and securing of the PMA hose at the bottom side area of SBC-2. - Check that the routing is proper, the hose is securely fixed, and no bulging is observed.		
18	16	Sheet-2/S.No 9, 10, Sheet-7/Clause 3.1.5 and Sheet-1/Clause 1.2 (Sr.no.28 of observation)	- Check the cable connection between the alternator neutral and the earth bus bar. - Check that the connection is proper, ferrules are correctly provided, and no excess insulation is removed.		

Check Sheet-Q3

Inspection Checksheet on Work Instruction for Precaution to be taken while laying of cables

Ref specification-

i) All cables specification
ii) RITES Audit Report No. QA/NR/ISA/RCF/LPC/01 Rev.00 May 2025.
iii) RCF letter no. RCF/HSQ/ED/2129(Audit) dated 20.08.2025 issued with Document No. RCF/AUDIT/ISA/POWER CAR Rev.0 Annexure-A, dated 31.07.2025.

Variant: **Power Car**
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

S. No. of Annex A	S No. of Audit	Clause No.	Operative part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
6	4	Sheet-4/Clause 3.3 (Sr. no 8 of observation)	- Check power cables from the Alternator to SBC-2. - Check there are no sharp edges in the tuff floor area of the engine room, and adequate protection (such as PVC sheets) is provided against any potential sharp edges.		
13	11	Sheet-4/Clause 3.1 (Sr. no 18 of observation)	Check the power cables from the ACB output to the bus coupler and from the bus coupler to the bus bar input. Check that there is no twisting or bulging of the cables near the terminal areas.		
16	14	Sheet-	Check the bending		

S. No. of Annex A	S No. of Audit	Clause No.	Operative part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
		4/Clause 3.1 (Sr.no 22,23,26 of observation)	radius of the output cable from Transformer-A Contactor S2K44, the HOG-A cable inside SBC-2, and the R-phase cable inside SBC-2 connected to Transformer-B Contactor S2K4. Check that the bending radius is maintained more than 4D.		

Check Sheet-Q4

Testing Stage:

Ref.

For Testing of Power car variant, the following references of AC-2 Tier variant are applicable.

i) RDSO Specification and Code of Practice for Wiring In 750 V EOG System Coaching Stock - Doc. No. ELPS/SPEC/EOG/01, March 1994.

ii) RDSO Specification No. RDSO/PE/SPEC/TL/0091-2016 (REV-1) 'Specification for Energy Efficient LED Based Luminaire Units for Passenger Coaches'.

iii) RCF Work Instructions No. EDW 0032 Ver 1.0 dt. 05.08.2025, EDW 0024 Ver 1.0 dt. 09.06.2025.

iv) RITES Audit Report No. QA/NR/ISA/RCF/AC2T/01 Rev.00 March 2025.

v) RCF letter no. RCF/HSQ/ED/2129(Audit) dated 05.07.2025 issued with Document No. RCF/AUDIT/ISA/AC 2-Tier Annexure-A, Rev.1 dated 05.07.2025.

Variant: **Power Car**
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

SN of Annex A	S. No. of Audit	Clause no.	Operative part of Check	Specified Value	RCF Observations	RITES Observations (Accepted / Rejected)
46 of Ref (v)	1	11.1	illumination (uniformity and lux measurement) Test as per as per RDSO spec RDSO/PE/SPEC/TL/0091-2016 (REV-1) **- To be performed on one coach per variant only.**	The voltage during the test shall be maintained at 110V with a tolerance of +0 / -3V**.** The test shall be conducted as per Annexure-1 and in accordance with Clauses 6.12 and 6.13 of the specification**.** Refer RCF Work Instructions No. EDW 0032 Ver 1.0 dt. 05.08.2025**.**		
48 of Ref (v)	3	12.5.1	Check Insulation resistance Test record for 750, 415,	Refer RCF Work Instructions No. EDW 0025 Ver 1.0 dt. 09.06.2025		

<table>
<tr><th>SN of Annex A</th><th>S. No. of Audit</th><th>Clause no.</th><th>Operative part of Check</th><th>Specified Value</th><th>RCF Observations</th><th>RITES Observations (Accepted / Rejected)</th></tr>
<tr><td></td><td></td><td></td><td>110, 24 V circuit before and after high voltage test.</td><td>
<table>
<tr><th>s. no</th><th>Rated voltage</th><th>Megg ering voltag e</th><th>Insulation value</th></tr>
<tr><td>1</td><td>750 V AC</td><td>1000V DC</td><td>≥5Ω</td></tr>
<tr><td>2</td><td>415 V AC</td><td>500 V DC</td><td>≥3Ω</td></tr>
<tr><td>3</td><td>230 V AC</td><td>500 V DC</td><td>≥2Ω</td></tr>
<tr><td>4</td><td>190 V AC</td><td>500 V DC</td><td>≥2Ω</td></tr>
<tr><td>5</td><td>110 V AC</td><td>500 V DC</td><td>≥2Ω</td></tr>
<tr><td>6</td><td>24 V DC</td><td>500V DC</td><td>≥2Ω</td></tr>
<tr><td colspan="4">Insulation resistance values measured immediately after the high voltage tests shall not be less than the original value</td></tr>
</table>
</td><td></td><td></td></tr>
<tr><td>49 of Ref (v)</td><td>4</td><td>12.5.2</td><td>Check High Voltage Test</td><td>Refer RCF Work Instructions No. EDW 0025 Ver 1.0 dt. 09.06.2025
<table>
<tr><th>S. NO</th><th>CIRCUIT CABLES</th><th>APPLIED HV VOLTAGE FOR 60 SEC</th></tr>
<tr><td>1</td><td>750V AC</td><td>2.5 KV</td></tr>
<tr><td>2</td><td>415V AC</td><td>1.8 KV</td></tr>
<tr><td>3</td><td>230V AC</td><td>1.5 KV</td></tr>
<tr><td>4</td><td>190V AC</td><td>1.4 KV</td></tr>
<tr><td>5</td><td>110V AC</td><td>1.2 KV</td></tr>
<tr><td>6</td><td>110V DC</td><td>1.2 KV</td></tr>
</table>
</td><td></td><td></td></tr>
<tr><td>50 of Ref (v)</td><td>5</td><td>12.5.4</td><td>Continuity test on IV coupler.</td><td>Continuity to be checked OK/Not OK</td><td></td><td></td></tr>
</table>

Check Sheet-Q7

Inspection of SBC

Ref-

i) RDSO Spec Revision ---- (to be obtained)
ii) RITES Audit Report No. QA/NR/ISA/RCF/AC2T/01 Rev.00 March 2025.
iii) RCF letter no. RCF/HSQ/ED/2129(Audit) dated 05.07.2025 issued with Document No. RCF/AUDIT/ISA/AC 2-Tier Annexure-A, Rev.1 dated 05.07.2025, Section 1, Section 4 and Section 6.
iv) RITES Audit Report No. QA/NR/ISA/RCF/LPC/01 Rev.00 May 2025.
v) RCF letter no. RCF/HSQ/ED/2129(Audit) dated 20.08.2025 issued with Document No. RCF/AUDIT/ISA/POWER CAR Rev.0 Annexure-A, dated 31.07.2025.

Variant: **Power Car**
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials: 1)
2)
3)

S. No. of Annex A	S. No. of Audit	Action Points	Inspection points	RCF observations	RITES observation
2 of Ref (v)	2	Compressor Motor MPCB rating 7A - 10A. Setting at 10A	- Refer work instructions. - Record actual setting on Coach as per RDSO letter no. EL/7.1.108/SBC/Main dtd. 10.06.2025.		
41 of Ref (iii)	1	B(h)	Check availability of two braided copper cable of 70 mm^2 and 300 mm length, each duly crimped to be supplied with panel. Reject if unbraided cable is provided		
42 of Ref (iii)	2	B(i)	Check Make of Halogen free Polycarbonate / ABS duct. It should be Trinity Touch/ L&T/		

S. No. of Annex A	S. No. of Audit	Action Points	Inspection points	RCF observations	RITES observation
			Phoenix. Reject if approved make is not provided.		
43 of Ref (iii)	3	g	- Check availability of Work instructions no. EDW0025 Ver1.0 dt 09.06.25 on Shop Floor - Check insulation Resistance Test records		
44 of Ref (iii)	4	m	Check Marking. Schematic diagram should be available as specified on SBC		
-	Gen1	-	Check that SBC provided is as per revised RDSO specification		
52 & 54 of Ref (iii)	1 & 4	1 & 5(ii)	- If RDSO modification sheet no. RDSO/PE/MS/AC 0097-2025 implemented in RDSO specification for SBC, if this document and check implementation in SBC on shop floor.		
53 of Ref (iii)	2	2	There are three MCBs out of 15, at which three terminals are connected. RDSO has issued modification sheet for single input single output connection. - check documents to verify modification sheet.		

