



# Modern Coach Factory Raebareli

## आधुनिक रेल डिब्बा कारखाना, 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/2018-19/1180

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2019																						
RLY	E	R	-	Coach No.	1	9	1	9	2	2	/	C	DATE OF DISPATCH	1	1	-	0	2	-	1	9	
DISPATCH TO	CWM/LLH	Type	L	W	S	C	N	1	Shell No.	8	7	4	9	1	-	2	0	1	8	-	1	9
MCF/113/2 Dated-07-02-2019																						

- Railway Board's Order No. : 2018/M(C)/142/2, Dated-07-02-2019
- Tare Weight of Coach : 41.24 Tones
- Carrying Capacity : (a) Seating: 80 (b) Sleeping: 80 (c) Luggage: NIL

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) 1103(NPPE) 2) 1102(PPE)

4. CBC height/Bulldozer height

5. TRACEABILITY OF SHELL ITEMS:					MAKE/SUPPLIER		SERIAL NO			
S NO	ITEM									
1.	Under frame	Front Part	PP END	M/S E.c.blades &tool pvt. Ltd CDG		12				
			NPP END	M/S E.c.blades &tool pvt. Ltd CDG		12				
		Complete	MCF/RBL		87491					
2.	Lav. side wall		M/S Rail tech pvt.ltd. KXH		LAV.1	---	LAV.2	---		
			M/S Rail tech pvt.ltd. KXH		LAV.3	---	LAV.4	---		
3.	Side wall	LH SIDE	MCF/RBL (CONTRACTOR V4U )		307					
		RH SIDE	MCF/RBL (CONTRACTOR V4U )		307					
4.	End wall	PP END	M/s Shivalic fastners pvt.ltd. mohali		---					
		NPP END	M/s Shivalic fastners pvt.ltd. mohali		---					
5.	Roof	M/S Pennar ind. Ltd. Thiruvallur Cheenai		283						
6.	Centre Buffer Coupler		M/s FRONTIER LTD		PP END	97	NPP END	16		

6. AIRBRAKE TEST REPORT:			DESCRIPTION	SPEC. VALUE	OBSERVED
S NO	ITEM				
1.	Full application	brake	➤ Reduce pressure of BP from 5.0 to 3.4 kg/cm <sup>2</sup> . ➤ Max. pressure in BC ➤ All Brake are applied	6 - 10 sec. 3.0 ± 0.15 kg/cm <sup>2</sup> . OK	06 Sec. 3.0 kg/cm <sup>2</sup> OK
2.	Insensitivity		➤ Exhaust BP @ 0.3 kg/cm <sup>2</sup> /min.	No brake application	OK
3.	Sensitivity		➤ Exhaust BP @ 0.1 kg/cm <sup>2</sup> /Sec, after 06 Sec.	Brake must apply	OK

7. PAINTING DETAILS:			APPLICATION BY MCF/ CONTRACTOR(SUPPLY & APPLY)		AVERAGE GLOSS VALUE
S NO	DESCRIPTION	TYPE OF PAINT	MAKE		
1.	Paint	P.U	M/s -GS	Supply & apply	91/88
2.	Insulation			Satisfactory	

*Signature*  
SSE/QC/MCF/RBL

गुणवत्ता विभाग  
रेडिंक ०, रायबरेली (लालगंज)





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/1180

Coach No.	1	9	1	9	2	2	/	C	-	DATE OF DISPATCH	1	1	.	0	2	.	1	9
RLY	E	R	-	Type	L	W	S	C	N	1	Shell No.	8	7	4	9	1	-	-

## 8. DETAIL OF BOGIES:

ITEMS	NPP Side				PP Side			
Bogie No	182450				182449			
Bogie Type	FIAT				FIAT			
Frame no.	ECBT-1401				ECBT-1402			
Bolster no.	APEX-21				APEX-36			
Axle No	18 G-2918 RWF		18 G - 3090 RWF		18G-3262 RWF		18F-9609 RWF	
Wheel Dia	917.742	917.679	917.752	917.667	917.50	917.55	917.673	917.682
Wheel Disc No	TZ 08-18 43596-8RR4	TZ 07-18 41458-8RM5	TZ 07-18 42761-8RR7	TZ 07-18 42760-8RP7	TZ07-18 39928-8RT1	TZ07-18 41618-8RR4	TZ08-18 45017-8RN4	TZ08-18 45016-8RN4
R.B. Nos.	09-18 23078	09-18 21553	09-18 02647	09-18 23669	09-18 22298	09-18 22481	09-18 23153	09-18 23234
CT R B Make	TIMKEN		TIMKEN		TIMKEN		TIMKEN	

