	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/2020-21/816

RLY	NFR	COACH NO	205559/C			DATE OF DISPATCH	16-Dec-20
Type	LWSCN1	Shell No.	20G294	DISPATCH TO	SSE/C&W/GHY	FUR.NO.	LSCNG-482

1. Railway Board's Order No. : 2020/M(C)/142/2,DATED-21.08.2020
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	M/s-HFGW VADODARA
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	1105/1105

6. TRACEABILITY OF SHELL ITEMS:

S NO		ITEM		MAKE/SUPPLIER	SERIAL NO			
1	Under frame	Front	PP END	M/S-NE	-------			
		Part	NPP END	M/S-NE	-------			
		Complete		MCFRBL-SIS	20G294			
2	Lav. side wall			M/S-ATHANCY ALD	LAV.1	-------	LAV.2	-------
				M/S-ATHANCY ALD	LAV.3	-------	LAV.4	-------
3	Side wall	LH SIDE		M/S-ECBT	195			
		RH SIDE		M/S-DTL	195			
4	End wall	PP END		M/S-SIPL	-------			
		NPP END		M/S-SIPL	-------			
5	Roof			MCFRBL-CONT.	153			
6	Centre Buffer Coupler			M/s-SANROK	PP END	14823	NPP END	14728

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	AXALTA	M/S-EMPRISE WOW (S&A)	96/94	22-Sep-20
2	Insulation	Satisfactory				

03/02/2021

SSE/QC/MCF/RBL

गुणवत्ता विभाग
रेल डिब्बा का., रायबरेली (लालगंज)

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/**2020-21/-816**

RLY	N	F	R	Coach No.	2	0	5	5	5	9	/	C	-	DATE OF DISPATCH	1	6	1	2	2	0	2	0

DISPATCH	SSE/C&W/GHY	Type	L	W	S	C	N	1	Shell No.	2	0	G	2	9	4	FUR .NO	LSCN – G-482

9. DETAIL OF BOGIES:

ITEMS	NPP Side				PP Side			
Bogie No	201559				201560			
Bogie Type	FIAT				FIAT			
Frame no.	AML - 194				ECBT-678			
Bolster no.	AMIT ENGG -526				AMIT ENGG -542			
Axle No	20 A – 5932 RWF		20 A– 3224 RWF		20 A – 3250 RWF		20 A – 3945 RWF	
Wheel Dia	917.648	917. 462	917.602	917.281	917.36	917.26	917.288	917.27
Wheel Disc No	TZ 11-19 85760-9WH0	TZ 02-19 22337-8XH0	TZ 02-19 25102-9MI4	TZ 12-19 95452-9WK2	TZ 12-19 95780-9XG4	TZ 12-19 95781-9XG4	TZ 04-19 38500-9QI3	TZ 02-19 21174-8XH1
R.B. Nos.	01-20 403718	01-20 404931	02-20 501522	01-20 405244	01-20 405540	02-20 401516	01-20 404520	01-20 404714
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.	TAYAL & CO. Sr. NO- 06-20 0706	TAYAL & CO. Sr. NO- 06-20 0801	TAYAL & CO. Sr. NO- 06-20 0668	TAYAL & CO. Sr. NO- 06-20 0731

11. TRACEABILITY OF BOGIE ITEMS :-

S. NO	ITEM	MAKE/ SUPPLIER	SERIAL NO.	
			NPP SIDE	PP SIDE
1.	Yaw Damper	IAI	304187,304153	304125,304192
2.	Primary outer Spring	CMGBD	12-19 F07-402(484,494,620,463)	12-19 F07-402(463,743,456,434)
3.	Primary Inner Spring	CMGBD	01-20 F06-400 (558,628,664,795)	01-20 F06-400 (873,741,859,521)
4.	Primary Damper	IAI	01-20 (301330,301311,299604,299232)	01-20 (298614,300817,299129,300315)
5.	Secondary Damper	IAI	01-20 (302804,302725)	01-20 (302878,302827)
6.	Lateral Damper	IAI	03-20 313934	03-20 314049
7.	Brake Cylinder	KBI	D(0914,0926),C(9594,9593)-K29	D(0964,),C(0963,9527,9592)-K29
8.	Brake Caliper	KBI	C(6335,6681,6600,6333)-29	C(6388,6530,6533,6384)-29
9.	Brake Disc	AVADH RAIL	09-18 (312000609,31200614,31200611,31200698)	09-18 (31200596,3020055,31200719,30200594)
10.	Ball Joint Control Arm	BONY		
11.	Lateral Bump Stop	AR		
12.	Traction Centre make	SF(SARITA)		
13.	Traction lever make	JI		
14.	Ball joint traction lever	BASANT/AR		
15.	Ball joint traction centre	BASANT		
16.	Leveling Valve	ESCORT	1912,1912	20084897,1912
17.	Check Valve	ESCORT	1912	1912
18.	Anti roll bar Make	EMSON		
19.	Roll Link make	RF/BASANT SAI		
20.	Fork make	RNG		
21.	Control Arm Upper	KUMAR	N8832,D5175,D5237,D5256	N5755,N5281,D5363,N5241
22.	Control Arm Lower	KUMAR	N5219,D4610,N5232,N5215	N5743,D4654,N9953,N5226
23.	Phonic Wheel	KBI	K 07-20	K 07-20

