



Modern Coach Factory Raebareli

आधुनिक रेल डिब्बा कारखाना, रायबरेली

L37-426

DOC NO.: MCF/RBL/QMF 8002

REV NO: 00

DATE:

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2016-17/284

Coach No.	1	6	1	4	1	/	C	-	DATE OF DISPATCH	0	8	1	2	2	0	1	6
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RLY	C	R	-	Type	L	W	A	C	C	N	Shell No.	6	3	0	0	9	-	2	0	1	6	-	1	7
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- Railway Board's Order No. : 2015/M(C)/142/1 Dated - 18.05.2016
- Tare Weight of Coach : 45.6 Tones
- 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.	CEC height/Buffer height from Rail level 1105 +0/-15	1)1112 (NPPE) 2)1123 (PPE)

5. TRACEABILITY OF SHELL ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Under frame	Front Part	M/s Sidhu Industrial Corporation, KXH
		Complete	M/s MCF/RBL
2.	Side wall	M/s DTL Ancillaries Ltd. Pune	RH 63009 LH 63009
3.	End wall	PP- M/s Rail Tech ,KXH	PP END 63009 NPP END 63009
		NPP- M/s Rail Tech ,KXH	
4.	Roof	M/s DTL Ancillaries Ltd. Pune	
5.	Centre Buffer Coupler	M/s ESCORTS	PP END 5285 NPP END 5311
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	7 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 06 Sec. 	Brake must apply	OK

7. PAINTING DAETAILS:


S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U	VIBGYOR	97/90
2.	Insulation		Satisfactory	

वरिष्ठ अभियंता
 SSE/QC/MCF/RBL
 गुणवत्ता विभाग

रेडिंकॉ, रायबरेली (लाखगंज)



L3T-426

	MODERN COACH FACTORY, RAEBARELI	DOC NO.: MCF/RBL/QMF 8002
	आधुनिक रेल डिब्बा कारखाना, रायबरेली	REV NO.: 00
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8. DETAIL OF BOGIES :

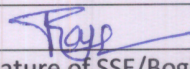
ITEMS	PP Side				NPP Side			
Bogie No	160249				160250			
Bogie Type	FIAT				FIAT			
Frame no.	MCF/RBL-0228				MCF/RBL-0234			
Bolster no.	RBL-707				JUPITER-17			
Axle No	129667 CHT-13		129354 CHT-13		B 9848 RWF		B -9998 RWF	
Wheel Dia	917.269	917.363	917.254	917.245	917.287	917.285	917.303	917.305
Wheel Disc No	01085-6QG5 TZ 05-16	02069-6QG0 TZ 05-16	00554-6MG8 TZ 05-16	00556-6MG8 TZ 05-16	07099-6QJ4 TZ 05-16	07100-6QJ4 TZ 05-16	01081-6QG5 TZ 05-16	01080-6QG5 TZ 05-16
R.B. Nos.	06-16 04879	05-16 04044	06-16 04928	06-16 04543	06-16 04916	06-16 04674	06-16 04912	05-16 04347
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.	CMGBD05-16-83683-112	CVFSK 04-16-9513-193-233	CMGBD05-16-83624-125	CVFSK 04-16-9513-193-122	CMGBD05-16-83683-117	CVFSK 04-16-9513-193-200	CMGBD04-16-83624-123	CVFSK 04-16-9513-193-59
Compressed Ht. at Tested Load	515	468	515	468	514	464	512	464
Alignment deviation (mm)	9	8	10	8	11	8	12	9

