	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/2020-21/604

RLY	NFR	COACH NO	204978/C			DATE OF DISPATCH	3-Oct-20
Type	LWSCN1	Shell No.	20G277	DISPATCH TO	SSE/C&W/GHY/KYQ	FUR.NO.	LSCN-1758

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	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 1105/1101

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- V4U-TECHIE	20G277			
2	Lav. side wall			M/S-ATHANCY ALD	LAV.1	------	LAV.2	------
				M/S-ATHANCY ALD	LAV.4	------	LAV.3	------
3	Side wall	LH SIDE		M/S-ECBT CDG	176			
		RH SIDE		M/S-ECBT CDG	176			
4	End wall	PP END		M/S-SIPL PALWAL	---------			
		NPP END		M/S-SIPL PALWAL	---------			
5	Roof			M/S-MCFRBL-CONT.	133			
6	Centre Buffer Coupler			M/S-FRONTIER	PP	137P2	NPP	234P2

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.	9 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 WOW (S&A)	73/95	25-Sep-20
2	Insulation	Satisfactory				

23/12/2020

SSE/QC/MCF/RBL

वरि०अनु० अभियंता
गुणवत्ता विभाग
मे०डि०का०, 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/**604**

RLY	N	F	R	Coach No.	2	0	4	9	7	8	/	C	-	DATE OF DISPATCH	0	3	1	0	2	0	2	0

DISPATCH	SSE/C&W/GHY/KYQ	Type	L	W	S	C	N	1	Shell No.	2	0	G	2	7	7	FUR .NO	LSCN – 1758

9. DETAIL OF BOGIES:

ITEMS	NPP Side				PP Side			
Bogie No	200651				200652			
Bogie Type	FIAT				FIAT			
Frame no.	MCF/RBL/LS5-870				ECBT-375			
Bolster no.	RBL/LS5-2372				MCF/RBL-2299			
Axle No	20 W– 0697 RWF		20 W – 9079 RWF		20 W– 6055 RWF		20 Z– 1618 RWF	
Wheel Dia	917.45	917. 604	917.432	917.591	917.391	917.6	917.431	917.62
Wheel Disc No	TZ 11-19 83523-9WF2	TZ 11-19 76011-9VG1	TZ 06-19 55873-9QK0	TZ 06-19 52389-9PF0	TZ 04-19 40546-90D6	TZ 06-19 52759-9QH5	TZ 06-19 59016-9PI6	TZ 07-19 62477-9RN0
R.B. Nos.	12-19 36384	11-19 32192	12-19 35588	11-19 32237	12-19 34954	12-19 35486	12-19 35250	12-19 35550
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 8001	TAYAL & CO. Sr. NO- 06-20 0055	TAYAL & CO. Sr. NO- 06-20 8143	TAYAL & CO. Sr. NO- 06-20 7898

11. TRACEABILITY OF BOGIE ITEMS :-

S. NO	ITEM	MAKE/ SUPPLIER	SERIAL NO.	
			NPP SIDE	PP SIDE
1.	Yaw Damper	IAI	278425,293507	293523,293518
2.	Primary outer Spring	CMAFJ	06-20 1100-(276,273,386,228)	06-20 1100-(388,238,387,220)
3.	Primary Inner Spring	CMAFJ	06-20,1101-(238,308,21,240)	06-20,1101-(40,33,14,18)
4.	Primary Damper	GABRIEL/IAI	01-20 (14438,14443,14600,14328)	01-20 (14345,144291,14339,14333)
5.	Secondary Damper	IAI	01-20 (302742,302928)	01-20 (295934,295742)
6.	Lateral Damper	IAI	11-19 283559	11-19 283804
7.	Brake Cylinder	KBI	C(9807,8459,8295,9817)K29	C(4441,3074,3363,4842)K29
8.	Brake Caliper	KBI	C-(5347,5570,5405,5376)-29	C-(0924,0781,1068,1111)-29
9.	Brake Disc	KBI	24229047 0016-01/02,24229047 0015-01/02 24229056 0064-28/20,24229056 0074-28/20	24229048 0050-27/20,24229048 0047-27/20 24229048 0049-27/20,24229048 0048-27/20
10.	Ball Joint Control Arm	GMT		
11.	Lateral Bump Stop	GMT/BONY		
12.	Traction Centre make	SF		
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	RF		
19.	Roll Link make	SF /GMT		
20.	Fork make	RNG		
21.	Control Arm Upper	CC	20A764,20A531,20A625,20B45	20B16,20B18,20A710,20A774
22.	Control Arm Lower	CC	19M222,20A317,20A106,20B668	20A138,20A31,20A140,20A180
23.	Phonic Wheel	KBI	K 07-20	K 05-20

