



रेल डिब्बा कारखाना, रायबरेली
RAIL COACH FACTORY, RAEBARELI



L37-129

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

ROLLING STOCK CERTIFICATE

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

Date: 21/08/2014

SHELL	L	W	A	C	C	N	3	1	3	6	/	2	0	1	3	DATE OF DISPATCH	2	8	0	6	2	0	1	4
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------------	---	---	---	---	---	---	---	---

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

- Railway Board's Order No : 2013/M(C)/142/3 dated 03.03.2014
- 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) 1104(NPPE) 2) 1105(PPE)

5. TRACEABILITY OF SHELL ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Buffers	N.A.	
2.	Centre Buffer Coupler	M/s ESCORTS	PP END 2886 NPP END 2884

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 DETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U.	VIBGYOR	90/91
2.	Insulation	Satisfactory		



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: 21/08/2014

SHELL	L	W	A	C	C	N	3	1	3	6	/	2	0	1	3	DATE OF DISPATCH	2	8	0	6	2	0	1	4
RLY	S	W	R	Type	L	W	A	C	C	N	Coach No.	1	4	1	1	2	/	C						

8. DETAIL OF BOGIES :

ITEMS	PP SIDE				NPP SIDE			
Bogie No	146117				146116			
Bogie Type	Fiat				Fiat			
Axle No	RWF-109341		R-3143		RWF-109341		RWF-109341	
Wheel Dia	918.00	918.00	918.00	918.00	918.00	918.00	918.00	918.00
Wheel Disc No	186-50854	300-50859	082-50846	104-50800	189-50857	151-50857	051-50854	259-50800
R.B. Nos.	02808	03110	02952	03542	04968	05040	04619	04594
CT 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-13-1-1658	G-13-4-4853	DN-13-1-1389	G-13-4-5322	DN-13-1-1511	G-13-4-5286	DN-13-1-1552	G-13-4-4914
Compressed Ht. at Tested Load	508	466	506	466	509	464	509	464
Alignment deviation (mm)	6	6	8	8	12	11	10	11

10. TRACEABILITY OF BOGIE ITEMS:

S NO	ITEM	SERIAL NO		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	L&S-02-13	L&S-02-13	L&S
2.	Primary Inner Spring	G-05-12	G-05-12	GF
3.	Primary Damper			SACHS
4.	Secondary Damper			SACHS
5.	Lateral Damper			GEREPI
6.	Yaw Damper			SV SOCKS
7.	Brake Cylinder & Caliper	H-5052/691,H5215/691 H-4802/691,H5217/691	H-6154/691,H6014/691 H-6268/691,H5943/691	KBI
8.	Brake Disc			FTI
9.	Ball Joint Control Arm			SGA
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			SGA
15.	Secondary Rubber Pad			TECSPAC
16.	Rubber Spring			SARITA
17.	Anti roll bar make			SARITA
18.	Roll Link make			EMSON
19.	Fork make			EMSON



