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/2019-20/1226

RLY	N	F	R	Coach No.	1	9	7	7	3	6	/	C	DATE OF DISPATCH	1	1	-	1	2	-	1	9

DISPATCH TO	Sr.DME/DBRG	Type	L	W	S	C	N	1	Shell No.	9	7	5	5	1	FUR.NO.	LSCNG-317

1. Railway Board's Order No. : 2019/M(C)/142/2, Dated-21-11-2019
2. Tare Weight of Coach : 41.24 Tones
3. Carrying Capacity : (a) Seating : 80 (b) Sleeping : 80 (c) Luggage : NIL

4. Special feature: -

S NO	DESCRIPTION	MAKE/SUPPLIER
A.	Epoxy flooring in lavatory	M/s-ACME INDIA NEW DELHI
B.	Anti slip friendly Grab Bar	M/s-ACME INDIA NEW DELHI
C.	Provision of Health Faucet in lavatories	M/s-ACME INDIA NEW DELHI
D.	Washbasin counter Top (Corian of Duport or Montelli)	M/s-ACME INDIA NEW DELHI
E.	GFRE ceiling instead of NFTC	M/s-ACME INDIA NEW DELHI
F.	DGFRP panels instead of LP panels	M/s-ACME INDIA NEW DELHI
G.	Honey Comb partition frame with DGFRP sheet instead of FRP sheet	M/s-ACME INDIA NEW DELHI
H.	Choke of 5/6 mm in DV side replace with 9 mm in both type (KBI & Faiveley) letter no. MC/LHB/Brake, Dated 27.09.2018	

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	1) 1098 (NPPE) 2) 1105 (PPE)

6. TRACEABILITY OF SHELL ITEMS:

S NO	ITEM		MAKE/SUPPLIER		SERIAL NO			
1.	Under frame	Front Part	PP END	M/S-SFPL	10/19			
			NPP END	M/S-SFPL	10/19			
		Complete	MCF/RBL		97551			
2.	Lav. side wall		M/S- JSL HARIYANA		LAV.1	-	LAV.2	-
			M/S- JSL HARIYANA		LAV.3	-	LAV.4	-
3.	Side wall	LH SIDE	M/S-ECBT(CDG)		25			
		RH SIDE	M/S-ECBT(CDG)		25			
4.	End wall	PP END	M/s-DTL PUNE		--			
		NPP END	M/s-RSM MOHALI		--			
5.	Roof		M/s-ECBT		393			
6.	Centre Buffer Coupler		M/s- FRONTIER		PP END	104P1	NPP END	123P1

7. AIRBRAKE 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. ➢ Max. pressure in BC ➢ All Brake are applied	6 – 10 sec. 3.0 ±0.15 kg/cm². OK	09 Sec. 3.0 kg/cm² 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	M/s-NEROLAC	(SUPPLY & APPLY)	88/87	22.11.19
2.	Insulation	Satisfactory				

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	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/**2019-20/1226**

