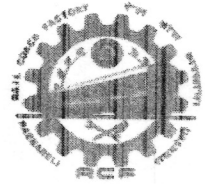




रेल डिब्बा कारखाना, रायबरेली RAIL COACH FACTORY, RAEBARELI



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

ROLLING STOCK CERTIFICATE

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

Date: 19/03/2015

SHELL NO	L	W	A	C	C	W	4	0	2	0	/	2	0	1	4	DATE OF DISPATCH	2	0	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	5	/	C	
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1. Railway Board's Order No. : 2014/M(C)/142/1, dated 08.09.2014
2. Tare Weight of Coach : 44.5 Tonnes
3. Carrying Capacity : (a) Seating : 52 (b) Sleeping : 52 (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	4039
4.	CBC height/Buffer height from Rail level 1105 +0/-15	1) 1104(NPPE) 2) 1105(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 3552 NPP END 3373

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 DETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U.	GS	87/87
2.	Insulation		Satisfactory	

RCF



रेल डिब्बा कारखाना, रायबरेली RAIL COACH FACTORY, RAEBARELI



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ROLLING STOCK CERTIFICATE

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

Date: 19/03/2015

SHELL NO	L	W	A	C	C	W	4	0	2	0	/	2	0	1	4	DATE OF DISPATCH	2	0	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	5	/	C
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8. DETAIL OF BOGIES

ITEMS	PP SIDE				NPP SIDE			
Bogie No	146403				146700			
Bogie Type	Fiat				Fiat			
Axle No	RWF-126926/476		Z-3036		126301/474		RWF-109455	
Wheel Dia	915.00	915.00	915.00	915.00	916.00	916.00	915.00	915.00
Wheel Disc No	022-10570	081-11600	148-10538	095-11605	095-11605	259-10562	210-11600	236-11605
R.B. Nos.	34336	35960	05062	35871	05060	34218	34296	35831
CTRB 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.	DN-12-11-2783	G-13-5-5300	DN-12-11-2750	G-13-5-5092	G-4-12-912	G-4-12-2110	G-4-12-935	G-4-12-2097
Compressed Ht. at Tested Load	508	465	511	455	512	465	512	466
Alignment deviation (mm)	19	14	15	14	1	16	2	16

10. TRACEABILITY OF BOGIE ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO	
			PP SIDE	NPP SIDE
1.	Primary outer Spring	GF	G-13-3	G-13-3
2.	Primary inner Spring	GF	G-13-3	G-13-5
3.	Primary Damper	KONI		
4.	Secondary Damper	SACHS		
5.	Lateral Damper	SACHS		
6.	Yaw Damper	GEREP		
7.	Brake Cylinder & Caliper	KBI		
8.	Brake Disc	KBI		
9.	Ball Joint Control Arm	SGA		
10.	Lateral Bump Stop	MTI		
11.	Traction Centre make	SARITA		
12.	Traction lever make	SARITA		
13.	Ball joint traction lever	GMT		
14.	Ball joint traction centre	SGA		
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: 19/03/2015

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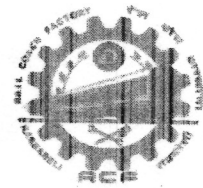
RLY	E	R	Type	L	W	A	C	C	W	Coach No.	0	1	4	0	5	5	/	C	
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11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s KBI, Faridabad, New Delhi	14G0711
2.	Pull box	M/s KBI, Faridabad, New Delhi	
3.	DV	M/s KBI, Faridabad, New Delhi	2014G1234
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 industries Mumbai	
9.	Body Side Window	M/s Rail Tech KXH + M/s Aikon Technology Pvt.Ltd. Solan H.P	
10.	Emergency Window	M/s Rail Tech KXH	
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, Jalanchar	
15.	Body Side Doors	M/s JEM 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 Mandi 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 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 Century polymer 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



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

ROLLING STOCK CERTIFICATE

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

Date: 19/03/2015

SHELL NO	L	W	A	C	C	W	4	0	2	0	/	2	0	1	4	DATE OF DISPATCH	2	0	0	1	2	0	1	5
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RLY	E	R	Type	L	W	A	C	C	W	Coach No.	01	4	0	5	5	/	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 Frequency	REFERENCE & 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 qualityrcfbl@gmail.com

