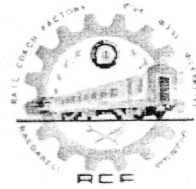




रेल डिब्बा कारखाना, रायबरेली RAIL COACH FACTORY, RAEBARELI



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

ROLLING STOCK CERTIFICATE

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

Date: 19/02/2015

SHELL NO	L	W	A	C	C	W	R	B	L	2	/	1	4	-	1	5	DATE OF DISPATCH	2	4	0	1	2	0	1	5
RLY	E	R	-	Type	L	W	A	C	C	W	Coach No.	1	4	0	5	6	/	C							

- Railway Board's Order No. : 2014/M(C)/142/1, dated 08.09.2014
- Tare Weight of Coach : 44.5 Tonnes
- Carrying Capacity : (a) Seating : 52 (b) Sleeping : 52 (c) Luggage : NIL
- 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	4039
4.	CBC height/Buffer height from Rail level 1105 +0/-15	1) 1101 (NPPE) 2) 1102 (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 3630 NPP END 3717

6. AIRBRAKE TEST REPORT:

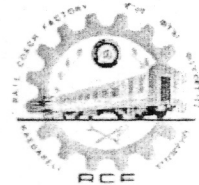
S NO	ITEM	DESCRIPTION	SPEC. VALUE	OBSERVED
1.	Full brake application	<ul style="list-style-type: none"> ➤ Reduce pressure of BP from 5.0 to 3.4 kg/cm². ➤ Max. pressure in BC ➤ All Brake are applied 	6 – 10 sec. 3.0 ±0.15 kg/cm ² . OK	8 sec. 3.0 kg/cm ² OK
2.	Insensitivity	➤ Exhaust BP @ 0.3 kg/cm ² /min.	No brake application	OK
3.	Sensitivity	➤ Exhaust BP @ 0.1 kg/cm ² /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	95/93
2.	Insulation		Satisfactory	



रेल डिब्बा कारखाना, रायबरेली RAIL COACH FACTORY, RAEBARELI



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ROLLING STOCK CERTIFICATE

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Date: 19/02/2015

SHELL NO	L	W	A	C	C	W	R	B	L	2	/	1	4	-	1	5	DATE OF DISPATCH	2	4	0	1	2	0	1	5
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RLY	E	R	-	Type	L	W	A	C	C	W	Coach No.	1	4	0	5	6	/	C	
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8. DETAIL OF BOGIES :

ITEMS	PP SIDE				NPP SIDE			
Bogie No	146311				146310			
Bogie Type	Fiat				Fiat			
Axle No	RWF-110188		H-3158		H-3350		RWF-110315	
Wheel Dia	918.00	918.00	918.00	918.00	918.00	918.00	918.00	918.00
Wheel Disc No	168-50857	212-50781	136-50846	030-50843	115-50859	304-50859	247-51777	002-50857
R.B. Nos.	04744	04813	05014	03740	04676	04754	04823	03635
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.	RSK-13-05-424-012	RSK-13-05-359-014	RSK-13-05-12-041	RSK-13-05-759-030	RSK-13-05-20-037	RSK-13-05-778-033	RSK-13-05-429-051	RSK-13-05-307-011
Compressed Ht. at Tested Load	507	468	510	466	509	468	507	463
Alignment deviation (mm)	16	32	20	30	14	42	15	38

10. TRACEABILITY OF BOGIE ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO	
			PP SIDE	NPP SIDE
1.	Primary outer Spring	RSK	RSK-06-13	RSK-06-13
2.	Primary Inner Spring	RSK	RSK-06-13	RSK-06-13
3.	Primary Damper	GEREP		
4.	Secondary Damper	SACHS		
5.	Lateral Damper	KONI		
6.	Yaw Damper	SV	--	--
7.	Brake Cylinder & Caliper	KONI	---	---
8.	Brake Disc	KBI		
9.	Ball Joint Control Arm	GTMT		
10.	Lateral Bump Stop	GMT		
11.	Traction Centre make	SARITA		
12.	Traction lever make	SARITA		
13.	Ball joint traction lever	SGA		
14.	Ball joint traction centre	GMT		
15.	Secondary Rubber Pad	TESPAK		
16.	Rubber Spring	GMT		
17.	Anti roll bar make	EMSON		
18.	Roll Link make	SARITA		
19.	Fork make	EMSON		