S. No. of Annex A	S. No. of Audit	Action Points	Inspection points	RCF observations	RITES observation
			- If the same is issued, check implementation on SBC on shop floor.		
56 of Ref (iii)	5	5(iii) & (iv)	- For improved loop wiring, check if RDSO has issued any modification to place RMPU MPCB/ MCB with a single three Pole bus bar. - If issued, check implementation on SBC on shop floor.		

Check Sheet-Q8

Checks on embedded devices such as WSP, CCTV, Public Address (PA System), Fire Alarm system or any other embedded device fitted on coach –

Variant: **Power Car**
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

A. WSP

SN	Operative part of Check	RCF Observations	RITES Observations (Accepted / Rejected)
1	Check if line diagram, circuit diagram and specification have been issued		
2	- Check if use of Fire-retardant material has been specified. - Check if the same has been checked through Quality Audit/ inspection.		

B. Public Address (PA System)

SN	Operative part of Check	RCF Observations	RITES Observations (Accepted / Rejected)
1	Check if line diagram, circuit diagram and specification have been issued		
2	- Check if use of Fire-retardant material has been specified. - Check if the same has been checked through Quality Audit/ inspection.		

C. Any other equipment of this category

SN	Operative part of Check	RCF Observations	RITES Observations (Accepted / Rejected)
1	Check if line diagram, circuit diagram and specification have been issued		
2	- Check if use of Fire-retardant material has been specified. - Check if the same has been checked through Quality Audit/ inspection.		

Part C- Manufacturing Inspection

Checksheet – Electrical Production

Checksheet-P1

STAGE-III ROOF/PRE-CEILING OF LWLRRM, LHB-LUGGAGE GUARD CUM GENERATOR VAN COACH

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
1	Ensure DC 110 V +ve & -ve wires routed in separate conduit/sleeve		
2	Ensure roof all cabins rooftop, sidewall and doorway area 20 mm PVC conduits C-clamping tightness with proper hardware at regular distance		
3	Ensure that all rooftop cable trays are properly tightened using suitable hardware at regular intervals		
4	Ensure the provision of rubber insulation sheets at the bottom of the cable trays and rubber beading at the corners		
5	Ensure proper laying of the cables on the tuff floor with necessary sharp-edge protection		
6	Ensure all cables are as per specification number ELRS/SPEC/ELC/0019 Rev-04		
7	Ensure that all PVC, PMA shall be routed through the dedicated 'Through-hole' wherever applicable		
8	Ensure that there is no conduit damage and use a PVC pipe connector at the joining areas		
9	Ensure all PMA hoses/Sleeves are secured properly and have no joint		
10	Ensure necessary sharp edge protection for cables using PMA hose (for metal contact) & Sleeves (for non-metallic contact)		
11	Ensure that Cables are properly connected at all Cage clamps terminals/Wago with 1A glass fuses, and no strands to be visible outside		
12	Check all roof cables (LED, Engine Room Fan, PACIL, Charging Socket, Exhaust Fan, Flasher Unit, etc.) for correct size, colour code, and printed ferrules as per EDTS-257 Rev-K.		

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
13	Check the DA Set A & B alternators, radiator and its control panel, 24 V battery bank, isolator switch, starter battery charger, and on-board 60 kVA transformer wiring for correct wire size, colour code, and printed ferrules as per EDTS-257 Rev-K		
14	Ensure all Roof JB/cage clamp Cables are provided with printed ferrules as per EDTS-257 Rev-K		
15	Ensure that all Roof JBs are mounted using proper hardware		
16	Ensure that the cable tray cover is provided and properly fitted at the Lavatory JB		

Additional remarks (if any):

CONFIRMING/NON-CONFIRMING

RCF REPERESENTATIVE SIGNATURE & DATE		RITES REPERESENTATIVE SIGNATURE & DATE	
NAME		NAME	

Checksheet - P2

ROOF QUALITY CHECK OF LWLRRM, LHB-LUGGAGE GUARD CUM GENERATOR VAN COACH

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
1	**LED FITTING**		
1.1	Ensure all LED cable wago coupler connections are properly made.		
1.2	Ensure all LED fittings are mounted with proper hardware without any gaps.		
1.3	Ensure all LED fitting diffuser covers are provided.		
2	**CHARGING SOCKETS & RAZOR SOCKET**		
2.1	Ensure all CS switch cable connections are properly made.		
2.2	Ensure the 1A glass fuse provision in each CS.		
2.3	Ensure that any switches are not fixed in reverse position.		
2.4	Ensure all switch plates are mounted with screws and washers without any gaps.		
3	**FLASHER UNIT**		
3.1	Ensure the Flasher unit is mounted using proper hardware, without any gaps		
3.2	Ensure the Flasher unit cables PMA hose is properly clamped with suitable hardware		
3.3	Ensure all cable terminations at the WAGO terminals are correct, and no cable strands are visible outside the terminal		
3.4	Ensure that Flasher unit and CS covers are closed with proper hardware		
4	**ENGINE ROOM BLDC FAN**		
4.1	Ensure the tightness of fan main mounting bolts with washers		
4.2	Ensure the tightness of fan guard mounting bolts with washers		
4.3	Ensure all Fan cable WAGO coupler connections are properly made		
4.4	Ensure the fitment of guard ring with proper hardware		

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
5	**PACIL**		
5.1	Ensure the fitment of PACIL with proper hardware		
5.2	Ensure the cable connections of PACIL		
5.3	Ensure the application of Water sealant corners of the PACIL		
6	**LAVATORY LIGHT**		
6.1	Ensure the Lavatory light WAGO coupler connection		
6.2	Ensure the tightness of all Lavatory Light		
6.3	Ensure all cables are properly secured		
6.4	Ensure the Lavatory JB cable connections are made and secured properly		
7	**GUARD ROOM SIDE LIGHT**		
7.1	Ensure the fitment of Side light with proper hardware.		
7.2	Ensure the cable connections of Side light.		
7.3	Ensure the application of Water sealant corners of the side light and cover to be close.		
7.4	Ensure the side light covers are closed properly		
8	**SBC-1**		
8.1	Ensure SBC panel mounting tightness with proper hardware.		
8.2	Check the Double earthing for SBC-1 panel with proper hardware		
8.3	Ensure that PMA conduits are properly secured with clamps and have no joint.		
8.4	Ensure that PMA end fittings are tightened and provided with gasket.		
8.5	Ensure all Contactors, MPCBs, RC Filters, Fuses and Relays etc. Ratings and Identification Numbers as per the Spec No. RDSO/PE/SPEC/AC/0184 -2015 Rev-01 or Latest.		
8.6	Check proper use of Fire barrier at the rear side of the panel cable entry area.		
8.7	Ensure all Cable ferrules as per EDTS-257 Rev K or Latest.		
8.8	Ensure all Cable crimping with proper lug and heat shrink sleeve provision.		
8.9	Ensure all Cable tightness with proper hardware and not more than two cables are connected at any terminal.		
8.10	Ensure D&ED cables are secured properly with sleeves and grommet is provided at the cable entry area of the D&ED.		
8.11	Ensure all cable dressing, tray covers, Poly carbonate		

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
	sheet and fuse safety covers are provided.		
8.12	Ensure provision of 4 Nos. at SBC panel Aerosol based Fire Suppression system with proper fitment and verify their locations		
8.13	Ensure the sharp edge protection is provided at both panel corner areas.		
9	**SBC-2**		
9.1	Ensure the mounting arrangement of panel with proper hardware.		
9.2	Ensure the SBC panel body double earthing is provided.		
9.3	Ensure that the Panel PMA conduits are properly secured and the PMA end fittings are tightened with gaskets		
9.4	Ensure all cables are properly crimped with suitable lugs, mounted using proper plain and spring washers, and the cable bending radius is not less than 4D		
9.5	Ensure that all cables printed ferrules are provided as per the Harness No. EDTS-257 Rev-K		
9.6	Ensure that all the electrical components Ratings and identification number as per the Specification No. EDTS-103 Rev-D		
9.7	Ensure that the all the electrical components (Contactors, Relays, Control Transformers, CTs, ACBs, Meters, LEDs, etc.) are mounted properly		
9.8	Ensure that all cables are routed neatly in the cable tray and are secured with sleeves		
9.9	Ensure the Polycarbonate sheet covers are fitted properly		
9.10	Ensure that terminal caps are provided for all power cable terminations		
9.11	Ensure that all the cable entry are Fire barriers are provided		
9.12	Ensure that the provision of the surge suppressors of the contactors		
9.13	Ensure that the Aerosol based Fire suppression Cartridges are properly mounted at the designated location (RDSO/RCF guidance required for quantity and location)		
9.14	Ensure that the provision of 2 Nos of HOG coupler		
9.15	Ensure that the panel light is properly mounted and the cables are connected using the coupler		
9.16	Ensure that the SBC-2 panel doors are properly closed and the panel key provision is in place		
10	**TAIL LIGHT**		
10.1	Ensure that the tail light is mounted using proper		

