

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	3	9	/	2	0	1	4	DATE OF DISPATCH	2	4	0	1	2	0	1	5
RLY	E	R		Type	L	W	A	C	C	W	Coach No.	4	4	0	5	7	/	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

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) 1105(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 3416 NPP END 3477

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	7sec. 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

7. PAINTING DETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U.	ADVANCE	86/86
2.	Insulation		Satisfactory	

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RLY	E	R	Type	L	W	A	C	C	W	Coach No.	1	4	0	5	7	/	C
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8. DETAIL OF BOGIES

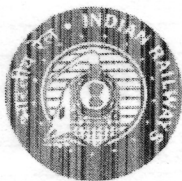
ITEMS	PP SIDE				NPP SIDE			
Bogie No	146953				146954			
Bogie Type	Flat				Flat			
Axle No	Z-3095		Z-3732		Z-3756		Z-3598	
Wheel Dia	917.00	917.00	916.50	917.00	916.00	916.00	916.50	916.00
Wheel Disc No	284-10568	297-10579	234-10579	017-10533	169-10570	166-10568	340-10568	210-63307
R.B. Nos.	02564	37585	28720	29282	37301	29854	01658	01657
CTR B Make	SKF		SKF		SKF		SKF	

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-12-4-1072	G-12-4-2121	G-12-4-1100	G-12-4-2118	G-12-4-968	G-12-4-1795	G-12-4-961	G-12-4-2081
Compressed Mt. at Tested Load	512	468	512	468	512	467	512	467
Alignment deviation (mm)	4	16	4	19	6	9	8	15

10. TRACEABILITY OF BOGIE ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO	
			PP SIDE	NPP SIDE
1.	Primary outer Spring	GF	G-12-6	G-12-6
2.	Primary inner Spring	GF	G-12-6	G-12-6
3.	Primary Damper	KONI		
4.	Secondary Damper	SACHS		
5.	Lateral Damper	KONI		
6.	Yaw Damper	GEREP		
7.	Brake Cylinder & Calliper	KBI		
8.	Brake Disc	KBI		
9.	Ball Joint Control Arm	MGN		
10.	Lateral Bump Stop	GMT		
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		



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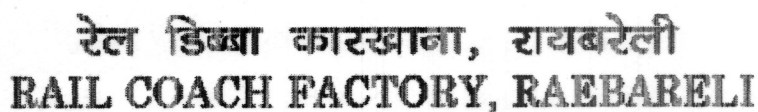
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RLY	E	R	Type	L	W	A	C	C	W	Coach No.	1	4	0	5	7	/	C
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11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s KBI, Faridabad, New Delhi	14F0710
2.	Pull box	M/s KBI, Faridabad, New Delhi	
3.	DV	M/s KBI, Faridabad, New Delhi	2014F1235
4.	PVC	M/s Responsive, Colaba, Mumbai	
5.	UIC Vestibule (PPE)	M/s SUNCREST, Kolkata	
6.	UIC Vestibule (NPPE)	M/s SUNCREST, Kolkata	
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	
10.	Emergency Window	M/s Rail Tech KXH	
11.	Lavatory/hopper 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 Jalandhar	
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 Kalsi Ludhiana	
19.	Vestibule Door (NPPE)	M/s Kalsi Ludhiana	
20.	CDTS	M/s Amit Engineers Baddi H.P.	
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.	Lotan 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 KAE Engg. Pvt. Ltd. Satarganj, U.K.	
31.	Seat & Berth	M/s Amirchand engg. Works pvt. Ltd. Jalandhar	
32.	Light Luggage Rack	M/s Virendra Steel Enterprises Chandigarh	
33.	Snack Table	M/s Anjani techno plast Noida	

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12. MODIFICATION (IF ANY) : NIL

13. DEVIATION (IF ANY) : NIL

14. ITEM FITTED ON THE COACH ON TRIAL :

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 fails 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 mail at qualityrcfbl@gmail.com

