

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/2016-17/057

SHELL NO.	5	3	1	5	7	-	2	0	1	5	-	1	6	-	-	DATE OF DISPATCH	2	8	0	6	2	0	1	6
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RLY	N	R	-	-	Type	L	W	A	C	C	N	Coach No.	1	6	3	9	5	0	/	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) 1098 (NPPE) 2) 1103 (PPE)

5. TRACEABILITY OF SHELL ITEMS:

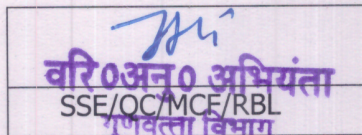
S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Underframe	Front Part MCF/RBL	PP END 53157 NPP END 53157
		Complete MCF/RBL	
2.	Side wall	MCF/RBL	RH 53157 LH 53157
3.	End wall	NPP- M/s Rubican Steel Mohali	PP END 53157 NPP END 53157
		PP- M/s Rubican Steel Mohali	
4.	Roof	MCF/RBL	
5.	Centre Buffer Coupler	M/s FAIVELY	PP END B16076B NPP END B16073B
6.	Buffers	N.A.	

6. AIRBRAKE TEST REPORT:

S NO	ITEM	DESCRIPTION	SPEC. VALUE	OBSERVED
1.	Full application brake	➤ Reduce pressure of BP from 5.0 to 3.4 kg/cm ² . ➤ 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	➤ 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	M/s VIBGYOR	96/97
2.	Insulation		Satisfactory	



रेडि०का०, रायबरेली (लालगंज)



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8. DETAIL OF BOGIES :

ITEMS	PP Side				NPP Side			
Bogie No	160048				160047			
Bogie Type	LWACCN				LWACCN			
Frame no.	SCI/FM-479				MCF/RBL-185			
Bolster no.	RBL-542				EC BLADES-066			
Axle No	K 3247		N 0684		K-3857		K-4082	
Wheel Dia	915	915	915	915	916	916	916	916
Wheel Disc No	7303-00140 VR 15	7303-00136 VR 15	7276-00162 VR 15	07302-00069 VR 15	7298-00007 VR 15	7276-00027 VR 15	7283-00060 VR 15	7277-00075 VR 15
R.B. Nos.	02-15 01809	05-15 06276	02-15 02355	03-15 04163	02-15 02759	02-15 02858	02-15 02877	05-15 06273
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.	CMAFJ02-16-8836-36	CVFSK04-16-9513-143-235	CMAFJ02-16-8836-23	CVFSK04-16-9513-193-190	CMAFS02-16-8836	CVFSK04-16-9513-195-249	CMAFS02-16-8836	CVFSK04-16-9513-195-20
Compressed Ht. at Tested Load	514	464	515	464	515	466	515	466
Alignment deviation (mm)	9	9	10	10	14	8	15	9

10. TRACEABILITY OF BOGIE ITEMS:

S. NO	ITEM	SERIAL NO.		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	RSK03 WA(054,387,342,432)	RSK03 WA (914,400,912),RSK1411-2891	RSK
2.	Primary Inner Spring	CMGBD 02-16-143-72(129,59,52,126)	CMGBD 02-16-143-72(140,89,160,182)	CMGBD
3.	Primary Damper	KW 37-2015 301530049	KW 37-2015 301530049	GEREP
4.	Secondary Damper	KONI 42-2014-5511,36-2015-6638	KNORR-BREMSE03-16(0230,220)	KONI/KNORR
5.	Lateral Damper	KW 37-2015 301550332	KW 37-2015 301550332	GEREP
6.	Brake Cylinder	2191-K-29,2166-K-29,2167-K-29,2114-K-29	2281-K-29,2303-K-29,2302-K-29,2280-K-29	KBI
7.	Brake Caliper	2143-29,2121-29,2122-29,2073-29	2238-29,2264-29,2265-29,2237-29	KBI
8.	Brake Disc	FAV 15-11-1523063,FAV 15-11-1523408, FAV 15-11-1523406, FAV 15-11-1523474	24073409-0004-14-16,24073417-0026-14-16, 24076722-0006-17-16,24076722-0005-17-16	FAV/KBI
9.	Ball Joint Control Arm			MGN
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			SARITA

