Modern Coach Factory Raebareli आधुनिक रेल डिब्बा कारख़ाना, रायबरेली	DOC NO.: MCF/RBL/QMF 8002 REV NO: 01 DATE: 17.04.2018

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No. MCF/RBL/QC/RSC/2019-20/1027

RLY	C	R	-	Coach No.	1	9	7	2	4	2	/	C	DATE OF DISPATCH	0	8	-	1	1	-	1	9

DISPATCH TO	SSE/STOCK/CR/BB	Type	L	W	S	C	N	1	Shell No.	9	7	3	6	3	FUR.NO.	LSCNG-338

1. Railway Board's Order No. : 2019/M(C)/142/2, Dated-03-06-2019
2. Tare Weight of Coach : 41.24 Tones
3. Carrying Capacity : (a) Seating : 80 (b) Sleeping : 80 (c) Luggage : NIL

4. Special feature: -

S NO	DESCRIPTION	MAKE/SUPPLIER
A.	Epoxy flooring in lavatory	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA
B.	Anti slip friendly Grab Bar	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA
C.	Provision of Health Faucet in lavatories	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA
D.	Washbasin counter Top (Corian of Duport or Montelli)	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA
E.	GFRE ceiling instead of NFTC	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA
F.	DGFRP panels instead of LP panels	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA
G.	Honey Comb partition frame with DGFRP sheet instead of FRP sheet	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA
H.	Choke of 5/6 mm in DV side replace with 9 mm in both type (KBI & Faiveley) letter no. MC/LHB/Brake, Dated 27.09.2018	
I	**RFID**(Radio frequency identification) fitted for traceability of coach	

5. 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	4039
4.	CBC height/Buffer height from Rail level 1105 +0/-10	1) 1102 (NPPE) 2) 1100 (PPE)

6. TRACEABILITY OF SHELL ITEMS:

S NO	ITEM		MAKE/SUPPLIER		SERIAL NO			
1.	Under frame	Front Part	PP END	M/S-M.TECH	245			
			NPP END	M/S-M.TECH	243			
		Complete	M/S-V4U		97363			
2.	Lav. side wall		M/S- RAIL TECH KXH		LAV.1	-	LAV.2	-
			M/S- RAIL TECH KXH		LAV.3	-	LAV.4	-
3.	Side wall	LH SIDE	M/S-ECBT (CDG)		11			
		RH SIDE	M/S-ECBT (CDG)		11			
4.	End wall	PP END	M/s-P.D.STEEL PANCHKULA		--			
		NPP END	M/s-P.D.STEEL PANCHKULA		--			
5.	Roof		M/s-MCF/RBL		137			
6.	Centre Buffer Coupler		M/s- FRONTIER		PP END	131P1	NPP END	144P1

7. 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

8. 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)	90/88	15.10.19
2.	Insulation	Satisfactory				

SSE/QC/MCF/RBL

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MCF/RBL

MCF/RBL

	MODERN COACH FACTORY, RAEBARELI आधुनिक रेल डिब्बा कारख़ाना, रायबरेली	DOC NO.: MCF/RBL/QMF 8002 REV NO.: 01 DATE: 16.05.2016

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2019-20/1027

RLY	C	R		Coach No.	1	9	7	2	4	2	/	C	-	DATE OF DISPATCH	0	8	1	1	2	0	1	9

DISPATCH	SSE/STOCK/CR/BB	Type	L	W	S	C	N	1	Shell No.	9	7	3	6	3	FUR .NO	LSCN-G-338

9. DETAIL OF BOGIES:

ITEMS	NPP Side				PP Side			
Bogie No	191393				191394			
Bogie Type	FIAT				FIAT			
Frame no.	RAOL TECH -93				RAOL TECH -87			
Bolster no.	MCF/RBL-2231				MCF/RBL-2292			
Axle No	19 S – 2526 RWF		19 S – 1117 RWF		19 S – 0394 RWF		19 S– 1355 RWF	
Wheel Dia	917.507	917.496	917.514	917.468	917. 464	917. 423	917.447	917.458
Wheel Disc No	TZ 06-19 54199-9QI1	TZ 06-19 54202-9QI1	TZ 07-19 62084-9RL0	TZ 06-19 54612-9QH9	TZ 07-19 62081-9RM4	TZ 07-19 62082-9RL0	TZ 06-19 53544-9PG8	TZ 06-19 56551-9QK4
R.B. Nos.	07-19-20410	07-19-21529	07-19-21022	07-19-19420	07-19-21421	07-19-20447	07-19-20850	07-19-15928
CT R B Make	TIMKEN		TIMKEN		TIMKEN		TIMKEN	

