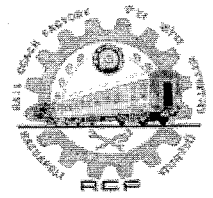


रेल डिब्बा कारखाना, रायबरेली
RAIL COACH FACTORY, RAEBARELI



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

ROLLING STOCK CERTIFICATE

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

Date: 09/06/2016

SHELL No.	L	W	A	C	C	N	5	3	0	8	1	1	5	-	1	6	DATE OF DISPATCH	1	2	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	3	/	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) 1105(NPPE)	2) 1104(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	5226	NPP END	5206

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	94/92
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	8	1	-	2	0	1	5	-	1	6	DATE OF DISPATCH	1	2	/	0	3	/	1	6
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RLY	C	R	-	Type	L	W	A	C	C	N	-	Coach No.	1	6	1	0	3	/	C	-	-
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8. DETAIL OF BOGIES :

ITEMS	PP Side				NPP Side			
Bogie No	150360 (MCF/RBL)				150359 (MCF/RBL)			
Bogie Type	FIAT				FIAT			
Frame no.	MCF/RBL/SCI-399				MCF/RBL/SCI-390			
Bolster no.	RBL-398				RBL-322			
Axle No	F 9020 RWF		F 9505 RWF		D 8477 RWF		F 9993 RWF	
Wheel Dia	916.044	916.089	916.093	915.961	916.061	915.953	916.022	916.055
Wheel Disc No	6202-00158 15 VR	6228-00183 15 VR	06227-00033 15 VR	06226-00146 15 VR	6228-00024 15 VR	06226-00022 15 VR	06230-00151 15 VR	06230-00118 15 VR
R.B. Nos.	05-15 06190	05-15 06333	05-15 06354	05-15-06100	05-15 06459	03-15 03340	05-15 06214	02-15 02856
CT R B Make	TIMKEN		TIMKEN		TIMKEN		TIMKEN	

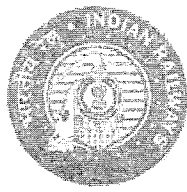
9. SECONDARY SUSPENSION LOAD DEFLECTION VALUES

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-952	RSK-895	G 15-9A-933	RSK-672	G 15-11A-773	RSK-680	G 15-9A-979	RSK-025
Compressed Ht. at Tested Load	511	467	510	467	513	468	512	468
Alignment deviation (mm)	15	32	17	35	19	30	22	32

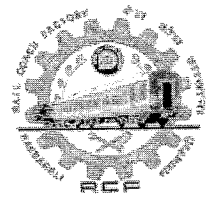
10. TRACEABILITY OF BOGIE ITEMS:

S. NO	ITEM	SERIAL NO.		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	RSK 03WA(2980,2845,2737,2968)	RSK 03WA	RSK
2.	Primary Inner Spring	L&S 09-15 CVB 2638,10-15 CVB 2638	L&S(10-15, 09-15,10-15,10-15 ,)CVB 2638	L&S
3.	Primary Damper	2015-08 (28585,28567,28568,28421)	2015-08(28582,28493,28506,28528)	KONI
4.	Secondary Damper	36-2015 (6703,6743)	36-2015(6758,6741)	KONI
5.	Lateral Damper	37-2015 3960	37-2015 3788	KONI
6.	Brake Cylinder	FAV K-15(166,183,184,161)	FAV K-15(122,146,147,130)	FAV
7.	Brake Caliper	FAV K15(347B,346B,345B,348B)	FAV K15(360B,358B,357B,359B)	FAV
8.	Brake Disc	24055155-0008-11/15,24055155-0009-11/15, 24055164-0024-12/15,24055164-0021-12/15	24048380-0016-48/14,2408380-0015-48/14, 24055152-0018-11/15,24055156-0003-11/15	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			GMT/SGA
14.	Ball joint traction centre			GMT/SGA
15.	Secondary Rubber Pad			TECSPAK
16.	Rubber Spring			GMT
17.	Anti roll bar make			SARITA
18.	Roll Link make			SARITA/GMT
19.	Fork make			SARITA

