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 checksheets before offering the coach to RITES. Filled SIP and these checksheets 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: **AC 2 Tier**
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/AC2T/01 Rev.00 March 2025.
ii) 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.

1. Check Specification RDSO/PE/SPEC/0184 of SBC – It should be as per RDSO revised Specification. Observation **Revised specification from RDSO is still awaited**.

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	3,4,8,9	Compressor Motor MPCB rating 7A - 10A. Setting at 10A	Check MPCB Rating in Design Document and record.		
3	5,10	Blower/ Evaporator MPCB rating - 2.5A - 4A. Setting at 2.8A	Check MPCB Rating in Design Document and record.		
4	6,7,11,12	Condenser Fan MPCB Rating 1.6A - 2.5A. Setting at 1.8A.	Check MPCB Rating in Design Document and record.		
5 and 6	13,14	Water Pump-1 MPCB Rating 1A - 1.6A. Setting at 1.1.A Water Pump-2 MPCB Rating 1A - 1.6A. Setting at 1.1A.	Check MPCB Rating in Design Document and record.		
9	17 to 24	MCB Rating of Lighting circuits	Check MCB Rating in Design Document and record.		
10	25	Fire Detection circuit - MCB Rating 2 Amp	Check MCB Rating in Design Document and record.		
11	26	MCB of Sanitary Control circuits	Check MCB 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 (Ref.-i), 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	As per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg		

S. No. of Audit	Observation on variation of rating/ nomenclature in drawings and specification	RCF observations	RITES observations (Corrected/Not Corrected)
	no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48, the analog ammeter is indicated as **S1P13**. However, in the Bill of Material (Sr. No. 9) of the Switchboard Cabinet (Spec RDSO/PE/SPEC/0184-2015, Rev-1, Page 26 of 47), the ammeter is mentioned as **S1P1**		
2	As per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48, Fuse No. S1F92 (4 Amp) is provided for the MMR-1 circuit. However, in the Bill of Material (Sr. No. 13, Page 26 of 47) of the Switchboard Cabinet (Spec RDSO/PE/SPEC/0184-2015, Rev-1), the fuse is mentioned as S1F93.		
3	As per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48, the Accident Emergency Light Circuit MCB (2-Pole, 6 Amp) is designated as S1F162. However, in the Bill of Material (Sr. No. 21, Page 28 of 47) of the Switchboard Cabinet (Spec RDSO/PE/SPEC/0184-2015, Rev-1), it is mentioned as S1 62.		
4	As per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48,), the MCB (2-Pole, 2 Amp) designated as S1F24 is shown for the Light Control Contactor (S1K49). However, in the Bill of Material (Sr. No. 21, Page 28 of 47) of the Switchboard Cabinet (Spec RDSO/PE/SPEC/0184-2015, Rev-1), MCB (2-Pole, 6 Amp) S1F24 is listed as a spare.		
5	As per the Bill of Material of the Switchboard Cabinet (Spec RDSO/PE/SPEC/0184-2015, Rev-1), MCB (2-Pole, 6 Amp) is specified for 17 circuits. However, 19 item codes are listed, with S1F15 and S1F31 appearing as additional/extra entries (Sr. No. 21, Page 21		

S. No. of Audit	Observation on variation of rating/ nomenclature in drawings and specification	RCF observations	RITES observations (Corrected/Not Corrected)
	of 47).		
6	As per the Bill of Material of the Switchboard Cabinet (Spec RDSO/PE/SPEC/0184-2015, Rev-1), MCB (2-Pole, 6 Amp) with item code S1F15 is listed. However, it appears in two locations in the Bill of Material—Sr. No. 21 (Page 28 of 47) and Sr. No. 46 (Page 35 of 47).		
7	As per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48, the MCB for the 5 KVA Transformer primary is designated as S1F106 without any specified rating, while on the secondary side, it is shown as S1F107 (4-Pole, 25 Amp). However, in the Bill of Material (Sr. No. 31, Page 31 of 47) of the Switchboard Cabinet (Spec RDSO/PE/SPEC/0184-2015, Rev-1), the MCB for the primary side is listed as S1F107 (16 Amp, 3-Pole), and the secondary side is mentioned as S1F106 (4-Pole, 25 Amp) (referenced at Sr. No. 21, Page 28 of 47). Apparently S1F106 & S1F107 have been wrongly interchanged in BOM as well as Single Line Diagram which need correction.		
8	As per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48, the Motor Protection Circuit Breakers (MPCBs) for Ventilation Fan Unit 1 & 2 are designated as S1F01 and S1F02, with a current range of 1.1-1.6 Amp. However, in the Bill of Material (Sr. No. 35, Page 32 of 47) of the Switchboard Cabinet (Spec RDSO/PE/SPEC/0184-2015, Rev-1), the MPCBs are listed with a range of 1.6-2 Amp, differing from the values specified in the Single Line Diagram. Duplicate entry for S1F01 and S1F02 are		

S. No. of Audit	Observation on variation of rating/ nomenclature in drawings and specification	RCF observations	RITES observations (Corrected/Not Corrected)
	also given at sr no 35 and 37 of SBC spec 184 Bill of material. However, in S No 37 Ratings for S1F01 & S1F02 are matching with Single line circuit diagram		
9	As per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48, the DC-DC Converter (110V/24V, 1 Amp) is designated with item code S1A8. However, in the Bill of Material (Sr. No. 56, Page 38 of 47) of the Switchboard Cabinet (Spec RDSO/PE/SPEC/0184-2015, Rev-1), the DC-DC Converter is listed with a capacity of 1.5 Amp and an item code S1A08, differing from the Single Line Diagram.		
10	As per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48, three diodes are shown in the AC RMPU Control Unit without any assigned item codes. However, in the Bill of Material (Sr. No. 56, Page 38 of 47) of the Switchboard Cabinet (Spec RDSO/PE/SPEC/0184-2015, Rev-1), these diodes are listed with item codes S1V1, S1V2, and S1V3, which are not reflected in the Single Line Diagram.		
11	As per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48, MPCBs S1F03, S1F05, S1F09, and S1F11 (7-10 Amp) are shown for Compressor Unit 1.1, 1.2, 2.1, and 2.2 in the schematic drawing. However, these MPCBs are not mentioned in the Bill of Material of the Switchboard Cabinet (Spec RDSO/PE/SPEC/0184-2015,		

S. No. of Audit	Observation on variation of rating/ nomenclature in drawings and specification	RCF observations	RITES observations (Corrected/Not Corrected)
	Rev-1), discrepancy between the schematic diagram and the Bill of Material.		
12	As per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48, input to RBC is shown as 3 wire but as per RBC spec no-RDSO/PE/SPEC/AC/0183 (Rev. '2')-2024, it is given as 3 phase, 4 wire system and in harness spec EDTS-252, Rev J , Corr-7, pg 3 of 4, it is shown as 4x 25 sqmm.		
19	As per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48, Exhaust fan (S11M1) for Pantry has been shown but in harness specification EDTS 252, Rev J, wiring harness and terminal has not been shown		
20	As per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48, terminal number S1X1-108,109 are shown as spare however same terminal nos are shown for Doorway & Gangway circuit (ref drg no LW70212, alt-d, sheet 2 of 6)		
21	As per drg general Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-0, terminal number are not shown for accidental emergency light circuit, however terminal nos. 283, 284 are shown in drg LW70212 alt d, sheet 4 of 6. In addition to this in scheme drawings supply is connected for AEL with 110V DC however as per circuit diagram (drg LW70212 alt d, sheet 4 of 6.)it is shown as 110 V AC.		
22	All Razor sockets are shown with terminal number 16 & 17 in harness spec no EDTS 252, REV j (Pg. 15 of 22) however in the scheme drg. of roof for 2 tier AC LW70212, Alt d, sheet 4 of 6 there is no wiring is shown for Razor socket.		