Signature of SSE/Bogie/QC

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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	15M1328
2.	Pull box	M/s KBI ,Faridabad ,New Delhi	
3.	DV	M/s KBI ,Faridabad ,New Delhi	2015L1929
4.	PVC	M/s Responsive Industries, Mumbai	
5.	UIC Vestibule (PPE)	M/s Suncrest Industries,West Bengal	
6.	UIC Vestibule (NPPE)	M/s Suncrest Industries,West Bengal	
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 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 Kalsi,Ludhiana	
19.	Vestibule Door(NPPE)	M/s Kalsi ,Ludhiana	
20.	CDTS	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 Fire Matics	NPP-80147 PP-1715
30.	Side Wall panel	M/s KAE Engg. pvt.Ltd Satarganj (UK)	
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	

वरिष्ठ अभियंता
SSE/QC/MCF/RBL
रेडिओका, रायबरेली (संलग्न)

आधुनिक रेल डिब्बा कारखाना, रायबरेली

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12. MODIFICATION (IF ANY) : NIL

13. DEVIATION (IF ANY) : NIL

14. ITEM FITTED ON THE COACH ON TRIAL : NIL

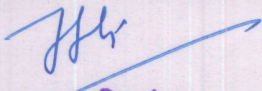
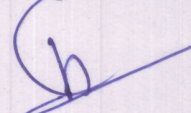
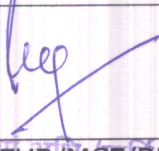
S NO	ITEM PARTICULARS	PURPOSE	REPORT	REFERENCE & PERIOD OF TRIAL
			Frequency	

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

 वरिष्ठ अनु अभियंता SSE/OC/MCF/RBL रेल डिब्बा कारखाना, रायबरेली (लालगंज)	 रहायक गहनिक अभियंता/ गुणवत्ता Asst. Mechanical Engineer/ Quality रेल डिब्बा कारखाना, लालगंज, रायबरेली Rail Coach Factory, Lalganj, Raebareli	 उप निदेशक/ रायबरेली/ लालगंज Dy. CME/FUR/MCF/RBL रेल कोच फैक्ट्री / रायबरेली / लालगंज RCF / RBL / LLJ
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**Govt. of India- Ministry of Railways
(MODERN COACH FACTORY RAEBARELI)**



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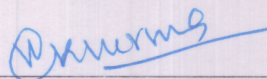
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FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES			
ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES			
TYPE COACH		LWACCN	SHELL/COACH NO
RAILWAY		NR	DATE OF DESPATCH
163950/C			
Sr no	Description of tests		Remarks
1.0	REFERENCE SPECIFICATION : L 446		163950/NR
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	29.17 Cub mtr/min	OK
3.2	Return Air	88.78 Cub mtr/min	OK
3.3	Exhaust Air	11.44 Cub mtr/min	OK
3.4	Conditioned Air	216.02 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 :23.2°C NPP Side : 21.0°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


Senior Section Engineer
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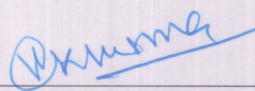
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FOR ELECTRICAL ITEMS

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	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 : LEEL Sr no of RMPU (NPP side): 16.05.652 Sr no of RMPU (PP side): 16.05.648 Sr no of Microprocessor: SA.16.03.250	As per rdso/pe/spes/ac/0061/rev -1/2005	02
02.	Switch board cabinet Make : ISG Sr no : 16.03.0034	As per spec no . EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make: KALSI Sr no PA- 5097/02/2016 Sr no.1- 263047/02/2016 Sr no.2- 263048/02/2016 Sr no.CPA- 5097/02/2016	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

(Signature)

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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- 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 : 11/2015	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

(Signature)

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(MODERN COACH FACTORY RAEBARELI)**



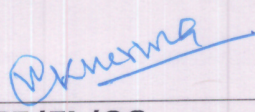

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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
23.	Battery fuse box +ve Make : ISG	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 : HIREL Sr no : 16010707	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	01
26.	Emergency battery charger Make : BHASIN Sr no : 10151614	EDTS 163,Rev `c` corg.-2&3	01
27.	60KVA transformer Make : VIMAL Sr no : 3611	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	EDTS-328 REV-C	02
30.	Wheel set earthing equipment. Make : MLI,DARSHAN	EDTS101,REV-C,AM-1	02
31.	Wheel Slide Protection System (WSP) Make : KNORR & Sr no : 0115411731	M/s : KNORR	01 set
32.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : SUPER REFRIGRATION	As per spec no EDTS 139, Rev- E ,Sec II.	01

 SSE/EL/QC	 DyCEE(P)/MCF/RBL
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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

