



# आधुनिक रेल डिब्बा कारखाना, रायबरेली

## MODERN COACH FACTORY, RAEBARELI

L37-399

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

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2016-17/052

SHELL NO.	5	3	1	3	7	-	2	0	1	5	-	1	6	-	-	DATE OF DISPATCH	1	8	0	6	2	0	1	6
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RLY	N	R	-	-	Type	L	W	A	C	C	N	Coach No.	1	6	3	9	4	6	/	C
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- Railway Board's Order No. : 2016/M(C)142/1 Dtd. 12.05.2016
- 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) 1103 (NPPE) 2) 1099 (PPE)

**5. TRACEABILITY OF SHELL ITEMS:**

5. TRACEABILITY OF SHELL ITEMS.							
S NO	ITEM		MAKE/SUPPLIER	SERIAL NO			
1.	Underframe	Front Part	M/s E.C. Blades & Tool Pvt. Chandigarh	PP END	53137	NPP END	53137
		Complete	MCF/RBL				
2.	Side wall		M/s DTL Ancillaries Ltd. PUNE	RH	53137	LH	53137
3.	End wall	NPP- M/s Rubican Steel Mohali		PP END	53137	NPP END	53137
		PP- M/s Rubican Steel Mohali					
4.	Roof		M/s DTL Ancillaries Ltd. PUNE				
5.	Centre Buffer Coupler		M/s ESCORT	PP END	5556	NPP END	5560
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 <sup>2</sup> . ➤ Max. pressure in BC ➤ All Brake are applied	6 – 10 sec. 3.0 ±0.15 kg/cm <sup>2</sup> . OK	8 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 02 Sec.	Brake must apply	OK

**7. PAINTING DAETAILS:**

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U	VIBGYOR	92/93
2.	Insulation		Satisfactory	

वरिष्ठ अभियंता  
SSE/QC/MCF/RBL

रेडिका, रायबरेली (लालगंज)





# आधुनिक रेल डिब्बा कारखाना MODERN COACH FACTORY RAEBARELI

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VERSION: 2016-01-13

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RLY	N	R	-	Type	L	W	A	C	C	N	Coach No.	1	6	3	9	4	6	/	C
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### 8. DETAIL OF BOGIES :

ITEMS	PP Side				NPP Side			
Bogie No	160028				160027			
Bogie Type	LWACCN				LWACCN			
Frame no.	MCF/RBL-182				MCF/RBL-165			
Bolster no.	BEC-24				BEC-07			
Axle No	CHT 13 126454-12000481		CHT 13 126413-12000481		CHT 13 28597-13001989		CHT 13 126489-1200481	
Wheel Dia	915		915		915		915	
Wheel Disc No	7279-00102 VR 15	7292-00126 VR 15	6226-00022 VR 15	6226-00093 VR 15	6208-00096 VR 15	7150-00095 VR 15	6226-00178 VR 15	6226-00084 VR 15
R.B. Nos.	02-15-03102	02-15-01964	02-15-02716	02-15-02358	05-14-20082	05-14-20011	02-15-02377	02-15-01926
CT R B Make	TIMKEN		TIMKEN		SKF		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.	G 15-11A-779	CMGBD03-16 513-06-137	G 15-9A-966	CMGBD03-16 513-06-197	CMFSK02-16 8836-188-20	CMGBD03-16 513-06-196	CMFSK02-16 883-54	CMGBD03-16 513-06-115
Compressed Ht. at Tested Load	513	467	513	468	511	466	512	467
Alignment deviation (mm)	16	7	18	9	7	6	8	8

### 10. TRACEABILITY OF BOGIE ITEMS:

S. NO	ITEM	SERIAL NO.		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	RSK (763,872,878,746)2891	RSK (733,719,752,881)2891	RSK
2.	Primary Inner Spring	CVFSK12-15 7143-186(33,135,126,196)	CVFSK 12-15 7143-186(45,61,140,193)	CVFSK
3.	Primary Damper	KW 37-2015 301530049	KW 37-2015 301530049	GEREP
4.	Secondary Damper	KW 13-2015 301550333	KW 13-2015 301550333	GEREP
5.	Lateral Damper	KW 37-2015 301550332	KW 37-2015 301550332	GEREP
6.	Brake Cylinder	481-K-29,534-K-29,536-K-29,486-K-29	462-K-29,544-K-29,542-K-29,451-K-29	KBI
7.	Brake Caliper	478-29,528-29,530-29,479-29	445-29,538-29,536-29,447-29	KBI
8.	Brake Disc	D133561-300-02-16(360,363), BSI 05-15(1504314,1504330)	FAV 04-15(1497203,1497221), D133561-300-12-15(85,56)	FAV
9.	Ball Joint Control Arm			GMT
10.	Lateral Bump Stop			GMT
11.	Traction Centre make			EMSON
12.	Traction lever make			SARITA
13.	Ball joint traction lever			GMT
14.	Ball joint traction centre			GMT
15.	Secondary Rubber Pad			TECSPAK
16.	Rubber Spring			GMT
17.	Anti roll bar make			SARITA
18.	Roll Link make			SARITA / GMT
19.	Fork make			EMSON/ SARITA