## 9. 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.	CMFSK01-19- 5101-105-	CMGBD05-18- 5100-66-358	CMFSK01-19- 5101-107	CMGBD05-18- 5100-66-403	CMFSK01-18- 5101-62	CMGBD05-18- 5100-641-363	CMFSK01-18- 5101-87	CMGBD05-18- 5100-64-360
Compressed Ht. at Tested Load	515	471	515	471	516	472	515	472
Alignment deviation (mm)	8	11	8	11	10	6	8	5

## 10. TRACEABILITY OF BOGIE ITEMS :-

S. NO	ITEM	MAKE/ SUPPLIER	SERIAL NO.	
			NPP SIDE	PP SIDE
1.	Yaw Damper	KBI	14412,14402	12376,13295
2.	Primary outer Spring	CMGBD	10-18 1100-121(325,256,247,296)	10-18 1100-122 (204,289,262,195)
3.	Primary Inner Spring	CMRSK,CMRSK	08-18 F06-41-06Y (1943,3253,2835,9325)	04-18 1101-402 (262,34,88,198)
4.	Primary Damper	KNORR	12-18(48295,48306,48563,48570)	10-18(48523,48840,48856,48854)
5.	Secondary Damper	GEREP	KW16-2018 301550739	KW 16-2018 301550739
6.	Lateral Damper	IAI	12-18 237262	12-18 237234
7.	Brake Cylinder	KBI	A19(9709,9102,9001,9706)-29	A19(9713,9106,3062,9716)-29
8.	Brake Caliper	KBI	A19(7862,7955,7957,7861)-29	A19(7863,7926,7956,7854)-29
9.	Brake Disc	KBI	24164687 0014-43/18,24164609 0013-43/18 24167538 0033-44/18,24167538 0032-44/18	24162276 0012-39/18,24162277 0041-39/18 24164609 0039-43/18,24164688 0017-43/18
10.	Ball Joint Control Arm	AR		
11.	Lateral Bump Stop	AR		
12.	Traction Centre make	SARITA/SF		
13.	Traction lever make	JI		
14.	Ball joint traction lever	AR		
15.	Ball joint traction centre	AR		
16.	Secondary Rubber Pad	DUREL		
17.	Rubber Spring	AR		
18.	Anti roll bar Make	EMSON		
19.	Roll Link make	SARITA/GMT,SF/GMT		
20.	Fork make	EMSON		
21.	Control Arm Upper	RVE	121218-1,131118-1,131118-2,131118-1	121218-2,131218-1,131218-1,131218-1
22.	Control Arm Lower	RVE	171218-1,RVE,161218-2,171218-1	171218-4,171218-1,171218-1,171218-1

Signature of SSE/Bogie/QC





# Modern Coach Factory Raebareli

## आधुनिक रेल डिब्बा कारखाना, 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/2018-19/1180

Rolling Stock Certificate No.: MCF/RBL/QC/RCC/2015																						
RLY	E	R	-	Coach No.	1	9	1	9	2	2	/	C	DATE OF DISPATCH	1	1	-	0	2	-	1	9	
DISPATCH TO	CWM/LLH	Type	L	W	S	C	N	1	Shell No.	8	7	4	9	1	-	2	0	1	8	-	1	9
TRACEABILITY OF FURNISHING ITEMS:														SUPPLIER				SERIAL NO				

**11. TRACEABILITY OF FURNISHING ITEMS:**

SNO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s KBI Faridabad. New Delhi	1936 01/19
2.	Pull box	M/s KBI Faridabad. New Delhi	
3.	Distribution valve	M/s KBI Faridabad. New Delhi	2018M6476
4.	Foot Step	M/s- SUPER SPARK PVT. LTD. FARIDABAD	
5.	Decoupling arrangement	M/S- ELASTOMER MUMBAI	
6.	Floor board	M/s- EG WOOD BOARD HYDARABAD	
7.	PVC	M/s Responsive ind.mumbai	
8.	Lavatory Inlay	M/s- SEEMA INDS. BHOPAL	
9.	UIC Vestibule (PPE)	M/s-Suncrest ind.kolkata	
10.	UIC Vestibule (NPPE)	M/S- ELASTOMER MUMBAI	
11.	Gangway bridge mounting (PPE)	M/s COMPETENT ENGG.	
12.	Gangway bridge mounting (NPPE)	M/s COMPETENT ENGG.	
13.	Body Side Window	M/S- AGF INDS, KOLKATA	
14.	Emergency Window	M/S- AGF INDS, KOLKATA	
15.	Hopper Window	M/S- S.S PUNJAB	
16.	Side panel	M/S-SUNGLOW PUNJAB LAMINATE	
17.	Roof ceiling	M/s EXCEL IND KOLKATA	
18.	Door way ceiling	M/s- RAJA IND. KHANNA	
19.	Body Side Door	M/S- JVR LDH	
20.	Vestibule Door(PPE)	M/s- JBM FARIDABAD	
21.	Vestibule Door(NPPE)	M/s- JBM FARIDABAD	
22.	Bio Tank	M/s- SARVAN INFRATEL LTD	
23.	Auxiliary Water Tank	M/s- AMIT ENG. MOHALI	
24.	Under Slung Water Tank( 2X685L)	M/s- AMIT ENG. MOHALI	
25.	Under Slung Water Tank (1X685L)	M/s Shivalic fastners pvt.ltd. mohali	
26.	Flexible Faucet	M/s- KAPCO VALVES, JALANDHAR	
27.	Lotah Filler Tap	M/s- KAPCO VALVES, JALANDHAR	
28.	Controlled Discharge Tap	M/s- AGMECO PVT. LTD. UK	
29.	Lavatory Doors	M/s- KALSI, LDH	
30.	Seat & Berth	M/S- SUKATA CDG	
31.	Snack Table	N/A	

