

आधुनिक रेल डिब्बा कारखाना, रायबरेली

MODERN COACH FACTORY, RAEBARELI

FORM NO: RCF/RBL/QMF 8002
VERSION: 2016-01-13

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2016-17/050

SHELL NO.	5	3	1	4	0	-	2	0	1	5	-	1	6	-	-	DATE OF DISPATCH	1	7	0	6	2	0	1	6
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LY	N	R	-	-	Type	L	W	A	C	C	N	Coach No.	1	6	3	9	4	4	/	C
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- Railway Board's Order No. : 2016/M(C)142/1 Dtd. 12.05.2016
- 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) 1100 (NPPE) 2) 1100 (PPE)

5. TRACEABILITY OF SHELL ITEMS:

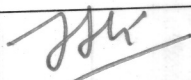
S NO	ITEM	MAKE/SUPPLIER	SERIAL NO			
1.	Underframe	M/s E.C. Blades & Tool Pvt. Chandigarh	PP END	53140	NPP END	53140
	Front Part	MCF/RBL				
	Complete	MCF/RBL	RH	53140	LH	53140
2.	Side wall	MCF/RBL				
3.	End wall	NPP- M/s Rail Tech Pvt. Ltd. KXH	PP END	53140	NPP END	53140
		PP- M/s Omax Auto Gurgaon Rewari				
4.	Roof	MCF/RBL				
5.	Centre Buffer Coupler	M/s ESCORT	PP END	5535	NPP END	5536
6.	Buffers	N.A.				

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 DAETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U	VIBGYOR	94/93
2.	Insulation		Satisfactory	


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RLY	N	R	-	Type	L	W	A	C	C	N	Coach No.	1	6	3	9	4	4	/	C	
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8. DETAIL OF BOGIES :

ITEMS	PP Side				NPP Side			
Bogie No	160033				160034			
Bogie Type	LWACCN				LWACCN			
Frame no.	SCI-456				SCI/FM-459			
Bolster no.	BEC-22				BEC-16			
Axle No	G 0002 RWF		F 9037 RWF		F 9376		F 9077	
Wheel Dia	917.018	916.883	917.000	916.883	916.979	916.816	917.016	916.821
Wheel Disc No	7276-00053 VR 15	7292-00059 VR 15	7277-00073 VR 15	7305-00139 VR 15	7280-00068 VR 15	7276-00128 VR 15	7276-00159 VR 15	7279-00072 VR 15
R.B. Nos.	02-15-02503	02-15-01983	02-15-02637	02-15-02022	03-15-03306	03-15-04318	03-15-03856	03-15-03555
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.	CMFSK02-16-883-93	CVFSK04-16-9513-193-236	CMFSK04-16-883-79	CVFSK04-16-9513-193-224	G 15-11-871	CVFSK04-16-9513-193-186	G 15-11-906	CVFSK04-16-9513-193-252
Compressed Ht. at Tested Load	512	468	512	467	512	466	512	466
Alignment deviation (mm)	9	8	8	8	20	6	21	8

10. TRACEABILITY OF BOGIE ITEMS:

S. NO	ITEM	SERIAL NO.		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	RSK 03WA(179,553,168,158)	RSK 03WA(549,312,270,108)	RSK
2.	Primary Inner Spring	CVFSK12-15 7143-186(65,24,106,188)	CVFSK09-15-7143-130-73,12-15-7143-186(6,178,125)	CVFSK
3.	Primary Damper	KW 37-2015 301530049	KW 37-2015 301530049	GEREP
4.	Secondary Damper	KW 13-2015 301550333	KW 13-2015 301550333	GEREP
5.	Lateral Damper	KW 37-2015 301550332	KW 37-2015 301550332	GEREP
6.	Brake Cylinder	700-K-29,760-K-29,758-K-29,699-K-29	2285-K-29,2400-K-29,2401-K-29,2282-K-29	KBI
7.	Brake Caliper	664-29,731-29,729-29,663-29	2242-29,2357-29,2358-29,2239-29	KBI
8.	Brake Disc	FAV D133561-300-02-16(434,438,439,435)	FAV D133561-300-02-16(437,244,243,245)	FAV
9.	Ball Joint Control Arm			GMT
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			GMT
15.	Secondary Rubber Pad			TECSPAK
16.	Rubber Spring			GMT
17.	Anti roll bar make			SARITA
18.	Roll Link make			SARITA/GMT
19.	Fork make			SARITA

