L3T-648

	Modern Coach Factory Raebareli **आधुनिक रेल डिब्बा कारख़ाना, रायबरेली**	DOC NO.: MCF/RBL/QMF 8002 REV NO: 00 DATE: 16.05.2016

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2017-18/258

Coach No.	1	7	9	6	2	/	C	-	DATE OF DISPATCH	2	0	-	0	9	-	1	7

RLY	C	R	-	-	Type	L	W	A	C	C	N	Shell No.	7	3	0	7	7	-	2	0	1	7	-	1	8

1. Railway Board's Order No. : **2017/M/(C)/142/2 dated -25.08.2017**
2. Tare Weight of Coach : 45.6 Tonnes
3. Carrying Capacity : (a) Seating: 72 (b) Sleeping: 72 (c) Luggage: NIL

4. SHELL LEADING DIMENSIONS:

S NO	DESCRIPTION	DIMENSION (MM)
1.	Maximum length over body	23700
2.	Maximum width over body	3240
3.	Maximum height from Rail Level	4250
4.	CBC height/Buffer height from Rail level 1105 +0/-15	1) 1102 (NPPE) 2) 1101 (PPE)

5. TRACEABILITY OF SHELL ITEMS:

S NO	ITEM		MAKE/SUPPLIER	SERIAL NO			
1.	Underframe	Front Part	M/S Sidhu ind.corporation KXH	PP END	993	NPP END	893
		Complete	M/S MCF/RBL				
2.	Side wall		M/S MCF/RBL	RH	73077	LH	73077
3.	End wall		M/s Amit Engg.	PP END	73077	NPP END	73077
			M/s Amit Engg.				
4.	Roof		M/S MCF/RBL				
5.	Centre Buffer Coupler		M/S Sanrok faridabad	PP END	3725	NPP END	3704
6.	Buffers		n.a				

6. AIRBRAKE TEST REPORT:

S NO	ITEM	DESCRIPTION	SPEC. VALUE	OBSERVED
1.	Full brake application	➢ Reduce pressure of BP from 5.0 to 3.4 kg/cm². ➢ Max. pressure in BC ➢ All Brake are applied	6 – 10 sec. 3.0 ±0.15 kg/cm². OK	08 sec. 3.0 kg/cm² OK
2.	Insensitivity	➢ Exhaust BP @ 0.3 kg/cm²/min.	No brake application	OK
3.	Sensitivity	➢ Exhaust BP @ 0.1 kg/cm²/Sec, after 06 Sec.	Brake must apply	OK

7. PAINTING DAETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U	M/S- VIBGYOR	89/87
2.	Insulation	Satisfactory		

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SSE/QC/MCF/RBL
रे0डि0का0, रायबरेली (लालगंज)

	MODERN COACH FACTORY, RAEBARELI आधुनिक रेल डिब्बा कारख़ाना, रायबरेली	DOC NO.: MCF/RBL/QMF 8002 REV NO.: 00 DATE: 16.05.2016

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RLY	C	R	-	-	Type	L	W	A	C	C	N	Shell No.	7	3	0	7	7	-	2	0	1	7	-	1	8

8. DETAIL OF BOGIES :

ITEMS	PP Side				NPP Side			
Bogie No	170659				170660			
Bogie Type	FIAT				FIAT			
Frame no.	VS/RBL-0532				MCF/RBL -0622			
Bolster no.	AAL/MCF-027				AAL/MCF-041			
Axle No	G-0058		F-9667		F-9548		F-9958	
Wheel Dia	917.642	917.572	917.618	917.547	917.621	917.530	917.640	917.558
Wheel Disc No	07342-70J4 TZ03-17	07343-70J4 TZ03-17	06054-70G6 TZ03-17	06055-70G6 TZ03-17	07344-70J4 TZ03-17	09745-7NL8 TZ03-17	07345-70J4 TZ03-17	07346-70J4 TZ03-17
R.B. Nos.	12-16 92599	07-16 72414	12-16 93735	07-16 69987	12-16 92574	07-16 72679	12-16 92580	07-16 70107
CT R B Make	SKF		SKF		SKF		SKF	