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
	hardware		
10.2	Check the tail light WAGO coupler connection		
10.3	Ensure the application of Water sealant at the corners of the tail light.		
11	**HOG COUPLER**		
11.1	Check the HOG coupler connection.		
11.2	Check the HOG coupler mounting with gasket.		
12	**EXHAUST FAN**		
12.1	Check the mounting of exhaust fans with proper hardware		
12.2	Ensure the exhaust fan is connected using a 4-terminal WAGO connector at the top side of SBC-2, and ensure the PMA hoses are properly placed in SBC-2 and the Lavatory		
12.3	Ensure all cables are properly secured with PMA hsoes and sleeves		
13	**STARTER BATTERY CHARGER (2 Nos)**		
13.1	Ensure the Starter battery chargers mounting with proper hardware.		
13.2	Ensure the Starter battery charger PMA hoses are secured with clamp.		
13.3	Ensure the tightness of the double earthing connections at the non-painted surface		
13.4	Ensure that the input and indication cables are connected properly at the wago		
13.5	Ensure that the output cables are crimped with suitable lug and provision of heat-shrink sleeves		
13.6	Ensure that the cables are tightened with proper hardware		
13.7	Ensure the provision of a 16A HRC fuse at the input and a 63A fuse at the output		
13.8	Ensure that the cooling fans and their grills are properly tightened and free from any obstruction		
13.9	Ensure starter battery charger covers are closed with proper hardware.		
14	**RADIATOR FAN MOTOR AND CONTROL PANEL**		
14.1	Ensure the Radiator fan motor is mounted with proper hardware		
14.2	Ensure the Radiator fan motor PMA hose is secured with clamps		
14.3	Ensure the Radiator fan motor earthing is provided and tightened on a clean (non-painted) surface		
14.4	Ensure the cable terminations are properly tightened		
14.5	Ensure the engine flue gas exhaust is mounted with		

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
	proper hardware		
14.6	Ensure the Radiator fan motor panel is mounted with proper hardware		
14.7	Ensure double earthing is provided to the Radiator fan motor panel with proper tightness and proper grinding		
14.8	Ensure the Radiator fan motor panel PMA hose is secured with clamps		
14.9	Ensure all contactors and cables inside the Radiator fan motor panel are properly fixed and secured		
14.10	Ensure all cable terminations at the WAGO terminals are properly tightened and no strands are visible outside		
14.11	Ensure the Radiator fan motor panel door is closed and the key is provided		
15	**ALTERNATOR**		
15.1	Ensure the alternator is mounted with proper hardware		
15.2	Ensure the alternator cables are crimped properly with suitable lugs, no strands are visible outside, the strands are inserted up to the inspection hole, and heat-shrink sleeves are provided		
15.3	Ensure the cables are tightened with proper hardware		
15.4	Ensure the alternator double earthing cable tightness at the non-painted area		
15.5	Ensure the alternator terminal covers are closed with proper hardware		
16	**ENGINE SET**		
16.1	Ensure both Engine set bottom area PMA to be secured properly		
16.2	Ensure the Engine bottom area is clean		
17	**S-40 PANEL**		
17.1	Ensure the S-40 panel is mounted with proper hardware		
17.2	Ensure the S-40 PMA is secured with clamp and end fitting tightness with gasket		
17.3	Ensure the S-40 double earthing is provided and tightened on the non-painted surface		
17.4	Ensure all wire connections at the WAGO terminals and contactors and secured properly		
17.5	Ensure the –VE loops are provided with proper short link at the WAGO terminals		
17.6	Ensure the tightness of the rail mounting and provision of wago stopper		
17.7	Ensure the S-40 cover is closed properly and the key is provided		

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
18	**ISOLATOR SWITCH**		
18.1	Ensure the Isolator switch is mounted with proper hardware		
18.2	Ensure the tightness of the Isolator double earthing at the non-painted area		
18.3	Ensure the Isolator cable PMA hose is secured with clamp and end fitting tightness with gasket		
18.4	Ensure the Isolator inside all wire connections with suitable lug and hardware are secured properly		
18.5	Ensure the Isolator covers are closed		
19	**HATCH DOORS**		
19.1	Ensure the Hatch doors are mounted with proper hardware		
19.2	Ensure the gaps are arrested with foam		
20	**ONBOARD 55+5 or 60 KVA TRANSFORMER**		
20.1	Ensure the transformer is fitted with proper hardware and torque markings are done		
20.2	Ensure that transformer PMA conduits are properly secured with clamps and have no joint		
20.3	Ensure that PMA end fittings are tightened and provided with gasket		
20.4	Ensure double earth cables are properly crimped with suitable lugs and mounted using proper hardware on a non-painted surface		
20.5	Ensure all cables are properly crimped with suitable lugs and mounted using proper head bolt, plain and Spring washer		
20.6	Ensure Transformer door to be closed with proper bolts and wing nuts		
21	**24 V BATTERY SET**		
21.1	Ensure the battery cells are placed on the floor with the isolation rubber sheet		
21.2	Ensure the provision of painted metal frame guard		
21.3	Ensure the cells are free from damage or leak		
21.4	Ensure the lug date of the cells is within six months		
21.5	Ensure the cables are crimped with the suitable lug and heat-shrink provision		
21.6	Ensure the cell interloop and main terminal connections are done with proper hardware		
21.7	Ensure the fitment of polycarbonate sheet on the top of the battery cells		
22	**SMOKE DETECTOR**		
22.1	Ensure the smoke detector system and the hooter are fitted at the SBC-1		
22.2	Ensure the Smoke detector system cables are secured properly		
22.3	Ensure the Smoke detector sensors 1 & 2 are placed		

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
	inside SBC-1 and SBC-2 respectively		
23	**COMMON POINTS FOR ALL ELECTRICAL EQUIPMENTS**		
23.1	Ensure all the electrical equipment mounting bolts torque marking is done		
23.2	Ensure and all electrical equipment have nameplates indicating ratings as per RCF/RDSO specifications and note down Inventory details		
23.3	Ensure the printed ferrule provision for all cables after the terminations as per EDTS-257 Rev-K		

Additional remarks (if any):

CONFIRMING/NON-CONFIRMING

RCF REPERESENTATIVE SIGNATURE & DATE		RITES REPERESENTATIVE SIGNATURE & DATE	
NAME		NAME	

Checksheet - P3

UNDERFRAME QUALITY CHECK OF LWLRRM, LHB-LUGGAGE GUARD CUM GENERATOR VAN COACH

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
1	**750 V FEEDER PIPE, CABLE TRAY & FEEDER JUNCTION BOX**		
1.1	Ensure all 70 mm Conduit clamps are tightened with a head bolt, nylock nut and plain washer.		
1.2	Ensure the tightness of 70 mm conduit clamps in both PP and NPP bogie areas.		
1.3	Ensure the FDB is fitted with proper hardware and torque markings are done.		
1.4	Ensure the provision and tightness of clip clamps on the rubber hoses at the feeder conduit pipe joint area.		
1.5	Check for providing Silicon Sealants at the Rubber Hose and Conduits joints at the feeder box.		
1.6	Ensure the closing of dummy holes in the feeder junction box with proper caps.		
1.7	Check underframe cable tray laying and ensure it is properly secured with clamps using spring and plain washers		
1.8	Ensure that Cable tray joints are done with min 2 set of hardware and that there is no gap between the cable trays		
1.9	Ensure that there is no cable tray infringing with brake pipe lines.		
1.10	Ensure the tightness of all FDB cover earth cable with proper hardware		
1.11	Ensure the tightness of all FDB covers with proper hardware and rubber gaskets		
1.12	Check the sharp edge protection at the feeder cable entry area in the FDB and ensure the bending radius should not be less than 4D		
1.13	Ensure that PMA hoses are properly secured with clamps at the rear side of the FDB and both cable tray and non-cable tray area		
2	**POSITIVE (+VE) AND NEGATIVE (-VE) FUSE BOX**		

