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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: 07/05/2014

SHELL	L	W	A	C	C	N	-	3	1	5	6	/	2	0	1	3	DATE OF DISPATCH	0	1	0	4	2	0	1	4
RLY	C	R		TYPE	L	W	A	C	C	N		Coach No.	1	4	1	1	0	/	C						

1. Railway Board's Order No : **2013/M(C)/142/3 dated 03.03.2014**
2. Tare Weight of Coach : 45.6 Tonnes
3. 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) 1104 (NPPE) 2) 1105 (PPE)

5. TRACEABILITY OF SHELL ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO			
1.	Buffers	N.A.	PP END	2671	NPP END	2646
2.	Centre Buffer Coupler	M/s ESCORTS				

6. AIRBRAKE TEST REPORT:

S NO	ITEM	DESCRIPTION	SPEC. VALUE	OBSERVED
1.	Full brake application	➢ 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/cm². OK	8 sec. 3.0 kg/cm² OK
2.	Insensitivity	➢ Exhaust BP @ 0.3 kg/cm²/min.	No brake application	OK
3.	Sensitivity	➢ 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.	AKZO NOBEL	90.48/92.49
2.	Insulation	Satisfactory		

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RLY	C	R		TYPE	L	W	A	C	C	N		Coach No.	1	4	1	1	0	/	C						

8. DETAIL OF BOGIES :

ITEMS	PP SIDE				NPP SIDE			
Bogie No	137003				137002			
Bogie Type	Fiat				Fiat			
Axle No	T-2354		R-2278		R-3185		RWF-99041	
Wheel Dia	917.50	917.50	918.00	918.00	918.00	918.00	918.00	918.00
Wheel Disc No	220-53102/ZB13	118-50859/ZB13	214-51787/ZB13	353-51781/ZB13	194-50846/ZB13	181-50846/ZB13	003-51781/ZB13	153-51782/ZB13
R B Nos.	02804	02581	03036	02402	74270	74919	76127	79515
CT R B Make	TIM		TIM		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-10-11-35	CMGBD-12-5-93	CMGBD-10-12-16	CMGBD-12-5-120	CMGBD-10-12-14	CMGBD-12-5-115	CMGBD-10-12-8	CMGBD-12-5-20
Compressed Ht. at Tested Load	516	468	514	464	510	464	515	463
Alignment deviation (mm)	12	31	12	34	8	26	9	26

10. TRACEABILITY OF BOGIE ITEMS:

S NO	ITEM	SERIAL NO		MAKE
		NPP SIDE	PP SIDE	
1.	Primary outer Spring	CMGBD-11-12	CMGBD-11-12	CMGBD
2.	Primary Inner Spring	CMGBD-10-12	CMGBD-10-12	CMGBD
3.	Primary Damper			KONI
4.	Secondary Damper			SACHS
5.	Lateral Damper			SACHS
6.	Yaw Damper	------	------	SV
7.	Brake Cylinder & Caliper	N13157B,N13158B N13160B,N13159B	N13056B,N13053B N13055B,N13054B	FTI
8.	Brake Disc			FTI
9.	Ball Joint Control Arm			SGA
10.	Lateral Bump Stop			GMT
11.	Ball Joint Traction Lever			SGA
12.	Traction Centre Elastic			SARITA
13.	Secondary Rubber Pad			TECSPAK
14.	Rubber Spring			GMT
15.	Ball Joint Roll Link			SARITA

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RLY	C	R		TYPE	L	W	A	C	C	N		Coach No.	1	4	1	1	0	/	C

