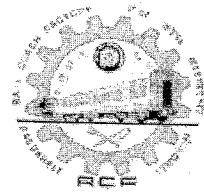


रेल डिब्बा कारखाना, रायबरेली  
RAIL COACH FACTORY, RAEBARELI



341

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

**ROLLING STOCK CERTIFICATE**

Rolling Stock Certificate No.: MCF/RBL/QC/RSC

Date: 16/06/2016

SHELL No.	L	W	A	C	C	N	5	3	0	8	9	1	5	-	1	6	DATE OF DISPATCH	3	1	0	3	2	0	1	6
RLY	C	R	-	Type	L	W	A	C	C	N	Coach No.	1	6	1	1	1	/	C							

Railway Board's Order No. : 2015/M(C)/142/1 dtd. 04.03.16

- Tare Weight of Coach : 45.6 Tonne
- Carrying Capacity : (a) Seating : 72 (b) Sleeping : 72 (c) Luggage : NIL

**3. 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) 1104(NPPE) 2) 1105(PPE)

**4. TRACEABILITY OF SHELL ITEMS:**

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Buffers	N.A.	
2.	Centre Buffer Coupler	M/s ESCORTS	PP END 5265 NPP END 5263

**5. AIRBRAKE TEST REPORT:**

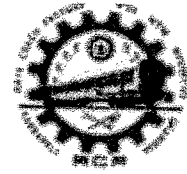
S NO	ITEM	DESCRIPTION	SPEC. VALUE	OBSERVED
1.	Full brake application	<ul style="list-style-type: none"> <li>Reduce pressure of BP from 5.0 to 3.4 kg/cm<sup>2</sup>.</li> <li>Max. pressure in BC</li> <li>All Brake are applied</li> </ul>	6 – 10 sec. 3.0 ±0.15 kg/cm <sup>2</sup> . OK	7 Sec. 3.0 kg/cm <sup>2</sup> OK
2.	Insensitivity	<ul style="list-style-type: none"> <li>Exhaust BP @ 0.3 kg/cm<sup>2</sup>/min.</li> </ul>	No brake application	OK
3.	Sensitivity	<ul style="list-style-type: none"> <li>Exhaust BP @ 0.1 kg/cm<sup>2</sup>/Sec, after 02 Sec.</li> </ul>	Brake must apply	OK

**6. PAINTING DETAILS:**

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U.	VIBGYOR	95/94
2.	Insulation	Satisfactory		



आधुनिक रेल डिब्बा कारखाना रायबरेली  
MODERN COACH FACTORY RAEBARELI



FORM NO: RCF/RBL/QMF 8001  
VERSION: 2012-01-01

**ROLLING STOCK CERTIFICATE**

Rolling Stock Certificate No.: MCF/RBL/QC/RSC

SHELL No.	R	B	L	-	5	3	0	8	9	-	2	0	1	5	-	1	6	DATE OF DISPATCH	3	1	/	0	3	/	1	6
RLY	C	R	-	Type	L	W	A	C	C	N	-	Coach No.	1	6	1	1	1	/	C							

**8. DETAIL OF BOGIES :**

ITEMS	PP Side				NPP Side			
Bogie No	150397 (MCF/RBL)				150398 (MCF/RBL)			
Bogie Type	FIAT				FIAT			
Frame no.	SCI/FM-427				SCI/FM-448			
Bolster no.	RBL-445				RBL-452			
Axle No.	G-0003 RWF		H-9917 RWF		F-9043 RWF		F 9473 RWF	
Wheel Dia	916.997	916.888	916.959	916.897	916.991	916.854	915.967	915.842
Wheel Disc No	7304-00117 15 VR	07302-00123 15 VR	07302-00121 15 VR	07302-00152 15 VR	07302-00024 15 VR	7274-00198 15 VR	07302-00071 15 VR	7274-00208 15 VR
R.B. Nos.	05-15-06335	02-15-03137	05-15-06431	02-15-02641	03-15-04210	02-15-02180	05-15-06401	02-15-03077
CT R B Make	TIMKEN		TIMKEN		TIMKEN		TIMKEN	

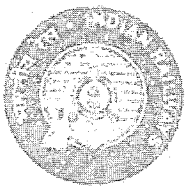
**9. SECONDARY SUSPENSION LOAD DEFLECTION VALUES**

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.	G 15-9A-957	CMGBD-0316-513-06	G 15-9-943	CMGBD-0316-513-06	G 15-11A-799	CMGBD-0316-513-06-199	G 15-11A-786	CMGBD-0316-513-06-187
Compressed Ht. at Tested Load	512	468	512	465	513	466	513	468
Alignment deviation (mm)	16	8	13	6	15	7	17	8