Signature of SSE/Bogie/QC



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RLY	N	R	-	-	Type	L	W	A	C	C	N	Coach No.					1	6	3	9	4	6	/	C			

#### 11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s KBI ,Faridabad ,New Delhi	15M1343
2.	Pull box	M/s KBI ,Faridabad ,New Delhi	
3.	DV	M/s KBI ,Faridabad ,New Delhi	2015M1954
4.	PVC	M/s Responsive Industries, Mumbai	
5.	UIC Vestibule (PPE)	M/s Cemcon Industries New Delhi	
6.	UIC Vestibule (NPPE)	M/s Cemcon Industries New Delhi	
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 Aikon Technology Pvt.Ltd.Solan (H.P)	
12.	Roof Ceiling	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
13.	Non-AC Area Ceiling	M/s Amirchand Engg. Works Jalandhar	
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 Hanspal KXH	
19.	Vestibule Door(NPPE)	M/s Hanspal KXH	
20.	CDTS	M/s Oasis Fabrication, Jagadari	
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-80143 PP-80145
30.	Side Wall panel	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
31.	Seat & Berth	M/s Oriental veneer Products Ltd Mumbai	
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 (ल.राज.)







# आधुनिक रेल डिब्बा कारखाना, रायबरेली

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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 qualityrcfrbl@gmail.com

 <b>वरिष्ठ अभियंता</b> <b>SSG/QC/MCF/RBL</b> <b>रेडिबा, रायबरेली (लालगंज)</b>	 <b>AME/QC/MCF/RBL</b> <b>Asst. Mechanical Engineer/ Quality</b> <b>रेल डिब्बा कारखाना, लालगंज, रायबरेली</b> <b>Rail Coach Factory, Lalganj, Raebareli</b>	 <b>Dy.CME/FUR/MCF/RBL</b> <b>रेल कोच फैक्ट्री / रायबरेली, लालगंज</b> <b>RCF/RBL/LLJ</b>
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(RAIL COACH FACTORY-RAEBARELI)**



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RCF/RBL/QEF8001

VER. 10.08.2015

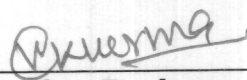
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**FOR ELECTRICAL ITEMS**

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES

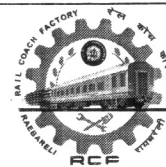
ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES				
TYPE COACH		LWACCN	SHELL/COACH NO	163946/C
RAILWAY		NR	DATE OF DESPATCH	
Sr no	Description of tests			Remarks
1.0	REFERENCE SPECIFICATION : L 446			
1.1	AIR CONDITIONING TEST : ELPS/TP/AC 01.			
1.2	CODE OF PRACTICE OF WIRING : ELPS/SPEC/EOG/AC-01			
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	29.49 Cub mtr/min		OK
3.2	Return Air	87.60 Cub mtr/min		OK
3.3	Exhaust Air	8.27 Cub mtr/min		OK
3.4	Conditioned Air	195.79 Cub mtr/min		OK
4.0	<b>PRE COOLING TEST: Max 01 hr.</b> Time taken to pre cool from 45 deg centigrade to 24/22 deg C during OFF LOAD condition  PP Side :21.8°C NPP Side :22.6°C			OK
5.0	<b>PULL DOWN TEST: Max 02 hrs.</b> Time taken to pull down from 45 deg C to 24/22 deg C during FULL LOAD condition.  NOT DONE.			OK

  
**Senior Section Engineer**  
**Quality control / Electrical**  
**RCF, Raebareli**





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ELECTRICAL TEST CERTIFICATE FOR LHB EOG AC COACHES

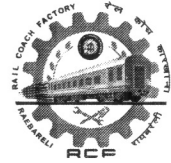
Sr no	Description of test	Remarks
6.0	HUMIDITY CONTROL	OK
7.0	PUMP EQUIPMENTS	OK
8.0	WORKING OF EXHAUST FANS OVER LAVATORIES	OK
9.0	WORKING OF COMPOSITE PANTRY	OK
10.0	COMPARTMENT LIGHT	OK
11.0	PUBLIC ADDRESSING SYSTEM ( PAS )	OK
12.0	WHEEL SLIDE PROTECTION SYSTEM ( WSP )	OK
13.0	WORKING OF 60KVA TRANSFORMER	OK
14.0	WORKING OF REGULATED BATTERY CHARGER	OK
15.0	WORKING OF EMERGENCY BATTERY CHARGER	OK
16.0	SAFETY ITEMS	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 <b>R 407C</b>	OK