RLY	N	F	R	Coach No.	1	9	7	7	3	6	/	C	-	DATE OF DISPATCH	1	1	1	2	2	0	1	9

DISPATCH	Sr.DME/DBRG	Type	L	W	S	C	N	1	Shell No.	9	7	5	5	1	FUR .NO	LSCN-G-317

9. DETAIL OF BOGIES:

ITEMS	NPP Side				PP Side			
Bogie No	192245				192246			
Bogie Type	FIAT				FIAT			
Frame no.	RBL-2074				RBL-2085			
Bolster no.	APEX-15				TACPL-04			
Axle No	19 P – 1827 RWF		19 S – 4735 RWF		19 N– 5119 RWF		19 L – 5410 RWF	
Wheel Dia	917.495	917.509	917.546	917.493	917.537	917.507	917.501	917.448
Wheel Disc No	TZ 07-19 63703-9RN7	TZ 08-19 74115-9SL1	TZ 07-19 70620-9RR9	TZ 07-19 70420-9RL8	TZ 07-19 62070-9RL0	TZ 07-19 69745-9RH2	TZ 07-19 67427-9RQ7	TZ 07-19 65778-9RL9
R.B. Nos.	08-19-29980	08-19-29200	08-19-28403	08-19-29069	08-19-29081	08-19-28779	08-19-29005	08-19-28830
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.	CMFSK10-19-5101-081-353	CMFSK05-19-5100-027-48	CMFSK10-19-5101-081-379	CMFSK05-19-5100-027-331	CMFSK10-19-5101-081-357	CMGBD03-16-5100-64-114	CMFSK10-19-5101-081-260	CMGBD03-16-5100-64-189
Compressed Ht. at Tested Load	513.5	472	515.5	472	511.5	472	513	472
10Alignment deviation (mm)	7	7	8	7	13	12	10	12

11. TRACEABILITY OF BOGIE ITEMS :-

S. NO	ITEM	MAKE/ SUPPLIER	SERIAL NO.	
			NPP SIDE	PP SIDE
1.	Yaw Damper	KBI	17572,17561	17578,18580
2.	Primary outer Spring	CMFSK	10-19 1100-078 (246,275,272,294)	10-19 1100-078 (840,807,1140,1157)
3.	Primary Inner Spring	CMFSK	10-19 1101-101 (270,66,55,267)	10-19 1101-101 (869,77,96,70)
4.	Primary Damper	KONIC	03-19 (08369,06892,06411,05882)	03-19 (08422,05333,05341,06400)
5.	Secondary Damper	IAI	09-19 (2775,272898)	09-19 (272997,272847)
6.	Lateral Damper	IAI	05-19 250999	05-19 250877
7.	Brake Cylinder	ESCORT	(48941,49093,49070,49315)	(28569,49067,49092,48934)
8.	Brake Caliper	ESCORT	(28289,28933,28410,28570,)	(49314,28407,28432,28291)
9.	Brake Disc	KBI	24200053 0018-36/19,24200052 0009-36/19 24200026 0019-35/19,24200026 0016-35/19	24198280 0020-35/19,24198280 0000-35/19 24200026 0017-35/19,24200026 0018-35/19
10.	Ball Joint Control Arm	GMT		
11.	Lateral Bump Stop	GMT		
12.	Traction Centre make	SF(SARITA)		
13.	Traction lever make	TAJ		
14.	Ball joint traction lever	ARYAN		
15.	Ball joint traction centre	GMT		
16.	Secondary Rubber Pad	AFW		
17.	Rubber Spring	AR		
18.	Anti roll bar Make	EMSON		
19.	Roll Link make	SARITA/GMT		
20.	Fork make	RNG		
21.	Control Arm Upper	RVE	RVE,270819-2,290819-2,290819-2	290819-2,RVE,180819-2,160819-2
22.	Control Arm Lower	RVE	210819-2,200819-2,170819-2,270819-2	240819-3,270819-2,210819-2,RVE
23.	Phonic Wheel	FAV	FT/KEP-194/194	FT/KEP-194/RW

Signature of SSE/Bogie/QC

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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/2019-20/1226