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
2.1	Check the fitment of +VE & -VE fuse boxes with proper hardware		
2.2	Ensure that dummy holes are closed in both fuse boxes		
2.3	Ensure that stenciling is done both fuse boxes		
2.4	Ensure the provision of Fuse Safety covers in both fuse boxes. (3Nos)		
2.5	Ensure PMA hose has no joint and their end fittings are provided with gasket		
2.6	Ensure all cable tightness in +VE and -VE fuse box and the bending radius is not less than 4D for the size of cable greater than 25 sqmm		
2.7	Ensure the tightness of both fuse box body earthing with proper hardware		
3	**55+5 or 60 KVA TRANSFORMER (2 Nos)**		
3.1	Ensure that transformer PMA conduits are properly secured with clamps and have no joint		
3.2	Ensure that PMA end fittings are tightened and provided with gasket		
3.3	Ensure the transformer is fitted with proper hardware and torque markings are done.		
3.4	Ensure the transformer holding safety chain is provided		
3.5	Ensure the transformer fixing frame is properly painted		
3.6	Ensure all cables are properly crimped with suitable lugs and mounted using proper head bolt, plain and Spring washer		
3.7	Ensure double earth cables are properly crimped with suitable lugs and mounted using proper hardware on a non-painted surface		
3.8	Ensure Transformer door to be closed with proper bolts and wing nuts		
3.9	Ensure that transformer PMA conduits are properly secured with clamps and have no joint.		
3.10	Ensure that PMA end fittings are tightened and provided with gasket.		
4	**RBC Cum EBC**		
4.1	Ensure that PMA conduits are properly secured with clamps and have no joint.		
4.2	Ensure that PMA end fittings are tightened and provided with gasket		
4.3	Ensure the RBC Cum EBC is fitted with proper hardware and torque markings are done.		
4.4	Check the RBC Cum EBC WAGO connections are properly made and no wire strands are visible outside		
4.5	Ensure terminal Box cover are tightened with proper hardware and dummy holes are arrested		
4.6	Ensure RBC Cum EBC door is closed with proper hardware		

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
	and ensure the provision of door stay arrangement		
5	**BATTERY BOX & BATTERY (110V, 70 Ah)**		
5.1	Ensure that PMA conduits are properly secured with clamps and have no joint.		
5.2	Ensure that PMA end fittings are tightened and provided with gasket.		
5.3	Ensure the battery bank is properly loaded in the battery box with adequate packing (12 cells each having the capacity of 9V)		
5.4	Ensure wooden stoppers are provided inside the battery box, if required		
5.5	Ensure all batteries are of the same make and the lug date is within six months		
5.6	Check that no battery cells are damaged or leaking.		
5.7	Ensure the battery cell top stopper plate is properly tightened		
5.8	Ensure the battery box is properly mounted with correct hardware		
5.9	Ensure the battery box doors are closed with wing nuts, and the lower part of the doors is welded. The welded area shall be properly painted		
5.10	Ensure the tightness of inter-cell loop cable connections with proper hardware		
5.11	Ensure the provision of petroleum jelly and terminal caps at all battery terminals		
5.12	Ensure the tightness of Battery Box body earthing with proper hardware		
5.13	Ensure Battery box dummy holes are closed		
6	**SPEED SENSOR CABLE AND DUMP VALVE**		
6.1	Ensure that PMA conduits are properly secured with clamps and have no joint		
6.2	Ensure that PMA end fittings are tightened and provided with gasket		
7	**THROUGH BOX**		
7.1	Ensure that PMA conduits are properly secured with clamps and have no joint		
7.2	Ensure that PMA end fittings are tightened and provided with gasket		
7.3	Ensure the tightness of the through box cover bolts with proper hardware		
8	**750V IV COUPLER AND FEEDER JUNCTION BOX (FJB/FDB- 4 Nos)**		
8.1	Ensure tightness of IV coupler and dummy socket with proper hardware and rubber gasket		
8.2	Ensure IV coupler length is 1535 mm and Safety chain tightness		
8.3	Ensure proper closing of IV socket limit switches		

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
8.4	Ensure all cables are properly crimped with suitable lugs, mounted using proper head bolts with plain and spring washers, terminal caps are provided, and the cable bending radius is not less than 4D		
8.5	Ensure the securing and connection of C1 and C2 control cables at the wago terminals and provision of end stoppers.		
8.6	Ensure the tightness of FDB body earth and PE cable with proper hardware on a non-painted surface		
8.7	To ensure IV Coupler Safety Chain is provided with Rubber Sheet Protection.		
8.8	Check the Power cable entering in junction box sharp edge protection, crimping and tightness of the connection.		
9	**LOCAL MAIN SUPPLY (LMS) SOCKET (2 Nos)**		
9.1	Ensure the tightness of LMS Socket with proper hardware		
9.2	Ensure LMS socket fixing plate tightness with proper hardware		
9.3	Ensure both LMS socket cable crimped with suitable lug and heat-shrink sleeves are provided		
9.4	Ensure the tightness of the LMS Socket cables with proper hardware		
9.5	Ensure both LMS socket doors are properly closed		
10	**WHEEL SET EARTHING EQUIPMENT (2 Nos)**		
10.1	To ensure Earthing Cable to be connected to the coach body and tightened with proper grinding.		
10.2	To ensure Both bogies earth insulator bush fixed properly		
10.3	Ensure both bogie earth cables are properly crimped with suitable lugs and mounted using proper hardware on a non-painted surface		
10.4	Ensure both bogie earth insulator bushes are fixed properly		
11	**DUMP VALVE (4 Nos)**		
11.1	Ensure earth cables are properly crimped with suitable lugs and mounted using proper hardware on a non-painted surface		
12	**WRP SET & WRP CONTROLLER**		
12.1	Ensure that PMA conduits are properly secured with clamps and have no joint		
12.2	Ensure that PMA end fittings are tightened and provided with gasket		
12.3	Check the mounting of WRP with proper hardware		
12.4	Ensure the PMA hoses clamping with proper hardware and have no joint		
12.5	Ensure the tightness of the WRP controller with proper hardware		
12.6	Ensure the WRP set & controller cable connections are		

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
	properly made and secured with sleeves		
13	**CAPACITOR BANK**		
13.1	Ensure that PMA conduits are properly secured with clamps and have no joint.		
13.2	Ensure that PMA end fittings are tightened and provided with gasket.		
13.3	Ensure the Capacitor bank is fitted with proper hardware and torque markings are done.		
13.4	Check the Capacitor bank WAGO connections are properly made and no wire strands are visible outside.		
13.5	Ensure Capacitor bank door is closed with proper hardware		
14	**COMMON POINTS FOR ELECTRICAL EQUIPMENTS**		
14.1	Ensure underframe all cables size, colour code and ferrules as per harness EDTS-257 Rev K or latest.		
14.2	Ensure all Electrical equipment mounting bolts torque markings are done.		
14.3	Ensure all electrical equipment have nameplates indicating ratings as per RCF/RDSO specifications and note down Inventory details.		
14.4	Ensure the earth marking of the all-electrical equipment.		
14.5	Check all Power & earth cable crimping to ensure that (i) no excess cable insulation is removed, (ii) no strands are visible outside, (iii) proper crimping sockets are used, (iv) cable strands are inserted up to the inspection hole and (v) heat shrink sleeves are provided.		

Additional remarks (if any):

CONFIRMING/NON-CONFIRMING

RCF REPERESENTATIVE SIGNATURE & DATE		RITES REPERESENTATIVE SIGNATURE & DATE	
NAME		NAME	

Check sheet - P4

WSP (WHEEL SLIDING PROTECTION SYSTEM) CHECK SHEET OF LWLRRM, LHB-LUGGAGE GUARD CUM GENERATOR VAN COACH

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

S.NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
1.	WSP unit Make _____ & S. No _____		
2.	Ensure WSP unit 110 V DC input supply with 1 pole 6A MCB controls are provided with identification numbers S1F63 (+VE) and S1F65 (-VE)		
3.	Check K-05 Off delay timer relay setting (10 Min) and its performance		
4.	Ensure that when FP pressure is **0 kg/ Cm^2** the pressure limit switch will not operate, and supply will not come in WSP microprocessor. As soon as FP pressure reaches beyond **1.8 kg/Cm^2** the pressure limit switch will make the contact, and supply will reach to microprocessor.		
5.	Ensure the WSP microprocessor will display **99(F)/9999 (K)/9.9 (E & J) F-FAIVELY, K-KNOOR, E-ESCORTS, J-JUPITER,** which shows system healthy?		
6.	Ensure WSP microprocessor working are checked by putting fault in sensor cable and dump valve by shorting/opening the wore of sensor cable connection and dump valve connection one by one, fault code showing in display of microprocessor with respect to sensor cable and dump valve should be as per WSP testing format.		
7.	Ensure for clearing of all faults by pressing as per respective microprocessor, microprocessor should display healthy code.		
8.	Check the dump valves. After applying brakes press button S2 (i.e. Test mode) dump valves will operate sequentially.		
9.	Ensure Fault/Activity data recorder function will be checked by downloading data. Date and time of fault/activity verified.		