S. No. of Audit	Observation on variation of rating/ nomenclature in drawings and specification	RCF observations	RITES observations (Corrected/Not Corrected)
23	Terminal no. S1X1-227,228 is shown for Razor socket (110V AC circuit) as per (drawing no LW70212, Alteration d, sheet 4/6), however same terminal numbers are not shown in single line schematic drawing (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184 , Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48.		
24	WC/ Toilet occupancy light is connected at S1X1-25 & 26 as per (drawing no 70212, Alteration d, sheet 4/6) on 24 V DC circuit (MCB 2 P, 10A, S1F37), however as per RDSO specification no RDSO/PE/SPEC/TLl0091-2016 (Rev "1") it is appearing on 110V DC.		
25	As per document no ED 30, Version-17 (PSL for 2 Tier AC coach for year 2021-2022) schematic diagram for roof for AC 2-Tier EOG LHB Type coaches is shown as LW70212 alteration C, however latest LW70212, alteration d drawings is available.		
13	As per Harness spec 252, Rev J, harness no 1 for jumper and branch wiring (sheet 1 of 22), terminal no shown S1X1-114,115 for FL-1, However terminal number shown in drg. LW70212 alt d, sheet 1 of 6 (schematic diagram of roof)		
14	As per Harness spec 252, Rev J, Harness no 32B for jumper and branch wiring (sheet 12 of 22) terminal no S1X1 276,277,278 used for crankcase heater-2 for RMPU-2 however these terminal numbers are used for condenser fan motor 2.2 for RMPU-2 As per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184 , Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48,		
15	As per Harness spec 252, Rev J, Harness no 32C for jumper and branch wiring (sheet 12 of 22) terminal no S1X1 239,240,241 used for compressor motor 2.1 for RMPU-2 however terminal number S1X1 259, 260,261 is provided as per General Single Line Diagram for Power & Control Circuits		

S. No. of Audit	Observation on variation of rating/ nomenclature in drawings and specification	RCF observations	RITES observations (Corrected/Not Corrected)
	(for SBC S1 in LHB AC EOG/HOG coaches, Spec 184 , Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48,		
16	As per Harness spec 252, Rev J, Harness no 32C for jumper and branch wiring (sheet 12 of 22) terminal no S1X1 243,244,245 used for compressor motor 2.2 however terminal number S1X1 263, 264,265 is provided as per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184 , Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48,		
17	As per Harness spec 252, Rev J, harness no 32C for jumper and branch wiring (sheet 12 of 22) terminal no S1X1 247,248,249 used for Heater bank however terminal number S1X1 267, 268,269 is provided as per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48,		
18	As per Harness spec 252, Rev J, harness no 45 for jumper and branch wiring (sheet 16 of 22) item name shown Deep freezer, however Refrigerator is shown as per General Single Line Diagram for Power & Control Circuits (for SBC S1 in LHB AC EOG/HOG coaches, Spec 184, Rev-1) drg no RDSO/PE/SK/AC/0206-2019 (Rev-0) sheet 1 of 48,		

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 3 Manufacturing Audit of Document No. RCF/AUDIT/ISA/AC 2-Tier Annexure-A, Rev.1 dated 05.07.2025). Implementation of the documents shall be checked during coach inspection as per Part B – Quality Checksheet.

S. No. of Annex A	S. No. of Audit	Clause No.	Operative Part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
19	6	3.7 of Sheet 1	Proper marking for provision of earth shunt should be provided on equipment. **- Check modified drawings no. LW71001 alt. J and LW71001 alt. J of battery fuse box +ve and -ve respectively for Earthing symbol.**		
22	9	2 of Sheet 2	Specification for Multicore cables of RMPU, Pump Controller, WSP does not mention any standards **- Check instructions and modified drawings issued by Mechanical Design, instructions issued by RDSO, ED Carriage regarding WSP.**		
23	10	8 of Sheet 2	Check, during coach inspection, availability of BRL jumper cables RVH joint area sleeves. Reject if not provided. **- Check if drawing has been issued for BRL wiring.**		
24	11	9 of Sheet 2	Compliance with Labeling and Identification Standards **- Check Corrigendum no. 10 dt. 06.06.2025 to Harnes Spec EDTS 252 Rev J, Corr. 9 issued for ferrule numbers.**		
39	26	10 of Sheet	WRP Earth cables routed out of RVH to be		

S. No. of Annex A	S. No. of Audit	Clause No.	Operative Part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
		2	checked. Reject if found punctured. All Feeder box earthing area paint to be removed properly for proper earth current flow. **- Check if any amendment has been issued by RDSO to ensure that there is no puncturing of RVH earth cable.**		
26	13	3.2 of Sheet 4	All cable should be adequately secured by clamp and in no case, cables should come in direct contact with coach metal body and components Check for availability of Clamps and smoothly laid cables. Reject if missing clamp and unwanted Twisting of cables found. **- For dump wall cables, instruction of Mechanical Design for Polyamide Conduit to be checked.**		
27	14	3.3 of Sheet 4	Cable should be protected from damage by sharp metallic edges of the coach body. i) Check RBC cum EBC cables RVH. It should not have unwanted joints noticed. ii) Check 5KVA Transformer input, output cables RVH routing.		

S. No. of Annex A	S. No. of Audit	Clause No.	Operative Part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
			iii) Check for Joint in Battery box to +VE and -VE fuse box cables RVH. Reject if joint is present. iv) Check +VE fuse box to SBC and RBC cables RVH routing. Cables should be secured with adequate no of clamps. vi) Check Brake unit Pressure switch cable RVH routing. **- Check if drawings have been issued for Through Box matching with equipment.**		
40	27	3.1.20 of Sheet 7	Quality audit of crimping socket shall be carried out. Pull out test may be conducted on sample basis as per IEC-61238-1. The general requirement shall be as per IEC/EN-60352-2. If crimping joint formed is not satisfactory then information shall be conveyed to competent authority for any type of flaring, surface defect or undesirable deformation is noticed after crimping. **- Check documents to show if pullout test is being done.**		
36	23	3.1.21 of Sheet 7	Being a special process, the crimped joint shall be done by competent person as per the competency chart. Check if staff deployed		

S. No. of Annex A	S. No. of Audit	Clause No.	Operative Part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
			is duly trained. Refer RITES letter No. RITES/RCF/Safety Audit/24 dated 16.07.25. **- Check document containing Competency Matrix for crimping technician.**		

6. Check for issuance of following documents by RDSO/RCF. (Ref. Table 6.1 Looping issues in SBC of Document No. RCF/AUDIT/ISA/AC 2-Tier Annexure-A, Rev.1 dated 05.07.2025)

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: **AC 2 Tier**
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/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, Section 3 Manufacturing Audit.