10. 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.	CMAFJ09-19-5101-105	CMFSK05-18-5100-0027-26	CMAFJ09-19-5101-120	CMFSK05-18-5100-0027-11	CMAFJ09-19-5101-121	CMFSK05-18-5100-0027-33	CMAFJ09-19-5101-154	CMFSK05-18-5100-0027-35
Compressed Ht. at Tested Load	516	472	514	472	515	471	516	471
Alignment deviation (mm)	5	10	5	10	15	11	15	11

11. TRACEABILITY OF BOGIE ITEMS :-

S. NO	ITEM	MAKE/ SUPPLIER	SERIAL NO.	
			NPP SIDE	PP SIDE
1.	Yaw Damper	KBI	17759,17608	17616,17610
2.	Primary outer Spring	CMSTL	07-19 07A (493,1572,1856,2075)	07-19 07A (1474,2226,2055,2300)
3.	Primary Inner Spring	CMSTL	07-19 06A (760,832,827,178)	07-19 06A (692,124,706,22)
4.	Primary Damper	KONIC	07-19 (0456,06944,05469,05731)	07-19 (02655,06294,04653,02001)
5.	Secondary Damper	KONIC	04-19 (00578,00569)	04-19 (00508,00485)
6.	Lateral Damper	IAI	05-19 251192	05-19 251407
7.	Brake Cylinder	KBI	B(8940,8036,3040,8955)K29	B(8957,8013,7979,8943)K29
8.	Brake Caliper	KBI	B(5973,6085,6084,5972)-29	B(5971,6082,6083,5970)-29
9.	Brake Disc	FAV	09-18 (611)06-196287,5942,6289) D 133561-300	06-19(5966,5940,5943,9814) D 133561-300
10.	Ball Joint Control Arm	GMT		
11.	Lateral Bump Stop	ARYAN/AR		
12.	Traction Centre make	SARITA		
13.	Traction lever make	SARITA/JI		
14.	Ball joint traction lever	SGA/GMT		
15.	Ball joint traction centre	GMT		
16.	Secondary Rubber Pad	PPI		
17.	Rubber Spring	PPI		
18.	Anti roll bar Make	EMSON		
19.	Roll Link make	SARITA/GMT		
20.	Fork make	EMSON		
21.	Control Arm Upper	RVE	310719-1,310719-1,310719-1,310719-1	310719-1,180719-3,250719-5,300719-2
22.	Control Arm Lower	RVE	300719-2,280619-2,280719-1,180719-5	220619-2,310719-2,300719-2,280619-2
23.	Phonic Wheel	KBI	K 07-19	K-07-19

Signature of SSE/Bogie/QC

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Modern Coach Factory Raebareli
आधुनिक रेल डिब्बा कारख़ाना, रायबरेली

DOC NO.: MCF/RBL/QMF 8002
REV NO: 01
DATE: 17.04.2018

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No. MCF/RBL/QC/RSC/2019-20/1027