11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s Faively,Harita,Hasur,Tamilnadu	N13043B
2.	Pull box	M/s Faively,Harita,Hasur,Tamilnadu	
3.	DV	M/s Faively,Harita,Hasur,Tamilnadu	13125544B
4.	PVC	M/s Responsive,Colaba,Mumbai	
5.	UIC Vestibule (PPE)	M/s COMCEN New Delhi	
6.	UIC Vestibule (NPPE)	M/s COMCEN New Delhi	
7.	Foot Step	M/s JVR Ludhiana	
8.	Decoupling arrangement	M/s SECO	
9.	Body Side Window	M/s Rail Tech Kapurthala,Punjab	
10.	Emergency Window	M/s Rail Tech Kapurthala,Punjab	
11.	Lavatory Window	M/s Rail Tech Kapurthala,Punjab	
12.	Roof Ceiling	M/s KAE Engineers, Sitarganj (U.K.)	
13.	Non-AC Area Ceiling	M/s Amirchand Engg.Works,Jalandhar	
14.	Supply Air Duct	M/s Hanspal coach products Kapurthala	
15.	Body Side Doors	M/S JBM faridabad	
16.	Compartment Door (PPE)	M/s Rail Tech Kapurthala,Punjab	
17.	Compartment Door (NPPE)	M/s Rail Tech Kapurthala,Punjab	
18.	Vestibule Door(PPE)	M/s JBM Faridabad	
19.	Vestibule Door(NPPE)	M/s JBM Faridabad	
20.	CDTS	M/s Darshan Enterprises New Delhi	
21.	Auxiliary Water Tank	M/s Amit Engg.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 Metco New 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 Engineers Pvt.Ltd. satarganj UK	
31.	Seat & Berth	M/s Savitry Engineering Product Ponta sahib	
32.	Light Luggage Rack	M/s Virendra Steel Entreprises,Chandigarh	
33.	Snack Table	M/s International Tractor Ltd Hoshiarpur	

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RLY	C	R		TYPE	L	W	A	C	C	N		Coach No.	1	4	1	1	0	/	C

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:

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 complaint/suggestion please contact on qualityrcfrbl@gmail.com.

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RCF/RBL

Dy CME/Fur
उप मु0 यां0 अभि0/फर.
RCF/RBL(LLJ)
रे. डि.का. रायबरेली (लालगंज)

SSE/QC
RCF/RBL

सीनियर सेक्शन इंजीनियर क्वालिटी (प्रोल)
रेल डिब्बा कारखाना, रायबरेली
Sr. Section Engineer (Control)
Rail Coach Factory, Raebareli (Lalganj)

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

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**	14110/C
RAILWAY	CR	**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 PREACTICE 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	**29.71** Cub mtr/min	OK
3.2	Return Air	**61.27** Cub mtr/min	OK
3.3	Exhaust Air	**6.54** Cub mtr/min	OK
3.4	Conditioned Air	**150.26** 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 PP Side :**22.5 deg C** NPP Side :**22.0 deg 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		OK

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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

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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.B.0060** Sr no of RMPU (PP side) :**14.B.0053** Sr no of Microprocessor. :**AE.10.03.00089**	As per rdso/pe/spes/ac/0061/ rev-1/2005	**02**
02.	Switch board cabinet Make: **ISG** Sr no :**0046-11/13**	As per spec no . EDTS073,REV-D,AM-6	**01**
03.	Pump equipment with PLC controller & pump box Make: **KIND** Sr no PA:**070886** Sr no.1 :**13070583** Sr no.2 :**13070584** Sr no.CPA:**1307027**	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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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 :**A RAJA** Lug date :**05/13**	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**

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Sr no	Description	Drg/Spec no.	Quantity per Coach
22.	Battery fuse box +ve Make :**NEC**	As per LW 71001,Alt-F	**01**
23.	Battery fuse box –ve Make : **NEC**	As per LW 71002,Alt-F	**01**
24.	Regulated battery charger Make : **IC Elect.** Sr no :**1402024**	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	**01**
25.	Emergency battery charger Make :**BHASIN** Sr no:**08130235**	EDTS 163,Rev `c' corg.-2&3	**01**
26.	60KVA transformer Make :**VIMAL** Sr no 1 :**1962-2012/13**	As per rdso/pe/spec/ac/0080/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 :**NEC**	EDML 020,Rev-I	**02**
29.	Wheel set earthling equipment. Make : **CHANDA&CHANDA**	EDTS101,REV-C,AM-1	**02**
30.	Wheel Slide Protection System (WSP) Make: **FAIVELEY** Sr no :**38/13/185**	M/s : **FAIVELEY**	**01 set**
31.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make :**SPECTRUM**	As per spec no EDTS 139, Rev- E ,Sec II.	**01**

SEE/RCF/RBL	**SSE/EL/QC**

वरिष्ठ विद्युत अभियन्ता
रेल कोच फैक्टरी, रायबरेली, लखनऊ
Sr. Electrical Engineer / RCF / RBL / Lucknow

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विद्युत उत्पादन–गुणवत्ता
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