

165

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/2016-17/014

SHELL NO.	5 2 0 5 1 - 2 0 1 5 - 1 6 - -	DATE OF DISPATCH	1 9 0 4 2 0 1 6
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RLY	C	R	-	Type	L	W	A	C	C	W	Coach No.	1	6	0	5	4	/	C	-
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1. Railway Board's Order No. : 2015/M(C)/142/1 dtd. 04.03.16
2. Tare Weight of Coach : 44.5 Tonnes
3. Carrying Capacity : (a) Seating : 52 (b) Sleeping : 52 (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	4039
4.	CBC height/Buffer height from Rail level 1105 +0/-15	1)1104 (NPPE) 2)1105 (PPE)

5. TRACEABILITY OF SHELL ITEMS:

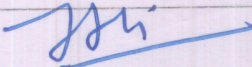
S NO	ITEM	MAKE/SUPPLIER	SERIAL NO				
1.	Underframe	Front Part	MCF/RBL	PP END	52051	NPP END	52051
		Complete	MCF/RBL				
2.	Side wall	MCF/RBL	RH	52051	LH	52051	
3.	End wall	M/s E.C.Blade & Tool Chandigarh	PP END	52051	NPP END	52051	
4.	Roof	MCF/RBL					
5.	Centre Buffer Coupler	M/s SENROK	PP END	1116	NPP END	1110	
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	<ul style="list-style-type: none"> ➤ Exhaust BP @ 0.3 kg/cm²/min. 	No brake application	OK
3.	Sensitivity	<ul style="list-style-type: none"> ➤ Exhaust BP @ 0.1 kg/cm²/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	91/91
2.	Insulation		Satisfactory	


 MCF/RBL
 गुणवत्ता विभाग

रेडि०का०, रायबरेली (लालगंज)

165

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

ITEMS	PP Side				NPP Side			
Bogie No	150497				150498			
Bogie Type	FIAT				FIAT			
Frame no.	SCI/FM-446				SCI/FM-437			
Bolster no.	RBL-0256				RBL-470			
Axle No	F- 9593 RWF		F - 9004 RWF		F- 9177 RWF		G - 0004 RWF	
Wheel Dia	916.94	916.803	916.949	916.800	916.910	916.948	916.843	916.921
Wheel Disc No	7270-00027 15 VR	7270-00048 15 VR	7270-00091 15 VR	7270-00072 15 VR	7298-000145 15 VR	7276-00021 15 VR	7298-00142 15 VR	6207-00109 15 VR
R.B. Nos.	02-15 02994	02-15 02617	08-15 03049	05-15 06366	02-15 02703	02-15 02696	02-15 02439	02-15 02094
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.	DN12P-2306T	CMGBD0316-51306	DN12P-2288T	CMGBD0316-51306	DN12P-2300T	CMGBD0316-51306	DN12P-S-2561T	CMGBD0316-51306
Compressed Ht. at Tested Load	506	468	506	466	502	465	504	465
Alignment deviation (mm)	18	7	17	7	24	10	21	9

10. TRACEABILITY OF BOGIE ITEMS:

S. NO	ITEM	SERIAL NO.		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	RSK (03WA,505,186,392)	RSK (03WA,078,357,03WA)	RSK
2.	Primary Inner Spring	SMRSK(505,511,532,301)	SMRSK(202,512,519,330)	SMRSK
3.	Primary Damper	GREEP KW 37-15 301530049	GREEP KW 37-2015 301530049	GREEP
4.	Secondary Damper	GREEP KW 37- 2015 301550333	GREEP KW 37- 2015 301550333	GREEP
5.	Lateral Damper	GREEP KW 37- 2015 301550332	GREEP KW 37- 2015 301550332	GREEP
6.	Brake Cylinder	B16-051,B16-040,B16-038,B16-023	B16-032,B16-032,B16-034,B16-046	FAV
7.	Brake Caliper	B16096B,B16094B,B16061B,B16085B	B16067B,B16065B,B16093B,B16093B	FAV
8.	Brake Disc	01-16-187D133561-300,01-16-185D133561-300 01-16-193D133561-300,01-16-192D133561-300	02-16-254D133561-300,02-16-259D133561-300 02-16-256D133561-300,02-16-255D133561-300	FAV
9.	Ball Joint Control Arm			MGN
10.	Lateral Bump Stop			GMT
11.	Traction Centre make			SARITA
12.	Traction lever make			SARITA
13.	Ball joint traction lever			SGA
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

P. S. Sanyal
Signature of SSE/QC/Bogie



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RLY	C	R	-	Type	L	W	A	C	C	W	Coach No.	1	6	0	5	4	/	C	-					

