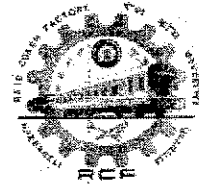


रेल डिब्बा कारखाना, रायबरेली
RAIL COACH FACTORY, RAEBARELI



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

ROLLING STOCK CERTIFICATE

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

Date: 21/04/2015

SHELL NO.	L	W	A	C	C	W	0	3	R	B	L	/	1	4	-	1	5	DATE OF DISPATCH	2	4	0	3	2	0	1	5
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RLY	S	C	R	Type	L	W	A	C	C	W	Coach No.	1	4	0	6	6	/	C
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- Railway Board's Order No. : 2014/M(C)/142/1, dated 05.12.2014
- 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) 1103(NPPE) 2) 1104(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 3832 NPP-END 3913

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	<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 DAETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U.	VIBGYOR	96.93/94.11
2.	Insulation		Satisfactory	



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Date: 21/04/2015

SHELL NO.	L	W	A	C	C	W	D	3	R	B	L	/	1	4	-	1	5	DATE OF DISPATCH	2	4	0	3	2	0	1	5
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RLY	S	C	R	Type	L	W	A	C	C	W	Coach No.	1	4	0	6	6	/	C
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8. DETAIL OF BOGIES :

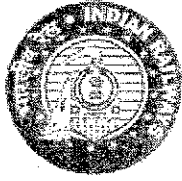
ITEMS	PP SIDE				NPP SIDE			
Bogie No	146639				146639			
Bogie Type	Fiat				Fiat			
Axle No	129256/982		128612/989		Z-3232		125975/475	
Wheel Dia	915.00	915.00	915.00	915.00	916.00	916.00	915.00	915.00
Wheel Disc No	163-10533	358-11607	138-11611	228-10570	056-10570	253-10570	097-63302	331-11602
R.B. Nos.	35803	35928	35986	36158	36129	36223	36218	36377
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.	DN-13-4-3426	G13-4-1360	DN13-4-3548	G13-4-4020	DN-13-4-3567	G13-4-5984	DN-13-4-3436	G13-4-4402
Compressed Ht. at Tested Load	508	466	508	466	506	465	503	468
Alignment deviation (mm)	29	18	29	16	19	11	18	14

10. TRACEABILITY OF BOGIE ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO	
			NPP SIDE	PP SIDE
1.	Primary outer Spring	L&S	L&S-3-13	L&S-3-13
2.	Primary Inner Spring	L&S	L&S-2-13	L&S-2-13
3.	Primary Damper	KONI		
4.	Secondary Damper	SACHS		
5.	Lateral Damper	---		
6.	Yaw Damper	KONI		
7.	Brake Cylinder & Caliper	FTI/KBI		
8.	Brake Disc	FTI		
9.	Ball Joint Control Arm	SGA		
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	SARITA		
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

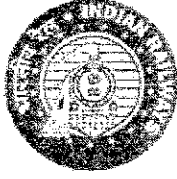
Date: 21/04/2015

SHELL NO.	L	W	A	C	C	W	0	3	R	B	L	/	1	4	-	1	5	DATE OF DISPATCH	2	4	0	3	2	0	1	5
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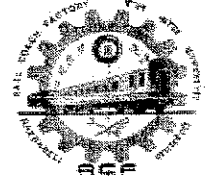
RLY	S	C	R	Type	L	W	A	C	C	W	Coach No.	1	4	0	6	6	/	C
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11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s Faiveley Harita Hasur Tamilnadu	C14039B
2.	Pull box	M/s Faiveley Harita Hasur Tamilnadu	1403531B
3.	DV	M/s Faiveley Harita Hasur Tamilnadu	
4.	PVC	M/s Responsive, Colaba, Mumbai	
5.	UIC Vestibule (PPE)	M/s Suncrest Industries West bangal	
6.	UIC Vestibule (NPPE)	M/s Suncrest Industries West bangal	
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/hooper Window	M/s Aikon Technology Pvt. Ltd. Solan HP	
12.	Roof Ceiling	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
13.	Non-AC Area Ceiling	M/s Gandhi Enterprises, jaandhar	
14.	Supply Air Duct	M/s Hanspal Coach Product Kapurthala	
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 (HP)	
21.	Auxiliary Water Tank	M/s Amit Engineers, Mohali Punjab	
22.	Under Slung Water Tank (450 L)	M/s Shivalik Fasteners, Mohali Punjab	
23.	Under Slung Water Tank (2X685L)	M/s Amit Engineers, Mohali Punjab	
24.	Flexible Faucet	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
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 Hindustan Fibre Ltd. Vadodra (Gujrat)	
30.	Side Wall panel	M/s KAE Engg. pvt.ltd Satarganj (UK)	
31.	Seat & Berth	M/s Mohan Rail Components Pvt. Ltd. kapurthala	
32.	Light Luggage Rack	M/s Virendra Steel Enterprises Chandigarh	
33.	Snack Table	M/s Anjani technoplast 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: 21/04/2015

