

# 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/2016-17/63

SHELL NO.		5	3	1	5	8	-	2	0	1	5	-	1	6	-	-	DATE OF DISPATCH				3	0	0	6	2	0	1	6
RLY	N	R	-	-	Type	L	W	A	C	C	N	Coach No.				1	6	3	9	4	9	/	C					

- 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) 1105 (NPPE) 2) 1101 (PPE)

#### 5. TRACEABILITY OF SHELL ITEMS:


S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Underframe	M/s E.C. Blades & Tool Chandigarh	PP END 53158 NPP END 53158
	Front Part Complete	MCF/RBL	
2.	Side wall	MCF/RBL	RH 53158 LH 53158
3.	End wall	NPP- M/s E.C. Blades & Tool Chandigarh	PP END 53158 NPP END 53158
		PP- M/s E.C. Blades & Tool Chandigarh	
4.	Roof	MCF/RBL	
5.	Centre Buffer Coupler	M/s ESCORTS	PP END 5464 NPP END 5478
6.	Buffers	N.A.	

#### 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/cm <sup>2</sup> . ➤ Max. pressure in BC ➤ All Brake are applied	6 – 10 sec. 3.0 ±0.15 kg/cm <sup>2</sup> . OK	8 sec. 3.0 kg/cm <sup>2</sup> OK
2.	Insensitivity	➤ Exhaust BP @ 0.3 kg/cm <sup>2</sup> /min.	No brake application	OK
3.	Sensitivity	➤ Exhaust BP @ 0.1 kg/cm <sup>2</sup> /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	M/s VIBGYOR	95/98
2.	Insulation		Satisfactory	

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

**ROLLING STOCK CERTIFICATE**  
Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2016-17/063

SHELL No.	5	3	1	5	8	-	2	0	1	5	-	1	6	-	-	-	DATE OF DISPATCH	3	0	/	0	6	/	1	6
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RLY	N	R	-	Type	L	W	A	C	C	N	Coach No.	1	6	3	9	4	9	/	C
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**8. DETAIL OF BOGIES :**

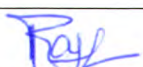
ITEMS	PP Side				NPP Side			
Bogie No	160052				160051			
Bogie Type	LWACCN				LWACCN			
Frame no.	MCF/RBL-191				SCI/FM-472			
Bolster no.	RBL-393				EC BLADES-068			
Axle No	F- 9839		F-9798		F-9118		F-9799	
Wheel Dia	917	917	918	918	917	917	918	918
Wheel Disc No	6228-00105 VR 15	06230-00092 VR 15	06226-00186 VR 15	6211-00218 VR 15	06226-00197 VR 15	06227-06002 VR 15	06226-00062 VR 15	06228-00149 VR 15
R.B. Nos.	05-15 06465	02-15 02923	02-15 02984	02-15 03183	05-15 06281	02-15 02693	05-15 06355	02-15 02979
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.	CMAFJ02-16-8836-33	CVFSK04-16-9513-193-212	CMAFJ02-16-8836-8	CVFSK04-16-9513-193-161	CMAFJ02-16-8836	CVFSK04-16-9513-193-118	CMAFJ02-16-836	CVFSK04-16-9513-193-167
Compressed Ht. at Tested Load	515	465	515	465	514	467	514	467
Alignment deviation (mm)	5	8	5	8	10	7	10	7

**10. TRACEABILITY OF BOGIE ITEMS:**

S. NO	ITEM	SERIAL NO.		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	RSK03 WA(119,497,466,170)	RSK03 WA (481,509,155,-)	RSK
2.	Primary Inner Spring	CMGBD 02-16-143-72(159,95,57,23)	CVFSK 12-15 7143-186(122,62,67,186)	CMGBD /CVFSK
3.	Primary Damper	KW 37-2015 301530049	KW 37-2015 301530049	GEREP
4.	Secondary Damper	KNORR-03-16(0234,0253)	KNORR-03-16(0236,0215)	KNORR
5.	Lateral Damper	KW 37-2015 301550332	KW 37-2015 301550332	GEREP
6.	Brake Cylinder	2187K29,2242K29,2241K29,2181K29	2116K29,2165K29,2244K29,2148K29	KBI
7.	Brake Caliper	2145-29,2197-29,2796-29,2138-29	2074-29,2120-29,2199-29,2106-29	KBI
8.	Brake Disc	24067810 0017-07/16,24067810 0016-07/16 24067893 0006-08/16,24067893 0009-08/16	24067809 0002-06/16,24067814 0038-08/16 24067814 0020-08/16,24067893 0005-08/16	KBI
9.	Ball Joint Control Arm			MGN/GMT
10.	Lateral Bump Stop			MGN
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,MGN/GMT
19.	Fork make			EMSON/SARITA

