	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/2020-21/814

RLY	NFR	COACH NO	205555/C			DATE OF DISPATCH	16-Dec-20
Type	LWSCN1	Shell No.	20G330	DISPATCH T	SSE/C&W/GHY	FUR.NO.	LSCNG-484

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-H.F GLASS WORKS VADODRA
B	Anti slip friendly Grab Bar	M/S-H.F GLASS WORKS VADODRA
C	Provision of Health Faucet in lavatories	M/S-H.F GLASS WORKS VADODRA
D	Washbasin counter Top (Corian of Duport or Montelli)	M/S-H.F GLASS WORKS VADODRA
E	GFRE ceiling instead of NFTC	M/S-H.F GLASS WORKS VADODRA
F	DGFRP panels instead of LP panels	M/S-H.F GLASS WORKS VADODRA
G	Honey Comb partition frame with DGFRP sheet instead of FRP sheet	M/S-H.F GLASS WORKS VADODRA
H	Venturi arrangement in lavatory	M/S-H.F GLASS WORKS VADODRA
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	1098/1104

6. TRACEABILITY OF SHELL ITEMS:

S NO		ITEM		MAKE/SUPPLIER	SERIAL NO			
1	Under frame	Front Part	PP END	M/S-INDIRA	_			
			NPP END	M/S-INDIRA	_			
		Complete		M/S-INDIRA	37-175			
2	Lav. side wall			M/S-JSL HARYANA	LAV.1	_	LAV.2	_
				M/S-JSL HARYANA	LAV.3	_	LAV.4	_
3	Side wall	LH SIDE		M/S-DTL PUNE	32			
		RH SIDE		M/S-DTL PUNE	32			
4	End wall	PP END		M/S-SIPL PALWAL	_			
		NPP END		M/S-SIPL PALWAL	_			
5	Roof			MCFRBL-CONT	172			
6	Centre Buffer Coupler			M/s- ESCORTS	PP END	5697	NPP END	5778

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	VIBGYOR	M/S-VIBGYOR	75/96	07.11.2020
2	Insulation	Satisfactory				

13/02/2021

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	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/-814**

RLY	N	F	R	Coach No.	2	0	5	5	5	/	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	3	3	0	FUR .NO	LSCN – G-484

9. DETAIL OF BOGIES:

ITEMS	NPP Side				PP Side			
Bogie No	201616				201615			
Bogie Type	FIAT				FIAT			
Frame no.	SIMPLEX -350				VS-2137			
Bolster no.	APEX- 350				APEX- 354			
Axle No	20A– 6114 RWF		20 A– 4062 RWF		20 A– 5791 RWF		20 A– 3923 RWF	
Wheel Dia	917.173	917. 363	917.201	917.413	917.111	917.243	917.294	917.284
Wheel Disc No	TZ 04-19 36558-9MI7	TZ 12-19 93568-9WH4	TZ 02-19 27132-9MJ8	TZ 12-19 90705-9WF8	TZ 1-19 22338-8XH4	TZ 06-19 51421-9PH7	TZ 07-19 69444-9RM9	TZ 02-19 25101-9MJ4
R.B. Nos.	02-20 500536	01-20 405440	01-20 402093	01-20 403265	01-20 404405	02-20 401074	01-20 405647	01-20 502516
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.	CMFSK05-20-F08-193-38	CMGBD02-20F08-838-54	CMFSK05-20F09-193-93	CMGBD02-20-F08-837-375	CMFSK05-20-F08-193-45	CMGBD02-20-F08-837-33	CMFSK05-20-F08-193-198	CMGBD02-20-F08-837-263
Compressed Ht. at Tested Load	515	468	514.5	467	516	467	515	468
Alignment deviation (mm)	11	15	8	15	12	12	10	12

11. TRACEABILITY OF BOGIE ITEMS :-

S. NO	ITEM	MAKE/ SUPPLIER	SERIAL NO.	
			NPP SIDE	PP SIDE
1.	Yaw Damper	IAI	304064,304177	294844,294008
2.	Primary outer Spring	CMGBD	12-19 F07-402(243,241,314,333)	01-20 F07-403(268,288),12-19 F07-402(240,254)
3.	Primary Inner Spring	CMGBD	01-20 F06-400 (531,513,601,759)	01-20 F06-400 (845,507,340,504)
4.	Primary Damper	IAI	01-20 (298386,300386,301089,299956)	01-20 (300961,299466,300466,301302)
5.	Secondary Damper	GABRIEL	07-20 (2157,2141)	07-20 (2135,2360)
6.	Lateral Damper	KONI	03-19 01751	03-19 00456
7.	Brake Cylinder	KBI	D(0954,1002)K29, C(9471,9508)K29	D(0997,0990)K29, C(9501,9907)K29
8.	Brake Caliper	KBI	C(6373,6466,6516,6421)-29	C(6417,6518,6517,6418)-29
9.	Brake Disc	AVADH	09-18 (30200530,31200633,30200553,30200590)	09-18 (31200610,31200645,31200731,30200560)
10.	Ball Joint Control Arm	BONY		
11.	Lateral Bump Stop	BASANT		
12.	Traction Centre make	SF		
13.	Traction lever make	JI		
14.	Ball joint traction lever	AR/BASANT		
15.	Ball joint traction centre	GMT/BASANT		
16.	Secondary Rubber Pad	PRAG		
17.	Rubber Spring	AR		
18.	Anti roll bar Make	SF/EMSON		
19.	Roll Link make	JU/BASANT		
20.	Fork make	SF/RNG		
21.	Control Arm Upper	KUMAR	D1538,N1698,D6573,D6834	D2412,N3645,D2978,D2968
22.	Control Arm Lower	KUMAR	N3652,D3172,D3615,N1638	N3685,D5262,D5815,N1732
23.	Phonic Wheel	KBI	K07-20	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/2020-21/814