SHELL NO.	L	W	A	C	C	W	0	3	R	B	L	/	1	4	-	1	5	DATE OF DISPATCH	2	4	0	3	2	0	1	5
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RLY	S	C	R	Type	L	W	A	C	C	W	Coach No.	1	4	0	6	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 &
			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 qualityrcfbl@gmail.com

DY CME
उप कर्मचारी/फर्नि.
RCF/RBL
DY CME/FURNISHING
रेल कोच फैक्ट्री / रायबरेली / लालगंज
RCF / RBL / LLJ

SSE/QC
RCF/RBL



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		LWBAC		21-07-2014			
12.1	Wheel & Axle Details:	N PP Side				PP Side			
i.	Bogie No.	146638				146639			
ii.	Frame No.	FIAT-3082				FIAT-3298			
iii.	Bolster No.	4030-P				4008-VT			
iv.	Axle No.	Z-3232		125975/475		129256/982		128612/989	
v.	Wheel Dia.	916.00	916.00	915.00	915.00	915.00	915.00	915.00	915.00
vi.	Wheel Disc No.	056-10570	253-10570	097-63302	331-11602	163-10533	358-11607	138-11611	228-10570
vii.	R.B. Nos.	36129	36223	36218	36377	35803	35928	35986	36158
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.	DN13-4-3567	G13-5-5984	DN13-4-3436	G13-4-4402	DN13-4-3426	G13-4-1360	DN13-4-3548	G13-4-4020
ii.	Ht. attest load	506	465	503	468	508	466	508	466
iii.	Align .deviation	19	11	18	14	29	18	29	16
12.3	Items traceability:								
	Sno.	Item	PP Side Bogie		NPP side Bogie		Make		
i.		Primary Outer Spring	L&S-3-13		L&S-3-13		L&S		
ii.		Primary inner Spring	L&S-2-13		L&S-2-13		L&S		
iii.		Primary Damper					KONI		
iv.		Secondary damper					SACHS		
v.		Lateral Damper					NIL		
vi.		Yaw Damper					NIL		
vii.		Brake cylinder & Caliper					FTI/KBI		
viii.		Brake Disc					.FTI		
ix.		Ball joint Control arm					SGA		
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					SARITA		
xviii.		Ball joint roll link					SARITA		
xix.		Fork make					EMSON		
12.4	i.	Modification / Trial (if any):			NIL				
	ii.	Deviations (if any):			NIL				

Handwritten signature/initials



Govt. of India- Ministry of Railways
(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

TYPE COACH	LWACCW	SHELL/COACH NO	14066/C
RAILWAY	SCR	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	29.21 Cub mtr/min	OK
3.2	Return Air	63.40 Cub mtr/min	OK
3.3	Exhaust Air	6.74 Cub mtr/min	OK
3.4	Conditioned Air	204.22 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**



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

(Signature)

Senior Section Engineer
Quality control / Electrical
Rail Coach Factory Raebareli



Govt. of India- Ministry of Railways
(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
01.	Roof Mounted AC package unit for LHB AC coaches Make : AMIT Sr no of RMPU 1 (NPP side): 1038-G Sr no of RMPU 2(PP side) : 1036-G Sr no of Microprocessor: AE-14-09-290/AMIT	As per rdso/pe/spes/ac/0061/rev-1/2005	02
02.	Switch board cabinet Make: ABROL ENG. Sr no : 170	As per spec no . EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make: DR AUTO Sr no PA-NIL Sr no.1- 131206804 Sr no.2- 131206781 Sr no.CPA- 2014/05/0090	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

(Signature)
Senior Section Engineer
Quality control / Electrical
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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
Quality control / Electrical
Rail Coach Factory Raebareli



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



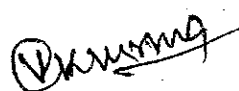
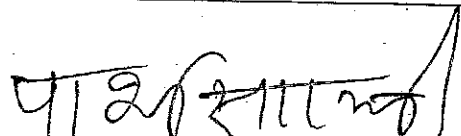
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ROLLING STOCK CERTIFICATE OF LHB/EOG 2T AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
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 : 11/2014	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: 14058287	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	01
29.	Emergency battery charger Make : BHASIN Sr no: 04140514	EDTS 163,Rev `c` corg.-2&3	01
30	60KVA transformer Make : VIMAL Sr no : 2349/2014-15	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 : NEC	EDML 020,Rev-I	02
33.	Wheel set earthing equipment. Make : MLI & CHANDA	EDTS101,REV-C,AM-1	02
34.	Wheel Slide Protection System (WSP) Make: FAIVELEY & Sr no : 17/14/245	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
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विद्युत उत्पादन-गुणवत्ता
रेल कोच फैक्टरी / लालगंज / रायबरेली
Sr. Section Engineer
Electric Production - Quality
RCF / RBL / LLJ

जय प्रकाश मिश्र अभियंता (उत्पादन)
रेल कोच फैक्टरी-रायबरेली, लालगंज
DY.CEE/P-RCF/RBL/LLJ