	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/2020-21/513

RLY	NFR	COACH NO	204855/C			DATE OF DISPATCH	22-Sep-20
Type	LWSCN1	Shell No.	97854	DISPATCH TO	SSE/C&W/KIR	FUR.NO.	LSCNG-441

1. Railway Board's Order No. : 2020/M(C)/142/2,DATED-01.05.2020
2. Tare Weight of Coach : 41.24 Tonnes
3. Carrying Capacity : (a) Seating: 80 (b) Sleeping: 80 (c) Luggage: NIL

4. Special feature:

A	Epoxy flooring in lavatory	M/s-HFGW VADODARA
B	Anti slip friendly Grab Bar	M/s-HFGW VADODARA
C	Provision of Health Faucet in lavatories	M/s-HFGW VADODARA
D	Washbasin counter Top (Corian of Duport or Montelli)	M/s-HFGW VADODARA
E	GFRE ceiling instead of NFTC	M/s-HFGW VADODARA
F	DGFRP panels instead of LP panels	M/s-HFGW VADODARA
G	Honey Comb partition frame with DGFRP sheet instead of FRP sheet	M/s-HFGW VADODARA
H	Venturi arrangement in lavatory	NIL
I	Choke of 5/6 mm in DV side replace with 9 mm in both type (KBI & Faiv.)letter no. MC/LHB/Brake, DT. 27.09.18	

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	NPP/PP	1095/1096

6. TRACEABILITY OF SHELL ITEMS:

S NO		ITEM		MAKE/SUPPLIER	SERIAL NO			
1	Under frame	Front Part	PP END	M/S-OMAX AUTO	12			
			NPP END	M/S-OMAX AUTO	12			
		Complete		M/S-OMAX AUTO	12			
2	Lav. side wall			M/S-INDIRA CHENNAI	LAV.1	-------	LAV.2	-------
				M/S-INDIRA CHENNAI	LAV.3	-------	LAV.4	-------
3	Side wall	LH SIDE		M/S-ECBT	143			
		RH SIDE		M/S-ECBT	143			
4	End wall	PP END		M/S-ECBT	-------			
		NPP END		M/S-SIPL PALWAL	-------			
5	Roof			M/S-ECBT	428			
6	Centre Buffer Coupler			M/s-FRONTIER	PP END	62P1	NPP END	96P1

7. AIR BRAKE 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.	6 – 10 sec.	08 sec.
		Max. pressure in BC	3.0 ±0.15 kg/cm².	3.0 kg/cm²
		All Brake are applied	OK	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	ADVANCE	M/S-ADVANCE(S&A)	88/89	10-Jun-20
2	Insulation	Satisfactory				

SSE/QC/MCF/RBL

वरि0अभि0 अभियंता
गुणवत्ता विभाग
आ0डि0का0, रायबरेली (लालगंज)

	MODERN COACH FACTORY, RAEBARELI आधुनिक रेल डिब्बा कारखाना, 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/**2020-21/513**

RLY	N	F	R	Coach No.	2	0	4	8	5	5	/	C	-	DATE OF DISPATCH	2	2	0	9	2	0	2	0

DISPATCH	SSE/C&W/KIR	Type	L	W	S	C	N	1	Shell No.	9	7	8	5	4	-	FUR .NO	LSCN – G-445

9. DETAIL OF BOGIES:

ITEMS	NPP Side				PP Side			
Bogie No	201191				201192			
Bogie Type	FIAT				FIAT			
Frame no.	ECBT- 836				ECBT- 829			
Bolster no.	MCF/RBL-2448				MCF/RBL-2416			
Axle No	20 Y– 5787 RWF		20 Y – 5926 RWF		20 Y– 3194 RWF		20 Z – 0424 RWF	
Wheel Dia	917.392	917. 472	917.383	917.493	917.491	917.509	917.426	917.472
Wheel Disc No	TZ 12-19 89953-9WK1	TZ 11-19 84969-9WK4	TZ 11-19 86374-9WK7	TZ 11-19 83443-9VE5	TZ 12-19 89954-9WK1	TZ 11-19 83999-9WF9	TZ 11-19 85163-9WM6	TZ 11-19 83111-9WG8
R.B. Nos.	12-19 36180	11-19 33913	11-19 43452	11-19 34430	12-19 34454	12-19 34348	11-19 43562	12-19 35209
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
Make & Nos.	AVADH RAIL Sr. NO- 07-20 10023	AVADH RAIL Sr. NO- 07-20 9850	AVADH RAIL Sr. NO- 07-20 9862	AVADH RAIL Sr. NO- 07-20 9954

