	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/2020-21/721

RLY	NFR	COACH NO	205158/C			DATE OF DISPATCH	5-Nov-20
Type	LWSCN1	Shell No.	20G212	DISPATCH TO	SSE/C&W/KYQ/RNY	FUR.NO.	LSCNG-466

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	1099/1105

6. TRACEABILITY OF SHELL ITEMS:

S NO		ITEM		MAKE/SUPPLIER	SERIAL NO			
1	Under frame	Front	PP END	M/S-NE CHD	-------			
		Part	NPP END	M/S-SFPL	-------			
		Complete		MCFRBL-AIRCON	-------			
2	Lav. side wall			M/S-KANSAL MOHALI	LAV.1	-------	LAV.2	-------
				M/S-KANSAL MOHALI	LAV.3	-------	LAV.4	-------
3	Side wall	LH SIDE		M/S-DTL	30			
		RH SIDE		M/S-DTL	30			
4	End wall	PP END		M/S-RSM MOHALI	-------			
		NPP END		M/S-RSM MOHALI	-------			
5	Roof			M/S-ECBT	431			
6	Centre Buffer Coupler			M/s-SANROK	PP END	16080	NPP END	14144

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.	09 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	GSI	M/S-GSI WOW (S&A)	97/94	16-Sep-20
2	Insulation	Satisfactory				

16/01/2021

SSE/QC/MCF/RBL

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/2020-21/721

RLY	N	F	R	Coach No.	2	0	5	1	5	8	/	C	-	DATE OF DISPATCH	0	5	1	1	2	0	2	0

DISPATCH	SSE/C&W/KYQ/RNY	Type	L	W	S	C	N	1	Shell No.	2	0	G	2	1	2	FUR .NO	LSCN G– 466

9. DETAIL OF BOGIES:

ITEMS	NPP Side				PP Side			
Bogie No	201507				201508			
Bogie Type	FIAT				FIAT			
Frame no.	VS- 294				ECBT- 609			
Bolster no.	ULTRA ENGG-154				ULTRA ENGG- 153			
Axle No	20 Z – 9772 RWF		20 Z – 8707 RWF		20 A – 0024 RWF		20Z – 9937 RWF	
Wheel Dia	917.598	917. 449	917.566	917.444	917.59	917.57	917.548	917.507
Wheel Disc No	TZ 04-18 27130-7QJ6	TZ 04-18 27132-9QJ9	TZ 04-18 22187-8XG9	TZ 02-19 23471-9MJ9	TZ 12-19 95550-9WL3	TZ 12-19 95552-9WL3	TZ 02-19 26705-9ML5	TZ 12-19 76726-9VD0
R.B. Nos.	02-20 500429	02-20 501122	01-20 405044	01-20 404289	11-19 42129	11-19 41837	12-19 40450	12-19 38090
CT R B Make	TIMKEN		TIMKEN		TIMKEN		TIMKEN	

10. SECONDARY SUSPENSION LOAD DEFLECTION VALUES : -

DESCRIPTION	Bogie NPP side		Bogie PP side	
Make & Nos.	Secondary 1	Secondary 2	Secondary 1	Secondary 2
	TAYAL & CO. Sr. NO- 06-20 804	TAYAL & CO. Sr. NO- 06-20 680	TAYAL & CO. Sr. NO- 06-20 800	TAYAL & CO. Sr. NO- 06-20 817