  
Signature of SSE/Bogie/QC



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RLY	N	R	-	-	Type	L	W	A	C	C	N	Coach No.				1	6	3	9	4	9	/	C							

#### 11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s KBI ,Faridabad ,New Delhi	15M1338
2.	Pull box	M/s KBI ,Faridabad ,New Delhi	
3.	DV	M/s KBI ,Faridabad ,New Delhi	2015L1921
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 Aikon Technology Pvt.Ltd.Solan (H.P)	
11.	Lavatory/hooper Window	M/s Rail Tech, Kapurthala	
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 Kalsi,Ludhiana	
19.	Vestibule Door(NPPE)	M/s Kalsi,Ludhiana	
20.	Bio-Tank	M/s Oasis Fabrication, Jagadari	
21.	Auxiliary Water Tank	M/s Shivalik Fastener 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 Pahal Fire	NPP-7819 PP-7813
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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RLY	N	R	-	-	Type	L	W	A	C	C	N	Coach No.				1	6	3	9	4	9	/	C							

12. MODIFICATION (IF ANY) : NIL

13. DEVIATION (IF ANY) : NIL

14. ITEM FITTED ON THE COACH ON TRIAL : NIL


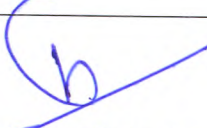
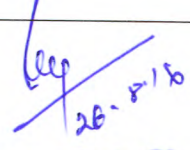
S NO	ITEM PARTICULARS	PURPOSE	REPORT Frequency	REFERENCE & PERIOD OF TRIAL

#### 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:

- 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	Asst. Manager/Quality रेल डिब्बा कारखाना, लालगंज, रायबरेली Rail Coach Factory, Lalganj, Raebareli	Dy.CME/FUR/MCF/RBL RCF / RBL, LLJ



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VER. 01.06.2016

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**FOR ELECTRICAL ITEMS**

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES					
TYPE COACH		LWACCN	SHELL/COACH NO	163949/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	<b>29.86</b> Cub mtr/min	OK		
3.2	Return Air	<b>85.85</b> Cub mtr/min	OK		
3.3	Exhaust Air	<b>10.51</b> Cub mtr/min	OK		
3.4	Conditioned Air	<b>207.94</b> Cub mtr/min	OK		
4.0	<b>PRE COOLING TEST: Max 01 hr.</b> Time taken to pre cool from 45 deg centigrade to 24/22 deg C during OFF LOAD condition  PP Side : <b>22.2°C</b> NPP Side : <b>20.9°C</b>			OK	
5.0	<b>PULL DOWN TEST: Max 02 hrs.</b> Time taken to pull down from 45 deg C to 24/22 deg C during FULL LOAD condition.  Not done			OK	

Prüfung

**Senior Section Engineer  
Quality control / Electrical  
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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	OK

