रेल डिब्बा कारखाना, रायबरेली
RAIL COACH FACTORY, RAEBARELI

3T-201

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

ROLLING STOCK CERTIFICATE

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

Date: 09/05/2015

SHELL	L	W	A	C	C	N	4	1	2	3	/	2	0	1	4		DATE OF DISPATCH	1	3	0	4	2	0	1	5
RLY	C	R		Type	L	W	A	C	C	N							Coach No.	1	4	1	1	3	/	C	

1. Railway Board's Order No : **2013/M(C)/142/3 dated 03.03.2014**
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) 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	3876	NPP END	3878

6. **AIRBRAKE TEST REPORT:**

S NO	ITEM	DESCRIPTION	SPEC. VALUE	OBSERVED
1.	Full brake application	➢ 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/cm². OK	8 sec. 3.0 kg/cm² OK
2.	Insensitivity	➢ Exhaust BP @ 0.3 kg/cm²/min.	No brake application	OK
3.	Sensitivity	➢ 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.	VIBGYOR	87/88
2.	Insulation	Satisfactory		

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RLY	C	R		Type	L	W	A	C	C	N		Coach No.	1	4	1	1	3	/	C	

8. DETAIL OF BOGIES :

ITEMS	PP SIDE				NPP SIDE			
Bogie No	156179				156178			
Bogie Type	Fiat				Fiat			
Axle No	C-4149		C-0063		B-9708		A-2902	
Wheel Dia	916.00	916.00	916.00	916.00	916.00	915.50	917.00	917.00
Wheel Disc No	185-10568	346-10579	011-63301	284-63301	112-63307	263-63301	312-63301	293-10579
R.B. Nos.	25759	25580	27509	36686	25559	27019	27691	27049
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.	FSK-15-01-08	BPS-2013-132	FSK-15-01-5	BPS-2013-012	FSK-15-01-19	BPS-2013-179	FSK-15-01-13	BPS-2013-012
Compressed Ht. at Tested Load	514	465	515	468	514	465	515	468
Alignment deviation (mm)	8	26	7	20	5	24	6	24

10. TRACEABILITY OF BOGIE ITEMS:

S NO	ITEM	SERIAL NO		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	YR-10-10	YR-10-10	GF
2.	Primary Inner Spring	GBD-14-05	GBD-14-05	GBD
3.	Primary Damper			KONI
4.	Secondary Damper			GEREP
5.	Lateral Damper			KONI
6.	Yaw Damper	70296,70203	70526,70247	KONI
7.	Brake Cylinder & Caliper	---	---	KBI
8.	Brake Disc			KBI
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			GMT
14.	Ball joint traction centre			SGA
15.	Secondary Rubber Pad			TECSPAC
16.	Rubber Spring			GMT
17.	Anti roll bar make			EMSON
18.	Roll Link make			SARITA
19.	Fork make			SARITA

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RLY	C	R		Type	L	W	A	C	C	N		Coach No.	1	4	1	1	3	/	C	

11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s KBI, Faridabad, New Delhi	14F 0706
2.	Pull box	M/s KBI, Faridabad, New Delhi	
3.	DV	M/s KBI, Faridabad, New Delhi	2014F1230
4.	PVC	M/s Responsive, Colaba, Mumbai	
5.	UIC Vestibule (PPE)	M/s Ameenji Rubber Pvt. Ltd, Hyderabad	
6.	UIC Vestibule (NPPE)	M/s Ameenji Rubber Pvt. Ltd, Hyderabad	
7.	Foot Step	M/s Super Spark Pvt. Ltd, Faridabad	
8.	Decoupling arrangement	M/s SECO Industries	
9.	Body Side Window	M/s AIKON Tech.pvt.ltd Solan (HP)	
10.	Emergency Window	M/s Rail Tech, Kapurthala	
11.	Lavatory Window	M/s AIKON Tech.pvt.ltd Solan (HP)	
12.	Roof Ceiling	M/s KAE Engg. Pvt. Ltd. Satarganj, U.K.	
13.	Non-AC Area Ceiling	M/s Amirchand Engg. Works,Jaladhar	
14.	Supply Air Duct	M/s Amirchand Engg. Works,Jaladhar	
15.	Body Side Doors	M/s JBM Faridabad,JVR	
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 Amit Engg, Baddi (H.P.)	
21.	Auxiliary Water Tank	M/s Manoj Enterprises 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 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 Fire maties/2166/2107	
30.	Side Wall panel	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
31.	Seat & Berth	M/s Oriental Veneer Product Ltd. Mumbai	
32.	Light Luggage Rack	M/s Virendra Steel Enterprises Chandigarh	
33.	Snack Table	M/s Anjani Technoplast, Gr. Noida	

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SHELL	L	W	A	C	C	N	4	1	2	3	/	2	0	1	4		DATE OF DISPATCH	1	3	0	4	2	0	1	5
RLY	C	R		Type	L	W	A	C	C	N							Coach No.	1	4	1	1	3	/	C	

12. MODIFICATION (IF ANY) : Modified Train Pipe Fitted

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

DY CME
RCF/RBL
उप मु.यां.अभि./फर्नि.
DY CME/FURNISHING
फैक्ट्री / रायबरेली
RCF / RBL

SSE/QC
RCF/RBL
सीनियर सेक्शन इंजीनियर (क्वालिटी कन्ट्रोल)
रेल डिब्बा कारखाना, रायबरेली