9. SECONDARY SUSPENSION LOAD DEFLECTION VALUES

DESCRIPTION	Bogie PP side				Bogie NPP side			
	Secondary 1		Secondary 2		Secondary 1		Secondary 2	
	Outer	Inner	Outer	Inner	Outer	Inner	Outer	Inner
Make & Nos.	CMAFJ-03-17-8836-66	RSK19W-867	CMAFJ-03-17-8836-39	RSK19W-715	CMAFJ-03-17-8836-2	RSK19W-312	CMAFJ-03-17-8836-11	RSK19W-119
Compressed Ht. at Tested Load	515	468	515	467	514	468	515	465
Alignment deviation (mm)	10	06	07	06	05	30	04	27

10. TRACEABILITY OF BOGIE ITEMS:

S. NO	ITEM	MAKE/ SUPPLIER	SERIAL NO.	
			PP SIDE	NPP SIDE
1.	Primary outer Spring	CVFSK	05-17-F03-410(245,326,106,424)	05-17-F03-410(381,225,72,307)
2.	Primary Inner Spring	CVFSK	03-17-F04(198,216,143,244)	03-17-F04(203,246,96,189)
3.	Primary Damper	IAI	04-17(179435,179485,179488,179378)	04-17(179446,179388,179373,179551)
4.	Secondary Damper	KONI	25-2016(9929,9902)	25-2016 (9964,9931)
5.	Lateral Damper	KONI	42-2016 5863	42-2016 5698
6.	Brake Cylinder	FAV	F17-028, F17-171, F17-170, F17-016,	F17-275, F17-189, E17-194, E17-305,
7.	Brake Caliper	FAV	G17051B,G17049B,G17050B,G17052B	G17221B,G17220B,G17219B,G17222B
8.	Brake Disc	FAV	05-17-2863-D133561-300, 05-17-2864-D133561-300, 05-17-2926-D133561-300, 05-17-2927-D133561-300,	05-17-2979-D133561-300, 05-17-2980-D133561-300, 05-17-3094-D133561-300, 05-17-3093-D133561-300,
9.	Ball Joint Control Arm	GMT		
10.	Lateral Bump Stop	MTC		
11.	Traction Centre make	EMSON		
12.	Traction lever make	JI-01-17		
13.	Ball joint traction lever	MTC		
14.	Ball joint traction centre	GMT/S-BLOC		
15.	Secondary Rubber Pad	PRAG		
16.	Rubber Spring	GMT		
17.	Anti roll bar make	SARITA		
18.	Roll Link make	SARITA/ S-BLOC		
19.	Fork make	SARITA		

Signature of SSE/Bogie/QC

	Modern Coach Factory Raebareli **आधुनिक रेल डिब्बा कारख़ाना, रायबरेली**	DOC NO.: MCF/RBL/QMF 8002 REV NO: 00 DATE: 16.05.2016

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RLY	C	R	-	-	Type	L	W	A	C	C	N	Shell No.	7	3	0	7	7	-	2	0	1	7	-	1	8

