



# रेल डिब्बा कारखाना, रायबरेली RAIL COACH FACTORY, RAE BARELI



L37-123

FORM NO: RCF/RBL/QMF 8001  
VERSION: 2012-01-01**ROLLING STOCK CERTIFICATE**

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

Date: 21/08/2014

SHELL	L	W	A	C	C	N	3	1	0	5	/	2	0	1	3	DATE OF DISPATCH	1	2	0	6	2	0	1	4
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RLY	S	W	R	Type	L	W	A	C	C	N	Coach No.	1	4	1	1	1	/	C
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1. Railway Board's Order No : 2013/M(C)/142/3 dated 03.03.2014
2. Tare Weight of Coach : 45.6 Tonnes
3. 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) 1104(NPPE) 2) 1103(PPE)

**5. TRACEABILITY OF SHELL ITEMS:**

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Buffers	N.A.	
2.	Centre Buffer Coupler	M/s ESCORTS	PP END 2739 NPP END 2738

**6. 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	➤ 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 DETAILS:**

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U.	VIBGYOR	85.0
2.	Insulation	Satisfactory		



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RLY	S	W	R	Type	L	W	A	C	C	N	Coach No.	1	4	1	1	1	/	C						

### 8. DETAIL OF BOGIES :

ITEMS	PP SIDE				NPP SIDE			
Bogie No	136469				136470			
Bogie Type	Fiat				Fiat			
Axle No	H-3083		RWF-73068		H-3301		G-8620	
Wheel Dia	915.00	915.00	915.00	915.00	915.00	915.00	915.00	915.00
Wheel Disc No	038-48744	259-50861	296-50800	25650796	101-50861	182-50788	252-50796	225-50800
	ZB13	ZB13	ZB13	ZB13	ZB13	ZB13	ZB13	ZB13
R.B. Nos.	79606	78768	79618	79608	79042	79525	78524	79037
CT R B Make	TIM		TIM		TIM		TIM	

### 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.	G4-12-044	G4-12-739	G4-12-024	G4-12-648	G4-12-125	G4-12-824	G4-12-019	G4-12-748
Compressed Ht. at Tested Load	512	466	512	466	514	467	514	467
Alignment deviation (mm)	11	23	15	27	19	22	19	22

### 10. TRACEABILITY OF BOGIE ITEMS:

S NO	ITEM	SERIAL NO		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	L&S-05-12	L&S-05-12	L&S
2.	Primary Inner Spring	L&S-05-12	L&S-05-12	L&S
3.	Primary Damper	19340,19408,19437,18703	19375,18611,18678,19257	KONI
4.	Secondary Damper			SACHS
5.	Lateral Damper	244	9	GERFPI
6.	Yaw Damper	---	---	SV SOCKS
7.	Brake Cylinder & Caliper	H-6977K35,H6777K35 H7037K35,H6773K35	H-7042K35,H6303K35 H6998K35,H6317K35	KBI
8.	Brake Disc			FTI
9.	Ball Joint Control Arm			MGN
10.	Lateral Bump Stop			GMT
11.	Traction Centre make			EMSON
12.	Traction lever make			SARITA
13.	Ball joint traction lever			SGA
14.	Ball joint traction centre			GMT
15.	Secondary Rubber Pad			TECSPAC
16.	Rubber Spring			GMT
17.	Anti roll bar make			SARITA
18.	Roll Link make			SGA
19.	Fork make			EMSON





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FORM NO: RCF/RBL/QMF 8001  
VERSION: 2012-01-01**ROLLING STOCK CERTIFICATE**

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

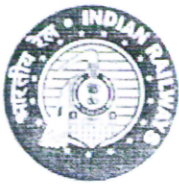
Date: 21/08/2014

SHELL	L	W	A	C	C	N	3	1	0	5	/	2	0	1	3	DATE OF DISPATCH	1	2	0	6	2	0	1	4
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RLY	S	W	R	Type	L	W	A	C	C	N	Coach No.	1	4	1	1	1	/	C
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**11. TRACEABILITY OF FURNISHING ITEMS:**