S.NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
10.	Check the cable layout of speed sensor as per ICF drawing **No. ICF/SK3-3-5-046.**		
11.	Check the Mounting Bracket for Junction box as per ICF drawing no. **AAD11918, Alt-d** and **AAA11835, Alt-f**		
12.	Ensure that no hole will be found in Junction box.		
13.	Ensure the Air brake wires should be properly connected in panel and in pressure limit switch at air brake unit.		
14.	Check the Ferrule no. as per vendor drawing. Printed-shrinkable ferrule provided.		
15.	Check that the WSP microprocessor panel mounting hardware is properly tightened and fitted.		
16.	Ensure that WSP Unit body earthing is connected with proper hardware.		
17.	Ensure that WSP wiring is properly dressed and secured with sleeves.		

Additional remarks (if any):

CONFIRMING/NON-CONFIRMING

RCF REPERESENTATIVE SIGNATURE & DATE		RITES REPERESENTATIVE SIGNATURE & DATE	
NAME		NAME	

Checksheet-P5

PUBLIC ADDRESS (PA) SYSTEM CHECKSHEET OF LWLRRM, LHB-LUGGAGE GUARD CUM GENERATOR VAN COACH

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
1.	Ensure the PA amplifier is fitted with proper hardware at the SBC-1 and the Coupler connection are done properly done		
2.	Ensure all the speakers is fitted with proper hardware and connection are done properly		
3.	Check the PA coupler and socket fixing at vestibule area and connection.		
4.	Ensure the PA and Speakers wires are as per the Specification No ELRS/SPEC/ELC/0019 Rev-04 or latest		
5.	Ensure the PA and Speakers wires are secured properly with sleeves		
6.	Ensure the PA input supply is controlled through S1F38 2-pole 10A MCB.		
7.	Ensure the PA system & performance with local power ON/OFF and volume adjustment		
8.	Check the PA system performance with the speakers in the Guard room and Crew room area		
9.	Note the PA name plate details		

Additional remarks (if any):

CONFIRMING/NON-CONFIRMING

RCF REPERESENTATIVE SIGNATURE & DATE		RITES REPERESENTATIVE SIGNATURE & DATE	
NAME		NAME	

Checksheet-P6

RMPU (ROOF MOUNTED AC PACKAGE UNIT) CHECK SHEET OF LWLRRM, LHB-LUGGAGE GUARD CUM GENERATOR VAN COACH

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

ITEM	MAKE	S. NO
RMPU		
MICROPROCESSOR		

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
1.	Ensure all nut-bolt tightening and the cover/mesh fitting for RMPU equipment are proper and torque marking is done		
2.	Ensure the RMPU double earthing (braided cable) is done using proper hardware at the non-painted area		
3.	Ensure the RMPU panel and top side Harting coupler & JB cable connections follow the correct colour code and printed ferrules are provided		
4.	Ensure the RMPU microcontroller is mounted with proper hardware		
5.	Ensure the RMPU display unit is mounted with proper hardware without any gap		
6.	Ensure the RMPU microcontroller and display cables are secured with sleeves properly		
7.	Ensure the RMPU unit MPCB and MCB rating and its setting as per the Letter No. EL/7.1.108/SBC/Main Dated: 10.06.2025		
8.	Check the AC plant operation in both Auto and Manual mode using the Auto/Manual rotary switch control		
9.	Check motor phase sequence and ensure the motors run smoothly without abnormal noise or vibration		
10.	Check Digital Display unit and analog gauge, showing correct reading and compare both for any pressure difference in **LP**&**HP** gauges.		
11.	Check the RMPU microcontroller is working properly		

S. NO	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
12.	Ensure compressor safety trip settings: (i) LP – 35 ± 15 psig, (ii) HP – 425 ± 15 psig and Heater tripping at OHP – 65°C	(i) (ii) (iii)	
13.	Check the RMPU performance at all seven Set points.		
14.	Ensure all sensors are functioning properly and verify the corresponding values (RT1, RT2, SA1, SA2, AT1 and AT2) at the RMPU display		
15.	Measure the RMPU equipment load current (Blower motor, Condenser fan motor, Compressor, and Heater) with and without capacitance in the table below		
16.	Measure and record the air delivery data for fresh air, exhaust air, return air, and supply air on the prescribed format		
17.	Check the return air filter: Whenever fresh air delivery data are recorded, the evaporator cover of the RMPU should be opened, and the return air filter checked. After that, the adjustable louvers should be set to the appropriate angle for fresh air intake. Then, record the fresh air delivery data		
18.	Note the RMPU Unit, microcontroller and display name plate details		

RMPU COMMISIONING REPORT

S. NO.	DESCRIPTION	LOW PRESSURE		HIGH PRESSURE	
		NORMAL PRESSURE	TRIPPING PRESSURE	NORMAL PRESSURE	TRIPPING PRESSURE
1.	COMPRESSOR 1.1				
2.	COMPRESSOR 1.2				
3.	COMPRESSOR 2.1				
4.	COMPRESSOR 2.2				

OHP MEASURES: -		REMARKS: -
HEATER 1		
HYGROSTATE		
RMPU DC EARTH:		

AIRCON Rotary ON/OFF	
415V OK Indication will glow only when K45 MMR relay is OK	
Individual 1P 3A MCB control S1F131 to S1F144	

S. NO.	DESCRIPTION	LOW PRESSURE		HIGH PRESSURE	
		NORMAL PRESSURE	TRIPPING PRESSURE	NORMAL PRESSURE	TRIPPING PRESSURE
EMERENGY MODE (Even after removing the Controller Main Supply connector, blower motor should continue to run)					
AUTO/MANUAL:					
CONTROL PRESSURE:					
DPS operation					

Equipment Description	MCB Control	Capacitance Value at the MCB Terminal RY, YB, BR	
		Acceptance Value	Observed Value
Blower Motor 1	S1F120 3P 3A	7 µF (1 KVAR)	
Condenser Motor 1.1	S1F122 3P 3A	7 µF (1 KVAR)	
Condenser Motor 1.2	S1F123 3P 3A	7 µF (1 KVAR)	
Compressor 1.1	S1F124 3P 6A	21 µF (3 KVAR)	
Compressor 1.2	S1F125 3P 6A	21 µF (3 KVAR)	

AC PLANT UNIT-1 CURRENT READING						
EQUIPMENT DESCRIPTION	WITH CAPACITOR			WITHOUT CAPACITOR		
	R-PHASE	Y-PHASE	B-PHASE	R-PHASE	Y-PHASE	B-PHASE
BLOWER MOTOR-1						
COMPRESSOR 1.1						
COMPRESSOR 1.2						
CONDENSOR 1.1						
CONDENSOR 1.1						
HEATER-1						

AIR DELIVERY TEST

FRESH AIR						AVG	QTY
LHS							
RHS							
SUPPLY AIR						AVG	QTY
CREW ROOM1							
CREW ROOM2							
GUARD ROOM1							

RETURN AIR						AVG	QTY
LHS							
RHS							

Additional remarks (if any):

CONFIRMING/NON-CONFIRMING

RCF REPERESENTATIVE SIGNATURE & DATE		RITES REPERESENTATIVE SIGNATURE & DATE	
NAME		NAME	

Checksheet-P7

ELECTRICAL SAFETY CHECKSHEET OF LWLRRM, LHB-LUGGAGE GUARD CUM GENERATOR VAN COACH

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

S. N	CIRCUIT/ LOCATION	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
1.	Battery & DC circuit	1. Check of 40 A HRC fuses in both fuse boxes, and 25 A HRC fuses in SBC for positive & negative circuit provided. 2. Check interconnected loop in between each battery blocks. 3. Check MCBs of suitable rating as per specifications are provided separately (tested) for each circuit viz. PACIL (Alarm Ckt. (6A), PA system (10 A), WSP (K05 Delay timer), RMPU control (6 A), and Pump control (6 A) provided. 4. Check insulation testing meter showing through push button switch +ve & -ve is provided in panel & being tested.		
2.	Regulated Battery Charger (RBC)	1. Check the provision of 40A fuse for coach load in RBC. 2. Check DC polarity in RBC. 3. Check 3P 20A MCB for RBC and 1P 25A MCB for EBC at the SBC.		
3.	FDS/FSDS	1. Check S1F33 2 Pole 2 A MCB provided in SBC. 2. Check output of MCB at terminal no 322 and 323. 3. Check connection of FDS/FSDS at terminal no 322 and 323 in SBC.		
4.	Transformer 60/55+5 KVA	Check HRC fuses in input and output at SBC rating of 125 A and 100 A respectively provided.		

