

रेल डिब्बा कारखाना, रायबरेली
RAIL COACH FACTORY, RAEBARELI



FORM NO: RCF/RBL/QMf 8091
VERSION: 2012-01-01

ROLLING STOCK CERTIFICATE

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

Date: 26/03/2015

SHELL No.	L	W	A	C	C	N	-	4	0	8	2	/	2	0	1	4	DATE OF DISPATCH	0	4	0	3	2	0	1	5
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RLY	E	R	Type	L	W	A	C	C	N	Coach No.	1	4	1	2	6	/	C
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- Railway Board's Order No. : 2014/M(C)/142/1 dated 08.09.2014
- Tare Weight of Coach : 45.6 Tonnes
- Carrying Capacity : (a) Seating : 72 (b) Sleeping : 72 (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	4250
4.	CBC height/Buffer height from Rail level 1105 +0/-15	1) 1103(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	3840	NPP END	3841

6. AIRBRAKE TEST REPORT:

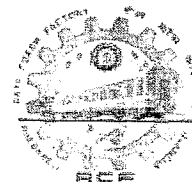
S NO	ITEM	DESCRIPTION	SPEC. VALUE	OBSERVED
1.	Full brake application.	<ul style="list-style-type: none"> ➤ Reduce pressure of BP from 5.0 to 3.4 kg/cm². ➤ Max. pressure in BC ➤ All Brake are applied 	6 – 10 sec. 3.0 ±0.15 kg/cm ² OK	7 Sec. 3.0 kg/cm ² OK
2.	Insensitivity	<ul style="list-style-type: none"> ➤ 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 DETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U.	VIBGYOR	89/89
2.	Insulation	Satisfactory		



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RLY	E	R	Type	L	W	A	C	C	N	Coach No.	1	4	1	2	6	/	C
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8. DETAIL OF BOGIES :

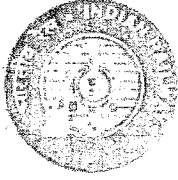
ITEMS	PP SIDE				NPP SIDE			
Bogie No	156122				156123			
Bogie Type	Fiat				Fiat			
Axle No	Z-3719		A-3147		A-3253		C-4109	
Wheel Dia	916.50	916.50	916.50	916.50	915.00	915.00	917.00	917.00
Wheel Disc No	117-11611	209-11605	020-63302	036-63302	245-63307	029-11605	173-63305	246-63309
R.B. Nos.	36334	36315	25892	36324	31938	32090	63579	27152
CT R B Make	SKF		SKF		SKF		SKF	

9. SECONDARY SUSPENSION LOAD DEFLECTION VALUES

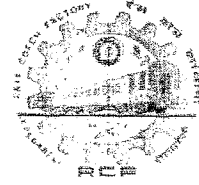
DESCRIPTION	BOGIE PP SIDE				BOGIE NPP SIDE			
	SECONDARY 1		SECONDARY 2		SECONDARY 1		SECONDARY 2	
	OUTER	INNER	OUTER	INNER	OUTER	INNER	OUTER	INNER
Make & Nos.	CMGBD-14-11	HZ-13	CMGBD-14-11	HZ-13	CMGBD-14-11	HZ-13	CMGBD-14-11	HZ-13
Compressed Ht. at Tested Load	515	467.30	512	466.10	510	467.50	512	467.20
Alignment deviation (mm)	8	47.10	7	45.80	9	40.30	8	39.70

10. TRACEABILITY OF BOGIE ITEMS:

S NO	ITEM	SERIAL NO		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	YR-10-10	YR-10-10	YR
2.	Primary Inner Spring	BPS-2013	BPS-2013	BPS
3.	Primary Damper			KONI
4.	Secondary Damper			GEREP
5.	Lateral Damper			GEREP
6.	Yaw Damper			KONI
7.	Brake Cylinder & Caliper			KBI
8.	Brake Disc			KBI
9.	Ball Joint Control Arm			WINLANE
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,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



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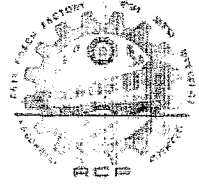
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11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s Faiveley Harita Hasur Tamilnadu	C14043B
2.	Pull box	M/s Faiveley Harita Hasur Tamilnadu	
3.	DV	M/s Faiveley Harita Hasur Tamilnadu	14035533B
4.	PVC	M/s Responsive Industries, Mumbai	
5.	UIC Vestibule (PPE)	M/s Ameenji Pvt. Ltd. Hyderabad	
6.	UIC Vestibule (NPPE)	M/s Ameenji 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 Aikon Technology Pvt. Ltd. Solan H.P	
10.	Emergency Window	M/s Rail Tech, Kapurthala	
11.	Lavatory Window	M/s Rail Tech, Kapurthala	
12.	Roof Ceiling	M/s KAE Engg. Pvt. Ltd. Sitarganj, U.K.	
13.	Non-AC Area Ceiling	M/s Amirchand Engg. Works Jalandhar	
14.	Supply Air Duct	M/s Amirchand Engg. Works Jalandhar	
15.	Body Side Doors	M/s JBM Faridabad	
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 M.K. Precision Metal Part Pvt. Ltd. Navi Mumbai	
21.	Auxiliary Water Tank	M/s Manoj Enterprises, Mohali Punjab	
22.	Under Slung Water Tank(450 L)	M/s Shivalik Fastener Mohali PB	
23.	Under Slung Water Tank(2X685L)	M/s Shivalik Fastener Mohali PB	
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 Technology Noida	



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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:

- 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
RCF/RBL

उप मु.या.अभि./फर्नि.
DY CME/FURNISHING
रेल कोच फैक्ट्री / रायबरेली / लालमंझ
RCF / RBL / LJ