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: 21/08/2014

SHELL	L	W	A	C	C	N	3	1	3	6	/	2	0	1	3	DATE OF DISPATCH	2	8	0	6	2	0	1	4
RLY	S	W	R	Type	L	W	A	C	C	N	Coach No.	1	4	1	1	2	/	C						

11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s KBI, Faridabad, New Delhi	14A0562
2.	Pull box	M/s KBI, Faridabad, New Delhi	
3.	DV	M/s KBI, Faridabad, New Delhi	2014A1009
4.	PVC	M/s Responsive, Colaba, Mumbai	
5.	UIC Vestibule (PPE)	M/s COMCEN	
6.	UIC Vestibule (NPPE)	M/s COMCEN	
7.	Foot Step	M/s JVR Ludhiana	
8.	Decoupling arrangement	M/s SECO	
9.	Body Side Window	M/s Rail Tech, Kapurthala	
10.	Emergency Window	M/s Rail Tech, Kapurthala	
11.	Lavatory Window	M/s Rail Tech, Kapurthala	
12.	Roof Ceiling	M/s KAE Engg. Pvt. Ltd. Satarganj, U.K.	
13.	Non-AC Area Ceiling	M/s Gandhi Enterprises Pvt. Ltd. ESIPL (UK)	
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 KALSI Ludhiana	
19.	Vestibule Door(NPPE)	M/s KALSI Ludhiana	
20.	CDTS	M/s Vibhu composite	
21.	Auxiliary Water Tank	M/s Manoj Enterprises	
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 Fibre Ltd. Vadodra (Gujrat)	
25.	Lotah Filler Tap	M/s Metco (New 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 Hindustan Fibre Ltd. Vadodra (Gujrat)	
30.	Side Wall panel	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
31.	Seat & Berth	M/s Mohan rail composite	
32.	Light Luggage Rack	M/s Virendra Steel Enterprises Chandigarh	
33.	Snack Table	M/s International Tractors Ltd. Hoshiarpur	



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: 21/08/2014

SHELL	L	W	A	C	C	N	3	1	3	6	/	2	0	1	3	DATE OF DISPATCH	2	8	0	6	2	0	1	4
RLY	S	W	R	Type	L	W	A	C	C	N		Coach No.	1	4	1	1	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 falls 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 contact at qualityrcfbl@gmail.com

DY CME
RCF/RBL

Dy CME/Fur
उप मु० या० अभि०/फर.
RCF/RBL(LLJ)
रे. डि. का. रायबरेली (तालागंज)

SSE/QC
RCF/RBL

सीनियर सेक्शन इंजीनियर (क्वालिटी कंट्रोल)
रेल डिब्बा कारखाना, रायबरेली
Sr Section Engineer (Quality Control)
Rail Coach Factory, Raebareli(Lalganj)



रेल कोच फैक्टरी, कपूरथला
RAIL COACH FACTORY, KAPURTHALA



Form No. : OMF 9484: Version: 02

Page : 2 of 4

Date: 21-02-2014

Shell No.: 3488 RBL

RLY		Type	LACCN	Coach No.
-----	--	------	-------	-----------

6.0 Wheel & Axle details:

Items	PP Side				Non PP Side			
Bogie No.	146116				146117			
Frame No.	FIAT-2942				FIAT-2767			
Bolster No.	1602-VT				3615-GT			
Axle No.	RWF-109588		RWF-109139		RWF-109341		R-3143	
Wheel Diameter	918.00	918.00	918.00	918.00	918.00	918.00	918.00	918.00
Wheel Disc No.	189-50857	151-50857	051-50854	259-50800	186-50854	300-50859	082-50846	104-50800
R.B. Nos.	04968	05040	04619	04594	02808	03110	02952	03542
R. B. Make	TIM		TIM		TIM		TIM	
RB Type	CARTRIDGE TAPER ROLLER BEARING							

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-13-1-1511	G13-4-5286	DN-13-1-1552	G13-4-4914	DN-13-1-1658	G-13-4-4853	DN-13-1-1389	G13-4-5322
Ht. Attest Load	509	464	509	464	508	466	506	466
Align. deviation	12	11	10	11	6	6	8	8

6.2 Component traceability:

SNO	ITEM	PP Side Bogie	NPP side Bogie	Make
1	Primary Outer Spring batch no.	L&S-02-13	L&S-02-13	L&S
2	Primary inner Spring batch no	G-05-12	G-05-12	GF
3	Primary Damper			SV
4	Secondary damper			SACHS
5	Lateral Damper			SACHS
6	Brake cylinder & Caliper	H-6154/691,H-6014/691, H-6268/691,H-5943/691	H-5052/691,H-5215/691, H-4802/691,H-5217/691	KBI
7	Brake Disc			FTI
8	Ball joint Control arm			SGA
9	Lateral Bump stop			GMT
10	Traction center make			SARITA
11	Traction lever make			SARITA
12	Ball joint traction lever			GMT
13	Ball joint Traction centre			SGA
14	Secondary rubber pad			TESPAK
15	Rubber spring			GMT
16	Anti roll bar make			SARITA
17	Roll link make			SARITA
18	Fork make			EMSON