SSE/QC
RCF/RBL

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

DY CME
RCE/RBL



रेल डिब्बा कारखाना, कपूरथला
Rail Coach Factory , Kapurthala

Page 2 of 3

12.	Bogie Details:		Shell No.		Railway		Type		Coach No.		Dispatch Date	
			4039/RBL				LWSCZ				17-11-2014	
12.1	Wheel & Axle Details:		PP Side						NPP Side			
	i.	Bogie No.	146953						146954			
	ii.	Frame No.	SCI/FM-54						SCI/FM-50			
	iii.	Bolster No.	4308-VT						4317-VT			
	iv.	Axle No.	Z-3095			Z-3732			Z-3753		Z-3598	
	v.	Wheel Dia.	917.00	917.00	916.50	917.00	916.00	916.00	916.50	916.00		
	vi.	Wheel Disc No.	284-10568	297-10579	234-10579	017-10533	169-10570	166-10568	340-10568	210-63307		
	vii.	R.B. Nos.	02564	37585	28720	29282	37301	29854	01658	01657		
	viii.	R.B. Make	SKF			SKF			SKF		SKF	
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.	G12-4-1072	G12-4-2121	G12-4-1100	G12-4-2118	G12-4-968	G12-4-1795	G12-4-961	G12-4-2081			
ii.	Ht attest load	512	468	512	468	512	467	512	467			
iii.	Align deviation	4	16	4	19	6	9	8	15			
12.3	Items traceability:											
	Sno.	Item	PP Side Bogie				NPP side Bogie				Make	
	i.	Primary Outer Spring	G-12-6				G-12-6				GF	
	ii.	Primary inner Spring	G-12-6				G-12-6				GF	
	iii.	Primary Damper									KONI	
	iv.	Secondary damper									SACHS	
	v.	Lateral Damper									KONI	
	vi.	Yaw Damper									NIL	
	vii.	Brake cylinder & Caliper									KBI	
	viii.	Brake Disc									KBI	
	ix.	Ball joint Control arm									MGN	
	x.	Lateral Bump stop									GMT	
	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						

28/11/15
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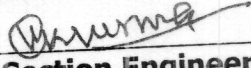
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PAGE 1 OF 5

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	14057/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	31.7 Cub mtr/min	OK
3.2	Return Air	73.80 Cub mtr/min	OK
3.3	Exhaust Air	5.28 Cub mtr/min	OK
3.4	Conditioned Air	184.43 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


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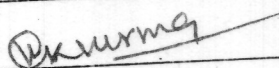
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PAGE 2 OF 5

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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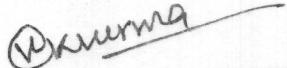
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VER.2014:00
PAGE 3 OF 5

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-L-290 Sr no of RMPU 2(PP side) :14-L-305 Sr no of Microprocessor:14-L-0181/ARECA	As per rdso/pe/spes/ac/0061/rev-1/2005	02
02.	Switch board cabinet Make :ISG Sr no :14-11-004	As per spec no . EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make: DR AUTO Sr no PA-2014/5/009 Sr no.1-131106667 Sr no.2-131106684 Sr no.CPA-14/05/004	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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VER.2014:00
PAGE 4 OF 5

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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VER.2014:00
PAGE 5 OF 5

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 :INTEG	LW 71002,Alt-F	01
28.	Regulated battery charger Make :HI-RELL Sr no:14-08-8637	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	01
29.	Emergency battery charger Make :WAVES Sr no:WEBCF-14593	EDTS 163,Rev `c` corg.-2&3	01
30	60KVA transformer Make :VIMAL Sr no :2359	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 :CHANDA & CHANDA	EDTS101,REV-C,AM-1	02
34.	Wheel Slide Protection System (WSP) Make :KNORR & Sr no :0114201220	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 खण्ड अभियन्ता
विद्युत उत्पादन-गुणवत्ता
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