S. No. of Annex A	S. No. of Audit	Clause No.	Operative Part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
14	1	2.7 of Sheet-1	Feeder box rear side 750V Cables RVH & power Cables to be checked – No hanging or incorrect routing to be permitted.		
15	2	2.9 of Sheet-1	Edges of groove should be chamfered to avoid pinching of cable insulation. Cleats should be properly secured to avoid vibrations. Check one Groove out of 5 at random. Reject if chamfering not done in more than 2 cases.		
16	3	2.13 & 5.3 of Sheet-1	Wherever cables run through holes, orifice, slits, apertures etc. with sharp edges, such		

S. No. of Annex A	S. No. of Audit	Clause No.	Operative Part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
			opening shall be provided with fire retardant PVC Grommets to grade 6 of IS 5831, 1984 - Grommets provided should not get dis lodged by vibration, whipping, heat, cold, dry or moist weather and aging. Check 1 in every 5 locations inside SBC and D&ED cable entry area. Reject if more than 2 found missing.		
17	4	2.14 & 2.15 of Sheet-1	Cables should be terminated in Junction box, Terminal boards with lugs and should not have any intermediate joints Check RBC Cum EBC Terminal Box, S1K41 & S1K42 input cables in SBC. Reject if found without lugs.		
18	5	2.18 of Sheet-1	Locking and securing arrangements for doors and covers of electrical controls, power cubicles and Terminal boards should prevent unauthorized access to live parts of electrical equipment. Check SBC for this feature. If not available, same may be rejected.		
19	6	3.7 of Sheet 1	Check proper marking for provision of earth shunt on equipment as per modified drawings no. LW71001 alt. J and LW71001 alt. J of battery fuse box +ve		

S. No. of Annex A	S. No. of Audit	Clause No.	Operative Part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
			and -ve respectively for Earthing symbol.		
21	8	7.1 of Sheet-1	70 Ah VRLA battery of 9 monoblocs of 12V each shall be arranged inside a sturdy steel box and secured to underframe by bolts, nuts, lock nuts or split pins box inside internal loop cables. It should be secured with PMA hose or PMA jacket. All interconnections should be tightened by torque wrench.		

Check Sheet-Q2

Work Instructions for Cabling and Harness

Reference -

i) RITES Audit Report No. QA/NR/ISA/RCF/AC2T/01 Rev.00 March 2025.
ii) 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 3 Manufacturing Audit.
iii) EDTS 252 Rev J Corr 10,
iv) ELRS/SPEC/ELC/0019 Rev-4,
v) RDSO/PE/SPEC/AC/0138-2009, Rev-1,
vi) Work instruction EDW 003, EDW006, EDW007

Variant: **AC 2 Tier**
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)
22	9	2 of Sheet-2	Specification for Multicore cables of RMPU, Pump Controller, WSP does not mention any standards **- Refer instructions and modified drawings issued by Mechanical Design, instructions issued by RDSO, ED Carriage regarding WSP.** **- Check its implementation on coach for RMPU.**		
23	10	8 of Sheet 2	Routing and Installation Requirements Check availability of BRL jumper cables RVH joint area sleeves as per drawing issued for BRL wiring. Reject if not provided.		

S. No. of Annex A	S No. of Audit	Clause No.	Check point	RCF Observations	RITES Observations (Accepted / Rejected)
			(Refer Part A Checksheet for drawing)		
24	11	9 of Sheet-2	Compliance with Labeling and Identification Standards Check as ferrules in VK box and FLS Black colour Ferrule & Ferrule No – reject if missing Check that all ferrules with Printed nos. are available. Handwritten Ferrule Nos not permitted **- Refer Corrigendum no. 10 dt. 06.06.2025 to Harnes Spec EDTS 252 Rev J, Corr. 9.**		
39	26	10 of Sheet-2	Earthing/shielding check- WRP Earth cables routed out of RVH to be checked. Reject if found punctured All Feeder box earthing area paint to be removed properly for proper earth current flow. Check if the paint in feeder box is being removed for proper earth current flow. **- Refer if any amendment has been issued by RDSO to ensure that there is no puncturing of RVH earth cable.**		

Check Sheet-Q3

Work Instruction for Precaution to be taken while laying of cables EDW 0007 version 1.0

Ref specification-

i) All cables specification

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.

Variant: **AC 2 Tier**
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)
25	12	3.1 of Sheet-4	Bending radius of cable size 25 sq.mm and above should not be less than 4 times the overall diameter of the cables. Check bending radius of +VE fuse box inside, CH colour 50 sqmm cable. Reject if bending radius is less than 4D.		
26	13	3.2 of Sheet-4	All cable should be adequately secured by clamp and in no case, cables should come in direct contact with coach metal body and components. - Check for availability of Clamps and smoothly laid cables. Reject if missing clamp and unwanted Twisting of cables found.		

S. No. of Annex A	S No. of Audit	Clause No.	Operative part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
			- Check on coach for cables from FJB to feeder conduit. - For dump wall cables, Refer instruction of Mechanical Design for Polyamide Conduit. Check its implementation on coach for Dump valve.		
27	14	3.3 of Sheet-4	Cable should be protected from damage by sharp metallic edges of the coach body. i) Check RBC cum EBC cables RVH. It should not have unwanted joints noticed. ii) Check 5KVA Transformer input, output cables RVH routing. iii) Check for Joint in Battery box to +VE and -VE fuse box cables RVH. Reject if joint is present. iv) Check +VE fuse box to SBC and RBC cables RVH routing. Cables should be secured with adequate no of clamps. vi) Check Brake unit Pressure switch cable RVH routing. **- Refer if drawings have been issued for Through Box matching with equipment.** **- Check on coach if Through Box with**		

S. No. of Annex A	S No. of Audit	Clause No.	Operative part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
			modified design is being fitted.		
28	15	3.10 of Sheet-4	Cable should be secured tightly into two halves of the cleat by bolt, nuts and plain washer. Cleats of length up to 50mm should be fixed at the center with single fixture and those longer than 50 mm by two fixtures. - Check All feeder box rear side 750V Cables RVH & power Cables for proper securing and routing. It should be secured with Clamps.		

