



आधुनिक रेल डिब्बा कारखाना, रायबरेली

MODERN COACH FACTORY, RAEBARELI

L3T-419

FORM NO: RCF/RBL/QMF 8002
VERSION: 2016-01-13**ROLLING STOCK CERTIFICATE**

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2016-17/91

SHELL NO.	5	3	1	5	4	-	2	0	1	6	-	2	0	1	7	DATE OF DISPATCH	2	2	0	7	2	0	1	6
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------------	---	---	---	---	---	---	---	---

RLY	C	R	-	-	Type	L	W	A	C	C	N	Coach No.	1	6	1	3	4	/	C	-
-----	---	---	---	---	------	---	---	---	---	---	---	-----------	---	---	---	---	---	---	---	---

- Railway Board's Order No. : 2015/M(C)/142/1 Dtd. 18.05.2016
- Tare Weight of Coach : 45.6 Tonnes
- Carrying Capacity : (a) Seating : 72 (b) Sleeping : 72 (c) Luggage : NIL

4. 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	4250
4.	CBC height/Buffer height from Rail level 1105 +0/-15	1) 1098 (NPPE) 2) 1097 (PPE)

5. TRACEABILITY OF SHELL ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO			
1.	Underframe	M/s DTL Ancillaries Ltd. PUNE MCF/RBL	PP END	53154	NPP END	53154
	Front Part Complete					
2.	Side wall	MCF/RBL	RH	53154	LH	53154
3.	End wall	NPP- M/s Rail Tech KXH	PP END	53154	NPP END	53154
		PP- M/s Rail Tech KXH				
4.	Roof	M/s DTL Ancillaries Ltd. PUNE				
5.	Centre Buffer Coupler	M/s FAIVELEY	PP END	B16062B	NPP END	B16063B
6.	Buffers	N.A.				

6. 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/cm ² .	6 - 10 sec.	8 sec.
		> Max. pressure in BC	3.0 ±0.15 kg/cm ² .	3.0 kg/cm ²
		> All Brake are applied	OK	OK
2.	Insensitivity	> Exhaust BP @ 0.3 kg/cm ² /min.	No brake application	OK
3.	Sensitivity	> Exhaust BP @ 0.1 kg/cm ² /Sec, after 06 Sec.	Brake must apply	OK

7. PAINTING DAETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U	M/s VIBGYOR	94/91
2.	Insulation		Satisfactory	

वरिष्ठ अनुसंधान अभियंता
SSE/QC/MCF/RBL

रेडिका, रायबरेली (लालगंज)



L37-419

आधुनिक रेल डिब्बा कारखाना
MODERN COACH FACTORY RAEBARELI

FORM NO: MCF/RBL/QMF 8002
VERSION: 2016-01-13

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2016-17/091

SHELL No.	5	3	1	5	4	-	2	0	1	6	-	1	7	-	-	-	-	DATE OF DISPATCH	2	2	/	0	7	/	1	6
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------------	---	---	---	---	---	---	---	---

RLY	C	R	Type	L	W	A	C	C	N	Coach No.	1	6	1	3	4	/	C		
-----	---	---	------	---	---	---	---	---	---	-----------	---	---	---	---	---	---	---	--	--

8. DETAIL OF BOGIES :

ITEMS	PP Side				NPP Side			
Bogie No	160302				160301			
Bogie Type	LWACCN				LWACCN			
Frame no.	MCF/RBL/BEC-129				MCF/RBL/BEC-142			
Bolster no.	RBL-333				RBL-596			
Axle No	P-9455 RWF		P-9106 RWF		P-9517 RWF		P-9258 RWF	
Wheel Dia	917.128	917.178	917.113	917.174	916.925	917.042	916.938	917.032
Wheel Disc No	7299-00167 VR 15	7274-00027 VR 15	7299-00191 VR 15	7304-00064 VR 15	7274-00031 VR 15	7283-00155 VR 15	7283-00448 VR 15	7302-00185 VR 15
R.B. Nos.	02-15 02773	03-15 03599	02-15 02766	03-15 03551	02-15 02257	02-15 02509	02-15 03113	03-15 03423
CT R B Make	TIMKEN		TIMKEN		TIMKEN		TIMKEN	

