

Modern Coach Factory Raebareli

DOC NO.: MCF/RBL/QMF 8002

REV NO: 01

DATE: 17.04.2018

आधुनिक रेल डिब्बा कारखाना, रायबरेली

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2019-20/121

RLY	C	R	-	Coach No.	1	9	3	4	6	5	/	C	DATE OF DISPATCH	3	0	-	0	4	-	1	9
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DISPATCH TO	SSE/STOCK/ CSTM	Type	L	W	A	C	C	N	Shell No.	9	3	0	8	8	FUR.NO.	L3T-1164
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1. Railway Board's Order No. : 2019/M(C)/142/2, dated -03 -04-2019

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/-10	1) 1104 (NPPE) 2) 1105 (PPE)

5. TRACEABILITY OF SHELL ITEMS:

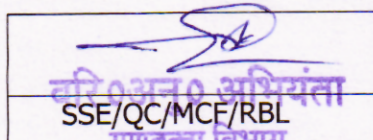
S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Under frame	Front Part	PP END M/s-ECBT
		NPP END	M/s-ECBT
	Complete	M/s-ECBT	270
2.	Lav. side wall	M/s-RAIL FAB, KXH	LAV.1 --- LAV.2 ---
		M/s-RAIL FAB, KXH	LAV.3 --- LAV.4 ---
3.	Side wall	LH SIDE	MCF/RBL(CONTRACTOR V4U)
		RH SIDE	MCF/RBL(CONTRACTOR V4U)
4.	End wall	PP END	M/s- RSM MOHALI
		NPP END	M/s- RSM MOHALI
5.	Roof	M/s-INDIRA	18/151
6.	Centre Buffer Coupler	M/S- SANROK ,FARIDABAD	PP END 12261 NPP END 12260

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/cm ² . ➤ Max. pressure in BC ➤ All Brake are applied	6 – 10 sec. 3.0 ±0.15 kg/cm ² . OK	08 sec. 3.0 kg/cm ² OK
2.	Insensitivity	➤ Exhaust BP @ 0.3 kg/cm ² /min.	No brake application	OK
3.	Sensitivity	➤ Exhaust BP @ 0.1 kg/cm ² /Sec, after 06 Sec.	Brake must apply	OK

7. PAINTING DETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	APPLICATION BY MCF/ CONTRACTOR(SUPPLY & APPLY)	AVERAGE GLOSS VALUE	DATE OF COMPLETION
1.	Paint	P.U	M/S-GS	SUPPLY & APPLY	89/88	13.04.19
2.	Insulation	Satisfactory				



रेडि0का0, रायबरेली (लालगंज)





MODERN COACH FACTORY, RAEBARELI

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8. DETAIL OF BOGIES:

ITEMS	NPP Side				PP Side			
Bogie No	190357				190358			
Bogie Type	FIAT				FIAT			
Frame no.	MCF/RM-1683				ECBT-1489			
Bolster no.	MCF/RBL-2569				MCF/RBL-2502			
Axle No	19 L- 8845 RWF		19 M- 9926 RWF		19 L - 5827 RWF		19 L - 8961 RWF	
Wheel Dia	917.699	917.75	917.627	917.786	917.688	917.724	917.64	917.79
Wheel Disc No	TZ 12-18 15895-300-1	TZ 12-18 16513-8WQ8	TZ 12-18 13614-8WR2	TZ 12-18 15897-8XG3	TZ 05-18 19789-8PQ2	TZ 12-18 17005-8XG1	TZ 05-18 20647-8MY0	TZ 07-17 27518-7QJ9
R.B. Nos.	05-18 13163	05-18 28791	05-18 13935	05-18 38986	05-18 12034	05-18 39452	05-18 12982	05-18 13137
CT R B Make	SKF		SKF		SKF		SKF	

9. SECONDARY SUSPENSION LOAD DEFLECTION VALUES :-

DESCRIPTION	Bogie NPP side				Bogie PP side			
	Secondary 1		Secondary 2		Secondary 1		Secondary 2	
	Outer	Inner	Outer	Inner	Outer	Inner	Outer	Inner
Make & Nos.	CMFSK02-19-8836-529-258	CMFSK02-19-9513-439-721	CMFSK02-19-8836-529-253	CMFSK02-19-9513-777	CMFSK02-19-8836-529-300	CMFSK02-19-9513-439-264	CMFSK02-19-8836-529-279	CMFSK02-19-9813-439-241
Compressed Ht. at Tested Load	511	465.5	510.5	468	515	465.5	9514	467.5
Alignment deviation (mm)	11	7	10	7	12	11	13	12