Check Sheet-Q4

Work Instructions for Installation and Commissioning of AC Package Unit Control Panel EDW 0009 Version 1.0

Ref specification -

i) Work instruction-EDW0009 Rev-1.0,
ii) AC package unit-RDSO/ PE/SPEC/AC/0061-2005 (Rev-1)
iii) Microprocessor controller for RMPU
iv) RDSO/PE/SPEC/AC/0139-2009 (Rev-1)
v) RITES Audit Report No. QA/NR/ISA/RCF/AC2T/01 Rev.00 March 2025.
vi) 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: **AC 2 Tier**
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)
31	18	3.1.2 of Sheet-6	Check Connection of e cable harness. The power cable harness is to be connected to the package units and to the control panels as per relevant wiring diagram of the coaches. - Check Core no. 2, 17 of 25 core control cables used for DPS circuit for correct connection.		
-	-	Gen	- Check RMPU mounting Holes of Coach. All holes should be accurately matching and without any need for extra Packing pieces. RMPU holes should not be		

S. No. of Annex A	S No. of Audit	Clause No.	Operative part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
			mismatched and should seat properly on Coach mounting Pad without need for any nonstandard fixing and Packing pieces.		

Check Sheet-Q5

Work Instruction for Crimping of Cable Ends and Cable Terminations EDW 0006 version 3.0

Ref specification –

i) EDTS-200, Rev nil, Am-2, Cor-3 or (Latest)
ii) EDTS-201 Rex 'A', Am 1. Cor-2 or (Latest)
iii) IEC/EN-60352-2-2006 A1-2013
iv) IEC-61238-1
v) BS 7609:1992
vi) RDSO specification no. ELRS/SPEC/ELC/0019, (Rev) or Latest.
vii) RITES Audit Report No. QA/NR/ISA/RCF/AC2T/01 Rev.00 March 2025.
viii) 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: **AC 2 Tier**
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)
32	19	3.1.2 of Sheet-7	- Check crimping socket for adequate barrel length, quality defects such as any deformity, inspection hole, palm surface finish etc. as per applicable specification. - Check all feeder box body earth cables crimping. No case of excess strands is outside of the lug or any other Crimping defect permitted. - Check WRP terminal box inside power and control cables crimping. No case of Excess		

S. No. of Annex A	S No. of Audit	Clause No.	Operative part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
			strands outside of the lug or any other crimping defect permitted.		
33	20	3.1.4 of Sheet-7	Ensure that inner surface is free from dirt/dust, if not, clean inner side of barrel first. - Check availability of Use of Crimping Tools. These should be of proper size and with calibration certificate. - Check on shop floor for availability of proper tool.		
34	21	3.1.6of Sheet-7	Insulation shall be removed with proper tool and not with knife or chipper. - Check practice of use of proper Tool for insulation removal. Reject if Knife and cutter used.		
35	22	3.1.8 of Sheet-7	Due care shall be taken that insulation is not crimped inside crimping barrel of the socket. Cases of Excessive Insulation removal or Insulation Crimped inside barrel of the socket during crimping to be rejected. - Check excessive insulation is not removed during crimping.		
37	24	3.2.1 of Sheet-7	Use correct size length & dia. of bolt/stud befitting crimped socket. Bolt should project at least 2 times		

S. No. of Annex A	S No. of Audit	Clause No.	Operative part of relevant clause	RCF Observations	RITES Observations (Accepted / Rejected)
			of dia. of bolt from check nut - Check for presence of Plain Spring washer in +VE fuse box inside 50 sq.mm cable mounting bolts area.		
38	25	3.2.2 of Sheet-7	Terminations at one point should not be more than two. - Check SBC at K-43 contactor, Heater-2 MCB S1F14, exhaust fan MCB-S1F15 and MCB-S1F20. Reject if more than two wires are terminated at one point.		

Check Sheet-Q6

Testing Stage:

Ref.

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

ii) 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 5.

Variant: **AC 2 Tier**
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

<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>46</td><td>1</td><td>11.1</td><td>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.</td><td>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.

The relevant clause and annexure-1 of specification are reproduced below of specification.</td><td></td><td></td></tr>
<tr><td>48</td><td>3</td><td>12.5.1</td><td>Check Insulation resistance Test record for 750, 415, 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>Insul value</th></tr><tr><td>1</td><td>750 V AC</td><td>1000V DC</td><td>Not l 5 M</td></tr><tr><td>2</td><td>415 V AC</td><td>500 V DC</td><td>Not l 3 M</td></tr><tr><td>3</td><td>230 V AC</td><td>500 V DC</td><td>Not l 2 M</td></tr><tr><td>4</td><td>190 V AC</td><td>500 V DC</td><td>Not l 2 M</td></tr><tr><td>5</td><td>110 V AC</td><td>500 V DC</td><td>Not l 2 M</td></tr><tr><td>6</td><td>24 V DC</td><td>110 V DC</td><td>Not l 1 M</td></tr></table></td><td></td><td></td></tr>
</table>

SN of Annex A	S. No. of Audit	Clause no.	Operative part of Check	Specified Value	RCF Observations	RITES Observations (Accepted / Rejected)
				Insulation resistance values measured immediately after the high voltage tests shall not be less than the original value		
49	4	12.5.2	Check High Voltage Test	All 750 V and 415 V circuits at a voltage of 1500 V for a period of 1 minute to be withstood All circuits on 190/110V shall be tested at a voltage of 1000V for a period of 1 minute to be withstood		
50	5	12.5.4	Continuity test on IV coupler.	Continuity to be checked OK/Not OK		

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.

Variant: **AC 2 Tier**
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 Sec 1	3,4,8,9	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.		
3 of Sec 1	5,10	Blower/ Evaporator MPCB rating - 2.5A - 4A. Setting at 2.8A	Refer work instructions. - Record actual setting on Coach as per RDSO letter no. EL/7.1.108/SBC/Main dtd. 10.06.2025.		
4 of Sec 1	6,7,11,12	Condenser Fan MPCB Rating 1.6A - 2.5A. Setting at 1.8A.	- Refer work instructions. - Record actual setting on Coach as per RDSO letter no. EL/7.1.108/SBC/Main dtd. 10.06.2025.		
5 and 6 of Sec 1	13,14	Water Pump-1 MPCB Rating 1A - 1.6A. Setting at 1.1.A	- Refer work instructions. - Record actual setting on Coach as		

S. No. of Annex A	S. No. of Audit	Action Points	Inspection points	RCF observations	RITES observation
		Water Pump-2 MPCB Rating 1A - 1.6A. Setting at 1.1A.	per RDSO letter no. EL/7.1.108/SBC/Main dtd. 10.06.2025.		
9 of Sec 1	17 to 24	MCB of Lighting circuits –	Revision by RDSO as 3 Amp. and MCB rating check as per RDSO letter no. EL/6.8.21 dtd. 04.09.2025.		
10 of Sec 1	25	Fire Detection circuit - MCB Rating 2 Amp	- Refer work instructions. - Record actual setting on Coach as per RDSO letter no. EL/6.8.21 dtd. 15.07.2024.		
11 of Sec 1	26	MCB of Sanitary Control circuits	Revision by RDSO as 3Amp. and MCB rating check as per RDSO letter no. EL/6.8.21 dtd. 04.09.2025.		
41 of Sec. 4	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 Sec. 4	2	B(i)	Check Make of Halogen free Polycarbonate / ABS duct. It should be Trinity Touch/ L&T/ Phoenix. Reject if approved make is not provided.		
43 of Sec. 4	3	g	- Check availability of Work instructions no. EDW0025 Ver1.0 dt 09.06.25 on Shop Floor		

S. No. of Annex A	S. No. of Audit	Action Points	Inspection points	RCF observations	RITES observation
			- Check insulation Resistance Test records		
44 of Sec. 4	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 Sec. 6	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 Sec. 6	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. - If the same is issued, check implementation on SBC on shop floor.		
56 of Sec. 6	5	5(iii) & (iv)	- For improved loop wiring, check if RDSO has issued any modification to place RMPU MPCB/		

S. No. of Annex A	S. No. of Audit	Action Points	Inspection points	RCF observations	RITES observation
			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, Passenger Information system, Fire Alarm system or any other embedded device fitted on coach –

Variant: **AC 2 Tier**
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. CCTV

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. Passenger Information 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/		

SN	Operative part of Check	RCF Observations	RITES Observations (Accepted / Rejected)
	inspection.		

