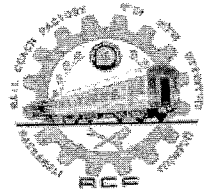


रेल डिब्बा कारखाना, रायबरेली
RAIL COACH FACTORY, RAEBARELI



336

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

ROLLING STOCK CERTIFICATE

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

Date: 10/06/2016

SHELL No.	L	W	A	C	C	N	5	3	0	7	9	1	5	-	1	6	DATE OF DISPATCH	2	3	0	3	2	0	1	6
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RLY	C	R	-	Type	L	W	A	C	C	N	Coach No.	1	6	1	0	6	/	C
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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) 1123(NPPE)	2) 1098(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	5222	NPP END	5220

5. AIRBRAKE TEST REPORT:

S NO	ITEM	DESCRIPTION	SPEC. VALUE	OBSERVED
1.	Full brake application	<ul style="list-style-type: none"> ➤ Reduce pressure of BP from 5.0 to 3.4 kg/cm². ➤ Max. pressure in BC ➤ All Brake are applied 	6 – 10 sec. 3.0 ±0.15 kg/cm ² . OK	8 Sec. 3.0 kg/cm ² OK
2.	Insensitivity	<ul style="list-style-type: none"> ➤ Exhaust BP @ 0.3 kg/cm²/min. 	No brake application	OK
3.	Sensitivity	<ul style="list-style-type: none"> ➤ Exhaust BP @ 0.1 kg/cm²/Sec, after 02 Sec. 	Brake must apply	OK

6. PAINTING DETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U.	VIBGYOR	95/93
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.: RCF/RBL/QC/RSC

SHELL No.	R	B	L	-	5	3	0	7	9	-	2	0	1	5	-	1	6	DATE OF DISPATCH	2	3	/	0	3	/	1	6
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RLY	C	R	-	Type	L	W	A	C	C	N	-	Coach No.	1	6	1	0	6	/	C	-	-
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8. DETAIL OF BOGIES :

ITEMS	PP Side				NPP Side			
Bogie No	150366 (MCF/RBL)				150365 (MCF/RBL)			
Bogie Type	FIAT				FIAT			
Frame no.	VS/ICF-42				VS/ICF-35			
Bolster no.	RBL-404				HEI-17			
Axle No	F 9988 RWF		F 9999 RWF		F9829 RWF		F 9476 RWF	
Wheel Dia	915.993	916.051	915.981	915.895	916.014	916.047	916.042	916.057
Wheel Disc No	06226-00166 15 VR	06227-00041 15 VR	7150-00157 15 VR	6207-00189 15 VR	06228-00031 15 VR	06228-00072 15 VR	7172-00057 15 VR	7172-00163 15 VR
R.B. Nos.	02-15 03013	03-15 03701	02-15 02988	02-15 02895	02-15 02999	02-15 03034	02-15 02928	05-15 06102
	TIMKEN		TIMKEN		TIMKEN		TIMKEN	

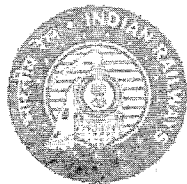
9. SECONDARY SUSPENSION LOAD DEFLECTION VALUES

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-969	CVFSK-0316-56	G15-9A-977	CVFSK-0316-34	G 15-11-914	RSK-358	G 15-11-840	RSK-252
Compressed Ht. at Tested Load	514	466	515	468	513	466	512	468
Alignment deviation (mm)	18	10	16	8	18	24	20	27

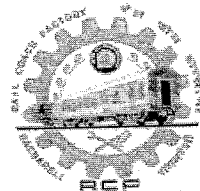
10. TRACEABILITY OF BOGIE ITEMS:

S. NO	ITEM	SERIAL NO.		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	RSK 03WA(2674,2815,2956,2598)	RSK 03WA(2683,2541,2538,2913)	RSK
2.	Primary Inner Spring	09-15 CVB 2638	09-15 CVB 2638	L&S
3.	Primary Damper	2015-08 (28283,27862,27946,25463)	KW 37-2015 301530049	KONI/GREEP
4.	Secondary Damper	36-2015 (6364,6584)	KW 37-2015 301550333	KONI /GREEP
5.	Lateral Damper	KW 37-2015 301550332	KW 37-2015 301550332	GREEP
6.	Brake Cylinder	FAV G- 15(042,115,117,107)	FAVG-15(046,096,095,050)	FAV
7.	Brake Caliper	FAV G 15(178BB,180B,179B,177B)	FAV G15 (117B,118B,119B,120B)	FAV
8.	Brake Disc	24048386 0019-09/15,24048386 0012-09/15 24055159 0019-12/15,24055159 0018-12/15,	24048386 0010-09/15,24048386 0005-09/15 24048388 0020-09/15,24055157 0004-11/15	KBI
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			SGA
14.	Ball joint traction centre			GMT
15.	Secondary Rubber Pad			TECSPAK
16.	Rubber Spring			GMT
17.	Anti roll bar make			SARITA/EMSON
18.	Roll Link make			SARITA/GMT
19.	Fork make			SARITA

Amay
SSE/OC/Bogie
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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

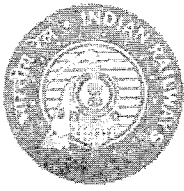
Rolling Stock Certificate No.: MCF/RBL/QC/RSC