11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s Faively transport tech.india ltd baddi(HP)	E17080B
2.	Pull box	M/s Faively transport tech.india ltd baddi(HP)	
3.	Distribution valve	M/s Faively transport tech.india ltd baddi(HP)	17065540B
4.	Foot Step	M/s Super spark pvt.ltd.faridabad	
5.	Decoupling arrangement	M/s Kohinoor Industries Faridabad	
6.	Floor board	M/S Oriental mumbai	
7.	PVC	M/s-Responsive ind. Delhi	
8.	UIC Vestibule (PPE)	M/s Cemcon ind.DLI	
9.	UIC Vestibule (NPPE)	M/s Cemcon ind.DLI	
10.	Gangway bridge mounting (PPE)	M/s Mahaveer metal workshop KXH	
11.	Gangway bridge mounting (NPPE)	M/s Mahaveer metal workshop KXH	
12.	Body Side Window	M/s Aikon ind.jalandhar	
13.	Emergency Window	M/s Birkan engg.pvt.ltd.GAZIABAD	
14.	Lavatory/hopper Window	M/s Rail tech KXH	
15.	Roof Ceiling	M/s KAE Eng.pvt.ltd.esipl U.K	
16.	Door way /gang way ceiling	M/s Galexy enterprises Jalandhar	
17.	Supply Air Duct	M/s Hanspal coach products KXH	
18.	Partition panel	M/s Sahai seating enterprises KXH	
19.	Partition pillar	M/s Rail tech KXH	
20.	Side Wall panel	M/s-Hindustan fibre ltd vadodara	
21.	AC Trough	M/s MSL CDG	
22.	Body Side Doors	M/s Sukata CDG	
23.	Compartment Door (PPE)	M/s Hanspal coach products KXH	
24.	Compartment Door (NPPE)	M/s Hanspal coach products KXH	
25.	Vestibule Door(PPE)	M/s Kalsi LDH	
26.	Vestibule Door(NPPE)	M/s Kalsi LDH	
27.	Bio Tank	M/s-Oriental veneer products	
28.	Auxiliary Water Tank	M/s Amit Engg, mohali	
29.	Under Slung Water Tank (2X685L)	M/s Amit Engg, Baddi	
30.	Under Slung Water Tank (1x450 L)	M/s Amit Engg, mohali	
31.	Flexible Faucet	M/s-HF Glass vadodara	
32.	Lotah Filler Tap	M/s-Metco delhi	
33.	Lavatory Modoules	M/s-Hindustan fibre ltd vadodara	
34.	Lavatory Doors	M/s-Hindustan fibre ltd vadodara	
35.	Waste Bin Arrangement	M/s-Hindustan fibre ltd vadodara	
36.	Fire Extinguisher	M/s Classic agnee	NPP-8569,PP-8576
37.	Seat & Berth	M/s Oriental veneer products mumbai	
38.	Light Luggage Rack	M/s- Techno ind. ALD	
39.	Snack Table	M/s-International tractors ltd. Hoshiarpur	

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गुणवत्ता विभाग
रे0डि0का0, रायबरेली (उ0प्र0)

	Modern Coach Factory Raebareli **आधुनिक रेल डिब्बा कारख़ाना, रायबरेली**	DOC NO.: MCF/RBL/QMF 8002 REV NO: 00 DATE: 16.05.2016

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RLY	C	R	-	-	Type	L	W	A	C	C	N	Shell No.	7	3	0	7	7	-	2	0	1	7	-	1	8

12. MODIFICATION (IF ANY) : NIL

13. DEVIATION (IF ANY) : NIL

14. ITEM FITTED ON THE COACH ON TRIAL : **NIL**

S NO	ITEM PARTICULARS	PURPOSE	REPORT Frequency	REFERENCE & PERIOD OF TRIAL

15. WARRANTY:

S NO	COMPONENTS	WARRANTY
1	Brake pads, wheels, push gravity cocks, flushing valves, mouldings, window glasses, mirrors, roller blinds, curtain & bulbs etc. (items which are consumable in nature)	NIL
2	Other coach furnishing sub assemblies(bought out items)	24 months date of dispatch of coach or 30 months from date of supply of material whichever is earlier.

NOTE:

1. This warranty covers free supply of parts which wear out and fails within warranty period of normal service.
2. This doesn't covers faults arising out of accident, non standard maintenance practices, abnormal use or mishandling, vandal activity, arson & deficient/pilferage etc.
3. This doesn't cover any consequential liabilities or damages/loss incurred by anybody; furthermore, it shall in no case extend to repayment, return of the coach or replacement of complete coach.
4. Whether a defective part is to be replaced or repaired shall be at the discretion of RCF/RBL.
5. For any complain/ suggestion please Mail at qualityrcfrbl@gmail.com

वरि0अनु0 अभियंता गुणवत्ता विभाग रे0डि0का0, रायबरेली (लालगंज)	जी. पी. पाण्डेय G.P. Pandey सहायक वरिष्ठ अभियंता / गुणवत्ता आधुनिक रेल डिब्बा कारखाना, रायबरेली Modern Coach Factory, Raebareli	जोगेश्वर सिंह उप मुख्य गुणवत्ता प्रबंधक Dy. Chief Quality Manager आधुनिक रेल डिब्बा कारखाना, रायबरेली Modern Coach Factory, Raebareli
SSE/QC/MCF/RBL	AME/QC/MCF/RBL	Dy.CQM/MCF/RBL