D. 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 PANEL LWACCW-LHB 2T AC COACH

Variant: AC 2 Tier
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

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

S. NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
1. SBC/HT/LV PANEL			
1.1	Check the **SBC/HT/LV** Double earthing to be provided.		
1.2	Check the Cables inside the SBC to be bunched properly with insulated stiffener.		
1.3	Check the Numbering ferrules to be provided for all cables.		
1.4	Ensure the proper cable size, crimping, Heat Shrink Sleeve provision and there is no connection more than 2 cable at a terminal		
1.5	Ensure all MCB, MPCB rating should be as per Letter No. EL/7.1.108/MSSBC dated 17.09.2021		
1.6	Check the Polycarbonate covering glass to be provided.		
1.7	Check the proper locking of **SBC** Doors		
1.8	Check the disconnecting and earthing device to be cleaned.		
1.9	Check the disconnecting and earthing device mounting		
1.10	Check the disconnecting and earthing device cable to be secured.		
1.11	Ensure MMR fuse rating is 4A (8 Nos) and MMR setting is proper		

S. NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
1.12	Check the control transformer fuse to be provided.		
1.13	Check the all-cable tray cover to be provided.		
1.14	Check the all-fuse safety cover to be provided.		
1.15	Check the all the **MCBs** and **MPCB** naming plate to be provided.		
1.16	Check the **SBC** all switched name plate to be provided.		
1.17	Check the **SBC** area to be cleaned.		
1.18	Ensure **RC** filter earth cable is connected.		
1.19	Check **RC** filter fuses.		
1.20	Ensure the Capacitor Bank cable connection and Spare cable to be secured properly		
1.21	Ensure provision of 4 Nos. Aerosol based Fire Suppression system with proper fitment and verify their locations		
1.22	i) Ensure the Aerosol based Fire Suppression system Safety pin status 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 ii) Ensure the Action Temperature setting as 68-72 deg C as per Letter No. EL/7.1.108/SBC/Main dated 06.08.2025. iii) Check operation/ temperature setting of one Fire Extinguisher on **one coach per variant** as per RDSO letter no. EL/7.1.108/SBC/Main dated 06.08.2025 in controlled condition outside the coach		
1.23	Check the sharp edge protection of **SBC** Panel.		
1.24	Heat shrinkable ferrule be insure.		
1.25	Ensure all equipment identification number.		

S. NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
1.26	Ensure SBC panel dressing.		
1.27	Ensure all equipment rating as per guideline.		
1.28	Ensure the Provision of the Fire barriers at SBC cable entry area		
1.29	Thermal Scanning SBC-Relay MCB/MPCB, Contactor & Contact point		

Note: - HV/LV Panel Only for Tejas Coaches

CONFIRMING/NON-CONFIRMING

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

Checksheet-P2

STAGE-III ROOF/PRECELLING OF LWACCW LHB 2T AC COACH

Variant: AC 2 Tier
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

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

S. NO.	ITEM TO BE INSPECTED AS PER HARNESS SPEC NO.-EDTS 252, REV-J, Corr 10	RCF REMARK	RITES REMARK (OK/NOT OK)
1	To ensure DC 110 V +VE & -VE segregation as per **ED/CAI/033** dated 02.04.2024		
2	Check for roof **40 mm** conduits clamping tightness.		
3	Check for roof **20 mm** conduits clamping tightness		
4	To ensure Roof Conduit clamps are provided at regular distance.		
5	Check for all cable harness laying.		
6	Check cables are to be provided with numbering ferrules		
7	To ensure necessary sharp edge protection given for cables using RVH (in metal contact) or Sleeves (for non-metallic contact)		
8	To ensure that Cables are to be connected properly at all Cage clamps terminal/WAGO on Roof and Side walls.		
9	To ensure all Rooms JB/cage clamp Cables to be secured with ferrules		
10	To ensure all **JB/cage clamp** Main clamps to be fixed with spring and Plain Washers and tightness.		
11	To ensure the PP side above both doorway all RVH Conduits to be secured with clamps.		
12	To ensure the rubber bidding is available on roof cable tray edges and ensure wago connection and securing of cable with cable sleeves		
13	Check proper under frame lying of cables with Numbering ferrules.		
14	To ensure proper under frame lying of conduit (70 mm) secured with clamping by Spring and Plain		

S. NO.	ITEM TO BE INSPECTED AS PER HARNESS SPEC NO.-EDTS 252, REV-J, Corr 10	RCF REMARK	RITES REMARK (OK/NOT OK)
	washers.		
15	To ensure **CS** cables are provided with ferrules and Cables to be Secured with Cable tie.		
16	To ensure Charging Socket Cable Color code **(RYB)**. R-Ph Corridor **Side** and Y, B Cabin **Side.**		
17	To ensure RMPU related all cables with proper ferrule to be provided		
18	To ensure cables are provided for lavatory exhaust fans with proper ferrule and RVH/Sleeves.		
19	Check all Pantry equipment wiring with ferrule. (in Rajdhani/Tejas coach)		
20	Check BRL wiring.		
21	To ensure **LED** cables with proper ferrule to be provided.		
22	To ensure Room No**. 04** & **07**, PP & NPP IC door area AEL Cable to be provided.		
23	To ensure all Rooms, PP& NPP side Speaker Cables		
24	To ensure Both NPP & PP side WC Cables.		
25	To ensure all cables sleeves.		
26	To ensure Both Side UIC all Cables.		
27	To ensure SBC panel mounting and hardware to be checked.		
28	Check proper use of fire barrier at cable entry point.		
30	Check PA & PAPIS wiring (in Rajdhani/Tejas coach)		
31	To ensure Panel mounting and securing.		