RLY	N	F	R	Coach No.	1	9	7	7	3	6	/	C	DATE OF DISPATCH	1	1	-	1	2	-	1	9

DISPATCH TO	Sr.DME/DBRG	Type	L	W	S	C	N	1	Shell No.	9	7	5	5	1	FUR.NO.	LSCNG-317

12. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/S- ESCORTS	2019040110
2.	Distribution valve	M/S- ESCORTS	1904A110
3.	Pull box	M/S -FAIVELY TRANS. TECH.INDIA LTD BADDI(HP)	
4.	FIBA	N/A	
5.	Foot Step	M/s- SUPER SPARK PVT. LTD. FARIDABAD	
6.	Decoupling arrangement	M/S-ELASTOMER LINING WORKS, MUMBAI	
7.	Floor board	M/s-TWPL MUMBAI	
8.	PVC	M/s-ACME INDIA NEW DELHI	
9.	Lavatory Inlay	M/S- SEEMA INDS. BHOPAL	
10.	UIC Vestibule (PPE)	M/S-KRP PUNE	
11.	UIC Vestibule (NPPE)	M/S-KRP PUNE	
12.	Gangway bridge mounting (PPE)	M/S- RAKESH IRON STORE, KXH & STEAL WORKS KXH	
13.	Gangway bridge mounting (NPPE)	M/S- RAKESH IRON STORE, KXH & STEAL WORKS KXH	
14.	Body Side Window	M/s-AGF KOLKATA .(ACME INDIA NEW DELHI)	
15.	Emergency Window	M/s-ACME INDIA NEW DELHI	
16.	Hopper Window	M/s-ACME INDIA NEW DELHI	
17.	Side panel	M/s-ACME INDIA NEW DELHI	
18.	Roof ceiling	M/s-ACME INDIA NEW DELHI	
19.	Door way ceiling	M/s-ACME INDIA NEW DELHI	
20.	Partition frame	M/S-SARITA HITECH UMB	
21.	Partition pillar	M/s-ACME INDIA NEW DELHI	
22.	Body Side Doors 1,3	M/S- JBM INDUSTRIES, FARIDABAD	
23.	Body Side Doors 2,4	M/s- JVR INDS, LUDHIYANA	
24.	Vestibule Door(PPE)	M/S- JBM INDUSTRIES, FARIDABAD	
25.	Vestibule Door(NPPE)	M/S- JBM INDUSTRIES, FARIDABAD	
26.	Water purifier	N/A	
27.	Bio Tank	M/S- JSL LIFE STYLE LTD.	
28.	Auxiliary Water Tank	M/s- AMIT ENG. MOHALI	
29.	Under Slung Water Tank(2X685L)	M/s- AMIT ENG. BADDI	
30.	Under Slung Water Tank (1X685L)	M/s- SHIVALIK FAST. MOHALI	
31.	Health Faucet	M/s- KAPCO VALVES JALANDHAR	
32.	Lotah Filler Tap	M/s- KAPCO VALVES JALANDHAR	
33.	Controlled Discharge Tap	M/s- EAUSET PVT LTD GURGAON	
34.	Lavatory Doors	M/s-ACME INDIA NEW DELHI	
35.	Seat & Berth	M/s-ACME INDIA NEW DELHI (DUREABLE LKO)	
36.	Snack Table	N/A	
37.	RFID	N/A	

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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/2019-20/1226

RLY	N	F	R	Coach No.	1	9	7	7	3	6	/	C	DATE OF DISPATCH	1	1	-	1	2	-	1	9

DISPATCH TO	Sr.DME/DBRG	Type	L	W	S	C	N	1	Shell No.	9	7	5	5	1	FUR.NO.	LSCNG-317

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, 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 30 months 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 case extend 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 date of 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 60°)	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.

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गुणवत्ता विभाग
रे०डि०का०, रायबरेली (लालगंज)

वरिष्ठ यांत्रिक अभियन्ता/गुणवत्ता
Senior Mechanical Engineer/Quality
आधुनिक रेल डिब्बा कारखाना, रायबरेली
Modern Coach Factory Raebareli

जोगिन्दर सिंह
Joginder Singh
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/HOG NONAC SCN COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG/HOG NON AC COACHES

TYPE COACH	**LWSCN**		**SHELL/COACH NO**		**197736/C**
RAILWAY	**NFR**	**ELECT.FIT DATE**	**10-12-2019**	**FUR.NO**	**SCN-G-317**

Sr no	Description of test	Remarks
1.	PUMP EQUIPMENTS	OK
2.	LIGHTS, NL,LAP CHARGING SOCKETS	OK
3.	RAILWAY CARRIAGE FAN	OK
4.	WHEEL SLIDE PROTECTION SYSTEM **(WSP)**	OK
5.	WORKING OF 9 KVA TRANSFORMER	OK
6.	WORKING OF REGULATED BATTERY CHARGER	OK
7.	SAFETIES :	
7.1.	FUSES AND THEIR RATING	OK
7.2	CONTROL CIRCUIT	OK
7.3	POWER CIRCUIT	OK

Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG/HOG NONAC SCN COACHES

01.	Switch board cabinet Make : **AMIT ENGG.** On Board Sr no : **AE/USBC-1537** HT Panel Sr no : **AE/USBC-1538**	EDTS 333, Rev`01'Am-1	**01**
02.	Pump equipment with PLC controller & pump box Make : **DR AUTO** Sr no PA: **2019/08/0096** Sr no.1 : **2946** Sr no.2 : **3424** Srno.CPA: **2019/08/0011-DR AUTO**	As per spec EDTS 186,Rev-a, Am- 2	**01**
03.	Emergency light system for EOG type coaches (AEL), Make : **DR AUTO**	EDTS 151,Rev –c Am-1 & 2	**04**
04.	Passenger Alarm Cum Indication Light (PACIL) Make: **RT VISION**	As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-I	**02**
05.	Fitment of Switch Plate Assly(Cabin Side) Make : **SALZER/RECORD**	EDML 086,Rev-03, ITEM-01	**20**
06.	Fitment of Switch Plate Assly Corridor Side),Make : **SALZER/RECORD**	EDML 086, Rev 03, ITEM-02	**20**
07.	Railway carriage Fan 400mm Sweep, 110V DC with crash worthy features. Make: **ORIENT**	IS 6680/92,First Rev, RCF Amdt 4, Col I, Ty XI, RCF Cor I.	**30**
08.	Cabin,Corridor,doorway and Gangway Lights. Make: **RT VISION**	As per RDSO/PE/SPEC/TL-0091(REV-1) TYPE B-1	**26**
09.	Lavatory Light Make: **DR AUTO**	As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-D &	**04**
10.	Night Light Fitting (LED BASED) Sticker For Berth Number On Night light Fitting For LHBSCN(80-BERTHER)Coaches Make : **INTRA**	CC76289 & CC76443	**09**

Senior Section Engineer
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MCF/RBL

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG/HOG NONAC SCN COACHES

11.	Battery fuse box +ve Make : **ISGPL**	LW 71001,Alt-F	**01**
12.	Battery fuse box –ve Make : **ISGPL**	LW 71002,Alt-F	**01**
13.	Regulated battery charger Make : **WAVES** Sr no: **W4K5K-19966**	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	**01**
14.	9KVA transformer Make :**VIMAL** Sr no :**VTC 3089 LHB-2558**	As per RDSO/PE/SPEC/TL 0158, 2010, Rev`0',Ty I.	**01**
15.	ZS coupling 400A/750V/03Ph/50hz. Make : **PRIME ELECT.**	As per spec No EDTS 105,Rev`e' Am-3, TYPE-2	**01 set**
16.	Feeder junction boxes. Make : **MV ELECTRO**	EDTS-328 REV-C	**01 set**
17.	Wheel set earthling equipment. Make : **DARSHAN ENTERPRISES**	EDTS101,REV-C,AM-1	**02 sets**
18.	Wheel Slide Protection System (WSP) Make : **ESCORT** Sr no : **190001-60527-0166**	M/s : **ESCORT**	**01 set**
19.	110V,120AH,VRLA SMF BATTERY SET WITH 19 MONOBLOCK (6V EACH) PRECHARGED,WIH MODIFIED TRAY TOSKED-644 Make : **HBL** Lug date : **11/19**	RDSO/pe/spec/ac-0009 rev-1-2008 amdt-1	**01 set**
20.	Battery box for LHB coaches. Make : **ANANYA**	CC 91205	**01**

वरिष्ठ अनुभाग अभियन्ता गुणवत्ता नियंत्रण आरे०डि०का० / लालगंज / रायबरेली S.S.E./Elect-QC/M.C.F./LLJ/RBL **SSE/EL/QC**	वरिष्ठ विद्युत अभियन्ता रेल कोच फैक्टरी, रायबरेली, Sr. Electrical Engineer / RCF / RBL **AWM(ELECT.)/MCF/RBL** **SEE(P)/MCF/RBL**

MCF/RBL