*Signature*  
 SSE/QC/MCF/RBL  
 कर्मचारी विभाग

गुणवत्ता विभाग  
 रेडिओका, रायबरेली (लालगंज)





# Modern Coach Factory Raebareli

## आधुनिक रेल डिब्बा कारखाना, 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/2018-19/1180

RLY	E	R	-	Coach No.	1	9	1	9	2	2	/	C	DATE OF DISPATCH	1	1	-	0	2	-	1	9
-----	---	---	---	-----------	---	---	---	---	---	---	---	---	------------------	---	---	---	---	---	---	---	---

DISPATCH TO	CWM/LLH	Type	L	W	S	C	N	1	Shell No.	8	7	4	9	1	-	2	0	1	8	-	1	9
-------------	---------	------	---	---	---	---	---	---	-----------	---	---	---	---	---	---	---	---	---	---	---	---	---

12. MODIFICATION (IF ANY) : NIL

13. DEVIATION (IF ANY) : NIL

14. ITEM FITTED ON THE COACH ON TRIAL : NIL

S NO	ITEM PARTICULARS	PURPOSE	REPORT	REFERENCE & PERIOD OF TRIAL
			Frequency	

### 15. WARRANTY:

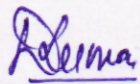
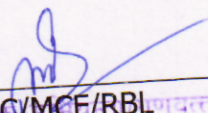
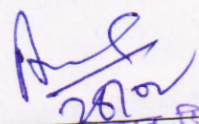
S NO	COMPONENTS	WARRANTY
1	Brake Pad, wheels, flushing valves, push gravity cocks, moldings, window glasses, mirrors, clutch wire etc. ( items which are consumable in nature)	NIL
2	Other coach furnishing sub assemblies(bought out items)	24 months from the date of dispatch of coach OR 30 months from the date of supply of material whichever is earlier.

#### NOTE:

- This warranty covers free supply of parts which wear out and fails within warranty period of normal service.
- This doesn't covers faults arising out of accident, non standard maintenance practices, abnormal use or mishandling, vandal activity, arson & deficient/pilferage etc.
- 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.
- Whether a defective part is to be replaced or repaired shall be at the discretion of MCF/RBL.
- For any complain/ suggestion please Mail at qualityrcfbl@gmail.com
- 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.

 SSE/QC/MCF/RBL गुणवत्ता विभाग रेडिओका, रायबरेली (लालगंज)	 AME/QC/MCF/RBL Senior Mechanical Engineer/Quality आधुनिक रेल डिब्बा कारखाना, रायबरेली Modern Coach Factory, Raebareli	 Dy. Chief Quality Manager आधुनिक रेल डिब्बा कारखाना, रायबरेली Modern Coach Factory, Raebareli
---	--	--





Modern Coach Factory Raebareilly  
आधुनिक रेल डिब्बा कारखाना, रायबरेली

DOC NO.: MCF/RBL/QEF/8001

REV NO: 00

DATE:18.01.2017

PAGE 1 OF 3

**FOR ELECTRICAL ITEMS**

ROLLING STOCK CERTIFICATE OF LHB/EOG NON AC SCN COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG NON AC COACHES

TYPE COACH	LWSCN	SHELL/COACH NO	191922/C
RAILWAY	ER	DATE OF DESPATCH	
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 Raebareilly