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/2020-21/816

RLY	NFR	COACH NO	205559/C			DATE OF DISPATCH	16-Dec-20
Type	LWSCN1	Shell No.	20G294	DISPATCH TO	SSE/C&W/GHY	FUR.NO.	LSCNG-482

12. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO(NPP/PP)
1	Air Brake Module	M/S -KBI	5883 28/20
2	Distribution valve	M/S -KBI	2020G11751
3	Pull box	M/S -KBI	
4	FIBA	M/S -FAIVELEY	H20077,H20084
5	Foot Step	M/S- FABRICON KOLKATA	
6	Decoupling arrangement	M/S-PULSER KOLKATA	
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-KRP PUNE	
11	UIC Vestibule (NPPE)	M/S-KRP PUNE	
12	Gangway bridge mounting (PPE)	M/S-MMW KXH	
13	Gangway bridge mounting (NPPE)	M/S-MMW KXH	
14	Body Side Window	M/s-HFGW VADODARA	
15	Emergency Window	M/s-HFGW VADODARA	
16	Lavatory/hopper Window	M/s-HFGW VADODARA	
17	Side panel	M/s-HFGW VADODARA	
18	Roof Ceiling	M/s-HFGW VADODARA	
19	Door way/Gangway Ceiling	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-JBM FARIDABAD	
24	Vestibule Door(NPPE)	M/S-JBM FARIDABAD	
25	Bio Tank	M/S-JSL LIFE STYLE	
26	Pressurised Flushing (electro.pneu.)	M/S-SPAC	
27	Auxiliary Water Tank	M/S- OASIS	
28	Under Slung Water Tank (2X685L)	M/S- OASIS	
29	Under Slung Water Tank (1x685 L)	M/S-AMIT ENGG 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-CHIRAG	153788/151002
35	Seat & Berth	M/s-HFGW VADODARA	
36	Ventury grill	M/s-HFGW VADODARA	
37	Water purifier(02 NOS)	M/s-HFGW VADODARA	
38	RFID	NIL	

Rema

03/12/2020

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/2020-21/816

RLY	NFR	COACH NO	205559/C			DATE OF DISPATCH	16-Dec-20
Type	LWSCN1	Shell No.	20G294	DISPATCH TO	SSE/C&W/GHY	FUR.NO.	LSCNG-482

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
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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.

03/02/2021 SSE/QC/MCF/RBL	3.2.2021 किरनपाल सहायक यांत्रिक इंजीनियर आ. रे. डि. का. रायबरेली SME/AME/QC/MCF/RBL	Sudhir Kumar Dy. Chief Quality Manager आधुनिक रेल डिब्बा कारखाना, रायबरेली Dy.CQM/MCF/RBL

MCF/RBL

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**	**205559/C**	
RAILWAY	**NFR**	**ELECT. FIT DATE**	**30-11-2020**	**MCF FUR. NO.**	**SCN-G-482**

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.: **HIND** On Board: **H355.20E.0779** HT Panel: **H355.20E.0737**	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-3558**	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 : **20/8/0164** Pump 1: **4904** Pump 2: **4946**	As per spec no. EDTS186,REV-A,AM-2	**01 SET**
05.	Provision & Mounting of Pump controller. Make: **DR AUTO** SL.no.:**20/08/0328**	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.: **12190117**	As per spec no. RDSO/PE/SPEC/AC/0183-2015(REV.-1)	**01**
07.	Provision of Feeder Junction Box Make : **SYSTEMS & SERVICES POWER**	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 :**INDORAIL**	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: **HITECH**	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: **11/19**	As per RDSO/PE/SPEC/AC/0009-2014 (Rev-2) with inner cell connectors or Latest.	**01 SET**

Senior Section Engineer
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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: **KAPSONS/ORIENT**	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: **AGASTYA**	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: **DR AUTO**	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: **AGASTYA**	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**

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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: **SKS**	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): **S.INTERNATIONALS** 2.(PP): **S.INTERNATIONALS**	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 : **KNORR** Sr no : **0120114733**	As per MDTS 077,Rev.-2 M/s"FAIVELEY" or "Knorr Bremse", or "ESCORTS"	**01 SET**

SSE/EL/QC वरिष्ठ अनुभाग अभियन्ता गुणवत्ता नियंत्रण आरसेडिकाo / लालगंज / रायबरेली S.S.E/Elect-QC/M.C.F/LLJ/RBL	**AWM(ELECT.)/MCF/RBL** **SEE(P)/MCF/RBL** वरिष्ठ विद्युत अभियन्ता रेल कोच फैक्टरी, रायबरेली, Sr. Electrical Engineer / RCF / RBL