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Modern Coach Factory Raebareli आधुनिक रेल डिब्बा कारख़ाना, रायबरेली	DOC NO.: MCF/RBL/QEF/8001 REV NO: 00 DATE:18.01.2017

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES

TYPE COACH	**LWACCN**	**SHELL/COACH NO**	**17962/C**
RAILWAY	**CR**	**DATE OF DESPATCH**	

Sr no	Description of tests		Remarks
1.0	REFERENCE SPECIFICATION : L 446		
1.1	AIR CONDITIONING TEST : ELPS/TP/AC 01.		
1.2	CODE OF PREACTICE OF WIRING : ELPS/SPEC/EOG/AC-01		
2.0	INSULATION RESISTANCE : Setting of insulation monitoring relay at 30K ohms as per TD 111 of M/s LHB.		
	Observed status : HEALTHY		
3.0	AIR DELIVERY MEASUREMENT	OBSERVED VALUE	OK
3.1	Fresh Air	**29.19** Cub mtr/min	OK
3.2	Return Air	**78.00** Cub mtr/min	OK
3.3	Exhaust Air	**7.05** Cub mtr/min	OK
3.4	Conditioned Air	**176.01** Cub mtr/min	OK
4.0	**PRE COOLING TEST: Max 01 hr.** Time taken to pre cool from 45 deg centigrade to 24/22 deg C during OFF LOAD condition PP Side :**22.7 ^{0}C** NPP Side :**20.4 ^{0}C**		OK
5.0	**PULL DOWN TEST: Max 02 hrs.** Time taken to pull down from 45 deg C to 24/22 deg C during FULL LOAD condition. Not done		OK

Senior Section Engineer
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FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB EOG AC COACHES

Sr no	Description of test	Remarks
6.0	HUMIDITY CONTROL	OK
7.0	PUMP EQUIPMENTS	OK
8.0	WORKING OF EXHAUST FANS OVER LAVATORIES	OK
9.0	WORKING OF COMPOSITE PANTRY	OK
10.0	COMPARTMENT LIGHT	OK
11.0	PUBLIC ADDRESSING SYSTEM **(PAS)**	OK
12.0	WHEEL SLIDE PROTECTION SYSTEM **(WSP)**	OK
13.0	WORKING OF 60KVA TRANSFORMER	OK
14.0	WORKING OF REGULATED BATTERY CHARGER	OK
15.0	WORKING OF EMERGENCY BATTERY CHARGER	OK
16.0	SAFETIES :	OK
16.1	THERMOSTAT :	OK
16.2	ROTARY 07 SET POINTS (NORMAL CONDITION)	OK
16.3	MID SET POINTS (SENSORS FAILED CONDITIONS)	OK
16.4	HYGROSTAT	OK
16.5	CONTROL CIRCUIT	OK
16.6	POWER CIRCUIT	OK
17.0	REFRIGERANT USED **R 407C**	OK

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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
01.	Roof mounted AC package unit for LHB AC coaches. Make :**AMIT** Sr no of RMPU (NPP side):**1733 N** Sr no of RMPU (PP side) :**1225 N** Sr no of Microprocessor: **AE 17.07.104**	As per rdso/pe/spes/ac/0061/rev -1/2005	**02**
02.	Switch board cabinet Make : **ISG** Sr no :**17-05-0032**	RDSO/PE/SPEC/AC/0184-2015 REV-0	**01**
03.	Pump equipment with PLC controller & pump box Make :**KALSI** Sr no PA :**4670/10/2015** Sr no.1 :**260370** Sr no.2 :**260371** Sr no.CPA :**5013/02/20016**	As per spec EDTS 186,Rev-a, Am- 2	**01**
04.	Double inlet centrifugal blower 415V/03Ph /50Hz /120W/450 cum mtr/hr discharge for exhausting air from lavatory & switch board cabinet Make :**EYYANI**	EDTS331, TYPE-1 CORR.-1&2	**02**
05.	Vestibule Light Fitting Single Make :**DR AUTO(LED)**	LW 76004,Alt-b	**07**
06.	Ceiling light fitting DOUBLE w/o diffuser. Make :**INTEG**	LW 76011,Alt -c	**09**
07.	Ceiling light fitting with NL w/o diffuser w/o item 2&3 Make :**DEW**	LW 76013,Alt -c	**09**
08.	Emergency light system for EOG type coaches (AEL) Make :**VGS**	EDTS 151,Rev –c Am-1 & 2	**04**
09.	Lavatory light fitting assly Make :NIL	LW 76001,Alt nil	**04**
10.	WC gauge signal light Make :**DR AUTO**	LW 76006,Alt-c	**02**
11.	Passenger alarm coach indication light Make :**DR AUTO**	LW 76005,Alt-e	**02**
12.	Fluorescent lamp 18W	RDSO/PE/SPEC/D/TL 0011-2000,Rev I, Sec- I , 07/2001	**34**