रेल डिब्बा कारखाना, रायबरेली RAIL COACH FACTORY, RAEBARELI



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

ROLLING STOCK CERTIFICATE

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

Date: 19/02/2015

SHELL NO	L	W	A	C	C	W	R	B	L	2	/	1	4	-	1	5	DATE OF DISPATCH	2	4	0	1	2	0	1	5
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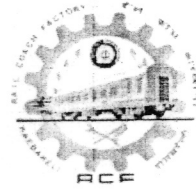
RLY	E	R	-	Type	L	W	A	C	C	W	Coach No.	1	4	0	5	6	/	C
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11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s Faiveley Harita Hasur Tamilnadu	N13024B
2.	Pull box	M/s Faiveley Harita Hasur Tamilnadu	
3.	DV	M/s Faiveley Harita Hasur Tamilnadu	13125525B
4.	PVC	M/s Responsive, Colaba, Mumbai	
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 Super Spark Pvt. Ltd. Faridabad	
8.	Decoupling arrangement	M/s SECO	
9.	Body Side Window	M/s Rail Tech KXH	
10.	Emergency Window	M/s Aikon Technology Pvt. Ltd. Solan H.P	
11.	Lavatory/hooper Window	M/s Rail Tech KXH	
12.	Roof Ceiling	M/s KAE Engg. pvt.ltd ESIPL (UK)	
13.	Non-AC Area Ceiling	M/s Shree Ganesh	
14.	Supply Air Duct	M/s Amirchand Eng. Works, jalandhar	
15.	Body Side Doors	M/s JBM Faridabad	
16.	Compartment Door (PPE)	M/s Rail Tech KXH	
17.	Compartment Door (NPPE)	M/s Rail Tech KXH	
18.	Vestibule Door(PPE)	M/s Concept Ludhiana	
19.	Vestibule Door(NPPE)	M/s Concept Ludhiana	
20.	CDTS	M/s Darshan Enterprises new Delhi	
21.	Auxiliary Water Tank	M/s Manoj enterprises, 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 Hindustan Fibre Ltd. Vadodra (Gujrat)	
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 Hindustan Fibre Ltd. Vadodra (Gujrat)	
30.	Side Wall panel	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
31.	Seat & Berth	M/s Savitry Engineering Products, Pontasahib	
32.	Light Luggage Rack	M/s Virendra Steel Enterprises Chandigarh	
33.	Snack Table	M/s Anjani techno plast Noida	



रेल डिब्बा कारखाना, रायबरेली RAIL COACH FACTORY, RAEBARELI



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ROLLING STOCK CERTIFICATE

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

Date: 19/02/2015

SHELL NO	L	W	A	C	C	W	R	B	L	2	/	1	4	-	1	5	DATE OF DISPATCH	2	4	0	1	2	0	1	5
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RLY	E	R	-	Type	L	W	A	C	C	W	Coach No.	1	4	0	5	6	/	C	
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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:

1. This warranty covers free supply of parts which wear out and falls 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 contact at qualityrcfrbl@gmail.com

DY CME

RCF/RBL

Dy. Chief Mechanical Engineer

रेल कोच फैक्ट्री / रायबरेली

RCF/RBL/LLJ

SSE/QC
RCF/RBL



रेल कोच फैक्टरी, कपूरथला
RAIL COACH FACTORY, KAPURTHALA



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Date: 08-04-2014

Shell No.:- 4016/RBL

RLY	Type	LACCW	Coach No.
-----	------	-------	-----------

6.0 Wheel & Axle details:

Items	N PP Side				Non PP Side			
Bogie No.	146310				146311			
Frame No.	FIAT-2985				FIAT-3043			
Bolster No.	152-HEI				HEI-153			
Axle No.	H-3350		RWF-110315		RWF-110188		H-3158	
Wheel Diameter	918.00	918.00	918.00	918.00	918.00	918.00	918.00	918.00
Wheel Disc No.	115-50859	304-50859	247-51777	002-50857	168-50857	212-50781	136-50846	030-50843
R.B. Nos.	04676	04754	04823	03635	04744	04813	05014	03740
R. B. Make	TIMKEN		TIMKEN		TIMKEN		TIMKEN	
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.	RSK-13-05-20-037	RSK-13-05-778-033	RSK-13-05-429-051	RSK-13-05-307-011	RSK-13-05-424-012	RSK-13-05-359-014	RSK-13-05-12-041	RSK-13-05-759-030
Ht. Attest Load	509	468	507	463	507	468	510	466
Align. deviation	14	42	15	38	16	32	20	30

6.2 Component traceability:

SNO	ITEM	PP Side Bogie	NPP side Bogie	Make
1	Primary Outer Spring batch no.	RSK-06-13	RSK-06-13	RSK
2	Primary inner Spring batch no	RSK-6-13	RSK-6-13	RSK
3	Primary Damper			GEREP
4	Secondary damper			SACHS
5	Lateral Damper			KONI
6	Brake cylinder & Caliper			-----
7	Brake Disc			KBI
8	Ball joint Control arm			GMT
9	Lateral Bump stop			GMT
10	Traction center make			SARITA
11	Traction lever make			SARITA
12	Ball joint traction lever			SGA
13	Ball joint Traction centre			GMT
14	Secondary rubber pad			TESPAK
15	Rubber spring			GMT
16	Anti roll bar make			EMSON
17	Roll link make			SARITA
18	Fork make			EMSON

8/4/14
S/12/14



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FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG 2T AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES

TYPE COACH	LWACCW	SHELL/COACH NO	14056/C
RAILWAY	ER	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	31.17 Cub mtr/min	OK
3.2	Return Air	76.04 Cub mtr/min	OK
3.3	Exhaust Air	6.54 Cub mtr/min	OK
3.4	Conditioned Air	191.95 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
Rail Coach Factory Raebareli