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**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 : <b>LEEL</b> Sr no of RMPU 1 (NPP side): <b>LRB16040620</b> Sr no of RMPU 2( PP side ) : <b>LRB16040625</b> Sr no of Microprocessor: <b>16.02.005/APAUL</b>	As per rdso/pe/spes/ac/0061/rev -1/2005	<b>02</b>
02.	Switch board cabinet Make : <b>ABROL</b> Sr no : <b>114/3-2016</b>	As per spec no . EDTS073,REV-D,AM-6	<b>01</b>
03.	Pump equipment with PLC controller & pump box Make : <b>KALSI</b> Sr no PA: <b>5058/02/16</b> Sr no.1: <b>262995/02/16</b> Sr no.2: <b>262996/02/16</b> Sr no.CPA: <b>5029/02/16</b>	As per spec EDTS 186,Rev-a, Am- 2	<b>01</b>
04.	Double inlet centrifugal blower 415V/03Ph /50Hz /120W/450 cum mtr/hr discharge for exhausting air from lavatory & switch board cabinet Make : <b>INTEG</b>	EDTS331, TYPE-1 CORR.-1&2	<b>02</b>
05.	Vestibule Light Fitting Single	LW 76004,Alt-b	<b>07</b>
06.	Ceiling light fitting DOUBLE w/o diffuser.	LW 76011,Alt -c	<b>09</b>
07.	Ceiling light fitting with NL w/o diffuser w/o item 2&3	LW 76013,Alt -c	<b>09</b>
08.	Emergency light system for EOG type coaches (AEL)	EDTS 151,Rev -c Am-1 & 2	<b>04</b>
09.	Lavatory light fitting assly	LW 76001,Alt nil	<b>04</b>
10.	WC gauge signal light	LW 76006,Alt-c	<b>02</b>

*D. Kumar*

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**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	<b>02</b>
12.	Fluorescent lamp 18W	RDSO/PE/SPEC/D/TL 0011-2000,Rev I, Sec- I, 07/2001	<b>34</b>
13.	Diffuser complete w/o item 1& 2.	LW 76012,Alt-a	<b>25</b>
14.	Razor socket for WC 110/240V.	EDML 047 ,Rev nil	<b>04</b>
15.	Terminal strip	EDML 034,Rev-a	<b>01</b>
16.	Terminal connector	EDML 037,Rev`a`	<b>04</b>
17.	Single switch 06A/250V/AC ONE WAY ,complete with steel plate & cover frame	EDML 047,Rev- C, Item 1.	<b>09</b>
18.	Single switch 06A/250V/AC ONE WAY complete with steel plate & cover frame	EDML 047,Rev-A, Item 2.	<b>09</b>
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	<b>09</b>
20.	PA system for LHB coaches Make : <b>AHUJA</b>	EDTS 173,Rev- a Am- 1,2&3	<b>01 set</b>
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 : <b>HBL</b> Lug date : <b>11/2015</b>	EDTS 129,Rev nil	<b>01 set</b>
22.	Battery box for LHB coaches.	1 10113 0 76 700 005 w/o item 5, 22, 23, 26 & 27.	<b>01</b>

*(Signature)*

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Quality control / Electrical  
RCF, Raebareli**





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**ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES**

Sr no	Description	Drg/Spec no.	Quantity per Coach
23.	Battery fuse box +ve Make : <b>ISGPL</b>	As per LW 71001,Alt-F	<b>01</b>
24.	Battery fuse box -ve Make : <b>NEC</b>	As per LW 71002,Alt-F	<b>01</b>
25.	Regulated battery charger Make : <b>HI REL</b> Sr no: <b>16010715</b>	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	<b>01</b>
26.	Emergency battery charger Make: <b>WAVES</b> Sr no: <b>WEBCC 161708</b>	EDTS 163,Rev `c` corg.-2&3	<b>01</b>
27.	60KVA transformer Make : <b>VIMAL</b> Sr no : <b>3625</b>	As per rdso/pe/spec/ac/0080/rev -0 (2007)/Am-1&2/Corr. 1,2&3	<b>01</b>
28.	ZS coupling 400A/750V/03Ph/50hz. Make : <b>S INTERNATIONAL</b>	As per spec No EDTS 105,Rev `e` Am-2	<b>02 sets</b>
29.	Feeder junction boxes. Make : <b>ABROL</b>	EDML 020, Rev- I/EDTS-328 REV-C.	<b>02</b>
30.	Wheel set earthing equipment. Make : <b>DARSHAN</b>	EDTS101,REV-C,AM-1	<b>02</b>
31.	Wheel Slide Protection System (WSP) Make : <b>KNORR</b> Sr no : <b>0115431910</b>	M/s : <b>KNORR</b>	<b>01 set</b>
32.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : <b>SD ENGINEERS</b>	As per spec no EDTS 139, Rev- E , Sec II.	<b>01</b>

 <b>SSE/EL/QC</b>	 <b>DyCEE(P)/RCF/RBL</b>
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वरिष्ठ खण्ड अभियन्ता  
विद्युत उत्पादन-गुणवत्ता  
रेल कोच फैक्टरी / लालगंज / रायबरेली  
Sr. Section Engineer  
Electric Production - Quality  
RCF / RBL / LLJ

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