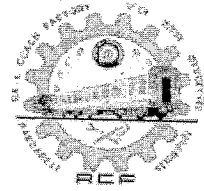
**10. TRACEABILITY OF BOGIE ITEMS:**

S. NO	ITEM	SERIAL NO.		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	RSK 03WA(2874,2584,2691,2621)		RSK
2.	Primary Inner Spring	L&S 10-15 CVB 2638		L&S
3.	Primary Damper	KW 37-2015 301530049		GREEP
4.	Secondary Damper	KW 37-2015 301550333		GREEP
5.	Lateral Damper	KW 37-2015 301550332		GREEP
6.	Brake Cylinder	713K29,809K29,810K29,714K29		KBI
7.	Brake Caliper	677-29,780-29,781-29,676-29		KBI
8.	Brake Disc	D-133561-300(02-16-209,02-16-206,12-15-49,12-15-50)		FAV
9.	Ball Joint Control Arm			MGN
10.	Lateral Bump Stop			GMT
11.	Traction Centre make			SARITA /EMSON
12.	Traction lever make			SARITA
13.	Ball joint traction lever			SGA
14.	Ball joint traction centre			GMT
15.	Secondary Rubber Pad			TECSPAK
16.	Rubber Spring			GMT
17.	Anti roll bar make			EMSON /SARITA
18.	Roll Link make			SARITA/GMT
19.	Fork make			SARITA

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रेल डिब्बा कारखाना, रायबरेली  
RAIL COACH FACTORY, RAEBARELI



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

**ROLLING STOCK CERTIFICATE**

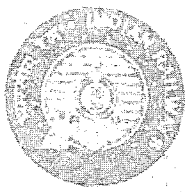
Rolling Stock Certificate No.: MCF/RBL/QC/RSC

Date: 16/06/2016

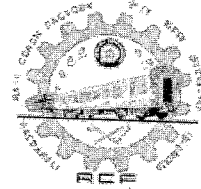
SHELL No.	L	W	A	C	C	N	5	3	0	8	9	1	5	-	1	6	DATE OF DISPATCH	3	1	0	3	2	0	1	6
RLY	C	R	-	Type	L	W	A	C	C	N	Coach No.	1	6	1	1	1	/	C							

**11. TRACEABILITY OF FURNISHING ITEMS:**

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s KBI ,Faridabad ,New Delhi	15L1301
2.	Pull box	M/s KBI ,Faridabad ,New Delhi	
3.	DV	M/s KBI ,Faridabad ,New Delhi	2015K1882
4.	PVC	M/s Premier Polyfilm Ltd., GZB	
5.	UIC Vestibule (PPE)	M/s Suncrest Industries West Bengal	
6.	UIC Vestibule (NPPE)	M/s Suncrest Industries West Bengal	
7.	Foot Step	M/s Hi-tech Infra Venture, RBL	
8.	Decoupling arrangement	M/s Seco Industries, Mumbai	
9.	Body Side Window	M/s Aikon Technology Pvt.Ltd.Solan (H.P)	
10.	Emergency Window	M/s Aikon Technology Pvt.Ltd.Solan (H.P)	
11.	Lavatory Window	M/s Aikon Technology Pvt.Ltd.Solan (H.P)	
12.	Roof Ceiling	M/s KAE Sataraganj U.K.	
13.	Non-AC Area Ceiling	M/s Gandhi Safe & Allied ,Jalandhar	
14.	Supply Air Duct	M/s Amirchand Engg. Works , Jalandhar	
15.	Body Side Doors	M/s Sukata KXH	
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.	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 Manoj Enterprises, 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 80136, PP 7759
30.	Side Wall panel	M/s KAE Sataraganj U.K.	
31.	Seat & Berth	M/s Oriental Veneer Product Ltd.Mumbai	
32.	Light Luggage Rack	M/s Verendra Steel Enterprises Chandigarh	
33.	Snack Table	M/s International Tractor's Limited, Hoshiarpur	
34.	Yaw Damper	M/s GEREEP, Supplier- M/s SFT Engineering Kolkata	NPP-316,364 PP-317,306