Senior Section Engineer
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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
13.	Diffuser complete w/o item 1& 2.	LW 76012,Alt-a	**25**
14.	Razor socket for WC 110/240V. Make : **SSK**	EDML 047 ,Rev nil	**04**
15.	Terminal strip Make :**WAGO**	EDML 034,Rev-a	**01**
16.	Terminal connector Make :**WAGO**	EDML 037,Rev`a'	**04**
17.	Single switch 06A/250V/AC ONE WAY ,complete with steel plate & cover frame Make :**SSK**	EDML 0,64,Rev-B, Item 04.	**09**
18.	Single switch 06A/250V/AC ONE WAY complete with steel plate & cover frame Make : **SSK**	EDML 0,64,Rev-B, Item 05.	**09**
19.	Provision of switch socket combined 5PIN (06A, 250V AC) along with 1A glass fuse fitted powder coated steel plate & cover frame Make :**SSK**	EDML 0,64,Rev-B, Item -16.	**09**
20.	PA system for LHB coaches Make :**AHUJA**	EDTS 173,Rev- a Am-1,2&3	**01 set**
21.	70AH/110V,54 Cells,02V each ,maintenance free pure lead acid tin monoblock ,battery set with 09 modules 12V each. , factory pre charged. Make :**A RAJA** Lug date :**05/17**	EDTS 129,Rev nil	**01 set**
22.	Battery box for LHB coaches. Make :**HI TECH**	1 10113 0 76 700 005 w/o item 5,22 ,23 ,26 & 27.	**01**
23.	Battery fuse box +ve Make :**AECO**	As per LW 71001,Alt-F	**01**
24.	Battery fuse box –ve Make :**INDORAIL**	As per LW 71002,Alt-F	**01**

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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
25.	Regulated battery charger Make :**IC Elect.** Sr no:**1703067**	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	**01**
26.	Emergency battery charger Make :**WAVES** Sr no:**172510**	EDTS 163,Rev `c' corg.-2&3	**01**
27.	Provision of 5KVA TFR Make :**AUTOMATIC Elect Ltd** SL.no :**T 509081/98**	As Per EDTS-366,REV-NIL & CC-71510	**01**
28.	Provision of capacitor Bank Make :**ISG** SL.no :**17/06/101**	As per EDML-130 Rev-1,Corr-1	**01**
29.	60KVA transformer Make :**PANTRONICS** Sr no :**160111712**	As per rdso/pe/spec/ac/0080/rev-0 (2007)/Am-1&2/Corr. 1,2&3	**01**
30.	ZS coupling 400A/750V/03Ph/50hz. Make :**S INTERNATIONAL**	As per spec No EDTS 105,Rev`e' Am-2	**01 set**
31.	Feeder junction boxes. Make :**NEC**	EDTS-328 REV-C	**01 set**
32.	Wheel set earthling equipment. Make :**CHANDA & CHANDA**	EDTS101,REV-C,AM-1	**02 sets**
33.	Wheel Slide Protection System (WSP) Make :**FAIVELEY** Sr no :**12/17/395**	M/s : **FAIVELEY**	**01 set**
34.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make :**HIND RECTIFIERS**	As per EDTS -139, Rev- E ,Sec II.	**01**

SSE/EL/QC	**SEE(P)/MCF/RBL**