



आधुनिक रेल डिब्बा कारखाना, रायबरेली

MODERN COACH FACTORY, RAEBARELI

L37-395

FORM NO: RCF/RBL/QMF 8002
VERSION: 2016-01-13**ROLLING STOCK CERTIFICATE**

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2016-17/049

SHELL NO.	5	3	1	4	5	-	2	0	1	5	-	1	6	-	-	DATE OF DISPATCH	1	7	0	6	2	0	1	6
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------------	---	---	---	---	---	---	---	---

RLY	N	R	-	-	Type	L	W	A	C	C	N	Coach No.	1	6	3	9	4	2	/	C
-----	---	---	---	---	------	---	---	---	---	---	---	-----------	---	---	---	---	---	---	---	---

1. Railway Board's Order No. : 2016/M(C)142/1 Dtd. 12.05.2016
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) 1100 (NPPE) 2) 1103 (PPE)

5. TRACEABILITY OF SHELL ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Underframe	MCF/RBL	PP END 53145 NPP END 53145
	Front Part	MCF/RBL	
	Complete	MCF/RBL	
2.	Side wall	MCF/RBL	RH 53145 LH 53145
3.	End wall	NPP- M/s Omax Auto Gurgaon Rewari	PP END 53145 NPP END 53145
		PP- M/s Omax Auto Gurgaon Rewari	
4.	Roof	MCF/RBL	
5.	Centre Buffer Coupler	M/s ESCORT	PP END 5438 NPP END 5478
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	95/95
2.	Insulation	Satisfactory		

[Signature]
SSE/QC/MCF/RBL

आधुनिक रेल डिब्बा कारखाना MODERN COACH FACTORY RAEBARELI

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

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2016-17/049

SHELL No.	5	3	1	4	5	-	2	0	1	5	-	1	6	-	-	-	DATE OF DISPATCH	1	7	/	0	6	/	1	6
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------------	---	---	---	---	---	---	---	---

RLY	N	R	-	Type	L	W	A	C	C	N	Coach No.	1	6	3	9	4	2	/	C
-----	---	---	---	------	---	---	---	---	---	---	-----------	---	---	---	---	---	---	---	---

8. DETAIL OF BOGIES :

ITEMS	PP Side				NPP Side			
Bogie No	160031				160032			
Bogie Type	LWACCN				LWACCN			
Frame no.	SCI/FM-463				SCI/FM-464			
Bolster no.	BEC-18				BEC-10			
Axle No	F 9675		F 9063		F 9422		F 9515	
Wheel Dia	917.131	916.968	917.062	916.985	917.100	917.073	917.090	917.039
Wheel Disc No	7280-00148 VR 15	7276-00033 VR 15	7304-00073 VR 15	7276-00090 VR 15	7289-00025 VR 15	7304-0001 VR 15	7276-00116 VR 15	7280-00064 VR 15
R.B. Nos.	02-15-02288	02-15-02541	02-15-02087	02-15-02415	02-15-02820	02-15-02493	02-15-02596	02-15-02264
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.	CMFSK02-16-8836-188-88	CVFSK04-16-9513-193-250	CMFSK02-16-883-96	CVFSK04-16-9513-193-273	CMFSK02-16-883-98	CVFSK04-16-9513-193-3	CMFSK02-16-883-13	CVFSK04-16-9513-193-18
Compressed Ht. at Tested Load	514	465	514	466	514	467	515	467
Alignment deviation (mm)	8	9	8	7	8	7	8	8

10. TRACEABILITY OF BOGIE ITEMS:

S. NO	ITEM	SERIAL NO.		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	RSK 03WA(231,0818,055,551)	RSK 0164-2891,RSK 03WA(213,134,266)	RSK
2.	Primary Inner Spring	L&S 10-15CVB2638	L&S 10-15CVB2638	L&S
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	736-K-29,771-K-29,773-K-29,746-K-29	906-K-29,984-K-29,976-K-29,909-K-29	KBI
7.	Brake Caliper	699-29,755-29,757-29,725-29	870-29,959-29,954-29,875-29	KBI
8.	Brake Disc	FAV D133561(330-02-16-387,300-10-15-01, 300-02-16-388,300-11-15-23)	FAV D133561-300(10-15-06,10-15-02, 01-16-181,01-16-177)	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			EMSON/SARITA