Signature of SSE/Bogie/QC

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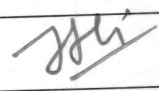
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11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s KBI ,Faridabad ,New Delhi	15M1337
2.	Pull box	M/s KBI ,Faridabad ,New Delhi	
3.	DV	M/s KBI ,Faridabad ,New Delhi	2015L1923
4.	PVC	M/s Responsive Industries, Mumbai	
5.	UIC Vestibule (PPE)	M/s Cemcon Industries New Delhi	
6.	UIC Vestibule (NPPE)	M/s Cemcon Industries New Delhi	
7.	Foot Step	M/s Hitech Infra RBL	
8.	Decoupling arrangement	M/s Kohinoor Industries, Faridabad	
9.	Body Side Window	M/s Aikon Technology Pvt.Ltd.Solan (H.P)	
10.	Emergency Window	M/s Rail Tech, Kapurthala	
11.	Lavatory/hooper Window	M/s Aikon Technology Pvt.Ltd.Solan (H.P)	
12.	Roof Ceiling	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
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 Khlsi, LDH	
19.	Vestibule Door(NPPE)	M/s Khlsi, LDH	
20.	CDTS	M/s Oasis Fabrication, Jagadari	
21.	Auxiliary Water Tank	M/s Manoj Enterprises Mohali PB	
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 (Gujarat)	
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 Fire Matics	NPP-1711 PP-1708
30.	Side Wall panel	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
31.	Seat & Berth	M/s Oriental veneer Products Ltd Mumbai	
32.	Light Luggage Rack	M/s Techno Industries, Allahabad	
33.	Snack Table	M/s Anjani Techno Plasts 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 qualityrcfrbl@gmail.com

SSE/QC/MCF/RBL	AME/QC/MCF/RBL	Dy. CME/FUR/MCF/RBL

सहायक निदेशक (गुणवत्ता) / गुणवत्ता
Asst. Mechanical Engineer/ Quality
रेल डिब्बा कारखाना, लालगंज, रायबरेली
Rae Coach Factory, Lalganj, Raebareli



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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	163944/C
RAILWAY	NR	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	29.08 Cub mtr/min	OK
3.2	Return Air	83.82 Cub mtr/min	OK
3.3	Exhaust Air	12.96 Cub mtr/min	OK
3.4	Conditioned Air	219.35 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 : 21.7°C NPP Side : 20.9°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

(Signature)
Senior Section Engineer
Quality control / Electrical
RCF, Raebareli



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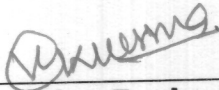
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FOR ELECTRICAL ITEMS

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	SAFETY ITEMS	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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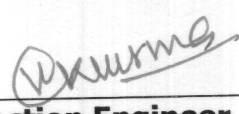
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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
01.	Roof mounted AC package unit for LHB AC coaches Make : LEEL Sr no of RMPU 1 (NPP side): 16.04.0630 Sr no of RMPU 2(PP side) : 16.04.0629 Sr no of Microprocessor: 16.02.002/A.PAUL	As per rdso/pe/spes/ac/0061/rev -1/2005	02
02.	Switch board cabinet Make : ABROL Sr no : 109/03/2016	As per spec no . EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make : KALSI Sr no PA- 5024/02/2016 Sr no.1- 262781/2/2016 Sr no.2- 262782/02/2016 Sr no.CPA: 5053/02/2016	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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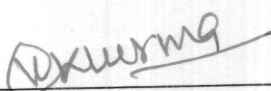
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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

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- C, Item 1.	09
18.	Single switch 06A/250V/AC ONE WAY complete with steel plate & cover frame	EDML 047,Rev-A, Item 2.	09
19.	Provision of switch socket combined 5PIN (06A, 250V AC) along with 1A glass fuse fitted powder coated steel plate & cover	As per cat no EL-243 (EL signature series) of M/s SSK	09
20.	PA system for LHB coaches Make :AHUJA	EDTS 173,Rev- a Am- 1,2&3	01 set
21.	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 :06/2015	EDTS 129,Rev nil	01 set
22.	Battery box for LHB coaches.	1 10113 0 76 700 005 w/o item 5, 22, 23, 26 & 27.	01


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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
23.	Battery fuse box +ve Make : ISGPL	As per LW 71001,Alt-F	01
24.	Battery fuse box -ve Make : NEC	As per LW 71002,Alt-F	01
25.	Regulated battery charger Make : HI REL Sr no : 16020743	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	01
26.	Emergency battery charger Make : BHASIN Sr no: 10151629	EDTS 163,Rev `c` corg.-2&3	01
27.	60KVA transformer Make : VIMAL Sr no : 3544	As per rdso/pe/spec/ac/0080/rev -0 (2007)/Am-1&2/Corr. 1,2&3	01
28.	ZS coupling 400A/750V/03Ph/50hz. Make : S INTERNATIONAL	As per spec No EDTS 105,Rev`e` Am-2	02 sets
29.	Feeder junction boxes. Make : ABROL	EDML 020, Rev- I/EDTS-328 REV-C.	02
30.	Wheel set earthing equipment. Make : DARSHAN	EDTS101,REV-C,AM-1	02
31.	Wheel Slide Protection System (WSP) Make : KNORR Sr no : 0115431904	M/s : KNORR	01 set
32.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : SUPER REFRIGERATION	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