रेल डिब्बा कारखाना, रायबरेली  
RAIL COACH FACTORY, RAEBARELI



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

**ROLLING STOCK CERTIFICATE**

Rolling Stock Certificate No.: MCF/RBL/QC/RSC

Date: 16/06/2016

SHELL No.	L	W	A	C	C	N	5	3	0	8	9	1	5	-	1	6	DATE OF DISPATCH	3	1	0	3	2	0	1	6
RLY	C	R	-	Type	L	W	A	C	C	N	Coach No.	1	6	1	1	1	/	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:**

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 RCF/RBL.
5. For any complain/ suggestion please mail at qualityrcfbl@gmail.com

*[Signature]*  
DY CME  
MCF/RBL

वरिष्ठ यांत्रिक अभियंता ( फर्नि 0 )  
Sr. Mech. Engineer (Fur.)

रेल डिब्बा कारखाना, रायबरेली लालगंज  
Rail Coach Factory, Raebareli Laiganj

*[Signature]*  
सहायक यांत्रिक अभियंता/ गुणवत्ता  
Asst. Mech. Engineer/ Quality  
रेल डिब्बा कारखाना, रायबरेली लालगंज  
MCF/RBL  
Rail Coach Factory, Laiganj, Raebareli

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



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

TYPE COACH	LWACCN	SHELL/COACH NO	16111/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	29.79 Cub mtr/min	OK
3.2	Return Air	81.05 Cub mtr/min	OK
3.3	Exhaust Air	11.68 Cub mtr/min	OK
3.4	Conditioned Air	234.85 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  Not done due to ambient temp below 22°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 due to ambient temp below 22°C.		OK

*D. Sharma*  
Senior Section Engineer  
Quality control / Electrical  
RCF, Raebareli



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



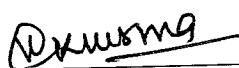
RCF/RBL/QEF8001  
VER. 10.08.2015  
PAGE 2 OF 5

**FOR ELECTRICAL ITEMS**

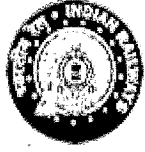
ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

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	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	R 407C OK

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





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



RCF/RBL/QEF8001  
VER. 10.08.2015  
PAGE  
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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>16.01.0084</b> Sr no of RMPU 2( PP side ) : <b>15.11.1176</b> Sr no of Microprocessor. <b>SA-16.01.163</b>	As per rdso/pe/spes/ac/0061/rev -1/2005	<b>02</b>
02.	Switch board cabinet Make : <b>SSK</b> Sr no : <b>2015-09-023</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>4858/12/15</b> Sr no.1 : <b>259850/10/2015</b> Sr no.2 : <b>259851/10/2015</b> Sr no.CPA: <b>4858/12/2015</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*

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





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



RCF/RBL/QEF8001  
VER. 10.08.2015  
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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)*

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







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



RCF/RBL/QEF8001

VER. 10.08.2015

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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>ISG</b>	As per LW 71001,Alt-F	<b>01</b>
24.	Battery fuse box -ve Make : <b>ABROL</b>	As per LW 71002,Alt-F	<b>01</b>
25.	Regulated battery charger Make : <b>AAL</b> Sr no : <b>BCH061601294</b>	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	<b>01</b>
26.	Emergency battery charger Make : <b>BHASIN</b> Sr no: <b>10151575</b>	EDTS 163,Rev `c` corg.-2&3	<b>01</b>
27.	60KVA transformer Make : <b>PANTRONICS</b> Sr no : <b>12072003</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.INTERNATIONALS</b>	As per spec No EDTS 105,Rev `e` Am-2	<b>02 sets</b>
29.	Feeder junction boxes. Make : <b>NEC</b>	EDML 020, Rev- I/EDTS-328 REV-C.	<b>02</b>
30.	Wheel set earthing equipment. Make : <b>MAA LAXMI INDUSTRIES</b>	EDTS101,REV-C,AM-1	<b>02</b>
31.	Wheel Slide Protection System (WSP) Make : <b>KNORR</b> & Sr no : <b>0114441405</b>	M/s : <b>KNORR</b>	<b>01 set</b>
32.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : <b>SUPER REFRIGERATION</b>	As per spec no EDTS 139, Rev- E , Sec II.	<b>01</b>

*D.K. Sharma*

**SSE/EL/QC**

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

*Dy. CEE (P)*

**DyCEE(P)/RCF/RBL**

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

