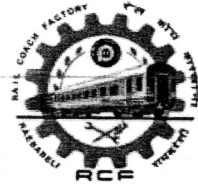




रेल डिब्बा कारखाना, रायबरेली
RAIL COACH FACTORY, RAEBARELI



FORM NO: RCF/RBL/QMF 8001
VERSION: 2012-01-01

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: RCF/RBL/QC/RSC

Date: 07/05/2013

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

- Railway Board's Order No : 2012/M(C)/142/3, dated 15.02.2013
- Tare Weight of Coach : 45.6 Tonnes
- Carrying Capacity : (a) Seating : 72 (b) Sleeping : 72 (c) Luggage : N/A

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) 1104 (PPE)

5. TRACEABILITY OF SHELL ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Buffers	N.A.	
2.	Centre Buffer Coupler	M/s KBI	PP END K12033 NPP END K12032

6. AIRBRAKE TEST REPORT:

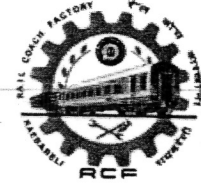
S NO	ITEM	DESCRIPTION	SPEC. VALUE	OBSERVED
1.	Full brake application	<ul style="list-style-type: none"> ➤ Reduce pressure of BP from 5.0 to 3.4 kg/cm². ➤ Max. pressure in BC ➤ All Brake are applied 	6 – 10 sec. 3.0 ±0.15 kg/cm ² . OK	8 sec. 3.0 kg/cm ² OK
2.	Insensitivity	<ul style="list-style-type: 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 DETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U.	M/s VIBGYOR	89.6/86.5/87.6
2.	Insulation		Satisfactory	



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Date: 07/05/2013

SHELL NO	L	W	A	C	C	N	-	2	1	2	6	/	2	0	1	3	DATE OF DISPATCH	2	3	0	3	2	0	1	3
----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------------	---	---	---	---	---	---	---	---

RLY	C	R	Type	L	W	A	C	C	N	Coach No.	1	3	1	0	6	/	C
-----	---	---	------	---	---	---	---	---	---	-----------	---	---	---	---	---	---	---

8. DETAIL OF BOGIES :

ITEMS	PP SIDE				NPP SIDE			
Bogie No	136156				136155			
Bogie Type	FIAT				FIAT			
Axle No	H-3162		G-8615		E-7995		RWF-96203	
Wheel Dia	916.20	916.50	916.00	916.20	916.00	916.10	916.00	916.10
Wheel Disc No	258-45320/ ZB-12	321-45320/ ZB-12	351-44519/ ZB-12	198-45318/ ZB-12	168-45318/ ZB-12	108-44519/ ZB-12	074-45319/ ZB-12	347-45320/ ZB-12
R. B. Nos.	03739	4467	03503	04442	03036	04462	03282	04416
C.T.R.B. Make	TIM		TIM		TIM		TIM	

9. SECONDARY SUSPENSION LOAD DEFLECTION VALUES

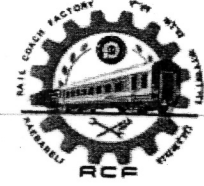
DESCRIPTION	BOGIE PP SIDE				BOGIE NPP SIDE			
	SECONDARY 1		SECONDARY 2		SECONDARY 1		SECONDARY 2	
	OUTER	INNER	OUTER	INNER	OUTER	INNER	OUTER	INNER
Make & Nos.	DN-12-7- 1018	G-12-4- 706	DN-12-7- 927	G-12-4- 832	DN-12-Z- 1026X	G-12-6- 3486	DN-12-Z- 1063X	G-12-6- 3432
Compressed Ht. at Tested Load (mm)	510	465	508	466	514	467	509	466
Alignment deviation (mm)	4	19	5	19	3	20	2	23