25/2/14
S/E/BG/B-8/c

73

3T-129

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

RCF/RBL/QEF7001
 VER.2014:00
 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	14112/C
RAILWAY	SWR	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	31.72 Cub mtr/min	OK
3.2	Return Air	51.82 Cub mtr/min	OK
3.3	Exhaust Air	9.04 Cub mtr/min	OK
3.4	Conditioned Air	163.37 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 : 24.6°C NPP Side : 19.4°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

(Signature)

Senior Section Engineer
Quality control / Electrical
RCF, Raebareli



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




RCF/RBL/QEF7001
VER.2014:00
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	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



Senior Section Engineer
Quality control / Electrical
RCF, Raebareli

71

RCF/RBL/QEF7001
VER.2014:00
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 : INTEC Sr no of RMPU (NPP side) : 14-D-103 Sr no of RMPU (PP side) : 14-D-110 Sr no of Microprocessor: AE.14.03.105/AMIT	As per rdso/pe/spes/ac/0061/rev-1/2005	02
02.	Switch board cabinet Make: INSTRUMENTATION Ltd Sr no : 137007	As per spec no . EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make: KALSI Sr no PA: 3434/8/13 Sr no.1: 243208/8/13 Sr no.2: 243209/8/13 Sr no.CPA: 3429/08/13	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


Senior Section Engineer
Quality control / Electrical
RCF, Raebareli

70



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



RCF/RBL/QEF7001

VER.2014:00

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 nil, Item 1.	09
18.	Single switch 16A/250V/AC ONE WAY complete with steel plate & cover frame	EDML 045,Rev nil ,Item 2.	09
19.	PA system for LHB coaches Make : AHUJA	EDTS 173,Rev-a Am-1,2&3	01 set
20.	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 : 05/2013	EDTS 129,Rev nil	01 set
21.	Battery box for LHB coaches.	1 10113 0 76 700 005 w/o item 5,22 ,23 ,26 & 27.	01

(Signature)
**Senior Section Engineer
Quality control / Electrical
RCF, Raebareli**



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



RCF/RBL/QEF7001
VER.2014:00
PAGE 5 OF 5

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
22.	Battery fuse box +ve Make : INTEG	As per LW 71001,Alt-F	01
23.	Battery fuse box -ve Make : INTEG	As per LW 71002,Alt-F	01
24.	Regulated battery charger Make : STESALITE Sr no: 1213388	As per RDSO/pe/spec/ac/01 29, Rev.-1 (2009)	01
25.	Emergency battery charger Make : BHASIN Sr no : 06130078	EDTS 163,Rev `c` corg.-2&3	01
26.	60KVA transformer Make : VIMAL Sr no : 2154	As per rdso/pe/spec/ac/008 0/rev-0 (2007)/Am- 1&2/Corr. 1,2&3	01
27.	ZS coupling 400A/750V/03Ph/50hz. Make : S.INTERNATIONAL	As per spec No EDTS 105,Rev `e` Am-2	02 sets
28.	Feeder junction boxes. Make : NEC	EDML 020,Rev-I	02
29.	Wheel set earthing equipment. Make : CHANDA & CHANDA	EDTS101,REV- C,AM-1	02
30.	Wheel Slide Protection System (WSP) Make: KNORR Sr no : 0113480912	M/s : KNORR	01 set
31.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : VISHAL GAS SERVICES	As per spec no EDTS 139, Rev- E ,Sec II.	01

Approved by वरिष्ठ विद्युत अभियन्ता रेल कोच फैक्टरी, रायबरेली, लखनऊ Sr. Electrical Engineer / RCF / RBL / Lucknow	SSE/EL/QC विद्युत उत्पादन-गुणवत्ता रेल कोच फैक्टरी / लालगंज / रायबरेली Sr. Section Engineer Electric Production - Quality RCF / RBL / LLJ