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s KBI, Faridabad, New Delhi	14A0574
2.	Pull box	M/s KBI, Faridabad, New Delhi	
3.	DV	M/s KBI, Faridabad, New Delhi	14A1026
4.	PVC	M/s Responsive, Colaba, Mumbai	
5.	UIC Vestibule (PPE)	M/s COMCEN	
6.	UIC Vestibule (NPPE)	M/s COMCEN	
7.	Foot Step	M/s JVR Ludhiana	
8.	Decoupling arrangement	M/s SECO	
9.	Body Side Window	M/s Rail Tech, Kapurthala	
10.	Emergency Window	M/s Rail Tech, Kapurthala	
11.	Lavatory Window	M/s Rail Tech, Kapurthala	
12.	Roof Ceiling	M/s KAE Engg. Pvt. Ltd. Satarganj, U.K.	
13.	Non-AC Area Ceiling	M/s Gandhi Enterprises Pvt. Ltd. ESIPL (UK)	
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 JBM Faridabad	
19.	Vestibule Door(NPPE)	M/s JBM Faridabad	
20.	CDTS	M/s Air Flow Chennai	
21.	Auxiliary Water Tank	M/s Amit Engg, Mohali Punjab	
22.	Under Slung Water Tank(450 L)	M/s Shivalik Fasteners, Mohali Punjab	
23.	Under Slung Water Tank( 2X685L)	M/s Shivalik Fasteners, Mohali Punjab	
24.	Flexible Faucet	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
25.	Lotah Filler Tap	M/s Metco (New Delhi)	
26.	Lavatory Modules	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 Hindustan Fibre Ltd. Vadodra (Gujrat)	
30.	Side Wall panel	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
31.	Seat & Berth	M/s Savitry Engg.Products Pontasahib	
32.	Light Luggage Rack	M/s Virendra Steel Enterprises Chandigarh	
33.	Snack Table	M/s International Tractors Ltd. Hoshiarpur	



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VERSION: 2012-01-01

## ROLLING STOCK CERTIFICATE

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

Date: 21/08/2014

SHELL	L	W	A	C	C	N	3	1	0	5	/	2	0	1	3	DATE OF DISPATCH	1	2	0	6	2	0	1	4
RLY	S	W	R	Type	L	W	A	C	C	N		Coach No.	1	4	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:

- This warranty covers free supply of parts which wear out and falls 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 contact at [qualityrcfbl@gmail.com](mailto:qualityrcfbl@gmail.com)

DY CME  
RCF/RBL

SSE/QC  
RCF/RBL

सीनियर सेक्शन इंजीनियर (क्वालिटी कंट्रोल)  
रेल डिब्बा कारखाना, रायबरेली  
Sr Section Engineer (Quality Control)  
Rail Coach Factory, Raebareli(Lalganj)

Dy CME/Fur  
रूप मु० या० अमि०/कर.  
RCF/RBL(LLJ)  
र. डि.का. रायबरेली (लालगंज)



# RAIL COACH FACTORY, KAPURTHALA

Form No. : QMF 9454; Version: 03

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Date: 18-05-2013

Shell No.:- RCF/RBL

RLY	Type	LACCN	Coach No.
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## 6.0 Wheel & Axle details:

6.0 Wheel & Axle details:								
Items	PP Side				Non PP Side			
Bogie No.	136469				136470			
Frame No.	FIAT-2277				FIAT-2163			
Bolster No.	017VT/ASR				2878-GT			
Axle No.	H-3083		RWF-73068		H-3301		G-8620	
Wheel Diameter	915.00	915.00	915.50	915.00	915.00	915.00	915.00	915.00
Wheel Disc No.	038-48744/ ZB13	259-50861/ ZB13	296-50800/ ZB13	256-50796/ ZB13	101-50861/ ZB13	182-50788/ ZB13	252-50796/ ZB113	225-50800/ ZB13
R.B. Nos.	79606	78768	79618	79608	79042	79525	78524	79037
R. B. Make	SKF		SKF		SKF		SKF	
RB Type	CARTRIDGE TAPER ROLLER BEARING							

## 6.1 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.	G4-12-044	G4-12-739	G4-12-024	G4-12-648	G4-12-125	G4-12-824	G4-12-019	G4-12-748
Compressed ht. at tested load	512	466	512	466	514	467	514	467
Align. deviation	11	23	15	27	19	22	19	22