437 - 201

रेल डिब्बा कारखाना, कपूरथला

Rail Coach Factory , Kapurthala

12.	Bogie Details:	Shell No.	Railway	Type	Coach No.	Dispatch Date
		4100/RBL		LACCN		07-03-2015

12.1	Wheel & Axle Details:		PP Side				NPP Side			
	i.	Bogie No.	156178				156179			
	ii.	Frame No.	FIAT-3627				FIAT-3819			
	iii.	Bolster No.	4569-GT				4550-GT			
	iv.	Axle No.	B-9708		A-2902		C-4149		C-0063	
	v.	Wheel Dia.	916.00	915.50	917.00	917.00	916.00	916.00	916.00	916.00
	vi.	Wheel Disc No.	112-63307	263-63301	312-63301	293-10579	185-10568	346-10579	011-63301	284-63301
	vii.	R.B. Nos.	25559	27019	27691	27049	25759	25560	27509	36686
	viii	R.B. Make	SKF		SKF		SKF		SKF	
	ix.	RB Type	UIC CARTRIDGE TAPER ROLLER BEARING							

12.2	Secondary suspension load deflection Values:								
	Description	Secondary 1		Secondary 2		Secondary 1		Secondary 2	
		Outer	Inner	Outer	Inner	Outer	Inner	Outer	Inner
i.	Make & nos.	FSK-15-01-19	BPS-2013-179	FSK-15-01-13	BPS-2013-126	FSK-15-01-08	BPS-2013-132	FSK-15-01-5	BPS-2013-012
ii.	Ht. at test load	514	465	515	468	514	465	515	468
iii.	Align .deviation	5	24	6	24	8	26	7	20

12.3	Items traceability:				
	Sno.	Item	PP Side Bogie	NPP side Bogie	Make
	i.	Primary Outer Spring	YR-10-10	YR-10-10	YR
	ii.	Primary inner Spring	GBD-14-05	GBD-14-05	GBD
	iii.	Primary Damper			KONI
	iv.	Secondary damper			GEREP
	v.	Lateral Damper			GEREP
	vi.	Yaw Damper			NIL
	vii.	Brake cylinder & Caliper			KBI
	viii.	Brake Disc			KBI
	ix.	Ball joint Control arm			MGN
	x.	Lateral Bump stop			GMT
	xi.	Traction center make			SARITA
	xii.	Traction lever make			SARITA
	xiii.	Ball joint traction lever			GMT
	xiv.	Traction centre elastic			SGA
	xv.	Secondary rubber pad			TESPAK
	xvi.	Rubber spring			GMT
	xvii.	Anti roll bar make			EMSON
	xviii.	Ball joint roll link			SARITA
	xix.	Fork make			SARITA
12.4	i.	Modification / Trial (if any):	NIL		
	ii.	Deviations (if any):	NIL		

6/4/15
SSE/DC

3T-201

RCF/RBL

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

RCF/RBL/QEF7001
VER.2014:00

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**	**14113/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 PREACTICE 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	**29.12** Cub mtr/min	OK
3.2	Return Air	**60.77** Cub mtr/min	OK
3.3	Exhaust Air	**5.83** Cub mtr/min	OK
3.4	Conditioned Air	**213.13** 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^{0}C** NPP Side :**21.7** ^{0}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

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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 **R 407C**	OK

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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) : **1030-F** Sr no of RMPU (PP side) : **1031-F** Sr no of Microprocessor**: AE.14.09.326.AMIT**	As per rdso/pe/spes/ac/0061/rev-1/2005	**02**
02.	Switch board cabinet Make: **ABROL ENG.** Sr no:**167**	As per spec no . EDTS073,REV-D,AM-6	**01**
03.	Pump equipment with PLC controller & pump box Make: **KALSI** Sr no PA:**4158/10/14** Sr no.1:**251455/10/2014** Sr no.2:**251456/10/2014** Sr no.CPA:**4156/10/2014**	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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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 : **A. RAJA** Lug date :**02/2015**	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**

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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
22.	Battery fuse box +ve Make :**ISG**	As per LW 71001,Alt-F	**01**
23.	Battery fuse box –ve Make :**NEC**	As per LW 71002,Alt-F	**01**
24.	Regulated battery charger Make :**HI-RELL** Sr no:**14100079**	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	**01**
25.	Emergency battery charger Make :**WAVES** Sr no:**WEBCH-14632**	EDTS 163,Rev `c' corg.-2&3	**01**
26.	60KVA transformer Make :**VIMAL** Sr no :**2318**	As per rdso/pe/spec/ac/0080/rev-0 (2007)/Am-1&2/Corr. 1,2&3	**01**
27.	ZS coupling 400A/750V/03Ph/50hz. Make :**MAA LAXMI INDUSTRIES**	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 earthling equipment. Make :**DARSHAN ENTERPRISES**	EDTS101,REV-C,AM-1	**02**
30.	Wheel Slide Protection System (WSP) Make: **KNORR** Sr no :**0114191189**	M/s :**KNORR**	**01 set**
31.	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**

वरिष्ठ खण्ड अभियन्ता
विद्युत उत्पादन–गुणवत्ता
रेल कोच फैक्टरी / लालगंज / रायबरेली
Sr. Section Engineer
Electric Production - Quality
RCF / RBL / LLJ

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