11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s Favieley Transport India Kathe Bhatoli,Baddi,Distt:- solan (HP)	A16019B
2.	Pull box	M/s Favieley Transport India Kathe Bhatoli,Baddi,Distt:- solan (HP)	
3.	DV	M/s Favieley Transport India Kathe Bhatoli,Baddi,Distt:- solan (HP)	16015526B
4.	PVC	M/s Responsive Industries, Mumbai	
5.	UIC Vestibule (PPE)	M/s Ameenji Rubber, Hyderabad	
6.	UIC Vestibule (NPPE)	M/s Ameenji Rubber, Hyderabad	
7.	Foot Step	M/s Hi-tech Infra Venture, RBL	
8.	Decoupling arrangement	M/s Kohinoor Rubber Industries, Jalandhar	
9.	Body Side Window	M/s Rail Tech KXH	
10.	Emergency Window	M/s Rail Tech KXH	
11.	Lavatory/hooper Window	M/s Rail Safe Pvt. Ltd. Gaziabad	
12.	Roof Ceiling	M/s KAE Engg. pvt.Ltd. Satarganj (UK)	
13.	Non-AC Area Ceiling	M/s Gandhi Safe & Allied, 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 KXH	
17.	Compartment Door (NPPE)	M/s Rail Tech KXH	
18.	Vestibule Door(PPE)	M/s Kalsi Ludhiana	
19.	Vestibule Door(NPPE)	M/s Kalsi Ludhiana	
20.	Bio Tank	M/s Amit Engineers, Mohali Punjab	
21.	Auxiliary Water Tank	M/s Shivalik Fasteners, Mohali Punjab	
22.	Under Slung Water Tank(450 L)	M/s Manoj Engineers , 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 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 Agni Safety Device Haryana	NPP-80163, PP-80186
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 International Tractor Limited, Hoshiarpur	

[Signature]
SSE/RC/MCF/RBL

गुणवत्ता विभाग
रेडि०का०, रायबरेली (लाहौर)



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12. MODIFICATION (IF ANY) : NIL

13. DEVIATION (IF ANY) : NIL

14. ITEM FITTED ON THE COACH ON TRIAL : NIL

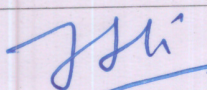
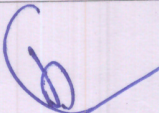
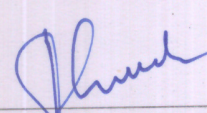
S NO	ITEM PARTICULARS	PURPOSE	REPORT	REFERENCE &
			Frequency	PERIOD OF TRIAL

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 fails 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 complain/ suggestion please Mail at qualityrcfbl@gmail.com

 वरि०अनु० अभियंता SSE/QC/MCF/RBL गुणवत्ता विभाग रेडिङका०, रायबरेली (लालगंज)	 सहायक यांत्रिक अभियंता/ गुणवत्ता Asst. Mechanical Engineer/Quality रेल डिब्बा कारखाना, लालगंज, रायबरेली Rail Coach Factory, Lalganj, Raebareli	 Dy. S. ME/FUR/MCF/RBL Sr. Mech. Engineer (Fur.) रेल डिब्बा कारखाना, लालगंज, रायबरेली Rail Coach Factory, Lalganj, Raebareli
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2T-165

RCF/RB



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 2T AC COACHES****ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES**

TYPE COACH	LWACCW	SHELL/COACH NO	16054/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 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	30.32 Cub mtr/min	OK
3.2	Return Air	73.80 Cub mtr/min	OK
3.3	Exhaust Air	8.12 Cub mtr/min	OK
3.4	Conditioned Air	170.35 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. Not done		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
Rail Coach Factory Raebareli





FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG 2T 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	BERTH READING LIGHTS	OK
11.0	COMPARTMENT LIGHT	OK
12.0	PUBLIC ADDRESSING SYSTEM (PAS)	OK
13.0	WHEEL SLIDE PROTECTION SYSTEM (WSP)	OK
14.0	WORKING OF 60KVA TRANSFORMER	OK
15.0	WORKING OF REGULATED BATTERY CHARGER	OK
16.0	WORKING OF EMERGENCY BATTERY CHARGER	OK
17.0	SAFETY ITEMS	
17.1	THERMOSTAT :	OK
17.2	ROTARY 07 SET POINTS (NORMAL CONDITION)	OK
17.3	MID SET POINTS (SENSORS FAILED CONDITIONS)	OK
17.4	HYGROSTAT	OK
17.5	CONTROL CIRCUIT	OK
17.6	POWER CIRCUIT	OK
18.0	REFRIGERANT USED	OK

R 407C

[Signature]
**Senior Section Engineer
Quality control / Electrical
Rail Coach Factory Raebareli**



ROLLING STOCK CERTIFICATE OF LHB/EOG 2T 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 1(NPP side): 15-L-441 Sr no of RMPU 2(PP side): 15-L-448 Sr no of Microprocessor: 15.11.203/SDWL	As per rdso/pe/spes/ac/0061/rev-1/2005	02
02.	Switch board cabinet Make : ABROL Sr no : 105/12/2015	As per spec no .EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make: KALSI Sr no PA- 4891/12/2015 Sr no.1- 261725/12/2015 Sr no.2- 261726/12/2015 Sr no.CPA- 4870/12/2015	As per spec EDTS 186,Rev-a, Am- 2	01
04.	Double inlet centrifugal blower 415V/03Ph /50Hz /120W/450 cummtr/hr discharge for exhausting air from lavatory & switch board cabinet Make : INTEG	EDTS331, TYPE-1 CORR.-1&2	02
05.	Vestibule Light Fitting Single w/o diffuser	LW 76004,Alt-b	06
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