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/2020-21/604

RLY	NFR	COACH NO	204978/C			DATE OF DISPATCH	3-Oct-20
Type	LWSCN1	Shell No.	20G277	DISPATCH TO	SSE/C&W/GHY/KYQ	FUR.NO.	LSCN-1758

12. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO(NPP/PP)
1	Air Brake Module	M/s-KBI	5974 28/20
2	Distribution valve	M/s-KBI	2020G11880
3	Pull box	M/s-KBI	
4	FIBA	M/s-KBI	8966/29,8997/29
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-RESPONSIVE INDS DELHI	
9	Lavatory inlay	M/S-SEEMA BHOPAL	
10	UIC Vestibule (PPE)	M/S-ELASTOMER MUMBAI	
11	UIC Vestibule (NPPE)	M/S-ELASTOMER MUMBAI	
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-SHATABDI SAFTEY GLASS VADODARA	
15	Emergency Window	M/S-SHATABDI SAFTEY GLASS VADODARA	
16	Lavatory/hopper Window	M/S-BET INDS PUNJAB	
17	Side panel	M/S-HF VADODARA	
18	Roof Ceiling	M/S-A.B COMPOSITE	
19	Door way Ceiling	M/S-ZAAM TOOLS RBL	
20	Body Side Doors	M/s-SUKATA CDG	
21	Vestibule Door(PPE)	M/s-KALSI LDH	
22	Vestibule Door(NPPE)	M/s-KALSI LDH	
23	Bio Tank	M/s-CEMCON -02NOS+UNIFAB-02NOS	
24	Presurized Flushing(Elect.pneumatic)	M/S-AIR FLOW	
25	Auxiliary Water Tank	M/s-AMIT ENGG. MOHALI	
26	Under Slung Water Tank (2X685L)	M/s-OASIS	
27	Under Slung Water Tank (1x685 L)	M/s-SHIVALIK FAST MOHALI	
28	Health Faucet	M/s- KAPCO VALVES JUC	
29	Lotah Filler Tap	M/s- KAPCO VALVES JUC	
30	Controlled discharge tap	M/s-AGMECO PVT LTD	
31	Lavatory Doors	M/S-EEPL LDH	
32	Seat & Berth	M/S-DURABLE POLYMER LKO	
33	Ventury grill	NIL	
34	RFID	NIL	

23/12/2020

SSE/QC/MCF/RBL

वरि०अनु० अभियंता
गुणवत्ता विभाग
रे०डि०का०, रायबरेली (लालगंज)

	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/2020-21/604

RLY	NFR	COACH NO	204978/C			DATE OF DISPATCH	3-Oct-20
Type	LWSCN1	Shell No.	20G277	DISPATCH TO	SSE/C&W/GHY/KYQ	FUR.NO.	LSCN-1758

13. MODIFICATION (IF ANY) : NIL

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.

23/12/2020 SSE/QC/MCF/RBL चरि०अनु० अभियंता गुणवत्ता विभाग रे०डि०का०, रायबरेली (लालगंज)	23.12.2020 SME/AME/QC/MCF/RBL किरनपाल सहायक यांत्रिक इंजीनियर Asst. Mechanical Engineer आ. रे. डि. का. रायबरेली MCF, RBL	Sudhir Kumar Dy.CQM/MCF/RBL सुधीर कुमार Sudhir Kumar उप प्रमुख Dy. Chief Quality Manager आधुनिक रेल डिब्बा कारख़ाना, 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**	**204978/C**	
RAILWAY	**NFR**	**ELECT. FIT DATE**	**30-09-2020**	**MCF EUR. NO.**	**LSCN-1758**

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

MCF/RBL

	Modern Coach Factory Raebareli आधुनिक रेल डिब्बा कारख़ाना, रायबरेली	DOC NO.: MCF/RBL/QEF/8001 REV NO: 01 DATE: 29.06.2020

ROLLING STOCK CERTIFICATE OF LHB/EOG NON AC 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.0766** HT Panel: **H355.19F.0290**	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 - 3870**	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 : **20/08/0060** Pump 1: **3700** Pump 2: **4790**	As per spec no. EDTS186,REV-A,AM-2	**01 SET**
05.	Provision & Mounting of Pump controller. Make: **DR AUTO** SL.no.: **20/08/0269**	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: **SIGNOTRON** Sr. no.: **08201909**	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

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**	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**

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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): **MLI** 2.(PP): **MLI**	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: **DARSHAN** PP: **DARSHAN**	EDTS101,REV-C,AM-1	**01 SET**
27.	Provision of Anti Skid Disk Brake System.(WSP) Make : **KNORR** Sr no : **0120265223**	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