S. N	CIRCUIT/ LOCATION	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
5.	5 KVA transformers for CS circuit	Check MCB of rating 16 A 3P in primary and 25 A 4 P in secondary in SBC.		
6.	Charging sockets	Check 1 Pole 16 A MCB for R, Y, B circuit respectively in SBC provided.		
7.	Light Fittings for AC coaches	Check 6A MCB for doorway/gangway light, cabin area, berth reading light and night light circuit respectively in SBC.		
8.	Pump (WRA)	Check 1.6 A MPCB in SBC and current setting should be 1.1 A		
9.	Lavatory Exhaust fan	Check 0.63 A MPCB in SBC and current setting should be 0.5 A		
10.	Pantry MCB's for AC coaches	Check MCB of proper rating for Water boiler (16A), Soup boiler (6A), Hot case (10A), deep freezer (6A) and bottle cooler(6A) in SBC		
11.	RMPU	1. Check MPCB of proper rating for Blower (2.5-4 A), condenser fan (1.6-2.5A), compressor (7-10A) in SBC and the set points are 2.8 A, 1.8 A, 10 A respectively. 2. Check MCB rating for heater 3 Pole 16 A. 3. Check availability of ESTI bulb. 4. Check tripping of OHP at 65 deg. C. 5. Check Low pressure tripping- 35±15 Psi. 6. Check High pressure tripping- 425±15 Psi.		
12.	Insulation failure relay	1. Check the A6 (110 V AC) and A7 (415 V AC) insulation monitoring relay are working properly by test lamp. 2. Check 110 V DC IR failure by pressing 110 V DC IR Test push button and using test lamp.		
13.	200 VA control transformer in AC Coach / Power Car	Check 2A-1.2KV AC fuses for primary and 2A-500V AC in secondary		
14	Aerosol Based FDSS	i) Ensure the provision and proper fitment of aerosol-based Fire Suppression cartridges: 4 Nos in SBC 1. Verify and confirm their installed locations. ii) Ensure the Aerosol based Fire Suppression system Safety pin status		

S. N	CIRCUIT/ LOCATION	CHECK POINTS	RCF OBSERVATION	RITES OBSERVATION
		as per the Letter No. EL/7.1.108/MSSBC dated 07.02.2023 FirePro - Safety pin should be removed STATX - Safety pin should not be removed HAFEX - Safety Allen key should be removed. PYROGEN – Not Applicable DSPA BV - Not Applicable iii) Ensure the Action Temperature setting as 68-72 deg C as per Letter No. EL/7.1.108/SBC/Main dated 06.08.2025		
15	SBC-2	Verify that all fuse ratings at SBC-2 match the BOM in EDTS-103 Rev-D or latest		
16	Thermal Imaging	Note the thermal imaging of all Contactors, MPCBs, MCBs, Relays, and Fuses at both SBC-1 and SBC-2 after 1 hour of full-load operation in the prescribed format. Ensure that the temperature rise does not exceed the ambient temperature + 25°C.		

Additional remarks (if any):

CONFIRMING/NON-CONFIRMING

RCF REPERESENTATIVE SIGNATURE & DATE		RITES REPERESENTATIVE SIGNATURE & DATE	
NAME		NAME	

Checksheet-P8

TESTING CHECKSHEET OF LWLRRM, LHB-LUGGAGE GUARD CUM GENERATOR VAN COACH

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

1. CONTINUITY AND HV TEST & INSULATION RESISTANCE OF CIRCUITS (REF. Specification: RDSO/PE/0/0008-2005 Rev-0)

Circuit Voltage	Capacity of Megger used	HV Applied for 60 Sec	Minimum IR value reqd. in MΩ	Actual value observed in MΩ (Before HV test)	Actual value observed in MΩ (After HV test)
750 V	1000V	2500V	5		
415 V	1000V	1800V	3		
230 V	500V	1500V	2		
110 V	500V	1200V	2		
24 V	500V	1100V	2		

2. CURRENT MEASURMENT OF VARIOUS EQUIPMENTS

Engine Room Equipment current (amps)	R	Y	B
Radiator fan motor – 1			
Radiator fan motor – 2			

3. HOG PERFORMANCE

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

A. HOG SIDE CHECK-LIST

A-Feeder ON								
HOG Selector Switch-A	**HOG Selector Switch-B**	**Bus coupler**	**Transformer A**	**Transformer B**	**Feeder A**	**Feeder B**	**NWP CONTACTOR-B**	**REMARKS**
HOG	OFF	ON	OFF	OFF	ON	ON	ON/ OFF	
HOG	DG	OFF	OFF	OFF	ON	OFF	OFF	
HOG	HOG	OFF	OFF	OFF	ON	OFF	OFF	
To ensure working in "Neutral Section", switch OFF and ON external supply, the corresponding feeder should get ON directly								
Keep DC Iso. Switch in OFF position, create earth fault, Hooter should get ON								

B-Feeder ON								
HOG Selector Switch-B	**HOG Selector Switch-A**	**Bus coupler**	**Transformer B**	**Transformer A**	**Feeder B**	**Feeder A**	**NWP CONTACTOR-A**	**REMARKS**
HOG	OFF	ON	OFF	OFF	ON	ON	ON/OFF	
HOG	DG	OFF	OFF	OFF	ON	OFF	OFF	
HOG	HOG	OFF	OFF	OFF	ON	OFF	OFF	
To ensure working in "Neutral Section", switch OFF and ON external supply, the corresponding feeder should get ON directly								
Keep DC Iso. Switch in OFF position, create earth fault, Hooter should get ON								

A-Feeder NWP ON		
HOG Selector Switch-A	**NWP CONTACTOR-A**	**REMARKS**
OFF	Permanently ON (without control)	
DG	ON/OFF	
HOG	ON/OFF	
NET-1 SUPPLY TO BE CHECKED		

B-Feeder NWP ON		
HOG Selector Switch-B	**NWP CONTACTOR-B**	**REMARKS**
OFF	Permanently ON (without control)	
DG	ON/OFF	
HOG	ON/OFF	
NET-2 SUPPLY TO BE CHECKED		

B. <u>DG SIDE CHECK-LIST</u>

A-Feeder ON								
HOG Selector Switch-A	**HOG Selector Switch-B**	**Bus coupler**	**TR. A**	**TR. B**	**Feeder A**	**Feeder B**	**NWP-B**	**Remarks**
DG	OFF	ON	ON	OFF	ON	ON	ON / OFF	
DG	DG	OFF	ON	OFF	ON	OFF	OFF	
DG	HOG	OFF	ON	OFF	ON	OFF	OFF	
HOG	HOG	OFF	OFF	OFF	OFF	OFF	OFF	

B-Feeder ON								
HOG Selector Switch-B	**HOG Selector Switch-A**	**Bus coupler**	**TR. B**	**TR. A**	**Feeder B**	**Feeder A**	**NWP-A**	**Remarks**
DG	OFF	ON	ON	OFF	ON	ON	ON / OFF	
DG	DG	OFF	ON	OFF	ON	OFF	OFF	
DG	HOG	OFF	ON	OFF	ON	OFF	OFF	
HOG	HOG	OFF	OFF	OFF	OFF	OFF	OFF	

4. HOG CONTROL SEQUENCE TEST (16 PIN HARTING COUPLER)

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

A. HOG CONTROL SEQUENCE TEST (16 PIN HARTING COUPLER)			
SUPPLY TO PIN NO.		11	110V (positive)
		12	110V (Negative)
		5	24V (positive)
HARTING COUPLER PIN NO.			**CHECK IN HOG PANEL**
5	SHORT WITH	1	Conv.-A Output Available (Green Colour) Indication
		2	Conv.-A Faulty (Red Colour) Indication
		10	Hotel Load ON (Yellow Colour) Indication
		6	Conv-B Output Available (Green Colour) Indication
		7	Conv.-B Faulty (Red Colour) Indication
HOG PANEL			**CHECK IN HARTING COUPLER**
Push Conv. A Reset Button			Check Continuity between PIN NO. 3 & 4
Push Conv. B Reset Button			Check Continuity between PIN NO. 8 & 9

B. CHECK LIST
Select in HOG panel RSW-1 in 2(HOG) and switch ON RSW-3
check out put - C1 W.R.T pin 12 - 110V Available
Select in HOG panel RSW-2 in 2(HOG) and switch ON RSW-4
check out put - C2 W.R.T pin 12 - 110V Available
Select in HOG panel RSW-1 in 1(DG) and switch OFF RSW-3
check out put - C1 W.R.T pin 12 - No Voltage
Select in HOG panel RSW-2 in 1(DG) and switch OFF RSW-4
check out put - C2 W.R.T pin 12 - No Voltage

5. COMMISSIONING REPORT OF HOG COACH DA SETS

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

A. COMMISSIONING REPORT OF HOG COACH DA SETS											
LOAD TEST OF DA SET OF POWER CAR **(AS PER SPECIFICATION No: RDSO/PE/SPEC/AC/0084-2008 Rev.01 clause 1.6.6)**						LWLRRM			DA Set: A		
RLY NO		Date				24 V circuit IR value		24 V Starter motor Make			
Engine Make		S. No		Alternator Make		S. No		Before Load test	After Load test	IR Value before Load test	IR Value after Load test
Radiator Motor Make		S. No		NEUTRAL REACTOR Make		S. No					
OVR Make		S. No:-		(AVR Mode) Green LED at the Alternator/OVR Panel shall glow while Alternator in AVR mode.							