BY DY. CME / कनि.
DY RCF/RBL
RCF/RBL

RCF

सीनियर सेक्शन इंजीनियर (क्वालिटी कंट्रोल)
रेल डिब्बा कारखाना, रायबरेली



रेल डिब्बा कारखाना, कपूरथला
Rail Coach Factory , Kapurthala

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12.	Bogie Details:		Shell No.		Railway		Type		Coach No.		Dispatch Date		
RCF/RBL					LWSCZ				20-08-2014				
12.1	Wheel & Axle Details:		PP Side						NPP Side				
	i.	Bogie No.	146403						146700				
	ii.	Frame No.	FIAT-3066						FIAT-3215				
	iii.	Bolster No.	102-HEI						4070-VT				
	iv.	Axle No.	RWF-126926/476		Z-3036		126301/474		RWF-109455				
	v.	Wheel Dia.	915.00	915.00	915.00	915.00	916.00	916.00	915.00	915.00			
	vi.	Wheel Disc No.	022-10570	081-11600	148-10538	014-11605	095-11605	259-10568	210-11600	236-11605			
	vii.	R.B. Nos.	34336	35960	05062	35871	05060	34213	34296	35831			
	viii.	R.B. Make	TIMKEN		TIMKEN		TIMKEN		TIMKEN				
ix.	RB Type	UIC CARTRIDGE TAPER ROLLER BEARING											
12.2	Secondary suspension load deflection Values:												
	Description		Secondary 1		Secondary 2		Secondary 1		Secondary 2				
Outer			Inner	Outer	Inner	Outer	Inner	Outer	Inner				
i.	Make & nos.		DN-12-11-2783	G-13-5-5300	DN-12-11-2750	G-13-5-5092	G-4-12-912	G-4-12-2110	G-4-12-935	G-4-12-2097			
ii.	Ht. attest load		508	465	511	465	512	465	512	466			
iii.	Align deviation		19	14	15	14	1	16	2	16			
12.3	Items traceability:												
	Sno.	Item				PP Side Bogie		NPP side Bogie		Make			
	i.	Primary Outer Spring				G-13-3		G-13-3		GF			
	ii.	Primary inner Spring				G-13-5		G-13-5		GF			
	iii.	Primary Damper								KONI			
	iv.	Secondary damper								SACHS			
	v.	Lateral Damper								SACHS			
	vi.	Yaw Damper								NIL			
	vii.	Brake cylinder & Caliper								KBI			
	viii.	Brake Disc								KBI			
	ix.	Ball joint Control arm								SGA			
	x.	Lateral Bump stop								MTC			
	xi.	Traction center make								SARITA			
	xii.	Traction lever make								SARITA			
	xiii.	Ball joint traction lever								GMT			
	xiv.	Traction centre elastic								SGA			
	xv.	Secondary rubber pad								TESPAK			
	xvi.	Rubber spring								GMT			
	xvii.	Anti roll bar make								EMSON			
	xviii.	Ball joint roll link								SARITA			
	xix.	Fork make								EMSON			
12.4	i.	Modification / Trial (if any):						NIL					
	ii.	Deviations (if any):						NIL					

AP
20/15
JEE/OC



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(RAIL COACH FACTORY-RAEBARELI)



RCF/RBL/QEF 7001

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2T-88

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	14055/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	30.86 Cub mtr/min		OK
3.2	Return Air	53.60 Cub mtr/min		OK
3.3	Exhaust Air	5.28 Cub mtr/min		OK
3.4	Conditioned Air	184.57 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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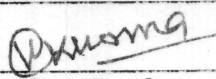
FOR ELECTRICAL ITEMS

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	OK

R 407C


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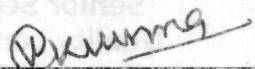
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ROLLING STOCK CERTIFICATE OF LHB/EOG 2T AC COACHES

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-F-143 Sr no of RMPU 2(PP side) :14-F-149 Sr no of Microprocessor:14-K-166/ARECA	As per rds0/pe/spes/ac/0061/rev-1/2005	02
02.	Switch board cabinet Make :INSYRUMENTATION LTD Sr no :14/07/049	As per spec no . EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make: KALSI Sr no PA-3816/5/14 Sr no.1-246099/05/14 Sr no.2-246100/05/14 Sr no.CPA-3267/04/2013	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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(RAIL COACH FACTORY-RAEBARELI)



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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

[Signature]

Senior Section Engineer
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Rail Coach Factory Raebareli



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(RAIL COACH FACTORY-RAEBARELI)



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RCF/RBL/QEF7001

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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 :HI-RELL Sr no:140-8-8660	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	01
29.	Emergency battery charger Make :WAVES Sr no:WEBCF-14589	EDTS 163,Rev 'c' corg.-2&3	01
30	60KVA transformer Make :VIMAL Sr no :2239	As per rdso/pe/spec/ac/0080/rev-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: KNORR & Sr no :0114191177	M/s : KNORR	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 संचालक अभियंता
विद्युत उत्पादन-गुणवत्ता
रेल कोच फ़ैक्टरी / लालगंज / रायबरेली
Sr. Section Engineer
Electric Production - Quality
RCF / RBL / LLJ

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