## 6.2 Component traceability:

SNO	ITEM	PP Side Bogie	NPP side Bogie	Make
		Sr. nos	Sr. nos.	
1	Primary Outer Spring batch no.	L&S-05-12	L&S-05-12, 4, 8-12	L&S
2	Primary inner Spring batch no	L&S-05-12	L&S-05-12	L&S
3	Primary Damper	19340,19408,19437,18703	19375,18611,18678,19257	KONI
4	Secondary damper			SACHS
5	Lateral Damper	244	g	GEREPI
6	Brake cylinder & Caliper	NOT FITTED	NOT FITTED	FTI
7	Brake Disc			MGN
8	Ball joint Control arm			GMT
9	Lateral Bump stop			EMSON
10	Traction center make			SARITA
11	Traction lever make			SGA
12	Ball joint traction lever			GMT
13	Ball joint Traction centre			TESPAK
14	Secondary rubber pad			GMT
15	Rubber spring			SARITA
16	Anti roll bar make			SGA
17	Roll link make			EMSON
18	Fork make			
19	YAW DAMPER			

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23/05/13  
2014/05/13



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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	14111/C
RAILWAY	SWR	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	<b>30.04</b> Cub mtr/min	OK
3.2	Return Air	<b>66.08</b> Cub mtr/min	OK
3.3	Exhaust Air	<b>7.43</b> Cub mtr/min	OK
3.4	Conditioned Air	<b>147.41</b> 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 : <b>22.3°C</b> NPP Side : <b>21.7°C</b>		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  
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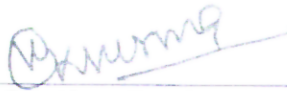
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**FOR ELECTRICAL ITEMS**

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

  
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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>INTEC</b> Sr no of RMPU (NPP side ) : <b>14-D-097</b> Sr no of RMPU (PP side) : <b>14-D-098</b> Sr no of Microprocessor: <b>AE.14.03.102/AMIT</b>	As per rdso/pe/spes/ac/0061/ rev-1/2005	<b>02</b>
02.	Switch board cabinet Make: <b>ISG</b> Sr no : <b>0062-02/2014</b>	As per spec no . EDTS073,REV-D,AM-6	<b>01</b>
03.	Pump equipment with PLC controller & pump box Make: <b>KIND</b> Sr no PA: <b>050891</b> Sr no.1: <b>13050261</b> Sr no.2: <b>13050262</b> Sr no.CPA: <b>1307034</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>

*(Signature)*

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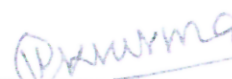
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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
11.	Passenger alarm coach indication light	LW 76005,Alt-e	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 nil, Item 1.	09
18.	Single switch 16A/250V/AC ONE WAY complete with steel plate & cover frame	EDML 045,Rev nil ,Item 2.	09
19.	PA system for LHB coaches Make :AHUJA	EDTS 173,Rev- a Am-1,2&3	01 set
20.	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 :05/2013	EDTS 129,Rev nil	01 set
21.	Battery box for LHB coaches.	1 10113 0 76 700 005 w/o item 5,22 ,23 ,26 & 27.	01

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

Sr no	Description	Drg/Spec no.	Quantity per Coach
22.	Battery fuse box +ve Make : <b>NEC</b>	As per LW 71001,Alt-F	<b>01</b>
23.	Battery fuse box -ve Make : <b>NEC</b>	As per LW 71002,Alt-F	<b>01</b>
24.	Regulated battery charger Make : <b>STESALITE</b> Sr no : <b>1213367</b>	As per RDSO/pe/spec/ac/01 29, Rev.-1 (2009)	<b>01</b>
25.	Emergency battery charger Make : <b>BHASIN</b> Sr no: <b>04-14-0479</b>	EDTS 163,Rev `c` corg.-2&3	<b>01</b>
26.	60KVA transformer Make : <b>PANTRONICS</b> Sr no : <b>13121817</b>	As per rdso/pe/spec/ac/008 0/rev-0 (2007)/Am- 1&2/Corr. 1,2&3	<b>01</b>
27.	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>
28.	Feeder junction boxes. Make : <b>NEC</b>	EDML 020,Rev-I	<b>02</b>
29.	Wheel set earthling equipment. Make : <b>DARSHAN ENTERPRISES</b>	EDTS101,REV- C,AM-1	<b>02</b>
30.	Wheel Slide Protection System (WSP) Make : <b>KNORR</b> Sr no : <b>0113390877</b>	M/s : <b>KNORR</b>	<b>01 set</b>
31.	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>

**SEE/RCF/RBL**

रेल कोच फ़ैक्टरी, रायबरेली, लखनऊ  
Sr. Electrical Engineer / RCF / RBL / Lucknow

**SSE/EL/QC**

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