10. TRACEABILITY OF BOGIE ITEMS:

S. NO.	ITEM	SERIAL NO.		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	L&S-08-12	L&S-08-12	L&S
2.	Primary Inner Spring	L&S-09-12	L&S-09-12	L&S
3.	Primary Damper	782,722,684,1123	697,715,1234,1211	GEREP
4.	Secondary Damper	---	---	SACHS
5.	Lateral Damper	94	137	GEREP
6.	Yaw Damper	5551,5602	5377,5226	KONI
7.	Brake Cylinder & Caliper	G-4717/691,G-3091/691 G-3094/691,G-4730/691	G-3476/691,G-3423/691 G-3444/691,G-3442/691	KBI
8.	Brake Disc			KBI
9.	Ball Joint Control Arm			GMT
10.	Lateral Bump Stop			GMT
11.	Ball Joint Traction Lever			MGN
12.	Ball Joint Traction Centre			MGN
13.	Secondary Rubber Pad			TESPAK
14.	Rubber Spring			GMT
15.	Roll Link			SARITA
16.	Air Spring			N.A.



रेल डिब्बा कारखाना, रायबरेली
RAIL COACH FACTORY, RAEBARELI



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ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: RCF/RBL/QC/RSC

Date: 07/05/2013

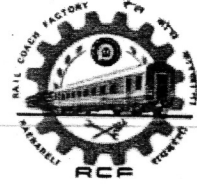
SHELL NO	L	W	A	C	C	N	-	2	1	2	6	/	2	0	1	3	DATE OF DISPATCH	2	3	0	3	2	0	1	3	
RLY	C	R		Type	L	W	A	C	C	N	Coach No.	1	3	1	0	6	/	C								

11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s Faiveley	E12018B
2.	Pull box	M/s KBI	
3.	DV	M/s Faiveley	12055525B
4.	PVC Flooring	M/s Responsive	
5.	UIC Vestibule (PPE)	M/s KRP	
6.	UIC Vestibule (NPPE)	M/s KRP	
7.	Foot Step	M/s JVR	
8.	Entrance Hand Rail	M/s SMS	
9.	Decoupling arrangement	M/s SECO	
10.	Body Side Window	M/s AIKON	
11.	Emergency Window	M/s AIKON & Rail Tech	
12.	Lavatory/Hooper Window	M/s Rail Tech	
13.	Roof Ceiling	M/s KAE Engineers	
14.	Body Side Doors	M/s Air Flow	
15.	Compartment Door (PPE)	-----	
16.	Compartment Door (NPPE)	-----	
17.	Vestibule Door(PPE)	-----	
18.	Vestibule Door(NPPE)	-----	
19.	CDTS (ORIENT)	M/s VIBHU	
20.	CDTS (WESTERN)	M/s VIBHU	
21.	Auxiliary Water Tank	M/s Shivalik Fasteners	
22.	Under Slung Water Tank(450 L)	M/s Amit Engineers	
23.	Under Slung Water Tank (2X685L)	M/s Amit Engineers	
24.	Flexible Faucet	M/s Rishabh Trading Co. (Make-Pooja)	
25.	Lotah Filler Tap	M/s Metco	
26.	Lavatory Modoules	M/s Hindustan Fibre Ltd. Gujarat	
27.	Lavatory Doors	M/s Hindustan Fibre Ltd. Gujarat	
28.	Waste Bin Arrangement	M/s Hindustan Fibre Ltd. Gujarat	
29.	Fire Extinguisher	M/s Hindustan Fibre Ltd. Gujarat	
30.	Side Wall panel	M/s KAE Engineers	
31.	AC Trough	M/s CRG Industries	
32.	Bellows of circulation units	-----	
33.	Seat & Berth	M/s Savitri Engineering	
34.	Light Luggage Rack	M/s Rail Fab	
35.	Snack Table	M/s International T. Ltd.	



रेल डिब्बा कारखाना, रायबरेली
RAIL COACH FACTORY, RAEBARELI



FORM NO: RCF/RBL/QMF 8001
VERSION: 2012-01-01

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: RCF/RBL/QC/RSC

Date: 07/05/2013

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

12. MODIFICATION (IF ANY) : NIL

13. DEVIATION (IF ANY) : NIL

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 falls 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.