9. SECONDARY SUSPENSION LOAD DEFLECTION VALUES

DESCRIPTION	Bogie PP side				Bogie NPP side			
	Secondary 1		Secondary 2		Secondary 1		Secondary 2	
	Outer	Inner	Outer	Inner	Outer	Inner	Outer	Inner
Make & Nos.	G15-11A-782	CMGBD03-16-513-06-18	CMAFJ02-16-8836-11	CMGBD03-16-513-06-69	CMAFJ 02-16-8836-29	CMGBD 03-16-513-06	CMAFJ 02-16-883-24	CMGBD03-16-513-06
Compressed Ht. at Tested Load	513	465	515	464	514	468	515	466
Alignment deviation (mm)	10	8	6	8	10	7	10	6

10. TRACEABILITY OF BOGIE ITEMS:

S. NO	ITEM	SERIAL NO.		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	RSK03 WA(573,406,397,136)	RSK03 WA(202,346,140,428)	RSK
2.	Primary inner Spring	CMGBD 02-16-143-72(86,199,61,25)	L&S 10-15 CVB 2638	CMGBD/L&S
3.	Primary Damper	2016-05(32645,32490,32765,32662)	2016-05 (32769,32745,32654,32752)	KONI
4.	Secondary Damper	S.V.DAWN 12-15 33509001	KNORR 03-16(0251,0222)	S.V.DAWN/KNORR
5.	Lateral Damper	S.V.DAWN 12-15 33500459	KNORR 37-2015 (3959)	S.V.DAWN/KNORR
6.	Brake Cylinder	3183K29,3156K29,3143K29,3184K29	3136K29,3087K29,3088K29,3139K29	KBI
7.	Brake Caliper	3006-29,3050-29,3037-29,3007-29	2985-29,2982-29,2983-29,2987-29	KBI
8.	Brake Disc	24067896 0029-08/16,24067813 0021-08/16 24067813 0023-08/16,24067897 0002-08/16	24067813 0018-09/16,24067815 0019-08/16 24067813 0026-08/16,24062267 0023-33/15	KBI
9.	Ball Joint Control Arm			MGN
10.	Lateral Bump Stop			MGN
11.	Traction Centre make			EMSON
12.	Traction lever make			SARITA
13.	Ball joint traction lever			GMT
14.	Ball joint traction centre			MGN/GMT
15.	Secondary Rubber Pad			TECSPAK
16.	Rubber Spring			GMT
17.	Anti roll bar make			EMSON/SARITA
18.	Roll Link make			SARITA/MGN
19.	Fork make			SARITA

Signature of SSE/Bogie/QC



आधुनिक रेल डिब्बा कारखाना, रायबरेली

MODERN COACH FACTORY, RAEBARELI

FORM NO: RCF/RBL/QMF 8002
VERSION: 2016-01-13

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2016-17/91

SHELL NO.	5	3	1	5	4	-	2	0	1	6	-	2	0	1	7	DATE OF DISPATCH	2	2	0	7	2	0	1	6
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------------	---	---	---	---	---	---	---	---

RLY	C	R	-	-	Type	L	W	A	C	C	N	Coach No.	1	6	1	3	4	/	C	-
-----	---	---	---	---	------	---	---	---	---	---	---	-----------	---	---	---	---	---	---	---	---