																Temperature in deg. C						
S. No	Time	Voltage (V)			Current (I)			KW	Hz	RPM	LOP	HWT	Fuel Consumption		Engine Working Hours	Neutral Current	Amb	Above Eng.	Above Alt.	Alt. Body	Hatch Door 1	Hatch Door 2	In-betwe Alt
		RY	YB	BR	R	Y	B						In	Out									
1																							
2																							
3																							
4																							
5																							
6																							
7																							

OVR MODE	RY	YB	BR	OVR MODE	RY	YB	BR
No Load				200 AMPS			
100 AMPS				FULL LOAD			

Red LED at the OVR Panel / Alternator and red indication lamp at the panel glows in cas AVR fails and OVR comes in the circuit.

TRANSFORMER A MAKE					
TRANSFORMER A SL. NO.					
TRANSFORMER A VOLTAGE					
PRIMARY SIDE			SECONDARY SIDE		
RY	YB	BR	RY	YB	BR
TRANSFORMER A CURRENT					
PRIMARY SIDE			SECONDARY SIDE		
R	Y	B	R	Y	B

S.NO	SAFETIES	MANUAL MODE	AUTO MODE
1	**LLOP**	OK/NOT OK	OK/NOT OK
2	**HWT**	OK/NOT OK	OK/NOT OK
3	**AEL**	OK/NOT OK	OK/NOT OK
4	**RFR**	OK/NOT OK	OK/NOT OK
5	**LCWL**	OK/NOT OK	OK/NOT OK
6	**FEL**	OK/NOT OK	
7	**FOL**	OK/NOT OK	
8	**UVR**	OK/NOT OK	OK/NOT OK
9	**Em. Off**	OK/NOT OK	OK/NOT OK
10	**ENGINE AIR CHOKE**	OK/NOT OK	OK/NOT OK

B. COMMISSIONING REPORT OF HOG COACH DA SETS

LOAD TEST OF DA SET OF POWER CAR **(AS PER SPECIFICATION No: RDSO/PE/SPEC/AC/0084-2008 Rev.01 clause 1.6.6)**								LWLRRM			DA Set : B
RLY NO		Date						24 V circuit IR value		24 V Starter motor Make	
Engine Make		S. No		Alternator Make		S. No		Before Load test	After Load test	IR Value before Load test	IR Value after Load test
Radiator Motor Make		S. No		NEUTRAL REACTOR Make		S. No					
OVR Make		S. No		(AVR Mode) Green LED at the Alternator/OVR Panel shall glow while Alternator in AVR mode.							

																		Temperature in deg. C								
Sr no	**Time**	**Voltage(V)**			**Current (I)**			**KW**	**Hz**	**RPM**	**LOP**	**HWT**	**Fuel Consumption**		**Engine working hours**	**Neutral current**	**Amb**	**Above Eng.**	**Above Alt.**	**vent. Fan above engine**	**vent. Fan above Alt.**	**Alt. Body**	**Hatch Door 1**	**Hatch Door 2**	**In between Alt.**
		RY	**YB**	**BR**	**R**	**Y**	**B**						**IN**	**OUT**												
1																										
2																										
3																										
4																										
5																										
6																										
7																										

OVR MODE	**RY**	**YB**	**BR**	**OVR MODE**	**RY**	**YB**	**BR**
No Load				**200 AMPS**			
100 AMPS				**FULL**			

Red LED at the OVR Panel / Alternator and red indication lamp at the panel glows in case of AVR fails and OVR comes in the circuit.

				LOAD				

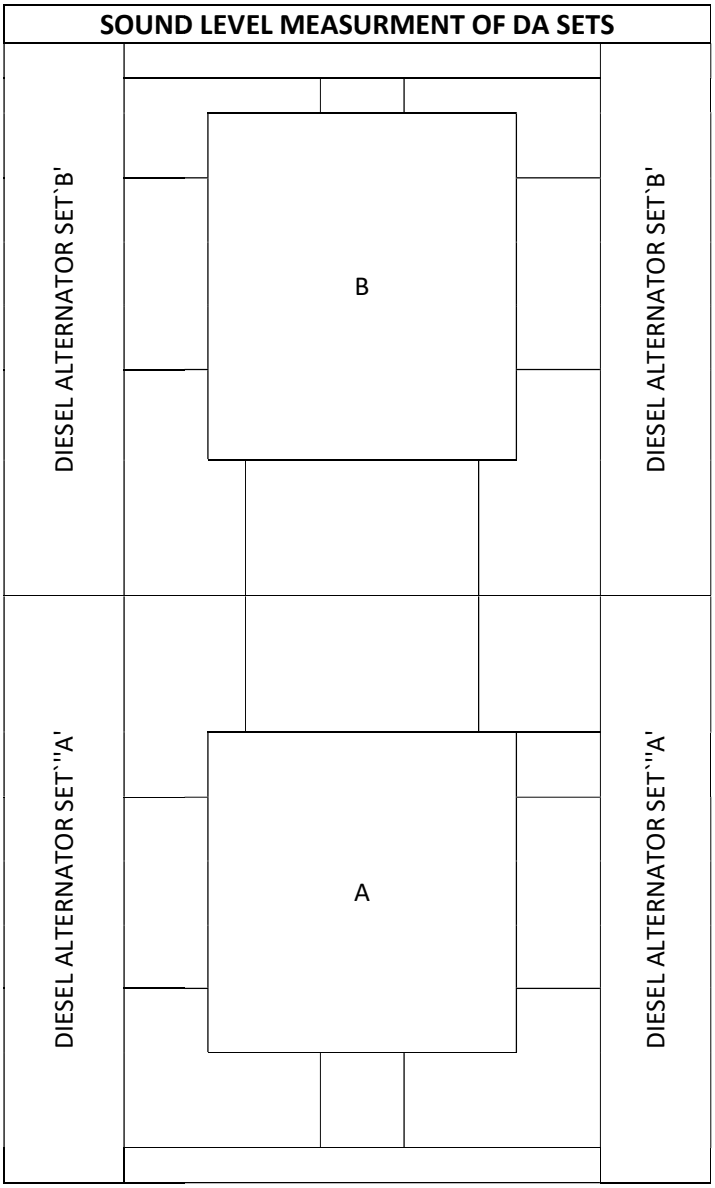
TRANSFORMER A MAKE					
TRANSFORMER A SL. NO.					
TRANSFORMER A VOLTAGE					
PRIMARY SIDE			SECONDARY SIDE		
RY	YB	BR	RY	YB	BR
TRANSFORMER A CURRENT					
PRIMARY SIDE			SECONDARY SIDE		
R	Y	B	R	Y	B

S.NO	SAFETIES	MANUAL MODE	AUTO MODE
1	**LLOP**	OK/NOT OK	OK/NOT OK
2	**HWT**	OK/NOT OK	OK/NOT OK
3	**AEL**	OK/NOT OK	OK/NOT OK
4	**RFR**	OK/NOT OK	OK/NOT OK
5	**LCWL**	OK/NOT OK	OK/NOT OK
6	**FEL**	OK/NOT OK	
7	**FOL**	OK/NOT OK	
8	**UVR**	OK/NOT OK	OK/NOT OK
9	**Em.Off**	OK/NOT OK	OK/NOT OK
10	**ENGINE AIR CHOKE**	OK/NOT OK	OK/NOT OK

6. SOUND LEVEL MEASURMENT OF DA SETS

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.