**R 407C**

*(Signature)*  
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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 : <b>LEEL</b> Sr no of RMPU (NPP side): <b>16.03.0419</b> Sr no of RMPU (PP side ): <b>16.04.0623</b> Sr no of Microprocessor: <b>16.03.009/A. PAUL</b>	As per rdso/pe/spes/ac/0061/rev -1/2005	<b>02</b>
02.	Switch board cabinet Make : <b>ESS ESS KAY</b> Sr no : <b>2015-11-046</b>	As per spec no . EDTS073,REV-D,AM-6	<b>01</b>
03.	Pump equipment with PLC controller & pump box Make: <b>KALSI</b> Sr no PA- <b>5071/02/2016</b> Sr no.1- <b>263021/02/2016</b> Sr no.2- <b>263022/02/2016</b> Sr no.CPA- <b>4866/12/2015</b>	As per spec EDTS 186,Rev-a, Am- 2	<b>01</b>
04.	Double inlet centrifugal blower 415V/03Ph /50Hz /120W/450 cum mtr/hr discharge for exhausting air from lavatory & switch board cabinet Make : <b>INTEG</b>	EDTS331, TYPE-1 CORR.-1&2	<b>02</b>
05.	Vestibule Light Fitting Single	LW 76004,Alt-b	<b>07</b>
06.	Ceiling light fitting DOUBLE w/o diffuser.	LW 76011,Alt -c	<b>09</b>
07.	Ceiling light fitting with NL w/o diffuser w/o item 2&3	LW 76013,Alt -c	<b>09</b>
08.	Emergency light system for EOG type coaches (AEL)	EDTS 151,Rev -c Am-1 & 2	<b>04</b>
09.	Lavatory light fitting assly	LW 76001,Alt nil	<b>04</b>
10.	WC gauge signal light	LW 76006,Alt-c	<b>02</b>

*(Signature)*

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MCF/RBL/QEF8001

VER. 01.06.2016

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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	<b>02</b>
12.	Fluorescent lamp 18W	RDSO/PE/SPEC/D/TL 0011-2000,Rev I, Sec- I , 07/2001	<b>34</b>
13.	Diffuser complete w/o item 1& 2.	LW 76012,Alt-a	<b>25</b>
14.	Razor socket for WC 110/240V.	EDML 047 ,Rev nil	<b>04</b>
15.	Terminal strip	EDML 034,Rev-a	<b>01</b>
16.	Terminal connector	EDML 037,Rev`a`	<b>04</b>
17.	Single switch 06A/250V/AC ONE WAY ,complete with steel plate & cover frame	EDML 047,Rev- C, Item 1.	<b>09</b>
18.	Single switch 06A/250V/AC ONE WAY complete with steel plate & cover frame	EDML 047,Rev-A ,Item 2.	<b>09</b>
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	<b>09</b>
20.	PA system for LHB coaches Make : <b>AHUJA</b>	EDTS 173,Rev- a Am- 1,2&3	<b>01 set</b>
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 : <b>HBL</b> Lug date : <b>11/2015</b>	EDTS 129,Rev nil	<b>01 set</b>
22.	Battery box for LHB coaches.	1 10113 0 76 700 005 w/o item 5,22 ,23 ,26 & 27.	<b>01</b>

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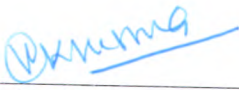

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**ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES**

Sr no	Description	Drg/Spec no.	Quantity per Coach
23.	Battery fuse box +ve Make : <b>ISG</b>	As per LW 71001,Alt-F	<b>01</b>
24.	Battery fuse box -ve Make : <b>NEC</b>	As per LW 71002,Alt-F	<b>01</b>
25.	Regulated battery charger Make : <b>HIREL</b> Sr no : <b>16020735</b>	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	<b>01</b>
26.	Emergency battery charger Make : <b>BHASIN</b> Sr no : <b>10151598</b>	EDTS 163,Rev `c` corg.-2&3	<b>01</b>
27.	60KVA transformer Make : <b>VIMAL</b> Sr no : <b>3520</b>	As per rdso/pe/spec/ac/0080/rev -0 (2007)/Am-1&2/Corr. 1,2&3	<b>01</b>
28.	ZS coupling 400A/750V/03Ph/50hz. Make : <b>S. INTERNATIONAL</b>	As per spec No EDTS 105,Rev `e` Am-2	<b>02 sets</b>
29.	Feeder junction boxes. Make : <b>NEC</b>	EDTS-328 REV-C	<b>02</b>
30.	Wheel set earthling equipment. Make : <b>DARSHAN ENTERPRISES</b>	EDTS101,REV-C,AM-1	<b>02</b>
31.	Wheel Slide Protection System (WSP) Make : <b>KNORR</b> & Sr no : <b>0115411732</b>	M/s : <b>KNORR</b>	<b>01 set</b>
32.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : <b>S D ENGINEERS</b>	As per spec no EDTS 139, Rev- E ,Sec II.	<b>01</b>

 <b>SSE/EL/QC</b>	 <b>DyCEE(P)/MCF/RBL</b>
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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