11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s KBI ,Faridabad ,New Delhi	16B1415
2.	Pull box	M/s KBI ,Faridabad ,New Delhi	
3.	DV	M/s KBI ,Faridabad ,New Delhi	2015M2025
4.	PVC	M/s Responsive Industries, Mumbai	
5.	UIC Vestibule (PPE)	M/s Fricmart Gaziyaab	
6.	UIC Vestibule (NPPE)	M/s Fricmart Gaziyaab	
7.	Foot Step	M/s Hitech Infra RBL	
8.	Decoupling arrangement	M/s Kohinoor Industries, Faridabad	
9.	Body Side Window	M/s Rail Tech, Kapurthala	
10.	Emergency Window	M/s Rail Tech, Kapurthala	
11.	Lavatory/hooper Window	M/s Rail Tech, Kapurthala	
12.	Roof Ceiling	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
13.	Non-AC Area Ceiling	M/s Gandhi Enterprises	
14.	Supply Air Duct	M/s Hanspal Coach Products Kapurthala	
15.	Body Side Doors	M/s JBM Faridabad	
16.	Compartment Door (PPE)	M/s Rail Tech, Kapurthala	
17.	Compartment Door (NPPE)	M/s Rail Tech, Kapurthala	
18.	Vestibule Door(PPE)	M/s Kalsi, Ludhiana	
19.	Vestibule Door(NPPE)	M/s Kalsi ,Ludhiana	
20.	CDTS/Bio Tank	M/s Amit Engineers Mohali PB	
21.	Auxiliary Water Tank	M/s Shivalik Fastener Mohali PB	
22.	Under Slung Water Tank(450 L)	M/s Shivalik Fastener Mohali PB	
23.	Under Slung Water Tank (2X685L)	M/s Shivalik Fastener Mohali PB	
24.	Flexible Faucet	M/s Hindustan Fibre Ltd. Vadodra (Gujarat)	
25.	Lotah Filler Tap	M/s Metco Delhi	
26.	Lavatory Modoules	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
27.	Lavatory Doors	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
28.	Waste Bin Arrangement	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
29.	Fire Extinguisher	M/s Agni Safety Devices Haryana	NPP-80122 PP-7861
30.	Side Wall panel	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
31.	Seat & Berth	M/s Savitri Engg. Products Pontasahib HP	
32.	Light Luggage Rack	M/s Techno Industries, Allahabad	
33.	Snack Table	M/s Anjani Techno Plasts Noida	

वरिष्ठ अभियंता
SSE/OC/MCF/RBL
गुणवत्ता विभाग

रेडिका, रायबरेली (लाहौर)





आधुनिक रेल डिब्बा कारखाना, रायबरेली

MODERN COACH FACTORY, RAEBARELI

FORM NO: RCF/RBL/QMF 8002
VERSION: 2016-01-13

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2016-17/91

SHELL NO.	5	3	1	5	4	-	2	0	1	6	-	2	0	1	7	DATE OF DISPATCH	2	2	0	7	2	0	1	6
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------------	---	---	---	---	---	---	---	---

RLY	C	R	-	-	Type	L	W	A	C	C	N	Coach No.	1	6	1	3	4	/	C	-
-----	---	---	---	---	------	---	---	---	---	---	---	-----------	---	---	---	---	---	---	---	---

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 blocks, wheels, push gravity cocks, flushing valves, moldings, window glasses, mirrors, roller blinds, curtain & bulbs etc. (items which are consumable in nature)	NIL
2	Other coach furnishing sub assemblies(bought out items)	24 months date of dispatch of coach or 30 months from 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 RCF/RBL.
- For any complain/ suggestion please Mail at qualityrcfbl@gmail.com

 वरि०अनु० अभियंता SSE/OC/MCF/RBL रेडिका, रायबरेली (लालगंज)	 सहायक यांत्रिक अभियंता/गुणवत्ता Asst. Mechanical Engineer/Quality डिब्बा कारखाना, लालगंज, रायबरेली	 उप मु.यांअभि/कनि. DY CME/FUR/MCF/RBL रेडिका, रायबरेली (लालगंज) RCF/RBL/LLJ
--	---	---

Coach Factory, Lalganj, Raebareli



3T-419

रेडिकल / रायबरेली



Govt. of India- Ministry of Railways
(MODERN COACH FACTORY RAEBARELI)