General remarks (If Any):

CONFIRMING/NON-CONFIRMING

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

Checksheet-P3

STAGE-III UNDER FRAME OF LWACCW LHB 2T AC COACH

Variant: AC 2 Tier
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

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

S. NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
1. 750V FEEDER PIPE, CABLE TRAY & FEEDER JUNCTION BOX			
1.1	To ensure the tightness of clip-clamp in the rubber hoses provide in feeder pipe.		
1.2	To ensure all the 70 mm Conduit clamps are tightened with **M 8 x 35 Hex**. Head bolt, **M8** Nyloc Nut and an **8.4** Plain Washer.		
1.3	To ensure Both PP and NPP Bogie area 70 mm Conduits clamps to be provided and tighten.		
1.4	Check for providing of Silicon Sealants at the Rubber hose and Conduits joints at feeder box.		
1.5	Checking of **PMA** conduits near the both end bogie area to be secured.		
1.6	To ensure for closing the Dummy holes on the Feeder Junction Box		
1.7	To ensure for providing of feeder junction box cover in both PP and **NPP** end and all bolts are provided.		
1.8	To ensure All feeder boxes door cover earthing to be done**. (16 sq mm)**		
1.9	To ensure water tightness rubber gasket Feeder junction box cover.		
1.10	Check the Power cable crimping and tightness of the connection.		
1.11	Check the Power cable entering in junction box sharp edge protection.		
1.12	Ensure the alignment of cable tray and confirm that there is no gap between the cable trays except in the dump valve areas.		
1.13	To ensure no cable tray is infringing with brake		

S. NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
	pipe lines.		
1.14	To ensure all cable trays are mounted to coach body with M 8x25 Hex Head bolt, **M8** Nyloc Nut and an **8.4** Plain Washer.		
1.15	To ensure all PMA conduits are secure inside the cable tray with cable tie.		
1.16	To ensure through Box cover to be provided.		
1.17	To ensure through Box Unwanted holes to be closed.		
1.18	To ensure through Box connected all PMA to be secured with clamp.		
2. NEGATIVE AND POSITIVE FUSE BOX			
2.1	Check the fitment of Negative and Positive fuse box, mounted with proper hardware.		
2.2	Check the Dummy Holes to be closed in both negative and positive fuse box.		
2.3	To ensure cable tightness in Negative and Positive fuse box.		
2.4	To ensure stenciling to be done both negative and positive fuse box.		
2.5	To ensure in Both Positive and Negative Fuses Safety guard to be provided.		
2.6	To ensure PMA end fitting with gasket.		
3. 60/55+5 KVA TRANSFORMER			
3.1	Check the Transformer cable entry end fitting glands to be tightened.		
3.2	To ensure no PMA conduit joints.		
3.3	To ensure Transformer PMA Conduits to be secured with clamp properly.		
3.4	To ensure PMA end fitting with gasket.		
4. 5 KVA TRANSFORMER			
4.1	Check the Transformer cable entry end fitting glands to be tightened.		
4.2	To ensure no PMA conduit Joints.		
4.3	To ensure Transformer PMA Hose to be secured with clamp properly.		
4.4	To ensure Transformer PMA conduits to be secured properly.		
4.5	To ensure PMA end fitting with gasket.		
5. WRP			
5.1	To ensure WRP Cable conduits to be secured.		
5.2	To ensure PMA end fitting with gasket.		
6. CAPACITOR BANK			

S. NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
6.1	Check the Capacitor PMA Conduits are clamped and secured properly.		
6.2	To ensure PMA end fitting with gasket.		
7. RBC			
7.1	To ensure PMA conduit clamps to be provided.		
7.2	To ensure PMA end fitting with gasket.		
8. BATTERY BOX & BATTERY			
8.1	To ensure PMA end fitting with gasket		
8.2	To ensure PMA conduit clamps to be provided.		
9. SPEED SENSOR CABLE AND DUMP VALVE			
9.1	To ensure Dump valve PMA Conduits to be secured properly.		
9.2	Check the clamping of Speed Sensor Cable.		
10. LOCAL MAIN SUPPLY SOCKET			
10.1	To Ensure PMA end fitting with gasket.		
10.2	To ensure LMS PMA Conduits to be secured properly.		
11.SBC/HT/LV PANEL			
11.1	To Ensure panel PMA end fitting with gasket		
11.2	To ensure Panel PMA Conduits to be secured properly.		
12. OTHERS POINTS			
12.1	To check all the Under-frame laying cables ferrules.		
12.2	Final /cross check with SIP data with actual coach		
13.PUSH PULL (IN TEJAS COACHES)			
13.1	Check the mounting and securing of push pull set.		
13.2	Check the RVH securing with clamp.		

General remarks (If Any):

CONFIRMING/NON-CONFIRMING

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

Checksheet-P4

STAGE-III LOADING UNDERFRAME OF LWACCW-LHB 2T AC COACH

Variant: AC 2 Tier
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

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

S.NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
1. BATTERY BOX & BATTERY			
1.1	Check the Loading of battery in battery box, packing.		
1.2	To ensure wooden stoppers inside Battery box to be provided.		
1.3	To ensure Lug date within six months		
1.4	To ensure the battery cell top stopper plate to be tightened.		
1.5	Check any cells are damaged or leak.		
1.6	Check whether same make batteries are provided.		
1.7	To ensure the stenciling to be done on the battery box.		
1.8	To ensure Battery Box to be mounted with proper hardware and ensure. **(16*70mm)**		
1.9	To ensure Battery Box door to be closed properly.		
2. 60/55+5 KVA TRANSFORMER			
2.1	Check the fitment of **60/55+5 KVA** Transformer mounting. **(16*60 mm) (12*50 mm) (12*40 mm)**		

S.NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
2.2	Ensure tightness of the mounting and torque marking		
2.3	Ensure transformer holding safety chain are provided.		
3. 5 KVA TRANSFORMER			
3.1	Check the fitment of **5 KVA** Transformer mounting with proper hardware's. **(12*40 mm)**		
4. WRP			
4.1	Check the mounting arrangements of **WRP** with proper hardware's. **(16*50 mm)**		
5. WRP PUMP CONTROLLER			
5.1	To ensure Pump controller to be mounted with proper hardware.		
5.2	Check pump controller dressing.		
6. CAPACITOR BANK			
6.1	Check the mounting arrangements of Capacitor bank with proper hardware's**. (12*40)**		
7. RBC CUM EBC			
7.1	Check the mounting arrangements of RBC with proper hardware's. **(12*40)**		
7.2	To ensure RBC cum EBCterminal BoxCovertobeprovided andBoltstobetighten.		
7.3	Check any obstruction to do the cable connection.		
7.4	To ensure RBC cum EBCdoortobeclosedandBoltstobe tighten.		
7.5	Check the RBC cum EBC WAGO Connection.		
7.6	To ensure RBC cum EBC unwanted dummy holes.		
7.7	Ensure the RBC cum EBC name plate and its rating.		
8 PANTRY EQUIPMENT (RAJDHANI/TEJAS)			

S.NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
8.1	Check the mounting arrangements of Pantry equipment with proper hardware's.		
8.2	To ensure Pantry equipment Cover to be provided and Bolts to be tighten.		
8.3	Check any obstruction to do the cable connection.		
8.4	To ensure Pantry equipment door to be closed and Bolts to be tighten.		
9 HT/LV PANEL/SBC			
9.1	Check the mounting arrangements panel with proper hardware's.		
9.2	To ensure Panel Cover to be provided and Bolts to be tighten.		
9.3	Check any obstruction to do the cable connection.		
9.4	To ensure Panel door to be closed and Bolts to be tighten.		