DY CME
RCF/RBL

Dy CME M&P
उप मू० या० अभि/एन. & अ.
RCF/RBL(LLJ)
रे. डि.का. रायबरेली (लालागंज)

SSE/QC/MECH
RCF/RBL

वरिष्ठ अनुसंधान (यांत्रिक)
रेल कोच फैक्ट्री, रायबरेली
SE(Mech. C/F R/LLJ)



रेल कोच फैक्टरी, कपूरथला
RAIL COACH FACTORY, KAPURTHALA



Form No. : QMF 9454; Version: 03

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Date: 20-02-2013

Shell No.:-

RLY	Type	LACCN				Coach No.			
Items	PP Side				Non PP Side				
Bogie No.	136155				136156				
Frame No.	ECBT-528				FIAT-2046				
Bolster No.	2467-GT				2690-VT				
Axle No.	E-7995		RWF-96203		H-3162		G-8615		
Wheel Diameter	916.00	916.10	916.00	916.10	916.20	916.50	916.00	916.20	
Wheel Disc No.	168-45318/ ZB-12	108-44519/ ZB-12	074-44519/ ZB-12	347-45320/ ZB-12	258-45320/ ZB-12	321-45320/ ZB-12	351-44519/ ZB-12	198-45318/ ZB-12	
R.B. Nos.	03036	04462	03282	04416	03739	4467	03503	04442	
R. B. Make	TIM		TIM		TIM		TIM		
RB Type	CARTRIDGE TAPER ROLLER BEARING								

6.0 Wheel & Axle details:

6.1 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.	DN-12-7-1025	G-12-4-695	DN-12-7-1003	G-12-4-592	DN-12-7-1018	G-12-4-706	DN-12-7-927	G-12-4-832
Compressed ht. at tested load	514	467	509	466	510	465	508	466
Alignment deviation (mm)	3	20	2	23	4	19	5	19

6.2 Component traceability:

SNO	ITEM	PP Side Bogie	NPP side Bogie	Make
		Sr. nos	Sr. nos.	
1	Primary Outer Spring batch no.	L&S-08-12	L&S-08-12	L&S
2	Primary inner Spring batch no	L&S-09-12	L&S-09-12	L&S
3	Primary Damper	697,715,1234,1211	782,722,684,1123	GEREP
4	Secondary damper	NIL	NIL	SACHS
5	Lateral Damper	137	94	GEREP
6	Brake cylinder & Caliper	G-3476/691,G-3423/691 G-3444/691,G-3442/691	G-4717/691,G-3091/691 G-3094/691,G-4730/691	KBI
7	Brake Disc			KBI
8	Ball joint Control arm			GMT
9	Lateral Bump stop			GMT
10	Traction center make			-
11	Traction lever make			-
12	Ball joint traction lever			MGN
13	Ball joint Traction centre			MGN
14	Secondary rubber pad			TESPAK
15	Rubber spring			GMT
16	Anti roll bar make			SARITA
17	Roll link make			-
18	Fork make			EMSON
19	Yaw Damper make			



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



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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