Date: 10/06/2016

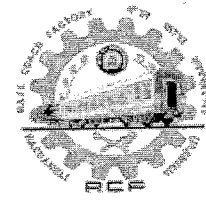
SHELL No.	L	W	A	C	C	N	5	3	0	7	9	1	5	-	1	6	DATE OF DISPATCH	2	3	0	3	2	0	1	6	
RLY	C	R	-	Type	L	W	A	C	C	N	Coach No.	1	6	1	0	6	/	C								

11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s Faveley Transport India Kathe Bhatoli, Baddi, Distt:	N15009B
2.	Pull box	M/s Faveley Transport India Kathe Bhatoli, Baddi, Distt:	
3.	DV	M/s Faveley Transport India Kathe Bhatoli, Baddi, Distt:	15125508B
4.	PVC	M/s Premier Polyfilm Ltd. Sahibabad	
5.	UIC Vestibule (PPE)	M/s Ameenji. Rubber Pvt. Ltd, Hyderabad	
6.	UIC Vestibule (NPPE)	M/s Ameenji. Rubber Pvt. Ltd, Hyderabad	
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 Enterprises, Jalandhar	
14.	Supply Air Duct	M/s Amirchand Engg. Works, Jalandhar	
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.	Bio Tank	M/s Amit Engineers, Mohali PB	
21.	Auxiliary Water Tank	M/s Manoj Enterprises, 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	NPP 80180, PP 80167
30.	Side Wall panel	M/s KAE Sataraganj U.K.	
31.	Seat & Berth	M/s Savitri Engg. Products Pontasahib HP	
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-223,210 PP-234,221



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: 10/06/2016

SHELL No.	L	W	A	C	C	N	5	3	0	7	9	1	5	-	1	6	DATE OF DISPATCH	2	3	0	3	2	0	1	6
RLY	C	R	-	Type	L	W	A	C	C	N	Coach No.	1	6	1	0	6	/	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 qualityrcfrbl@gmail.com

[Signature]
DY CME
MCF/RBL
वरिष्ठ यंत्रिक अभियंता (फर्निचर)
Sr. Mech. Engineer (Fur.)
रेल डिब्बा कारखाना, रायबरेली लालगंज
Rail Coach Factory, Raebareilly Lalganj

[Signature]
सहायक यंत्रिक अभियंता/ म.प.
Asst. Mechanical Engineer
रेल डिब्बा कारखाना, रायबरेली लालगंज
Rail Coach Factory, Raebareilly Lalganj



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



RCF/RBL/QEF8001
VER. 10.08.2015
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FOR ELECTRICAL ITEMS

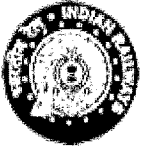
ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES

TYPE COACH	LWACCN	SHELL/COACH NO	16106/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	29.32 Cub mtr/min	OK
3.2	Return Air	90.86 Cub mtr/min	OK
3.3	Exhaust Air	11.02 Cub mtr/min	OK
3.4	Conditioned Air	210.23 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 Not done due to ambient temp. below 22°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 due to ambient temp. below 22°C		OK

(Signature)
**Senior Section Engineer
Quality control / Electrical
RCF, Raebareli**





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



RCF/RBL/QEF8001

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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	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

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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 : LEEL Sr no of RMPU 1 (NPP side): 16.01.0076 Sr no of RMPU 2(PP side) : 16.01.0081 Sr no of Microprocessor: SA.15.11.109	As per rdso/pe/spes/ac/0061/rev-1/2005	02
02.	Switch board cabinet Make : ISG Sr no : 15.12.0018	As per spec no . EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make : KALSI Sr no PA- 3882/7/2014 Sr no.1- 248611/7/2014 Sr no.2- 248612/7/2014 Sr no.CPA- 4028/8/2014	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

(Signature)

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





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



RCF/RBL/QEF8001

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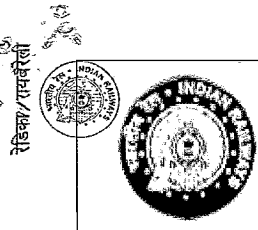
ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

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- 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 : 06/2015	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

(Signature)

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





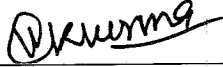

**Govt. of India- Ministry of Railways
(RAIL COACH FACTORY-RAEBARELI)**



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 : 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 : AAL Sr no : BCH-061601291	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	01
26.	Emergency battery charger Make : BHASIN Sr no : 10151676	EDTS 163,Rev `c` corg.-2&3	01
27.	60KVA transformer Make : VIMAL Sr no : 3407	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 : S INTERNATIONAL	As per spec No EDTS 105,Rev `e` Am-2	02 sets
29.	Feeder junction boxes. Make : NEC	EDML 020, Rev- I/EDTS-328 REV-C.	02
30.	Wheel set earthing equipment. Make : DARSHAN ENTERPRISES	EDTS101,REV-C,AM-1	02
31.	Wheel Slide Protection System (WSP) Make : FAIVELEY & Sr no : 38/15/377	M/s : FAIVELEY	01 set
32.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : SUPER REFRIGRATION	As per spec no EDTS 139, Rev- E , Sec II.	01

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

जय मुख्य विद्युत अभियन्ता (उत्पादन)
रेल कोच फैक्ट्री-रायबरेली, लालगंज
DY.CEEP-RCF/RBL/LLJ



RCF/RBL