11. TRACEABILITY OF BOGIE ITEMS :-

S. NO	ITEM	MAKE/ SUPPLIER	SERIAL NO.	
			NPP SIDE	PP SIDE
1.	Yaw Damper	IAI	294795,295011,	294799,295021
2.	Primary outer Spring	CMFSK	10-19 1100-114 (676,560,666,502)	10-19 1100-114 (554,682,672,689)
3.	Primary Inner Spring	CMFSK	10-19 1101-103 -(970,828,980,499)	10-19 1101-103 -(811,877,803,814)
4.	Primary Damper	IAI	01-20 (289999,288562,288578,288596)	12-19 (290187,289320,290413,290335)
5.	Secondary Damper	IAI	01-20 (302947,302661)	01-20 (302977,302220)
6.	Lateral Damper	IAI	11-19 283701	11-19 283597
7.	Brake Cylinder	FAV	G20(409,262,303,439)	G20(568,570,574,272)
8.	Brake Caliper	FAV	G20-(1608,1606,1605,1607)-B	G20-(1915,1913,1914,1916)-B
9.	Brake Disc	KBI	24229053 0012-27/20,24229053 0011-27/20 24229049 0051-27/20,24229048 0072-27/20	24229053 0066-28/20,24229053 0077-28/20 24229054 0011-28/20,24229054 0010-28/20
10.	Ball Joint Control Arm	PRAG		
11.	Lateral Bump Stop	ARYAN		
12.	Traction Centre make	RF		
13.	Traction lever make	JI		
14.	Ball joint traction lever	GMT		
15.	Ball joint traction centre	GMT		
16.	Leveling Valve	ESCORT	06-20,06-20	06-20,06-20
17.	Check Valve	ESCORT	06-20	06-20
18.	Anti roll bar Make	SF(SARITA)		
19.	Roll Link make	RF /GMT		
20.	Fork make	RNG		
21.	Control Arm Upper	SF	9,SF,H107,H66	H115,H155,H95,H143
22.	Control Arm Lower	SF	DH197,546,H18,H23	H86,263,H145,H187
23.	Phonic Wheel	KBI	K 05-20	K 06-20

Signature of SSE/Bogie/QC

	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/2020-21/513

RLY	NFR	COACH NO	204855/C			DATE OF DISPATCH	22-Sep-20
Type	LWSCN1	Shell No.	97854	DISPATCH TO	SSE/C&W/KIR	FUR.NO.	LSCNG-441

12. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO(NPP/PP)
1	Air Brake Module	M/S -FAIVELEY	G20199B
2	Distribution valve	M/S -FAIVELEY	20075692B
3	Pull box	M/S -KBI	
4	FIBA	M/S -KBI	9005/29,9117/29
5	Foot Step	M/S- FEBRICON KOLKATA	
6	Decoupling arrangement	M/S-ELASTOMER MUMBAI	
7	Floor board	M/S-SHREE RAM PNL	
8	PVC	M/s-HFGW VADODARA	
9	Lavatory inlay	M/s-HFGW VADODARA	
10	UIC Vestibule (PPE)	M/S-SUNCREAST KOLKATA	
11	UIC Vestibule (NPPE)	M/S-SUNCREAST KOLKATA	
12	Gangway bridge mounting (PPE)	M/S-MMW KXH	
13	Gangway bridge mounting (NPPE)	M/S-MMW KXH	
14	Body Side Window(WIDDER)	M/s-HFGW VADODARA	
15	Emergency Window (WIDDER)	M/s-HFGW VADODARA	
16	Lavatory/hopper Window	M/s-HFGW VADODARA	
17	Side panel (DGFRP)	M/s-HFGW VADODARA	
18	Roof Ceiling (GFRE)	M/s-HFGW VADODARA	
19	Door way/Gangway Ceiling (GFRE)	M/s-HFGW VADODARA	
20	Partition panel Honeycomb	M/s-HFGW VADODARA	
21	Partition pillar	M/s-HFGW VADODARA	
22	Body Side Doors	M/s-HFGW VADODARA	
23	Vestibule Door(PPE)	M/S-KALSI LDH	
24	Vestibule Door(NPPE)	M/S-KALSI LDH	
25	Bio Tank	M/S-RAIL FAB KXH	
26	Pressurised Flushing (electro.pneu.)	M/S-SPAC	
27	Auxiliary Water Tank	M/S-OASIS	
28	Under Slung Water Tank (2X685L)	M/S-AMIT ENGG. MOHALI	
29	Under Slung Water Tank (1x685 L)	M/S-SHIVALIK FAST MOHALI	
30	Health Faucet	M/s-KAPCO VALES JALANDHAR	
31	Lotah Filler Tap	M/s-KAPCO VALES JALANDHAR	
32	Controlled discharge tap	M/s-AGMECO PVT.	
33	Lavatory Doors	M/s-HFGW VADODARA	
34	Fire Extinguisher	M/s-HFGW VADODARA	
35	Seat & Berth	M/s-HFGW VADODARA	
36	Ventury grill	NIL	
37	Water purifier(02 NOS)	NIL	
38	RFID	NIL	