RLY	NFR	COACH NO	205555/C			DATE OF DISPATCH	16-Dec-20
Type	LWSCN1	Shell No.	20G330	DISPATCH T	SSE/C&W/GHY	FUR.NO.	LSCNG-484

12. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO(NPP/PP)
1	Air Brake Module	M/S -KBI	5884-28/20
2	Distribution valve	M/S -KBI	2020G11750
3	Pull box	M/S -KBI	
4	FIBA	N/A	
5	Foot Step	M/S-FABRICON INDS KOLKATA	
6	Decoupling arrangement	M/S-PULSAR INDS KOLKATA	
7	Floor board	M/S-SHREERAM PNL GOVINDGARH	
8	PVC	M/S-H.F GLASS WORKS VADODRA	
9	Lavatory inlay	M/S-H.F GLASS WORKS VADODRA	
10	UIC Vestibule (PPE)	M/S-SUNCREAST KOLKATA	
11	UIC Vestibule (NPPE)	M/S-SUNCREAST KOLKATA	
12	Gangway bridge mounting (PPE)	M/s- MAHAVEER METAL WORKS, KXH	
13	Gangway bridge mounting (NPPE)	M/s- MAHAVEER METAL WORKS, KXH	
14	Body Side Window	M/S-H.F GLASS WORKS VADODRA	
15	Emergency Window	M/S-H.F GLASS WORKS VADODRA	
16	Lavatory/hopper Window	M/S-H.F GLASS WORKS VADODRA	
17	Side panel	NA	
18	Roof Ceiling	M/S-H.F GLASS WORKS VADODRA	
19	Door way/Gangway Ceiling	M/S-H.F GLASS WORKS VADODRA	
20	Partition panel	M/S-H.F GLASS WORKS VADODRA	
21	Partition pillar	M/S-H.F GLASS WORKS VADODRA	
22	Body Side Doors	M/S-H.F GLASS WORKS VADODRA	
23	Vestibule Door(PPE)	M/S-JBM INDS FARIDABAD	
24	Vestibule Door(NPPE)	M/S-JBM INDS FARIDABAD	
25	Bio Tank	M/S-RAIL FAB KAPURTHALA	
26	Pressurised Flushing (electro.pneu.)	M/S-IMI	
27	Auxiliary Water Tank	M/S-AMIT ENGG MOHALI	
28	Under Slung Water Tank (2X685L)	M/S-SHIVALIK FAST MOHALI	
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 LTD UK	
33	Lavatory Doors	M/S-H.F GLASS WORKS VADODRA	
34	Fire Extinguisher	M/s-CHIRAG INDUSTRIES HR	153777/152900
35	Seat & Berth	M/S-H.F GLASS WORKS VADODRA	
36	Ventury grill	M/S-H.F GLASS WORKS VADODRA	
37	Water purifier	M/S-H.F GLASS WORKS VADODRA	
38	RFID	N/A	

13/02/2021

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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/2020-21/814

RLY	NFR	COACH NO	205555/C			DATE OF DISPATCH	16-Dec-20
Type	LWSCN1	Shell No.	20G330	DISPATCH T	SSE/C&W/GHY	FUR.NO.	LSCNG-484

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.

13/02/2021	15.02.2021	
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Asst. Mechanical Engineer
आ. रे. डि. का. रायबरेली
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**	**205555/C**	
RAILWAY	**NFR**	**ELECT. FIT DATE**	**09-11-2020**	**MCF FUR. NO.**	**SCN-G-484**

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: **H.355.20E.0749** HT Panel: **H.355.20E.0846**	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-3520**	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 : **20/8/0154** Pump 1: **4886** Pump 2: **4892**	As per spec no. EDTS186.REV-A.AM-2	**01 SET**
05.	Provision & Mounting of Pump controller. Make: **DR AUTO** SL.no.:**20/08/0442**	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: **AUTOMETERS** Sr. no.: **A/03/20/050/RBC+EBC/0233**	As per spec no. RDSO/PE/SPEC/AC/0183-2015(REV.-1)	**01**
07.	Provision of Feeder Junction Box Make : **SYSTEMS & SERVICE 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: **9/19**	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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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: **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: **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: **RT VISION**	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 : **0119473434**	As per MDTS 077,Rev.-2 M/s"FAIVELEY" or "Knorr Bremse", or "ESCORTS"	**01 SET**

SSE/EL/QC	**AWM(ELECT.)/MCF/RBL** **SEE(P)/MCF/RBL**

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गुणवत्ता नियंत्रण
आरडिओका / लालगंज / रायबरेली
S.S.E./Elect-QC/M.C.F./LLJ/RBL

वरिष्ठ विद्युत अभियन्ता
रेल कोच फैक्टरी, रायबरेली,
Sr. Electrical Engineer / RCF / RBL