Signature of SSE/Bogie/QC



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/2016-17/049

SHELL NO.	5	3	1	4	5	-	2	0	1	5	-	1	6	-	-	DATE OF DISPATCH	1	7	0	6	2	0	1	6
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------------	---	---	---	---	---	---	---	---

RLY	N	R	-	-	Type	L	W	A	C	C	N	Coach No.	1	6	3	9	4	2	/	C
-----	---	---	---	---	------	---	---	---	---	---	---	-----------	---	---	---	---	---	---	---	---

11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s KBI ,Faridabad ,New Delhi	15M1347
2.	Pull box	M/s KBI ,Faridabad ,New Delhi	
3.	DV	M/s KBI ,Faridabad ,New Delhi	2015M1951
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 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 Hanspal Coach Products Kapurthala	
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 Hanspal Kapurthala	
19.	Vestibule Door(NPPE)	M/s Hanspal Kapurthala	
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 Pahal Fire	NPP-7902 PP-7906
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 Virendra Steel Enterprises, Chandigarh	
33.	Snack Table	M/s Anjani Techno Plasts Noida	

SSE/QC/MCF/RBL

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/2016-17/049

SHELL NO.	5	3	1	4	5	-	2	0	1	5	-	1	6	-	-	DATE OF DISPATCH	1	7	0	6	2	0	1	6
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------------	---	---	---	---	---	---	---	---

RLY	N	R	-	-	Type	L	W	A	C	C	N	Coach No.	1	6	3	9	4	2	/	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	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

Asst. Mechanical Engineer
डिब्बा कारखाना, लालगंज, रायबरेली
Coach Factory, Lalganj, Raebareli



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



RCF/RBL/QEF8001
VER. 10.08.2015
PAGE 1 OF 5

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	163942/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	29.11 Cub mtr/min	OK	
3.2	Return Air	89.44 Cub mtr/min	OK	
3.3	Exhaust Air	9.92 Cub mtr/min	OK	
3.4	Conditioned Air	209.93 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 : 22.6°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	

D. Kumar
Senior Section Engineer
Quality control / Electrical
RCF, Raebareli



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



RCF/RBL/QEF8001

VER. 10.08.2015

PAGE 2 OF 5

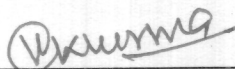
FOR ELECTRICAL ITEMS

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	OK

R 407C


**Senior Section Engineer
Quality control / Electrical
RCF, Raebareli**



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



RCF/RBL/QEF8001

VER. 10.08.2015

PAGE

3 OF 5

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): 16.03.0344 Sr no of RMPU 2(PP side) : 16.03.0347 Sr no of Microprocessor: 16.03.004/A.PAUL	As per rdso/pe/spes/ac/0061/rev -1/2005	02
02.	Switch board cabinet Make : TRINITRON Sr no : 3371/073/0093	As per spec no . EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make : KALSI Sr no PA- 5064/2/2016 Sr no.1- 263007/2/2016 Sr no.2- 263008/2/2016 Sr no.CPA- 5019/02/2016	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 CQRR.-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)

**Senior Section Engineer
Quality control / Electrical
RCF, Raebareli**



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



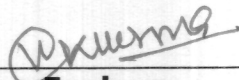
RCF/RBL/QEF8001

VER. 10.08.2015

PAGE 4 OF 5

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 : 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


Senior Section Engineer
Quality control / Electrical
RCF, Raebareli



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



RCF/RBL/QEF8001
VER. 10.08.2015
PAGE 5 OF 5

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 : 16010711	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	01
26.	Emergency battery charger Make : BHASIN Sr no : 10151656	EDTS 163,Rev `c` corg.-2&3	01
27.	60KVA transformer Make : PANTRONICS Sr no : PAN-150111116	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 : MAA LAXMI INDUSTRIES	EDTS101,REV-C,AM-1	02
31.	Wheel Slide Protection System (WSP) Make : KNORR & Sr no : 0115431895	M/s : KNORR	01 set
32.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : SD ENGINEERS	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