D. Kumar

Senior Section Engineer
Quality control / Electrical
Rail Coach Factory 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 2T AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
10.	WC gauge signal light	LW 76006,Alt-c	02
11.	Passenger alarm coach indication light	LW 76005,Alt-e	02
12.	Reading Light fitting (Upper berth)	LW 76023,Alt-e	26
13.	Reading light for longitudinal berth LHS	LW 76022,Alt-e	09
14.	Reading light for transverse Lower Berth -LH	LW 76020,Alt-e	09
15.	Reading light for transverse Lower berth RH	LW 76021,Alt-e	08
16.	Fluorescent lamp 18W	RDSO/PE/SPEC/D/TL 0011-2000,Rev I, Sec- I , 07/2001	33
17.	Diffuser complete w/o item 1& 2.	LW 76012,Alt-a	25
18.	Razor socket for WC 110/240V.	EDML 047 ,Rev nil	04
19.	Terminal strip	EDML 033,Rev-c	01
20.	Terminal connector	EDML 037,Rev`a`	04
21.	Single switch 06A/250V/AC ONE WAY ,complete with steel plate & cover frame	EDML 047,Rev_C, Item 1.	09
22.	Single switch 06A/250V/AC ONE WAY complete with steel plate & cover frame	EDML 047,Rev_A ,Item 2.	09
23.	Provision of switch socket combined 5PIN (06A, 250V AC) along with 1A glass fuse fitted powder coated steel plate & cover frame	As per cat no EL-243 (EL signature series) of M/s SSK	09
24.	PA system for LHB coaches Make :AHUJA	EDTS 173 Rev- a Am- 1,2&3	01 set

(Signature)

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(RAIL COACH FACTORY-RAEBARELI)



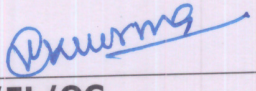
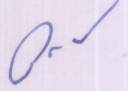
RCF/RBL/QEF8001

VER.10.08.2015

PAGE 5 OF 5

ROLLING STOCK CERTIFICATE OF LHB/EOG 2T AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
25.	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 : 12/2015	EDTS 129,Rev nil	01 set
26.	Battery box for LHB coaches.	As per drgno 1 10113 0 76 700 005,Alt C	01
27.	Battery fuse box +ve Make : ISG	LW 71001,Alt-F	01
28.	Battery fuse box -ve Make : NEC	LW 71002,Alt-F	01
29.	Regulated battery charger Make : AAL Sr no : BCH-061507059	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	01
30.	Emergency battery charger Make : BHASIN Sr no : 10151575	EDTS 163,Rev `c` corg.-2&3	01
31.	60KVA transformer Make : PANTRONICS Sr no : PAN-150111122	As per rdso/pe/spec/ac/0080/re v-0 (2007)/Am-1&2/Corr. 1,2&3	01
32.	ZS coupling 400A/750V/03Ph/50hz. Make : MAA LAXMI INDUSTRIES	As per spec No EDTS 105,Rev `e` Am-2	02 sets
33.	Feeder junction boxes. Make : ABROL	EDML 020,Rev- 1/EDTS-328 REV-C.	02
34.	Wheel set earthling equipment. Make : MAA LAXMI INDUSTRIES	EDTS101,REV-C,AM-1	02
35.	Wheel Slide Protection System (WSP) Make : FAIVELEY &Sr no : 36/15/346	M/s : FAIVELEY	01 set
36.	PANTRY EQUIPMENTS : Hot Case, Bottle cooler cum deep freezer Make : S D ENGINEERS	As per spec no EDTS 139, Rev- E ,Sec II.	01

 SSE/EL/QC	 DyCEE(P)/RCF/RBL
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वरिष्ठ खण्ड अभियन्ता
विद्युत उत्पादन-गुणवत्ता
रेल कोच फैक्ट्री / लालगंज / रायबरेली
Sr. Section Engineer

उप मुख्य विद्युत अभियन्ता (उत्पादन)
रेल कोच फैक्ट्री-रायबरेली, लालगंज
DYCEE/P-RCF/RBL/LJ





GOVT. OF INDIA- MINISTRY OF RAILWAYS
(RAIL COACH FACTORY-RAEBARELI)



QUALITY CONTROL RECTIFICATION ATTENDED CALL MEMO

RCF/RBL/QEF/6009

VER.10.08.2015

Page 1 of 1

Coach no. 2T-165 DATE: 18.4.16

1. Nature of QC inspection : Audit/100%
2. Sub Assembly/Assembly/
Component No Reference : _____
3. Stage Reference : Stage III 4IX (Out Source)
4. (i) Whether offered initially/
After Rectification : After Rectification
(ii) If rectified, QC Defect Report No: Q.C.T Dated: 5.4.16

Please check and advice clearance.

	Signature	
V.K. Verma	Name	VINOD RAY
SSE/JE-Elect.QC	Designation	SSE/JE EP-stage-105