SSE/QC
RCF/RBL

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				
		4129/RBL		LACCN		10-02-2015				
12.1	Wheel & Axle Details:	PP Side				NPP Side				
i.	Bogie No.	156122				156123				
ii.	Frame No.	FIAT-3779				FIAT-3773				
iii.	Bolster No.	4413-VT				4511-GT				
iv.	Axle No.	Z-3719		A-3147		A-3253		C-4109		
v.	Wheel Dia.	916.50	916.50	916.50	916.50	915.00	915.00	917.00	917.00	
vi.	Wheel Disc No.	117-11611	209-11605	020-63302	036-63302	245-63307	029-11605	173-63305	246-63309	
vii.	R.B. Nos.	36334	36315	25892	36324	31938	32090	36579	27152	
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.	CMGBD-14-11	HZ-13	CMGBD-14-11	HZ-13	CMGBD-14-11	HZ-13	CMGBD-14-11	HZ-13	
ii.	Ht attest load	515	467.30	512	466.10	510	467.50	512	467.20	
iii.	Align deviation	8	47.10	7	45.80	9	40.30	8	39.70	
12.3	Items traceability:									
	Sno.	Item	PP Side Bogie			NPP side Bogie			Make	
i.		Primary Outer Spring	YR-10-10			YR-10-10			YR	
ii.		Primary inner Spring	BPS-2013			BPS-2013			BPS	
iii.		Primary Damper							KONI	
iv.		Secondary damper							GEREP	
v.		Lateral Damper							GEREP	
vi.		Yaw Damper							NIL	
vii.		Brake cylinder & Caliper							KBI	
viii.		Brake Disc							KBI	
ix.		Ball joint Control arm							WINLANE	
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,GMT	
xv.		Traction centre elastic							TESPAK	
xvi.		Secondary rubber pad							GMT	
xvii.		Rubber spring							EMSON	
xviii.		Anti roll bar make							SARITA	
xviii.		Ball joint roll link							SARITA	
xix.		Fork make							SARITA	
12.4	i.	Modification / Trial (if any):							NIL	
	ii.	Deviations (if any):							NIL	

28/2/15
SSE/OC



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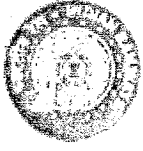
FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

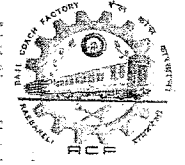
ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES

TYPE COACH	LWACCN	SHELL/COACH NO	14126/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	30.93 Cub mtr/min	OK
3.2	Return Air	62.64 Cub mtr/min	OK
3.3	Exhaust Air	6.60 Cub mtr/min	OK
3.4	Conditioned Air	188.83 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



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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	SAFETIES :	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	R 407C OK

(Signature)
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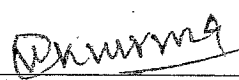
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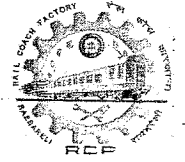
ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
01.	Roof mounted AC package unit for LHB AC coaches Make : INTEC Sr-no of RMPU (NPP side) : 14-L-254 Sr no of RMPU (PP side) : 14-L-245 Sr no of Microprocessor: 14-J-146/AMIT	As per rdso/pe/spes/ac/0061/ rev-1/2005	02
02.	Switch board cabinet Make : ISG Sr no : 14-11-0013	As per spec no EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make: KALSI Sr no PA- 3884/7/2014 Sr no.1: 248615/7/2014 Sr no.2: 248616/7/2014 Sr no.CPA- 3859/5/2014	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


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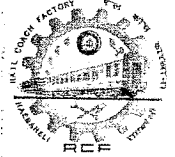
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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

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 nil, Item 1.	09
18.	Single switch 16A/250V/AC ONE WAY complete with steel plate & cover frame	EDML 045,Rev nil ,Item 2.	09
19.	PA system for LHB coaches Make : AHUJA	EDTS 173,Rev- a Am-1,2&3	01 set
20.	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
21.	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

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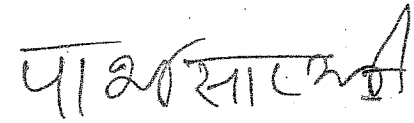
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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
22.	Battery fuse box +ve Make : ISG	As per LW 71001,Alt-F	01
23.	Battery fuse box -ve Make : INTEG	As per LW 71002,Alt-F	01
24.	Regulated battery charger Make : HI-RELL Sr no: 14088655	As per RDSO/pe/spec/ac/01 29, Rev.-1 (2009)	01
25.	Emergency battery charger Make : BHASIN Sr no: 04140521	EDTS 163,Rev 'c' corg.-2&3	01
26.	60KVA transformer Make : VIMAL Sr no : 2249	As per rdso/pe/spec/ac/008 0/rev-0 (2007)/Am- 1&2/Corr. 1,2&3	01
27.	ZS coupling 400A/750V/03Ph/50hz. Make : S INTERNATIONAL	As per spec No EDTS 105,Rev 'e' Am-2	02 sets
28.	Feeder junction boxes. Make : ISG	EDTS 328, Rev-C, Drg. No. SKED- 614,615	02
29.	Wheel set earthling equipment. Make : CHANDA,DARSHAN	EDTS101,REV- C,AM-1	02
30.	Wheel Slide Protection System (WSP) Make: FAIVELEY & Sr no : 17/14/244	M/s : FAIVELEY	01 set
31.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : SIDWAL	As per spec no EDTS 139, Rev- E ,Sec II.	01

	
SSE/EL/SG	DY.CEE(P)/RCF/RBL

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