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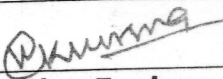
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FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG 2T 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	BERTH READING LIGHTS	OK
11.0	COMPARTMENT LIGHT	OK
12.0	PUBLIC ADDRESSING SYSTEM (PAS)	OK
13.0	WHEEL SLIDE PROTECTION SYSTEM (WSP)	OK
14.0	WORKING OF 60KVA TRANSFORMER	OK
15.0	WORKING OF REGULATED BATTERY CHARGER	OK
16.0	WORKING OF EMERGENCY BATTERY CHARGER	OK
17.0	SAFETIES :	OK
17.1	THERMOSTAT :	OK
17.2	ROTARY 07 SET POINTS (NORMAL CONDITION)	OK
17.3	MID SET POINTS (SENSORS FAILED CONDITIONS)	OK
17.4	HYGROSTAT	OK
17.5	CONTROL CIRCUIT	OK
17.6	POWER CIRCUIT	OK
18.0	REFRIGERANT USED R 407C	OK


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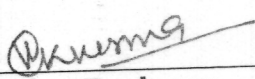
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ROLLING STOCK CERTIFICATE OF LHB/EOG 2T AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
01.	Roof Mounted AC package unit for LHB AC coaches Make : INTEC Sr no of RMPU 1 (NPP side) : 14-G-185 Sr no of RMPU 2(PP side) : 14-G-186 Sr no of Microprocessor: 14-L-0178/ARECA	As per rdso/pe/spes/ac/0061/rev-1/2005	02
02.	Switch board cabinet Make : INSTRUMENTATION LTD Sr no : 14-07-056	As per spec no . EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make: DR AUTO Sr no PA- 2014/05/024 Sr no.1- 131206746 Sr no.2- 131106628 Sr no.CPA- 14/05/009	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 w/o diffuser	LW 76004,Alt-b	06
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


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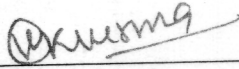
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ROLLING STOCK CERTIFICATE OF LHB/EOG 2T AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
10.	WC gauge signal light	LW 76006,Alt-c	02
11.	Passenger alarm coach indication light	LW 76005,Alt-e	02
12.	Reading Light fitting (Upper berth)	LW 76023,Alt-e	27
13.	Reading light for longitudinal berth LHS	LW 76022,Alt-e	09
14.	Reading light for transverse Lower Berth -LH	LW 76020,Alt-e	09
15.	Reading light for transverse Lower berth RH	LW 76021,Alt-e	09
16.	Fluorescent lamp 18W	RDSO/PE/SPEC/D/TL 0011-2000,Rev I, Sec- I , 07/2001	33
17.	Diffuser complete w/o item 1& 2.	LW 76012,Alt-a	25
18.	Razor socket for WC 110/240V.	EDML 047 ,Rev nil	04
19.	Terminal strip	EDML 033,Rev-c	01
20.	Terminal connector	EDML 037,Rev`a`	04
21.	Single switch 06A/250V/AC ONE WAY ,complete with steel plate & cover frame	EDML 047,Rev nil, Item 1.	09
22.	Single switch 16A/250V/AC ONE WAY complete with steel plate & cover frame	EDML 045,Rev nil ,Item 2.	09
23.	PA system for LHB coaches Make :AHUJA	EDTS 173 Rev- a Am- 1,2&3	01 set


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ROLLING STOCK CERTIFICATE OF LHB/EOG 2T AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
24.	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 :09/2014	EDTS 129,Rev nil	01 set
25.	Battery box for LHB coaches.	As per drg no 1 10113 0 76 700 005,Alt C	01
26.	Battery fuse box +ve Make :ISG	LW 71001,Alt-F	01
27.	Battery fuse box -ve Make :ISG	LW 71002,Alt-F	01
28.	Regulated battery charger Make :IC ELECTRICALS Sr no-1409009	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	01
29.	Emergency battery charger Make :WAVES Sr no-WEBCE-14594	EDTS 163,Rev `c` corg.-2&3	01
30	60KVA transformer Make :VIMAL Sr no :2359	As per rdso/pe/spec/ac/0080/re v-0 (2007)/Am-1&2/Corr. 1,2&3	01
31.	ZS coupling 400A/750V/03Ph/50hz. Make : S INTERNATIONAL	As per spec No EDTS 105,Rev `e` Am-2	02 sets
32.	Feeder junction boxes. Make :MAA LAXMI INDUSTRIES	EDML 020,Rev-I	02
33.	Wheel set earthing equipment. Make :MAA LAXMI INDUSTRIES	EDTS101,REV-C,AM-1	02
34.	Wheel Slide Protection System (WSP) Make : FAIVELEY & Sr no :46/13/323	M/s : FAIVELEY	01 set
35.	PANTRY EQUIPMENTS : Hot Case, Bottle cooler cum deep freezer Make : SIDWAL	As per spec no EDTS 139, Rev- E, Sec II.	01

SSE/EL/QC	DYCEE(P)/RCF/RBL

वरिष्ठ खण्ड अभियन्ता
विद्युत उत्पादन-गुणधर्मा
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