Modern Coach Factory Raebareli  
आधुनिक रेल डिब्बा कारखाना, रायबरेली

DOC NO.: MCF/RBL/QEF/8001

REV NO: 00

DATE:18.01.2017

PAGE 2 OF 3

**FOR ELECTRICAL ITEMS**

ROLLING STOCK CERTIFICATE OF LHB/EOG NONAC SCN COACHES

01.	Switch board cabinet Make : <b>NEC</b> On Board Sr no : <b>2018/16/27</b> HT Panel Sr no : <b>2018/16/12</b>	EDTS 333, Rev`01'Am-1	<b>01</b>
02.	Pump equipment with PLC controller & pump box Make : <b>DR AUTO</b> Sr no PA: <b>2018/12/006</b> Sr no.1 : <b>18110159</b> Sr no.2 : <b>18110423</b> Sr no.CPA: <b>2018/12/018-DR AUTO</b>	As per spec EDTS 186,Rev-a, Am- 2	<b>01</b>
03.	Emergency light system for EOG type coaches (AEL), Make : <b>CONCORD</b>	EDTS 151,Rev -c Am-1 & 2	<b>04</b>
04.	Passenger Alarm Cum Indication Light (PACIL) Make: <b>KAVERI</b>	As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-I	<b>02</b>
05.	Fitment of Switch Plate Assly(Cabin Side) Make : <b>SSK/SALZER</b>	EDML 086,Rev-03, ITEM-01	<b>20</b>
06.	Fitment of Switch Plate Assly Corridor Side),Make : <b>SSK/SALZER</b>	EDML 086, Rev 03, ITEM-02	<b>20</b>
07.	Railway carriage Fan 400mm Sweep, 110V DC with crash worthy features. Make : <b>CG POWER</b>	IS 6680/92,First Rev, RCF Amdt 4, Col I, Ty XI, RCF Cor I.	<b>30</b>
08.	Cabin, Corridor, doorway and Gangway Lights. Make: <b>RT VISION</b>	As per RDSO/PE/SPEC/TL-0091(REV-1) TYPE B-1	<b>26</b>
09.	Lavatory Light Make: <b>RT VISION</b>	As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-D &	<b>04</b>
10.	Night Light Fitting (LED BASED) Sticker For Berth Number On Night light Fitting For LHBSCN(80-BERTHER)Coaches Make : <b>AGASTYA</b>	CC76289 & CC76443	<b>09</b>

Senior Section Engineer  
Quality control / Electrical  
Modern Coach Factory Raebareli





Modern Coach Factory Raebareli  
आधुनिक रेल डिब्बा कारखाना, रायबरेली

DOC NO.: MCF/RBL/QEF/8001

REV NO: 00

DATE:18.01.2017

PAGE 3 OF 3

## FOR ELECTRICAL ITEMS

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

11.	Battery fuse box +ve Make : <b>INTEG</b>	LW 71001,Alt-F	<b>01</b>
12.	Battery fuse box -ve Make : <b>NEC</b>	LW 71002,Alt-F	<b>01</b>
13.	Regulated battery charger Make : <b>IC ELECTRICAL</b> Sr no: <b>12-18-0094</b>	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	<b>01</b>
14.	9KVA transformer Make : <b>PANTRONICS</b> Sr no : <b>PAN-18018023</b>	As per RDSO/PE/SPEC/TL 0158, 2010, Rev` 0',Ty I.	<b>01</b>
15.	ZS coupling 400A/750V/03Ph/50hz. Make : <b>MAA LAXMI INDUSTRIES.</b>	As per spec No EDTS 105,Rev` e' Am-3, TYPE-2	<b>01 set</b>
16.	Feeder junction boxes. Make : <b>INTERNATIONAL</b>	EDTS-328 REV-C	<b>01 set</b>
17.	Wheel set earthing equipment. Make : <b>DARSHAN INTERPRISES</b>	EDTS101,REV-C,AM-1	<b>02 sets</b>
18.	Wheel Slide Protection System (WSP) Make : <b>KNORR</b> Sr no : <b>0118420522</b>	M/s : <b>KNORR</b>	<b>01 set</b>
19.	110V,120AH,VRLA SMF BATTERY SET WITH 19 MONOBLOCK (6V EACH) PRECHARGED,WIH MODIFIED TRAY TOSKED-644 Make : <b>HBL</b> Lug date : <b>07/18</b>	RDSO/pe/spec/ac-0009 rev-1- 2008 amdt-1	<b>01 set</b>
20.	Battery box for LHB coaches. Make : <b>TECHNO</b>	CC 91205	<b>01</b>

 <b>SSE/EL/QC</b> वरिष्ठ अनुभाग अभियन्ता	 <b>AWM(ELECT.)/MCF/RBL</b> <b>SEE(P)/MCF/RBL</b>
--	---

मुणवत्ता नियंत्रण  
आपरेटिंगका/लातगंज/रायबरेली  
S.S.E/Elect-QC/M.C.F./LLJ/RBL

सं कार्य प्रबन्धक/विद्युत  
आपरेटिंगका/रायबरेली  
A.W.M./Electrical/MCF/RBL