वरि0अनु0 अभियंता
गु0डि0का0, रायबरेली (लालगंज)

SSE/QC/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/2020-21/513

RLY	NFR	COACH NO	204855/C			DATE OF DISPATCH	22-Sep-20
Type	LWSCN1	Shell No.	97854	DISPATCH TO	SSE/C&W/KIR	FUR.NO.	LSCNG-441

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, 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 30months 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 caseextend 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 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 60º)	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/AME/QC/MCF/RBL	Dy.CQM/MCF/RBL

वरि०अनु० अभियंता
गुणवत्ता विभाग
रेलडिब्बा०, रायबरेली (लालगंज)

आधुनिक रेल डिब्बा कारखाना, रायबरेली
Modern Coach Factory, Raebareli

Sudhir Kumar
उप मुख्य गुणवत्ता प्रबन्धक
Dy. Chief Quality Manager
आधुनिक रेल डिब्बा कारखाना, रायबरेली
Modern Coach Factory, Raebareli

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB EOG NON AC SCN COACH.

ELECTRICAL TEST CERTIFICATE FOR LHB EOG NON AC SCN COACH.

TYPE COACH	**LWSCN**		**SHELL/COACH NO**	**204855/C**	
RAILWAY	**NFR**	**ELECT. FIT DATE**	**18-09-2020**	**MCF FUR. NO.**	**SCN-G-441**

Sr. no.	Description of tests	Remarks
1.	PUMP EQUIPMENTS	OK
2.	LIGHTS, NL,LAP CHARGING SOCKETS	OK
3.	WORKING OF ACCIDENTAL, EMERGENCY LIGHTS.	OK
4.	RAILWAY CARRIAGE FAN	OK
5.	WHEEL SLIDE PROTECTION SYSTEM (**WSP**)	OK
6.	WORKING OF 9 KVA TRANSFORMER	OK
7.	WORKING OF REGULATED BATTERY CHARGER/EMERGENCY BATTERY CHARGER.	OK
8.	SAFETY :	--
8.1.	FUSES AND THEIR RATING	OK
8.2	CONTROL CIRCUIT	OK
8.3	POWER CIRCUIT	OK

Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli

ROLLING STOCK CERTIFICATE OF LHB/EOG NONAC SCN COACHES

Sr. no.	Description	Drg./Spec no.	Quantity per Coach
01.	Fitment of Switch board cabinet.(set of panel) Make/Sr.no.: **MREM** On Board: **MREM 355418** HT Panel: **MREM 355428**	EDTS 355, Rev`01'.Am-3	**01 SET**
02.	Provision of 9 KVA 750/415/190V, 03Ø AC. Make: **VIMAL** Sr no.: **VTC 3089 LHB-2572**	RDSO/PE/SPEC/TL 0158, 2010, Rev`0',Ty I.	**01**
03.	Mounting of 09KVA TFR.	As per drg no 1.10113.0.76.300.001,Alt –B.	OK
04.	Provision of Pump equipment with pump box. Make: **DR AUTO** Sr no : **20/08/0144** Pump 1: **3612** Pump 2: **3565**	As per spec no. EDTS186,REV-A,AM-2	**01 SET**
05.	Provision & Mounting of Pump controller. Make: **DR AUTO** SL.no.:**20/07/0132**	As per Spec. EDTS186 Rev-a Am-2, & drg no. CC71328 & LW70020	**01**
06.	4.5 Kw Under slung type Constant Voltage Regulated Battery charger cum Emergency battery charger Make: **ELECTRONIC** Sr. no.: **07200093**	As per spec no. RDSO/PE/SPEC/AC/0183-2015(REV.-1)	**01**
07.	Provision of Feeder Junction Box Make :**RSI SWITCHGEARS LTD.**	EDTS-328 REV-C,AM-4,Type-II,COR-2	**01 SET**
08.	Provision of IVC dummy Socket assembly.	As per Drg. No. LW71302,Alt-nil	**01 SET**
09.	Battery fuse box +ve Make :**RICHMOND**	As per LW 71001,Alt- H	**01**
10.	Battery fuse box –ve Make :**RICHMOND**	As per LW 71002,Alt-I	**01**
11.	Provision of Battery boxes/ Cradles. Make: **MEENAKSHI**	As per Drg. No. 110113.0.76.700.005 W/O item 5,22,23,26 & 27,Alt-C or Latest.	**01**
12.	Provision of batteries Type: 110 V, 120 AH VRLA SMF Battery Set. Make: **AMARA RAJA** Lug Date: **06/20**	As per RDSO/PE/SPEC/AC/0009-2014 (Rev-2) with inner cell connectors or Latest.	**01 SET**

Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli

ROLLING STOCK CERTIFICATE OF LHB/EOG NONAC SCN COACHES

Sr. no.	Description	Drg./Spec no.	Quantity per Coach
13.	Fitment of Railway carriage Fan 400mm Sweep, 110V AC with crash worthy features. Make: **ELECTROWAVES**	As per Drg. No. ICF/SK-7-6-158,alt-g. RDSO/PE/SPEC/TL/0021-2005 (Rev-3) with RCF annex-1,am-1.	**30**
14.	Fitment of LED Light fittings for Cabin, Doorway and Gangway area. 9 watt. Make: **RT VISION**	As per RDSO/PE/SPEC/TL/0091-2016,Rev-1 with RCF Annex-1 .Type-B1. Drg. No. CC76453.	**26**
15.	Fitment of LED Light fittings for Night Light with berth indication Type-E (1 watt). Make: **RT VISION**	As per RDSO/PE/SPEC/TL/0091-2016,Rev-1 with RCF Annex-1, ICF/STB-7-6-053.Type- E. Drg. No. CC76461	**10**
16.	Fitment of LED Light fittings for Lavatory Lights. 9 Watt. Make: **RT VISION**	As per RDSO/PE/SPEC/TL/0091-2016,Rev-1 with RCF Annex-1Type-D. Drg. No. LW76092.	**04**
17.	Fitment of LED Light fittings for PACIL. Make: **KAVERI**	As per RDSO/SPEC/TL/0091-2016,Rev-1 with RCF Annex-1Type-I. Drg. No. LW76098.	**02**
18.	Fitment of Accidental Emergency Light (AEL) Make**: INTEG**	As per RDSO/SPEC/AC/0180-2016,Rev-0 ,Type-II.	**04**
19.	Provision of Cable binder	Drg. No. CC76120,Item - 1,2,3.100mm,200mm,300mm respectively.	**OK**
20.	Provision of Cable Jacket System.	EDTS-138,Cor-2,Item-5,7,8,9,11.	**OK**

Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli

ROLLING STOCK CERTIFICATE OF LHB/EOG NONAC SCN COACHES

Sr. no.	Description	Drg./Spec no.	Quantity per Coach
21.	Provision of Switch plate assembly along with mobile charging sockets. Make: **SSK**	EDML-086, Rev-6, Am-1, Table-1, Item-1.	**10**
22.	Provision of Switch plate assembly along with mobile charging sockets. Make: **SALZER**	EDML-086, Rev-6, Am-1, Table-1, Item-2.	**10**
23.	Provision of Switch plate assembly along with mobile charging sockets. Make: **SALZER**	EDML-086, Rev-5, Am-1, Table-1, Item-3.	**20**
24.	Provision of High Capacity Inter – Vehicular Coupler Unit (ZS Coupling) (500 A, 750 V,3 ph, 50 Hz). Make: 1.(NPP): **MAA LAXMI INDUSTRIES** 2.(PP): **MAA LAXMI INDUSTRIES**	As per Spec. no. RDSO/PE/SPEC/AC/0177(Rev.-0)-2013 with annexure-A, B.	**01 SET**
25.	Mounting of Inter Vehicle coupler	As per drg no.1.10113.0.74.000.001,Alt-B	**OK**
26.	Provision of Wheel Set Earthing equipment. Make:- NPP: **PRIME ELECT.** PP: **PRIME ELECT.**	EDTS101,REV-C,AM-1	**01 SET**
27.	Provision of Anti Skid Disk Brake System.(WSP) Make : **FAIVELEY** Sr no : **12334**	As per MDTS 077,Rev.-2 M/s"FAIVELEY" or "Knorr Bremse", or "ESCORTS"	**01 SET**

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** **SEE(P)/MCF/RBL** स० कार्य प्रबन्धक / विद्युत आ०रे०डि०का० / रायबरेली A.W.M./Electrical/MCF/RBL

MCF/RBL