MCF/RBL/QEF8001
VER. 01.06.2016
PAGE 1 OF 5

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES

TYPE COACH	LWACCN	SHELL/COACH NO	16134/C
RAILWAY	CR	DATE OF DESPATCH	
Sr no	Description of tests		Remarks
1.0	REFERENCE SPECIFICATION : L 446		
1.1	AIR CONDITIONING TEST : ELPS/TP/AC 01.		
1.2	CODE OF PRACTICE OF WIRING : ELPS/SPEC/EOG/AC-01		
2.0	INSULATION RESISTANCE : Setting of insulation monitoring relay at 30K ohms as per TD 111 of M/s LHB.		
	Observed status : HEALTHY		
3.0	AIR DELIVERY MEASUREMENT	OBSERVED VALUE	OK
3.1	Fresh Air	29.00 Cub mtr/min	OK
3.2	Return Air	82.51 Cub mtr/min	OK
3.3	Exhaust Air	10.56 Cub mtr/min	OK
3.4	Conditioned Air	193.87 Cub mtr/min	OK
4.0	PRE COOLING TEST: Max 01 hr. Time taken to pre cool from 45 deg centigrade to 24/22 deg C during OFF LOAD condition PP Side :23.5°C NPP Side :20.7°C		OK
5.0	PULL DOWN TEST: Max 02 hrs. Time taken to pull down from 45 deg C to 24/22 deg C during FULL LOAD condition. Not done		OK

(Signature)
Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli



Govt. of India- Ministry of Railways
(MODERN COACH FACTORY RAEBARELI)



MCF/RBL/QEF8001
VER. 01.06.2016
PAGE 2 OF 5

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB EOG AC COACHES

Sr no	Description of test	Remarks
6.0	HUMIDITY CONTROL	OK
7.0	PUMP EQUIPMENTS	OK
8.0	WORKING OF EXHAUST FANS OVER LAVATORIES	OK
9.0	WORKING OF COMPOSITE PANTRY	OK
10.0	COMPARTMENT LIGHT	OK
11.0	PUBLIC ADDRESSING SYSTEM (PAS)	OK
12.0	WHEEL SLIDE PROTECTION SYSTEM (WSP)	OK
13.0	WORKING OF 60KVA TRANSFORMER	OK
14.0	WORKING OF REGULATED BATTERY CHARGER	OK
15.0	WORKING OF EMERGENCY BATTERY CHARGER	OK
16.0	SAFETIES :	OK
16.1	THERMOSTAT :	OK
16.2	ROTARY 07 SET POINTS (NORMAL CONDITION)	OK
16.3	MID SET POINTS (SENSORS FAILED CONDITIONS)	OK
16.4	HYGROSTAT	OK
16.5	CONTROL CIRCUIT	OK
16.6	POWER CIRCUIT	OK
17.0	REFRIGERANT USED	R 407C OK

(Signature)

Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli



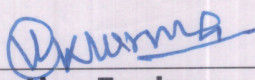
**Govt. of India- Ministry of Railways
(MODERN COACH FACTORY RAEBARELI)**



MCF/RBL/QEF8001
VER. 01.06.2016
PAGE 3 OF 5

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
01.	Roof mounted AC package unit for LHB AC coaches Make : LEEL Sr no of RMPU (NPP side): 16.05.0808 Sr no of RMPU (PP side) : 16.06.0836 Sr no of Microprocessor: SA.16.03.261	As per rdso/pe/spes/ac/0061/rev -1/2005	02
02.	Switch board cabinet Make: INTEG Sr no : 2016/03/004	As per spec no . EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make: KALSI Sr no PA: 5062/02/2016 Sr no.1: 263003/02/2016 Sr no.2: 263004/02/2016 Sr no.CPA: 4201/10/2014	As per spec EDTS 186,Rev-a, Am- 2	01
04.	Double inlet centrifugal blower 415V/03Ph /50Hz /120W/450 cum mtr/hr discharge for exhausting air from lavatory & switch board cabinet Make : INTEG	EDTS331, TYPE-1 CORR.-1&2	02
05.	Vestibule Light Fitting Single	LW 76004,Alt-b	07
06.	Ceiling light fitting DOUBLE w/o diffuser.	LW 76011,Alt -c	09
07.	Ceiling light fitting with NL w/o diffuser w/o item 2&3	LW 76013,Alt -c	09
08.	Emergency light system for EOG type coaches (AEL)	EDTS 151,Rev -c Am-1 & 2	04
09.	Lavatory light fitting assly	LW 76001,Alt nil	04
10.	WC gauge signal light	LW 76006,Alt-c	02


Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli



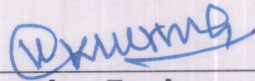
**Govt. of India- Ministry of Railways
(MODERN COACH FACTORY RAEBARELI)**



MCF/RBL/QEF8001
VER. 01.06.2016
PAGE 4 OF 5

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
11.	Passenger alarm coach indication light	LW 76005,Alt-e	02
12.	Fluorescent lamp 18W	RDSO/PE/SPEC/D/TL 0011-2000,Rev I, Sec- I , 07/2001	34
13.	Diffuser complete w/o item 1& 2.	LW 76012,Alt-a	25
14.	Razor socket for WC 110/240V.	EDML 047 ,Rev nil	04
15.	Terminal strip	EDML 034,Rev-a	01
16.	Terminal connector	EDML 037,Rev`a`	04
17.	Single switch 06A/250V/AC ONE WAY ,complete with steel plate & cover frame	EDML 047,Rev- C, Item 1.	09
18.	Single switch 06A/250V/AC ONE WAY complete with steel plate & cover frame	EDML 047,Rev-A ,Item 2.	09
19.	Provision of switch socket combined 5PIN (06A, 250V AC) along with 1A glass fuse fitted powder coated steel plate & cover	As per cat no EL-243 (EL signature series) of M/s SSK	09
20.	PA system for LHB coaches Make : AHUJA	EDTS 173,Rev- a Am- 1,2&3	01 set
21.	70AH/110V,54 Cells,02V each ,maintenance free pure lead acid tin monoblock ,battery set with 09 modules 12V each. , factory pre charged. Make : HBL Lug date : 03/2016	EDTS 129,Rev nil	01 set
22.	Battery box for LHB coaches.	1 10113 0 76 700 005 w/o item 5,22 ,23 ,26 & 27.	01


**Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli**



Govt. of India- Ministry of Railways
(MODERN COACH FACTORY RAEBARELI)



MCF/RBL/QEF8001
VER. 01.06.2016
PAGE 5 OF 5

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
23.	Battery fuse box +ve Make : ISG	As per LW 71001,Alt-F	01
24.	Battery fuse box -ve Make : ABROL	As per LW 71002,Alt-F	01
25.	Regulated battery charger Make : IC ELECT. Sr no: 1605021	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	01
26.	Emergency battery charger Make : WAVES Sr no: WEBCC 161661	EDTS 163,Rev `c` corg.-2&3	01
27.	60KVA transformer Make : VIMAL Sr no : 3757	As per rdso/pe/spec/ac/0080/rev -0 (2007)/Am-1&2/Corr. 1,2&3	01
28.	ZS coupling 400A/750V/03Ph/50hz. Make : MAA LAXMI INDUSTRIES	As per spec No EDTS 105,Rev `e` Am-2	02 sets
29.	Feeder junction boxes. Make : ABROL	EDTS-328 REV-C	02
30.	Wheel set earthling equipment. Make : DARSHAN ENTERPRISES	EDTS101,REV-C,AM-1	02
31.	Wheel Slide Protection System (WSP) Make: KNORR Sr no : 0115411886	M/s : KNORR	01 set
32.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : SPECTRUM	As per spec no EDTS 139, Rev- E ,Sec II.	01

 SSE/EL/QC	 DyCEE(P)/MCF/RBL
---	---

वर्तमान नियन्त्रिता
विद्युत उत्पादन-गुणवत्ता
रेल कोच फैक्टरी / लालगंज / रायवरेली
Sr. Section Engineer
Electric Production - Quality
RCF / RBL / LLJ

उप मुख्य विद्युत अभियंता (उत्पादन)
रेल कोच फैक्टरी-रायवरेली, लालगंज
DY.CEE/P-RCF/RBL/LLJ