General remarks (If Any):

CONFIRMING/NON-CONFIRMING

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

Checksheet-P5

STAGE-IX ROOF LWACCW LHB 2T AC COACH

Variant: AC 2 Tier
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

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

S.NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
1. LED FITTING			
1.1	To ensure all LED fitting to be mounted with screws, spring and plain washer.		
1.2	To ensure all LED fitting to be provided (AC and Non-AC Area).		
1.3	To ensure all LED fitting Diffuser cover to be provided.		
1.4	To ensure gap between LED fitting and roof ceilings to be arrested.		
1.5	To ensure all LED WAGO connections.		
2. CHARGING SOCKETS FITTING			
2.1	To ensure all switch panels to be mounted with screws and washers.		
2.2	To ensure gap between switch panel and side panel to be arrested.		
2.3	To ensure all Switch plate Cover to be provided		
2.4	Check whether any switch is fixed in reverse position		
2.5	To ensure all switch connections.		
3. AEL FITTING			
3.1	To ensure all AEL mounting		
3.2	To ensure all AEL WAGO connection		
3.3	To ensure Gap between AEL and Side Panel to be arrested.		
3.4	To ensure all AEL covers to be closed with proper hardware.		

S.NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
3.5	Check AEL orientation.		
4. WC FITTING			
4.1	Check the fixing of WC Light.		
4.2	Check WC WAGO connection		
4.3	Check any WC is fixed in reverse position		
5. PACIL LED FIXING			
5.1	Check the fixing of PACIL LED		
5.2	Check the connection of PACIL LED		
5.3	Check the fixing of PACIL Silicone sealant to be provided at gaps.		
6. LAVATORY INSIDE LIGHT/RAZOR SOCKET/WC			
6.1	To ensure Lavatory light WAGO connection		
6.2	Ensure the provision of Light fitting in all lavatory with switch control		
6.3	To ensure all lavatory light fitting cables to be secured.		
6.4	To ensure both the NPP and PP side lavatory JB cables to be secured and cover to be provided.		
6.5	To ensure all lavatories TOL limit switches to be provided.		
6.6	To ensure Lavatory inside razor socket WAGO connection		
6.7	To ensure Lavatory inside razor socket mounting		
6.8	To ensure Gap between lavatory razor socket and Side Panel to be arrested.		
7. RMPU			
7.1	Ensure RMPU earthing on non-painted area and tightness with proper hardware		
8. BRL FITTING			
8.1	To ensure all BRLs to be mounted with proper hardware.		
8.2	To ensure Gap between BRL and Side Panel to be arrested.		
8.3	To ensure Push button of all BRLs to be checked.		

S.NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
8.4	To ensure all BRL WAGO connection.		
9. PANTRY EQUIPMENT (IN RAJDHANI/TEJAS COACH)			
9.1	To ensure pantry connection.		
9.2	To ensure Pantry body earthing on non-painted.		

General remarks (If Any):

CONFIRMING/NON-CONFIRMING

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

Checksheet-P6

STAGE-IX, RMPU ROOF MOUNTED PACKAGE UNIT OF LHB AC COACH

Variant: AC 2 Tier
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

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

S. NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
1.	Check RMPU Connection in panel and top side as per colour code and ferrule.		
2.	To ensure all nut-bolt tightening and enactment of cover and mesh for RMPU related equipment are ensured properly.		
3.	Check RMPU earthing.		
4.	Check Digital Display unit mounting.		
5.	Check RMPU microprocessor mounting.		
6.	Check RMPU microprocessor and display dressing.		
7.	Check AC plant working in both auto mode and manual mode by Auto Manual rotary switch.		
8.	Check Phase Sequence of the all motor and their running normally.		
9.	Check Digital Display unit and analog gauge, showing correct reading and compare both of them for any pressure difference in **LP**&**HP** gauges.		
10.	Check RMPU microprocessor working properly.		
11.	Check Safety checks of devices (i) **LP (35 +15/-15 psig**) (ii) **HP(425 +15/-15 psig)** and (iii) **OHP (65°C).**	(i) (ii) (iii)	

S. NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
12.	Check Thermostat performance of seven Set points.		
13.	Check All sensors like **RT1,RT2, SA1, SA2, AT1, AT2** temperature sequence and working.		
14.	Check AC plant load current as measured for blower motor, condenser fan motor and compressor and heater. **Sheet to be attached. (Page no: -6 of 8)**		
15.	To ensure air delivery data are recorded for fresh air, exhaust air, return air and supply air as per format.		
16.	Check return air filter: Whenever fresh air delivery data are recorded, before measuring the data the evaporator cover of RMPU is to be opened and return air filter were checked, after that adjustable louver are adjusted to appropriate angle for fresh air intake. Later on, fresh air data are recorded.		
17.	Ensure Both RMPU Unit 1 & 2 Name plate and Rating.		
18.	Ensure Both RMPU Unit 1 & 2 mounting torque marking.		

General remarks (If Any): -

CONFIRMING/NON-CONFIRMING

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

Checksheet-P7

RMPU SAFETY

Variant: AC 2 Tier
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

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

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		
HEATER 2		
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	

EMERENGY MODE (Even after removing the Controller Main Supply connector, both blower motors should continue to run)	
AUTO/MANUAL:	
CONTROL PRESSURE:	
DPS:	

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)	
Blower Motor 2	S1F121 3P 3A	7 µF (1 KVAR)	
Condenser Motor 2.1	S1F126 3P 3A	7 µF (1 KVAR)	
Condenser Motor 2.2	S1F127 3P 3A	7 µF (1 KVAR)	
Compressor 2.1	S1F128 3P 6A	21 µF (3 KVAR)	
Compressor 2.2	S1F129 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						
CONDENSER 1.1						
CONDENSER 1.2						
HEATER-1						

AC PLANT UNIT-2 CURRENT READING

EQUIPMENT DESCRIPTION	WITH CAPACITOR			WITHOUT CAPACITOR		
	R-PHASE	Y-PHASE	B-PHASE	R-PHASE	Y-PHASE	B-PHASE
BLOWER MOTOR-2						
COMPRESSOR 2.1						
COMPRESSOR 2.2						
CONDENSER 2.1						
CONDENSER 2.2						
HEATER-2						

General remarks (If Any): -

CONFIRMING/NON-CONFIRMING

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

Checksheet-P8

STAGE-IX UNDERFRAME OF LWACCW LHB 2T AC COACH

Variant: AC 2 Tier
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

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

S.NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
1. 750V IV COUPLER			
1.1	To ensure for providing of Silicone Sealants at the Rubber hose and Conduits joints.		
1.2	To ensure Both side **ZS** coupler Dummy socket to be provided.		
1.3	Check all bolts of Mounting of IV coupler of Feeder junction box/**IV** coupler dummy socket		
1.4	To ensure proper closing of **IV SOCKET** limit switches in Feeder junction box.		
1.5	To ensure for providing of double earthing in all Feeder junction box.		
1.6	To ensure IV coupler length		
1.7	To ensure **IV COUPLER** Safety Chain is provided with Rubber sheet protection.		
1.8	Check the Power cable entering in junction box sharp edge protection, crimping and tightness of the connection.		
2. LOCAL MAIN SUPPLY SOCKET			
2.1	To ensure for providing of the stenciling of phase sequence		
2.2	Check water drain arrangement in LMS socket.		
2.3	Check opening and closing of LMS outer hinge Metal cover.		
2.4	To ensure Both sides LMS Mounting Plate all bolts to be checked.		
2.5	To ensure LMS inside painting to be done.		
2.6	Ensure the both LMS socket R, Y, B, N and E cable size, crimping and tightness		