10. TRACEABILITY OF BOGIE ITEMS:

S. NO	ITEM	MAKE/SUPPLIER	SERIAL NO.	
			PP SIDE	NPP SIDE
1.	Primary outer Spring	RSK	03WA-2489,03WB-281,03WB-272,03WA-3353	RSK 03WA(3317),03WB(3360,080,3342)
2.	Primary Inner Spring	CVFSK	04-16 7143-195(204,289,168,165)	04-16 7143-195(14,228,209,99)
3.	Primary Damper	KONI	05-2016(32168,32165,32143,32156)	05-2016(32126,32004,31964,31996)
4.	Secondary Damper	KONI	15-2016(7209,7045)	15-2016(7095,7243)
5.	Lateral Damper	KONI	15-2016-4553	15-2016-4549
6.	Brake Cylinder	KBI	3983K29,3962K29,3965K29,3981K29	3982K29,3963K29,3964K29,3984K29
7.	Brake Caliper	KBI	3676-29,3735-29,3738-29,3674-29	3675-29,3736-29,3737-29,3677-29
8.	Brake Disc	FAV	03-16(705,704,964,961) D 133561-300	03-16(727,640,729,636) D 133561-300
9.	Ball Joint Control Arm	GMT		
10.	Lateral Bump Stop	GMT		
11.	Traction Centre make	SARITA		
12.	Traction lever make	J1.12.15		
13.	Ball joint traction lever	MGN		
14.	Ball joint traction centre	SGA/GMT		
15.	Secondary Rubber Pad	TECSPAK		
16.	Rubber Spring	GMT		
17.	Anti roll bar make	SARITA/EMSON		
18.	Roll Link make	SARITA/SGA		
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 ,Palwal Haryana	16D1519
2.	Pull box	M/s KBI ,Palwal Haryana	
3.	DV	M/s KBI ,Palwal Haryana	2016D2245
4.	PVC	M/s Responsive Industries, Mumbai	
5.	UIC Vestibule (PPE)	M/s Sun crest Industries, West-Bengal	
6.	UIC Vestibule (NPPE)	M/s Sun crest Industries, West-Bengal	
7.	Foot Step	M/s Hi-tech Infra RBL	
8.	Decoupling arrangement	M/s Kohinoor Industries, Faridabad	
9.	Body Side Window	M/s Rail Tech, Kapurthala	
10.	Emergency Window	M/s Rail Tech, Kapurthala	
11.	Lavatory/hopper Window	M/s Aikon Technology Pvt.Ltd.Solan (H.P)	
12.	Roof Ceiling	M/s KAE Sataraganj Pvt. Ltd. ESIPL U.K.	
13.	Non-AC Area Ceiling	M/s Amirchand Engg. Works Jalandhar	
14.	Supply Air Duct	M/s Hans pal Coach Products, KXH	
15.	Body Side Doors	M/s JBM Faridabad	
16.	Compartment Door (PPE)	M/s J.R. Industries, JUC	
17.	Compartment Door (NPPE)	M/s J.R. Industries, JUC	
18.	Vestibule Door(PPE)	M/s Kalsi, LDH	
19.	Vestibule Door(NPPE)	M/s Kalsi, LDH	
20.	Bio Tank	M/s Rail Tech, Kapurthala	
21.	Auxiliary Water Tank	M/s Shivalik Fasteners, Mohali Punjab	
22.	Under Slung Water Tank (450 L)	M/s Shivalik Fasteners, Mohali Punjab	
23.	Under Slung Water Tank (2X685L)	M/s Shivalik Fasteners, Mohali Punjab	
24.	Flexible Faucet	M/s Hindustan Fiber Glass Vadodra (Gujarat)	
25.	Lotah Filler Tap	M/s Metco Delhi	
26.	Lavatory Modoules	M/s Hindustan Fiber Glass Vadodra (Gujarat)	
27.	Lavatory Doors	M/s Hindustan Fiber Glass Vadodra (Gujarat)	
28.	Waste Bin Arrangement	M/s Hindustan Fibre Glass Vadodra (Gujarat)	
29.	Fire Extinguisher	M/s Pahal Fire, Haryana	NPP-6132 PP-6118
30.	Side Wall panel	M/s Hindustan Fiber Glass Vadodra (Gujarat)	
31.	Seat & Berth	M/s Savitri Engg. Products Paonta Sahib	
32.	Light Luggage Rack	M/s Techno Industries Allahabad	
33.	Snack Table	M/s International Tractor Limited, Hoshiarpur	

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रेडि 0का 0, रायबरेली (जात नज)



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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:

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 qualityrcfrbl@gmail.com

वरिष्ठ अभियंता SSE/QC/MCF/RBL गुणवत्ता विभाग रेडि०का०, रायबरेली (लालगंज)	AME/QC/MCF/RBL जी.एस. पाण्डेय G.S. Pandey सहायक यांत्रिक अभियंता / गुणवत्ता Assistant Mechanical Engineer/Quality आधुनिक रेल डिब्बा कारखाना, रायबरेली Modern Coach Factory, Raebareli	Dy.CME/FUR/MCF/RBL उप मु.यां.अभि./कर्नि. DY CME/FURNISHING रेल कोच फैक्ट्री / रायबरेली / लालगंज RCF / RBL / LLJ

3T-426



Govt. of India- Ministry of Railways
(MODERN COACH FACTORY 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	16141/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	29.26 Cub mtr/min	OK
3.2	Return Air	65.89 Cub mtr/min	OK
3.3	Exhaust Air	11.35 Cub mtr/min	OK
3.4	Conditioned Air	186.09 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 due ambient temp below 22°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 due ambient temp below 22°C		OK

D. K. Sharma
Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli



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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

Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli



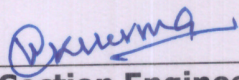
Govt. of India- Ministry of Railways
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MCF/RBL/QEF8001
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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
01.	Roof mounted AC package unit for LHB AC coaches Make : AMIT Sr no of RMPU (NPP side): 1698.I Sr no of RMPU (PP side) : 1697.I Sr no of Microprocessor: AE.16.05.778	As per rdso/pe/spes/ac/0061/rev-1/2005	02
02.	Switch board cabinet Make: ISG Sr no : 16.08.0087	As per spec no . EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make: KALSI Sr no PA: 5277/05/16 Sr no.1: 267697/05/2016 Sr no.2: 267698/05/2016 Sr no.CPA: 5470/07/2016	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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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 : 03/2016	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

Prerna

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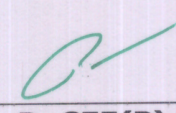
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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
23.	Battery fuse box +ve Make : NEC	As per LW 71001,Alt-F	01
24.	Battery fuse box -ve Make : ABROL	As per LW 71002,Alt-F	01
25.	Regulated battery charger Make : HI REL Sr no: 16080050	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	01
26.	Emergency battery charger Make : WAVES Sr no: 161706	EDTS 163,Rev `c` corg.-2&3	01
27.	60KVA transformer Make : PANTRONICS Sr no : 150111313	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 : MAA LAXMI INDUSTRIES	As per spec No EDTS 105,Rev `e` Am-2	02 sets
29.	Feeder junction boxes. Make : NEC	EDTS-328 REV-C	02
30.	Wheel set earthing equipment. Make: CHANDA&CHANDA, MAA LAXMI	EDTS101,REV-C,AM-1	02
31.	Wheel Slide Protection System (WSP) Make: KNORR Sr no : 0116192466	M/s : KNORR	01 set
32.	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

परिचालन विभाग
विद्युत उत्पादन-गुणवत्ता
रेल कोच फैक्टरी / लालगंज / रायबरेली
Sr. Section Engineer
Electric Production - Quality
RCF / RBL / LLJ


DyCEE(P)/MCF/RBL

उप मुख्य विद्युत अभियंता (उत्पादन)
रेल कोच फैक्टरी-रायबरेली, लालगंज
DY.CEE/P-RCF/RBL/LLJ