Amay
SSE/BC/Bogie



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

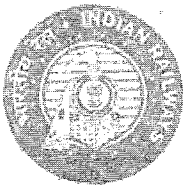
Date: 09/06/2016

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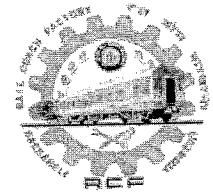
RLY	C	R	Type	L	W	A	C	C	N	Coach No.	1	6	1	0	3	/	C
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11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s Faveley Transport India Kathe Bhatoli, Baddi, Distt.	N15006B
2.	Pull box	M/s Faveley Transport India Kathe Bhatoli, Baddi, Distt.	
3.	DV	M/s Faveley Transport India Kathe Bhatoli, Baddi, Distt.	15125505B
4.	PVC	M/s Primier 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 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 Fire Matics	NPP 7755, PP 7752
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 Anjani Techno Plast Noida	
34.	Yaw Damper	M/s GEREEP, Supplier- M/s SFT Engineering Kolkata	NPP-209,200 PP-214,328



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: 09/06/2016

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

15. WARRANTY:

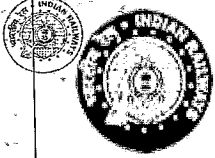
S NO	COMPONENTS	WARRANTY
1	Brake blocks, wheels, push gravity cocks, flushing valves, moldings, window glasses, mirrors, roller blinds, curtain & bulbs etc. (items which are consumable in nature)	NIL
2	Other coach furnishing sub assemblies(bought out items)	24 months date of dispatch of coach or 30 months 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 qualityrcf@rail.gov.in

DYCME
MCF/RBL
वरिष्ठ यान्त्रिक अभियन्ता (फर्निश)
Sr. Mech. Engineer (Fur.)
रेल डिब्बा कारखाना, रायबरेली लालगंज
Rail Coach Factory, Raebareli Lalganj

सहायक यान्त्रिक अभियन्ता/आवृत्त
Asst. Mechanical Engineer (Fur.)
रेल डिब्बा कारखाना, लालगंज, रायबरेली
Rail Coach Factory, Lalganj, Raebareli



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



RCF/RBL/QEF8001
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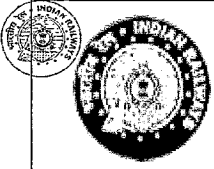
FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES

TYPE COACH	LWACCN	SHELL/COACH NO	16103/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	76.40 Cub mtr/min	OK
3.3	Exhaust Air	9.57 Cub mtr/min	OK
3.4	Conditioned Air	188.45 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)**



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FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB EOG AC COACHES

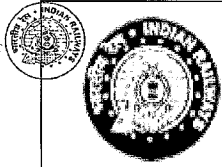
Sr no	Description of test	Remarks
6.0	HUMIDITY CONTROL	OK
7.0	PUMP EQUIPMENTS	OK
8.0	WORKING OF EXHAUST FANS OVER LAVATORIES	OK
9.0	WORKING OF COMPOSITE PANTRY	OK
10.0	COMPARTMENT LIGHT	OK
11.0	PUBLIC ADDRESSING SYSTEM (PAS)	OK
12.0	WHEEL SLIDE PROTECTION SYSTEM (WSP)	OK
13.0	WORKING OF 60KVA TRANSFORMER	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	OK

R 407C

(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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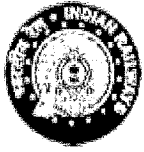
ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
01.	Roof mounted AC package unit for LHB AC coaches Make : LEEL Sr no of RMPU 1 (NPP side): 16.02.0199 Sr no of RMPU 2(PP side) : 16.02.0196 Sr no of Microprocessor: SA.16.01.175	As per rdso/pe/spes/ac/0061/rev -1/2005	02
02.	Switch board cabinet Make : SSK Sr no :NIL	As per spec no . EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make : KALSI Sr no PA- 3873/5/2014 Sr no.1- 248146/5/2014 Sr no.2- 248147/5/2014 Sr no.CPA- 4884/12/2015	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

VER. 10.08.2015

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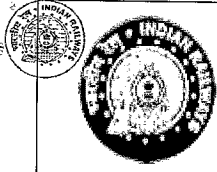
ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
11.	Passenger alarm coach indication light	LW 76005,Alt-e	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 : 11/2015	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 : STESALITE Sr no : SL/08/5540	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	01
26.	Emergency battery charger Make : BHASIN Sr no : 10151631	EDTS 163,Rev `c` corg.-2&3	01
27.	60KVA transformer Make : VIMAL Sr no : NIL	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 : 33/15/303	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/OC	 DyCEE(P)/RCF/RBL
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वरिष्ठ खण्ड अभियंता
विद्युत उत्पादन-गुणवत्ता
रेल कोच फैक्टरी / लालगंज / रायबरेली
Sr. Section Engineer
Electric Production - Quality
RCF / RBL / LLJ

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