COACH NO		SHELL NO	
TYPE OF COACH		DATE:	
Sr no	Description	Drg/Spec no.	Quantity per Coach
	13106/c - CR		
	LWACCN	14.3.13	
01.	Roof mounted AC package unit for LHB AC coaches Make : <u>L/704/2012 (SIDWAL)</u> Sr no of RMPU (PP side) : <u>L/704/2012</u> Sr no of RMPU (NPP side) : <u>L/709/2012</u> Sr no of Microprocessor : <u>12 LSR-497</u>	EDTS 075,Rev`a`, Col I.	02
02.	Switch board cabinet (In case of CHAIR CAR / In case of 2T/3T & FAC coach) Make : <u>steralit</u> Sr no : <u>294 - 6/2012</u>	EDTS 073 / 134 ,Rev `b`	01 ✓
03.	Pump equipment with PLC controller & pump box Make: <u>kalsi</u> Sr no PA - <u>3021/8/12</u> Sr no.1 <u>232526/8/12</u> Sr no.2 <u>232527/8/12</u> Sr no.CPA - <u>2558/10/2011</u>	EDTS 094,Rev`a`	01 ✓
05.	Single inlet radial blower 415V/03Ph/50Hz /185W /1045 cum mtr/hr discharge for exhausting air from PANTRY Make : <u>✓</u>	02D133-AB06-19 In case of Chair Car's	01 ✓
06.	Double inlet centrifugal blower 415V/03Ph /50Hz /120W/450 cum mtr/hr discharge for exhausting air from lavatory & switch board cabinet Make : <u>Integ</u>	Cat no D2D 133 -AB06-19 of EBM or equivalent approved	02 ✓
07.	Ceiling light fitting w/o diffuser w/o item 3&4 EOG 3T/2T/FAC/Ex ACC/II ACC	LW 76004,Alt nil	03/03/06 03/03
08.	Ceiling light fitting DOUBLE w/o diffuser. EOG 3T/2T/FAC	LW 76011,Alt nil	09/09/07
<u>Jwala Prasad</u>		Signature	 C.P. Meena SSE/Elect/Quality
		Name	
SSE/Elect/Production		Designation	



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



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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
09.	Ceiling light fitting with NL w/o diffuser w/o item 2&3 EOG 3T/2T/FAC/Ex ACC/II ACC	LW 76013,Alt nil	09/09/11/26 /26
10.	Emergency light system for EOG type coaches	EDTS 151,Rev nil	04 ✓
12.	Lavatory light fitting assly EOG 3T/2T/FAC/Ex ACC/II ACC	LW 76001,Alt nil	04/04/03 03/03
13.	Entry door lamp assly	LW 76003,Alt nil	04 no's ✓
14.	WC gauge signal light EOG 3T/2T/FAC/Ex ACC/II ACC	LW 76006,Alt`a`	02/02/03 03/03
15.	Passenger alarm coach indication cum Reservation Chart illumination light	LW 76005,Alt`a`	02 ✓
16.	Reading Light fitting (Upper berth) EOG 2T/FAC	AW 76023,Alt nil	27/12
17.	Reading light for longitudinal berth (LHS) EOG/2T	LW 76023,Alt nil	09
18.	Reading light for transverse -LH EOG/2T/FAC	LW 76020,Alt nil	09/04
19.	Reading Lights (02 seater) Ex.ACC / II,ACC	LW 76031,Alt nil	28/18
20.	Reading Lights (03 seater) II,ACC Only	LW 76030,Alt nil	14
21.	Reading light for longitudinal berth RH EOG/2T/FAC	LW 76021,Alt nil	09/08
22.	Fluorescent lamp 18W EOG 3T/2T/FAC/Ex ACC/II ACC	RDSO/PE/SPEC/D/ TL 0011-2000,Rev I, Sec- I , 07/2001	38/37/38 37/37
23.	Diffuser complete w/o item 1& 2. EOG 3T/2T/FAC/Ex ACC/II ACC	LW 76012,Alt nil	21/21/24 04/04
24.	Electronic inverter for reading lights. EOG Ex ACC/ II ACC	EDTS 108,Rev nil Amdt -1	14/08 14/20
25.	Razor socket for WC 110/240V. EOG 3T/2T/FAC/Ex ACC/ II ACC	EDML 047 ,Rev nil	04/04/03 03/03
Anand Jwala Prasad SSE/Elect/Production		Signature Name Designation	 C.P. Meena SSE/Elect/Quality