RLY	C	R	-	Coach No.	1	9	7	2	4	2	/	C	DATE OF DISPATCH	0	8	-	1	1	-	1	9

DISPATCH TO	SSE/STOCK/CR/BB	Type	L	W	S	C	N	1	Shell No.	9	7	3	6	3	FUR.NO.	LSCNG-338

12. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/S- KBI, FARIDABAD	3746 37/19
2.	Distribution valve	M/S- KBI, FARIDABAD	2019 J 8950
3.	Pull box	M/S- KBI, FARIDABAD	
4.	FIBA	N/A	
5.	Foot Step	M/s- SUPER SPARK PVT. LTD. FARIDABAD	
6.	Decoupling arrangement	M/S-ELASTOMER LINING WORKS, MUMBAI	
7.	Floor board	M/s-TWPL MUMBAI	
8.	PVC	M/S- HINDUSTAN FIBRE GLASS,	
9.	Lavatory Inlay	M/S- SEEMA INDS. BHOPAL	
10.	UIC Vestibule (PPE)	M/S-KRP PUNE	
11.	UIC Vestibule (NPPE)	M/S-KRP PUNE	
12.	Gangway bridge mounting (PPE)	M/S- RAKESH IRON STORE, KXH	
13.	Gangway bridge mounting (NPPE)	M/S- RAKESH IRON STORE, KXH	
14.	Body Side Window	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA	
15.	Emergency Window	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA	
16.	Hopper Window	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA	
17.	Side panel	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA	
18.	Roof ceiling	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA	
19.	Door way ceiling	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA	
20.	Partition frame	M/S-SARITA HITECH	
21.	Partition pillar	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA	
22.	Body Side Doors	M/S- JBM INDUSTRIES, FARIDABAD	
23.	Vestibule Door(PPE)	M/S- JBM INDUSTRIES, FARIDABAD	
24.	Vestibule Door(NPPE)	M/S- JBM INDUSTRIES, FARIDABAD	
25.	Bio Tank	M/S- FLASH FORGE (P) LTD VIZAG	
26.	Auxiliary Water Tank	M/s- AMIT ENG. MOHALI	
27.	Under Slung Water Tank(2X685L)	M/s- AMIT ENG. MOHALI	
28.	Under Slung Water Tank (1X685L)	M/s- AMIT ENG. MOHALI	
29.	Health Faucet	M/s- KAPCO VALVES JALANDHAR	
30.	Lotah Filler Tap	M/s- KAPCO VALVES JALANDHAR	
31.	Controlled Discharge Tap	M/s- AGMECO (P) LTD. UK	
32.	Lavatory Doors	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA	
33.	Seat & Berth	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA	
34.	Snack Table	N/A	
35.	RFID	M/s-TECH SOLUTION GURGAON	Sr.106744,106745
36.	WaterPurifier	M/S- HINDUSTAN FIBRE GLASS WORKS,VADODARA	

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MCF/RBL

	Modern Coach Factory Raebareli **आधुनिक रेल डिब्बा कारख़ाना, रायबरेली**	DOC NO.: MCF/RBL/QMF 8002 REV NO: 01 DATE: 17.04.2018

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No. MCF/RBL/QC/RSC/2019-20/1027

RLY	C	R	-	Coach No.	1	9	7	2	4	2	/	C	DATE OF DISPATCH	0	8	-	1	1	-	1	9

DISPATCH TO	SSE/STOCK/CR/BB	Type	L	W	S	C	N	1	Shell No.	9	7	3	6	3	FUR.NO.	LSCNG-338

13. MODIFICATION (IF ANY) : Partition frame & Partition pillar

14. DEVIATION (IF ANY) : NIL

15. ITEM FITTED ON THE COACH ON TRIAL : NIL

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

16. WARRANTY:

S NO	COMPONENTS	WARRANTY
1	Brake Pad, wheels, flushing valves, push gravity cocks, moldings, window glasses, mirrors, 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:

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 MCF/RBL.
5. For any complain/ suggestion please Mail at qualityrcfrbl@gmail.com
6. 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.

वरि0अनु0नि0(गु0) गुणवत्ता विभाग आ0डि0का0, रायबरेली (लालगंज) SSE/QC/MCF/RBL	SME/QC/MCF/RBL वरिष्ठ यांत्रिक अभियन्ता (गुणवत्ता) Senior Mechanical Engineer (Quality) आधुनिक रेल डिब्बा कारखाना, रायबरेली Modern Coach Factory Raebareli	19/12/2019 Dy.CQM/MCF/RBL जोगिन्दर सिंह Jogindei Singh उप मुख्य गुणवत्ता प्रबन्धक Dy. Chief Quality Manager आधुनिक रेल डिब्बा कारखाना, रायबरेली Modern Coach Factory, Raebareli

MCF/RBL

CJ- 338

	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 NONAC SCN COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG NON AC COACHES

TYPE COACH	**LWSCN**	**SHELL/COACH NO**	**197242/C**
RAILWAY	**CR**	**DATE OF DESPATCH**	

Sr no	Description of test	Remarks
1.	PUMP EQUIPMENTS	OK
2.	LIGHTS, NL,LAP CHARGING SOCKETS	OK
3.	RAILWAY CARRIAGE FAN	OK
4.	WHEEL SLIDE PROTECTION SYSTEM **(WSP)**	OK
5.	WORKING OF 9 KVA TRANSFORMER	OK
6.	WORKING OF REGULATED BATTERY CHARGER	OK
7.	SAFETIES :	
7.1.	FUSES AND THEIR RATING	OK
7.2	CONTROL CIRCUIT	OK
7.3	POWER CIRCUIT	OK

Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG NONAC SCN COACHES

01.	Switch board cabinet Make : **SSK** On Board Sr no : **2019/08/307** HT Panel Sr no : **2019/08/333**	EDTS 333, Rev`01'Am-1	**01**
02.	Pump equipment with PLC controller & pump box Make : **DR AUTO** Sr no PA: **2019/09/0015** Sr no.1 : **19090194** Sr no.2 : **19090108** Srno.CPA: **NIL-DR AUTO**	As per spec EDTS 186,Rev-a, Am- 2	**01**
03.	Emergency light system for EOG type coaches (AEL), Make : **VGS**	EDTS 151,Rev –c Am-1 & 2	**04**
04.	Passenger Alarm Cum Indication Light (PACIL) Make: **DR AUTO**	As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-I	**02**
05.	Fitment of Switch Plate Assly(Cabin Side) Make : **SALZER/SSK**	EDML 086,Rev-03, ITEM-01	**20**
06.	Fitment of Switch Plate Assly Corridor Side),Make : **SALZER**	EDML 086, Rev 03, ITEM-02	**20**
07.	Railway carriage Fan 400mm Sweep, 110V DC with crash worthy features. Make: **LIGHT ENGG.**	IS 6680/92,First Rev, RCF Amdt 4, Col I, Ty XI, RCF Cor I.	**30**
08.	Cabin,Corridor,doorway and Gangway Lights. Make: **RT VISION**	As per RDSO/PE/SPEC/TL-0091(REV-1) TYPE B-1	**26**
09.	Lavatory Light Make: **DR AUTO**	As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-D &	**04**
10.	Night Light Fitting (LED BASED) Sticker For Berth Number On Night light Fitting For LHBSCN(80-BERTHER)Coaches Make :**DR AUTO**	CC76289 & CC76443	**09**

Senior Section Engineer
Quality control / Electrical
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FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG NONAC SCN COACHES

11.	Battery fuse box +ve Make : **INDORAIL**	LW 71001,Alt-F	**01**
12.	Battery fuse box –ve Make : **ISGPL**	LW 71002,Alt-F	**01**
13.	Regulated battery charger Make : **PI ENGG.WORKS** Sr no: **PI-19080066**	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	**01**
14.	9KVA transformer Make :**VIMAL** Sr no :**VTC 3089 LHB-2152**	As per RDSO/PE/SPEC/TL 0158, 2010, Rev`0',Ty I.	**01**
15.	ZS coupling 400A/750V/03Ph/50hz. Make : **MAA LAXMI INDUSTRIES**	As per spec No EDTS 105,Rev`e' Am-3, TYPE-2	**01 set**
16.	Feeder junction boxes. Make : **INDORAIL**	EDTS-328 REV-C	**01 set**
17.	Wheel set earthling equipment. Make : **DARSHAN ENTERPRISES**	EDTS101,REV-C,AM-1	**02 sets**
18.	Wheel Slide Protection System (WSP) Make : **KNORR** Sr no : **0119242275**	M/s : **KNORR**	**01 set**
19.	110V,120AH,VRLA SMF BATTERY SET WITH 19 MONOBLOCK (6V EACH) PRECHARGED,WIH MODIFIED TRAY TOSKED-644 Make : **AMARA RAJA** Lug date : **09/19**	RDSO/pe/spec/ac-0009 rev-1-2008 amdt-1	**01 set**
20.	Battery box for LHB coaches. Make : **HITECH**	CC 91205	**01**

SSE/EL/QC वरिष्ठ अनुभाग अभियन्ता गुणवत्ता नियंत्रण आ०रे०डि०का० / लालगंज / रायबरेली S.S.E./Elect-QC/M.C.F./LLJ/RBL	**AWM(ELECT.)/MCF/RBL** for **SEE(P)/MCF/RBL** स० कार्य प्रबन्धक / विद्युत आ०रे०डि०का० / रायबरेली A.W.M./Electrical/MCF/RBL