10. TRACEABILITY OF BOGIE ITEMS :-

S. NO	ITEM	MAKE/SUPPLIER	SERIAL NO.	
			NPP SIDE	PP SIDE
1.	Yaw Damper	KNORR	17337,17348	17331,17338
2.	Primary outer Spring	CMFSK	03-19 7411-545(762,990,804,1025)	03-19 7411-545(1103,1090,992,776)
3.	Primary Inner Spring	CMRSK	10-18 04Y(8136,7564,7558) 11-18 (7650)	10-18 04Y(7257,6988,8255) 11-18 (7895)
4.	Primary Damper	KNORR	02-19 (54687,54678,54663,54682)	02-19 (54702,54696,54717,54707)
5.	Secondary Damper	KNORR	12-18 (13402,13414)	12-18 (13395,13392)
6.	Lateral Damper	IAI	02-19 241714	02-19 241921
7.	Brake Cylinder	FAV	C19(397,380,285,462)	C19(332,307,332,470)
8.	Brake Caliper	FAV	D19(035,034,1570,1570)B	A19(1564,1567,042,044)B
9.	Brake Disc	FAV	03-19 (2169,2170,2171,2172)0133561-300-1	03-19 (1856,1855,1592,1589)0133561-300-1
10.	Ball Joint Control Arm	AR		
11.	Lateral Bump Stop	AR		
12.	Traction Centre make	SARITA		
13.	Traction lever make	JI		
14.	Ball joint traction lever	PPI		
15.	Ball joint traction centre	PPI		
16.	Secondary Rubber Pad	TECSPAK		
17.	Rubber Spring	AR		
18.	Anti roll bar Make	EMSON		
19.	Roll Link make	SARITA/PPI/AR /SARITA/AR		
20.	Fork make	EMSON		
21.	Control Arm Upper	RVE	RVE,RVE,310119-1,310119-2	310119-2,RVE,010219-1,010219-1
22.	Control Arm Lower	RVE	RVE,010119-1,300119-1,RVE	300119-1,RVE,010119-1,010219-2
23.	Phonic Wheel	FAV	FT/KEP/1548	FT/KEP/1548

Signature of SSE/Bogie/QC





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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 Pad, wheels, flushing valves, push gravity cocks, moldings, window glasses, mirrors, curtain clutch wire etc. (items which are consumable in nature)	NIL
2	Other coach furnishing sub assemblies(bought out items)	24 months from the date of dispatch of coach OR 30 months from the date of supply of material whichever is earlier.

NOTE:

- This warranty covers free supply of parts which wear out and fails within warranty period of normal service.
- This doesn't covers faults arising out of accident, non standard maintenance practices, abnormal use or mishandling, vandal activity, arson & deficient/pilferage etc.
- 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.
- Whether a defective part is to be replaced or repaired shall be at the discretion of MCF/RBL.
- For any complain/ suggestion please Mail at qualityrcfbl@gmail.com
- Painting on supply & apply contract :- supply of material and application shall be warranted for a period of three years from date of Application for any manufacturing /Application as per clause -4,para- V of RDSO specification no .M&C/PCN/100/2013-Given below -

S.No	Time period	Gloss Retention (initial gloss >85 unit at 60°)	Colour Retention rating on 0-10 scale (initial rating of painted panels/coach or ISC/RAL shade card shall be taken as 10)	Adherence of paints (with each other and with substrate)Cross-cut tape adhesion test as per ASTM D:3359/97(or latest)
1	After 1 year	80% of initial gloss	7	5B
2	After 2 year	70% of initial gloss	6	5B
3	After 3 year	60% of initial gloss	5	4B

If any imperfection is noticed or any defect arises during the warranty –period due to improper material used or due to bad workmanship, the contractor shall be bounded to set right the defect/ imperfection on free of cost basis at the base depot of the coach.