S.NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
3. NEGATIVE AND POSITIVE FUSE BOX			
3.1	Ensure the cable size, Crimping, tightness with proper hardware in Negative and Positive fuse box		
3.2	Check Both fuse box earthing with proper grinding.		
3.3	Ensure the Cable bending radius should be more than 25mm		
4. BATTERY BOX & BATTERY			
4.1	Checks inter cell connections and end cell connections, tightness.		
4.2	To ensure for providing of petroleum jelly at cell terminals		
4.3	To ensure Battery Box earthing to be done with proper grinding.		
4.4	To ensure Battery Box Dummy Holes to be closed.		
5. 60/55+5 KVA TRANSFORMER			
5.1	Ensure the both Primary and Secondary cable size, Crimping, tightness		
5.2	To ensure Transformer doubles earthing to be provided & tightness.		
5.3	To ensure Transformer door to be closed and all the bolts to be tightened.		
5.4	To ensure 60/55+5 KVA T/F Double earthing to be provided with proper grinding.		
6. 5 KVA TRANSFORMER			
6.1	Check cable primary and secondary side cable tightness.		
6.2	To ensure 5 KVA T/F Double earthing to be provided with proper grinding.		
6.3	To ensure Transformer door to be closed and all bolts to be tightened.		
7. WRP			
7.1	To ensure WRP Double earthing to be provided with proper grinding.		
7.2	Check any obstruction to do the cable connection.		
7.3	Check the cable connection.		
8. CAPACITOR BANK			
8.1	To ensure for providing of double earthing for Capacitor Bank with proper grinding.		
8.2	To ensure in capacitor bank all cables are to be secured.		
8.3	Check any obstruction to open Capacitor Bank		

S.NO.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
	cover.		
8.4	Check cable tightness in all WAGO terminals.		
8.5	To ensure Capacitor bank door are closed.		
9. WHEEL SET EARTHING			
9.1	To ensure Earthing Cable to be connected to coach body and tightened with proper grinding.		
9.2	To ensure Both bogies earth insulator bush fixed properly		
10. DUMP VALVE			
10.1	To ensure for providing of double earthing for dump valve with proper grinding.		

General remarks (If Any):

CONFIRMING/NON-CONFIRMING

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

CheckSheet-P9

STAGE-IX WSP (WHEEL SLIDING PROTECTION SYSTEM) LHB AC COACH

Variant: AC 2 Tier
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

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

S. No.	WSP COMMISSIONING CHECKSHEET	RCF REMARK	RITES REMARK (OK/NOT OK)
1.	Ensure that the WSP input supply is controlled through S1F63 and S1F65 MCBs - 2-pole 6A MCBs for +VE and –VE respectively.		
2.	Check **K-05** off Delay timer **(10 min setting)**		
3.	To 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.		
4.	To 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?		
5.	To 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.		
6.	To ensure for clearing of all faults by pressing as per respective		

S. No.	WSP COMMISSIONING CHECKSHEET	RCF REMARK	RITES REMARK (OK/NOT OK)
	microprocessor, microprocessor should display healthy code.		
7.	Check the dump valves. After applying brakes press button S2 (i.e. Test mode) dump valves will operate sequentially.		
8.	To ensure Fault/Activity data recorder function will be checked by downloading data. Date and time of fault/activity verified.		
9.	Check the cable layout of speed sensor as per ICF drawing **No. ICF/SK3-3-5-046.**		
10.	Check the Mounting Bracket for Junction box as per ICF drawing no. **AAD11918, Alt-d** and **AAA11835, Alt-f**		
11.	To ensure that no hole will be found in Junction box.		
12.	To ensure the Air brake wires should be properly connected in panel and in pressure limit switch at air brake unit.		
13.	Check the Ferrule no. as per vendor drawing. Printed-shrinkable ferrule provided.		
14.	Check WSP microprocessor panel should be mounting hardware proper tighten fitment.		
15.	Check WSP Unit body earthing		
16.	Check the WSP wire dressing		

General remarks (If Any): -

CONFIRMING/NON-CONFIRMING

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

Checksheet-P10

STAGE-IX PA (PASSENGER ANNOUNCIATOR) AC COACH

Variant: AC 2 Tier
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

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

S. No.	ITEM TO BE INSPECTED	RCF REMARK	RITES REMARK (OK/NOT OK)
1.	To ensure the **PA** amplifier fixing and connection.		
2.	To ensure all the speakers fixing and connection.		
3.	Check the **PA**-coupler and socket fixing at vestibule area and connection.		
4.	Ensure the PA input supply is controlled through S1F38 2-pole 10A MCB.		
5.	Ensure the PA system & performance with local power ON/OFF and volume adjustment		
6.	Check the performance of all speakers and the individual volume adjustment in the cabin area.		
7.	Ensure the amplifier name plate and rating.		
8.	Check the PA wire dressing.		

General remarks (If Any): -

CONFIRMING/NON-CONFIRMING

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

CheckSheet-P11

ELECTRICAL SAFETY CHECKS

Variant: AC 2 Tier
Coach / Shell No.:
Date/ Dates:
Locations:
Name of RITES inspector:
Name of RCF officials:

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

SN	ELECTRICAL EQUIPMENT	SAFETY CHECKS TO BE DONE	RCF REMARK	RITES REMARK (OK/NOT OK)
TESTING				
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 3P **20A MCB** provided on input and 40A fuse is provided output in RBC. 2. Check DC polarity in RBC. 3. Check 3P 20A MCB for RBC and 1P 25A MCB for EBC at SBC.		
3.	**FDS/FSDS**	1. Check **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.		
5.	**5 KVA transformers for charging socket.**	Check MCB of rating **16 A** 3P in primary and **25 A** 4P in secondary in **SBC**.		
6.	**Charging sockets for AC coach**	Check **16 A** MCB for **R, Y, B** circuit resp. 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 **(6.3-10A)** in SBC. 2. Check MCB of proper rating for heater **(16A).** 3. Check availability of ESTI bulb. 4. Check tripping of **OHP** below 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 or not by test lamp. 2. Check **110 V DC IR** failure by pressing **110 V DC** IR failure push button and by test lamp.		
13.	**200 VA control**	Check **2A-1.2KV AC** fuses for primary and **2A-500V AC** in secondary		

	transformer in AC Coach / Power Car			

General remarks (If Any):

CONFIRMING/NON-CONFIRMING

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

Checksheet-P12

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	