11. TRACEABILITY OF BOGIE ITEMS :-

S. NO	ITEM	MAKE/ SUPPLIER	SERIAL NO.	
			NPP SIDE	PP SIDE
1.	Yaw Damper	IAI	304606,304586	304533,304457
2.	Primary outer Spring	CMFSK	10-19 1100-114(1311,1552,557,594)	10-19 1100-114(1521,1472,1550,1395)
3.	Primary Inner Spring	CMFSK	10-19 1101-103-(157,1998,1492,1422)	10-19 1101-103-(1274,1362,1401,1122)
4.	Primary Damper	IAI	02-20 (309283,309341,298728,290407)	02-20 (310014,310276,321822,308985)
5.	Secondary Damper	IAI	01-20 (327193,326664)	01-20 (327341,327170)
6.	Lateral Damper	IAI	02-20 0313839	03-2020 313338
7.	Brake Cylinder	KNORR	C(0982,9465,9456,0995)K29	C(9532,9530)K29,D(0986,0971)K29
8.	Brake Caliper	KNORR	C(6415,6456,6463,6412,)-29	C(6395,6538,6542,6394)-29
9.	Brake Disc	FAV	03-20(606,120,8930,8927)D133561-300	03-20(585,583,584,894)D133561-300
10.	Ball Joint Control Arm	GMT		
11.	Lateral Bump Stop	AR		
12.	Traction Centre make	RNG		
13.	Traction lever make	TAJ/JI		
14.	Ball joint traction lever	GMT		
15.	Ball joint traction centre	GMT		
16.	Leveling Valve	ESCORT	1912,1912	1912,1912
17.	Check Valve	ESCORT	1912	1912
18.	Anti roll bar Make	SARITA/EMSON		
19.	Roll Link make	RF /GMT		
20.	Fork make	SARITA		
21.	Control Arm Upper	SF(SARITA)	125,1024,942,842	683,109,912,657
22.	Control Arm Lower	SF(SARITA)	41,302,183,568	530,835,97,451
23.	Phonic Wheel	KONI	K 01-20	K 01-20

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/2020-21/721

RLY	NFR	COACH NO	205158/C			DATE OF DISPATCH	5-Nov-20
Type	LWSCN1	Shell No.	20G212	DISPATCH TO	SSE/C&W/KYQ/RNY	FUR.NO.	LSCNG-466

12. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO(NPP/PP)
1	Air Brake Module	M/S -KBI	5889 28/20
2	Distribution valve	M/S -KBI	2020G11752
3	Pull box	M/S -KBI	
4	FIBA	M/S -FAIVELEY	H20117,H20052
5	Foot Step	M/S- FABRICON 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-ELASTOMER MUMBAI	
11	UIC Vestibule (NPPE)	M/S-ELASTOMER MUMBAI	
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-RAIL FAB KXH	
26	Pressurised Flushing (electro.pneu.)	M/S-AIR FLOW	
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-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	M/s-HFGW VADODARA	
37	Water purifier(02 NOS)	M/s-HFGW VADODARA	
38	RFID	NIL	

16/01/2021

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/2020-21/721

RLY	NFR	COACH NO	205158/C			DATE OF DISPATCH	5-Nov-20
Type	LWSCN1	Shell No.	20G212	DISPATCH TO	SSE/C&W/KYQ/RNY	FUR.NO.	LSCNG-466

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.

16/01/2021	19.01.2021	15/1/2021
SSE/QC/MCF/RBL	SME/AME/QC/MCF/RBL	Dy.COM/MCF/RBL
वरि0अनु0 अभियंता गुणवत्ता विभाग आ0डि0का0, रायबरेली (लालगंज)	सहायक यांत्रिक इंजीनियर Asst. Mechanical Engineer आ. रे. डि. का. रायबरेली MCF, RBL	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**	**205158/C**	
RAILWAY	**NFR**	**ELECT. FIT DATE**	**04-11-2020**	**MCF FUR. NO.**	**SCN-G-466**

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.: **AMIT ENGG.** On Board: **AE/USBC/1415** HT Panel: **AE/USBC/1388**	EDTS 355, Rev`01'.Am-3	**01 SET**
02.	Provision of 9 KVA 750/415/190V, 03Ø AC. Make: **ZEN POWER** Sr no.: **ZEN-2000039**	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 : **20/8/0066** Pump 1: **3588** Pump 2: **3611**	As per spec no. EDTS186,REV-A,AM-2	**01 SET**
05.	Provision & Mounting of Pump controller. Make: **DR AUTO** SL.no.:**20/08/0129**	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.: **12190048**	As per spec no. RDSO/PE/SPEC/AC/0183-2015(REV.-1)	**01**
07.	Provision of Feeder Junction Box Make : **AECO**	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: **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
Quality control / Electrical
Modern Coach Factory Raebareli

MCF/RBL

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: **VIDISHA ELECT.**	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: **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**

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 : **KNORR** Sr no : **0119412973**	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