SSE/QC/MCF/RBL	SME/QC/MCF/RBL	Dy.CQM/MCF/RBL

गुणवत्ता विभाग
रेडिडका0, रायबरेली (लालगंज)

ज्योतिषादित्य अभियन्ता/गुणवत्ता
Senior Mechanical Engineer/Quality
आधुनिक रेल डिब्बा कारखाना, रायबरेली
Modern Coach Factory Raebareli

जोगिन्दर सिंह
उप मुख्या गुणवत्ता प्रबन्धक
Dy. Chief Quality Manager
आधुनिक रेल डिब्बा कारखाना, रायबरेली
Modern Coach Factory, Raebareli



MCF/RBL



Modern Coach Factory Raebareli
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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	193465/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 PRACTICE 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	19.96 Cub mtr/min		OK
3.2	Return Air	74.08 Cub mtr/min		OK
3.3	Exhaust Air	7.26 Cub mtr/min		OK
3.4	Conditioned Air	162.50 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 : 20.8°C NPP Side :22.6°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

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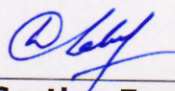
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FOR ELECTRICAL ITEMS

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 :	
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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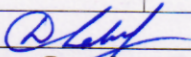
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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
01.	Roof mounted AC package unit for LHB AC coaches. Make : AMIT ENGG. Sr no of RMPU (NPP side): 3248 A Sr no of RMPU (PP side) : 3239 A Sr no of Microprocessor: AE 19.01.182	As per rdso/pe/spes/ac/0061/rev-1/2005	02
02.	Switch board cabinet Make : ISG Sr no : SBC-MCF-17-10-0008	RDSO/PE/SPEC/AC/0184-2015 REV-0	01
03.	Pump equipment with PLC controller & pump box Make : DR AUTO Sr no PA : 2019/02/074 Sr no.1 : 19010926 Sr no.2 : 19010953 Sr no.CPA : 2019/02/09-DR AUTO	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 : INTEG	EDTS331, TYPE-1 CORR.-1&2	02
05.	Door way/Gangway Light Make : RT VISION	RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-N	07
06.	Provision of Passenger area light(Cabin) Make: DR AUTO	As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-L	09
07.	Corridor Light with Night light Make: RT VISION	RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-M	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 : K.LITE	LW 76001,Alt nil	04
10.	Toilet indication (WC) light, Make: AGASTYA	As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-H1	04
11.	Passenger alarm coach indication light Make : DR AUTO	LW 76005,Alt-e	02


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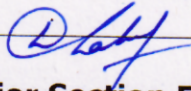
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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

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


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Sr no	Description	Drg/Spec no.	Quantity per Coach
23.	Emergency battery charger Make : WAVES Sr no: WEBCA 194875 Make : BHASIN Sr no: 03190135	EDTS 163,Rev `c' corg.-2&3	02
24.	Provision of 5KVA TFR Make : BHASIN SL.no : 11182879	As Per EDTS-366,REV-NIL & CC-71510	01
25.	Provision of capacitor Bank Make : KONTACT SL.no : KT-771	As per EDML-130 Rev-1,Corr-1	01
26.	60KVA transformer Make : VIMAL Sr no : VTC-3089 LHB-6297	As per rdso/pe/spec/ac/0080/rev-0 (2007)/Am-1&2/Corr. 1,2&3	01
27.	Inter Vehicle (ZS)coupler Make: MAA LAXMI INDUSTRIES.	As per RDSO PE SPEC-0177-2013 REV-0	01 set
28.	Feeder junction boxes. Make : NEC	EDTS-328 REV-C	01 set
29.	Wheel set earthling equipment. Make : MAA LAXMI INDUSTRIES.	EDTS101,REV-C,AM-1	02 sets
30.	Wheel Slide Protection System (WSP) Make : FAIVELEY Sr no : 01/19/140	M/s : FAIVELEY	01 set
31.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : ZUMAX	As per EDTS -139, Rev- E ,Sec II.	01

SSE/EL/QC

वरिष्ठ अनुभाग अभियन्ता

गुणवत्ता नियंत्रण

आउरेडिंका० / लालगंज / रायबरेली

S.S.E./Elect-QC/M.C.F./LLJ/RBL

AWM(ELECT.)/MCF/RBL

SEE(P)/MCF/RBL

स० कार्य प्रबन्धक / विद्युत

आउरेडिंका० / रायबरेली

A.W.M./Electrical/MCF/RBL