7. TEMPERATURE MEASUREMENT AFTER 3 HOURS OF LOAD TEST

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

TEMPERATURE MEASUREMENT AFTER 3 HOURS OF LOAD TEST								
750 v side	Engine A				Engine B			
	R	Y	B	N	R	Y	B	N
Alternator Terminal								
ACB IN								
ACB OUT								
Feeder contactor IN								
Feeder contactor OUT								
Feeder A terminal (SBC)								
Feeder B terminal (SBC)								
Coach Load A (SBC)								
Coach Load B (SBC)								
Transformer A Primary contactor								
Transformer A Secondary contactor								
Transformer B Primary contactor(415V)								
Transformer B Secondary contactor(415V)								

8. Performance of Electrical Equipment

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

SL NO		DESCRIPTION OF ITEMS	REMARKS
1	SBC-1 INTERIORS	Net 1 Supply	OK/NOT OK
2		Net 2 Supply	OK/NOT OK
3		Earthing & Disconnecting device	OK/NOT OK
4		Local Main Supply Sockets (LMS Contactor K 41 & K 42)	OK/NOT OK
5		Local Main Supply Indication	OK/NOT OK
8		PAS Amplifier & Speakers	OK/NOT OK
6		MMR 1 (NET 1)	OK/NOT OK
7		MMR 2 (NET 2)	OK/NOT OK
8		MMR 3 (K45)-Local Main supply	OK/NOT OK
10	BATTERY CHARGER	RBC Performance charger (after removing battery fuse)	OK/NOT OK
11		EBC Performance charger (after removing battery fuse)	OK/NOT OK
12		Battery Charging Interlocking	OK/NOT OK
13	Insulation monitoring Relays	1. A6 for 110 V AC	OK/NOT OK
14		2. A7 for 415 V AC	OK/NOT OK
15		3. 110 V DC Insulation monitoring relay	OK/NOT OK
16	SBC-1 Panel meters (750 V side)	1. Voltmeter (Net-1)	OK/NOT OK
17		2. Voltmeter (Net-2)	OK/NOT OK
18		3. Ammeter	OK/NOT OK
19	SBC-1 Panel meters (110 V side)	1.Voltmeter	OK/NOT OK
20		2.Consumer Current Ammeter	OK/NOT OK
21		3. Battery charging/discharging Ammeter	OK/NOT OK
22	SBC-2	SBC-2 All Panel Meters & Multifunction meter	OK/NOT OK
23		SBC-2 Panel Light	OK/NOT OK

SL NO		DESCRIPTION OF ITEMS	REMARKS	
24		SBC-2 All Indication Lights	OK/NOT OK	
25	SBC-1	All Indication Lights	OK/NOT OK	
26		Panel Light CFL	OK/NOT OK	
27		Light Control through ON/OFF Push button	OK/NOT OK	
29		Normal Lights i) 50% lights control through S1F39 & 50% lights control through S1F40 ii) Illumination test- Ensure the Lux value not less than 40 Lux	OK/NOT OK	
31		Tail light	OK/NOT OK	
33		Side light for Guard	OK/NOT OK	
35	BIC PERFORMANCE	24V Battery Charging Interlocking-A (By pressing ON push button in SBC-2)	OK/NOT OK	
36		Contactor A (compare battery A voltage w.r.t charger)	OK/NOT OK	
37		24V Battery Charging Interlocking-B (By pressing ON push button in SBC-2)	OK/NOT OK	
38		Contactor B (compare battery B voltage w.r.t charger)	OK/NOT OK	
			ENGINE A	ENGINE B
39	ENGINE PERFORMANCE	Starter motor IR value	OK/NOT OK	OK/NOT OK
40		Engine Lube oil level	OK/NOT OK	OK/NOT OK
41		Engine Coolant level	OK/NOT OK	OK/NOT OK
42		Performance of Ultra Capacitor	OK/NOT OK	OK/NOT OK
43		Modification of battery charger wiring for bypass of Starter Battery Charger	OK/NOT OK	OK/NOT OK
44		24 V Circuit IR value	OK/NOT OK	OK/NOT OK
45		Trace of Oil leak	OK/NOT OK	OK/NOT OK
46		Trace of Fuel leak	OK/NOT OK	OK/NOT OK
47	OTHER AREAS	Safety Loop A & B Check	OK/NOT OK	
48		Smoke detector with smoke sensors	OK/NOT OK	
49		Exhaust Fan (Above SBC-2)	OK/NOT OK	
50		Pump Controller with Pump 1 & 2	OK/NOT OK	
51		Engine Room Fan	OK/NOT OK	

SL NO		DESCRIPTION OF ITEMS	REMARKS
52		Razor Socket	OK/NOT OK
53		Crew room 110 V Socket supply	OK/NOT OK
54		Guard room 110 V Socket supply	OK/NOT OK
55		Guard room 230 V Socket supply	OK/NOT OK
56		HOG Coupler continuity	OK/NOT OK
		60 KVA Transformer RC Filter circuit	OK/NOT OK
58	ROOF MOUNTED PACKAGE UNIT	Safety Checks (LP, HP, OHP & Hygrostat)	OK/NOT OK
59		LP, HP Gauges	OK/NOT OK
60		Display Unit	OK/NOT OK
61		Temperature settings	OK/NOT OK
62		Auto/ Manual change over Switch	OK/NOT OK
63		Control through Contactor Isolation MCB	OK/NOT OK
64		Working through Laptop (Test/Run mode)	OK/NOT OK

9. INVENTORY OF ELECTRICAL EQUIPMENTS

Variant: LWLRRM
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

Note- RCF check - 100%, RITES check - 5%.

			SL NO		
SL NO	**DESCRIPTION OF ITEM**	**MAKE**	**ENGINE A**	**ENGINE B**	**QTY**
1	DIESEL ENGINE				2 NOS
2	ALTERNATOR				2 NOS
3	RADIATOR FAN MOTOR				2 NOS
4	CTRL PANEL FOR RADIATOR MOTOR				2 NOS
5	CTRL PANEL FOR VENT FAN 1&2 , 3&4				2 NOS
6	ENGINE CTRL PANEL				2 NOS
7	DISPLAY PANEL				2 NOS
8	24 V BATTERY				1 SET
9	OVR				2 NOS
10	NEUTRAL REACTOR				2 NOS
11	24 V BATTERY CHARGING CTRL PANEL				1 NO
12	SMOKE SENSOR				2 NOS
13	60 KVA ON BOARD TRANSFORMER				1 NO
14	400 MM SWEEP FIXED FAN				1 NO
15	SBC FOR HOG				1 NO
16	STARTER BAT. CHARGER 1				1 NO
17	STARTER BAT. CHARGER 2				1 NO
18	FUSE BOX FOR STARTER BATTERY CHARGER 2				1 NO
19	RBC CUM EBC				1 NO
20	PAS AMPLIFIER				1 NO
21	PUMP COTROLLER				1 NO
22	MICROPROCESSOR UNIT FOR RMPU				1 NO

			SL NO		QTY
SL NO	DESCRIPTION OF ITEM	MAKE	ENGINE A	ENGINE B	
23	DISPLAY UNIT FOR RMPU				1 NO
24	WSP UNIT				1 NO
25	SWITCH BOARD CABINET-1				1 NO
26	SWITCH BOARD CABINET-2 (DA SET)				1 NO
27	ROOF MOUNTED PACKAGE UNIT				1 NO
28	SMOKE DETECTOR UNIT				1 NO
29	SINGLE INLET EXHAUST FAN				1 NO
30	LIGHT FITTING(LED)				20 NOS
31	LAV LIGHT (LED)				1 NO
32	GUARD FLASHER CONTROL UNIT				1 NO
33	GUARD SIDE LIGHT				2 NOS
34	LOCAL MAIN SUPPLY INDICATION				2 NOS
35	UIC COUPLER				1 SET
36	14 PIN COUPLER				1 NO
37	110 V LAPTOP CHARGING SOCKET				1 NO
38	RAZOR SOCKET				1 NO
39	ZS COUPLING 750 V / 400 A				2 SETS
40	FEEDER JUNCTION BOX				4 NOS
41	HARTING COUPLER FOR HOG (16 PIN)				2 NOS
42	19 PIN COUPLER				2 NOS
43	60 KVA TRANSFORMER A				1 NO
44	60 KVA TRANSFORMER B				1 NO
45	WHEEL SET EARTHING				2 NOS
46	LOCAL MAIN SUPPLY SOCKET 415 V/125 A				2 NOS
47	CAPACITOR BANK				1 NO
48	110 V 70 AH BATTERY				1 SET
49	BATTERY FUSE BOX POSITIVE				1 NO
50	BATTERY FUSE BOX NEGATIVE				1 NO
51	TAIL LIGHT				1 NO
52	WATER RAISING PUMP 1				1 NO

			SL NO		
SL NO	**DESCRIPTION OF ITEM**	**MAKE**	**ENGINE A**	**ENGINE B**	**QTY**
53	WATER RAISING PUMP 2				1 NO

Checksheet-P9

Calibration record and Competency Check

1. Training and Competency Matrix for manpower deployed -Check if staff deployed for Model rake in each section has necessary Training and competency and record in format below-

S. No.	Name of Supervisor/ Technician	Section	Training & Competency on Crimping as per scheme recommended vide RITES letter No. RITES/RCF/Safety Audit/24 dated 16.07.2025 - Imparted/ Not Imparted	Training on Manufacturing & Testing Revised check list imparted/ not imparted

2. Check the validity of Calibration certificates of Testing instruments used in Stage and Final Testing. No Testing results to be accepted if all instruments used in preparation of Model rake are not calibrated.

S. No.	Section / Shop	Name of Test instrument used for Stage/ Final Testing	Calibration Certificate due date	Calibration Certificate Valid/ Expired
1				
2				
--				

RCF REPERESENTATIVE SIGNATURE & DATE		RITES REPERESENTATIVE SIGNATURE & DATE	
NAME		NAME	