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



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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
26.	Terminal connector (for CDTS) EOG 3T/2T/FAC/Ex ACC/II ACC	EDML 037,Rev`a`	04/04/03 03/03
27.	Terminal strip (EOG/3T)	EDML 034,Rev`a`	01 ✓
28.	Terminal strip (EOG/2T)	EDML 033,Rev`a`	01
29.	Terminal connector EOG/3T/2T	EDML 037,Rev`a`	04/04
30.	Connectors for lights (For chair cars only)	EDML 014,Rev nil	01
35.	Single switch 06A/250V/AC ONE WAY ,complete with steel plate & cover frame EOG 3T/2T/FAC	EDML 047,Rev nil, Item 1.	09/09/08
36.	Single switch 16A/250V/AC ONE WAY complete with steel plate & cover frame EOG 3T/2T/FAC	EDML 045,Rev nil ,Item 2.	09/09/08
37.	Switch plate (CORRIDOR) for FAC only	EDML 040,Rev nil	01
38.	Switch plate (CORRIDOR) for FAC only	EDML 042,Rev nil	01
39.	Switch plate (CORRIDOR & ATTENDANT) For FAC only	EDML 041,Rev nil	02
40.	Switch socket 5 Pin, 06A, 250V fitted with powder coated steel plate & cover frame. (Ex ACC/ II ACC)	Cat no EL-243 of M/s SIGNATURE series or equiv approved	18/18
42.	Bell push & single switch 06A/250V/AC ,TWO WAY ,complete with steel plate & cover frame (FAC only)	EDML 047,Rev nil	02
43.	Call cum reset indicator & Annunciator (FAC only)	EDTS 117,Rev nil	01
44.	PA system for LHB coaches Make : <u>AHUJA</u>	EDTS 173,Rev nil Ty -V.	01 set
	<u>Jwala Prasad</u>	Signature Name	<u>P.P. Menon</u>
	SSE/Elect/Production	Designation	SSE/Elect/Quality



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

Sr no	Description	Drg/Spec no.	Quantity per Coach
45.	70AH/110V,54 Cells,02V each ,maintenance free pure lead acid tin monoblock ,battery set with 09 modules 12V each. ,factory pre charged. Make : <u>HBL</u> Lug date : <u>8/2012</u>	EDTS 129,Rev nil	01 set ✓
46.	Battery box for LHB coaches.	1 10113 0 76 700 005 w/o item 5,22 ,23 ,26 & 27.	01 ✓
47	Battery fuse box +ve Make : <u>ISG</u>	LW 71001,Alt `a`	01 ✓
48.	Battery fuse box -ve Make : <u>ISG</u>	LW 71002,Alt `a`	01 ✓
49.	Regulated battery charger Make : <u>Pyramid</u> Sr no <u>PRBCA-137-38</u>	EDTS 074,Rev `b`	01
	Emergency battery charger Make : <u>Pyramid</u> Sr no <u>PEBCF-110-78</u>	EDTS 163,Rev `c` corg.-2	01
50.	60KVA transformer Make : <u>Vimal</u> Sr no 1 : <u>1138-2011-12</u> Sr no 2 : _____ 2T/3T/FAC/HB	EDTS 076 ,Rev nil	01/01/01/0 2
51.	ZS coupling 400A/750V/03Ph/50hz. Make : <u>S-International</u>	EDTS 105,Rev `c`	02 sets ✓
52.	Feeder junction boxes. Make : <u>NEC</u>	EDML 020,Rev `a`	02 ✓
53.	Wheel set earthing equipment. Make : <u>Dharshan Enterprises</u>	EDTS 101,Rev `a`	02
54.	Wheel Slide Protection System (WSP) Make & Sr no : <u>KNORR - 0112090567</u>	M/s : <u>KNORR</u>	01 set ✓
55.	Composite pantry Make : _____ Sr no : _____	EDTS 130 Sec-1 FOR LHB/EOG /AC Chair cars only EDTS 139 Comp-1	01 x
56.	PANTRY EQUIPMENTS : a.) Hot Case Make : <u>Spectrum</u> b.) Bottle coler cum deep freezer Make : <u>spectrum</u>	of EOG/3T & FAC EDTS -130, Sec II, In case of EOG/2T	01
<p align="center"><u>Anand</u> <u>Swala Prasad</u></p>		Signature Name	<p align="center"><u>Chandra</u> <u>C.P. Meena</u> SSE/Elect/Quality</p>
SSE/Elect/Production		Designation	