131 649

	Modern Coach Factory Raebareli **आधुनिक रेल डिब्बा कारख़ाना, रायबरेली**	DOC NO.: MCF/RBL/QMF 8002 REV NO: 00 DATE: 16.05.2016

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2017-18/265

Coach No.	1	7	9	6	3	/	C	-	DATE OF DISPATCH	2	1	-	0	9	-	1	7

RLY	C	R	-	-	Type	L	W	A	C	C	N	Shell No.	7	3	0	8	2	-	2	0	1	7	-	1	8

1. Railway Board's Order No. : **2017/M/(C)/142/2 dated -25.08.2017**
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) 1095 (NPPE) 2) 1100 (PPE)

5. TRACEABILITY OF SHELL ITEMS:

S NO	ITEM		MAKE/SUPPLIER	SERIAL NO			
1.	Underframe	Front Part	M/S E.c.blades &tool pvt. Ltd CDG M/S Sidhu ind.corporation KXH	PP END	2525	NPP END	809
		Complete	M/S MCF/RBL				
2.	Side wall		M/S MCF/RBL	RH	73082	LH	73082
3.	End wall		M/s Amit Engg, M/s Amit Engg,	PP END	73082	NPP END	73082
4.	Roof		M/S MCF/RBL				
5.	Centre Buffer Coupler		M/S Sanrok faridabad	PP END	3694	NPP END	3725
6.	Buffers		n.a				

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	07 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 06 Sec.	Brake must apply	OK

7. PAINTING DAETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	APPLICATION BY MCF/ CONTRACTOR(SUPPLY & APPLY)	AVERAGE GLOSS VALUE
1.	Paint	P.U	M/S- GS	M/S- GSI	88/86
2.	Insulation		Satisfactory		

SSE/QC/MCF/RBL

गुणवत्ता विभाग
रे०डि०का०, रायबरेली (लालगंज)

	MODERN COACH FACTORY, RAEBARELI **आधुनिक रेल डिब्बा कारख़ाना, रायबरेली**	DOC NO.: MCF/RBL/QMF 8002 REV NO.: 00 DATE: 16.05.2016

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2017-18/265

Coach No.	1	7	9	6	3	/	C	-	DATE OF DISPATCH	2	1	/	0	9	/	1	7

RLY	C	R	-	-	Type	L	W	A	C	C	N	Shell No.	7	3	0	8	2	-	2	0	1	7	-	1	8

8. DETAIL OF BOGIES :

ITEMS	PP Side				NPP Side			
Bogie No	170670				170669			
Bogie Type	FIAT				FIAT			
Frame no.	MCF/RBL-0542				MCF/RBL -0654			
Bolster no.	MCF/RBL/VS-187				MCF/RBL/VS-123			
Axle No	C-4125 RWF		B-9750 RWF		C-3945 RWF		A-3208 RWF	
Wheel Dia	917.550	917.600	917.578	917.635	917.582	917.600	917.517	917.590
Wheel Disc No	06018-7006 TZ03-17	06017-7006 TZ03-17	07320-70J4 TZ03-17	05910-70H4 TZ03-17	07317-70J4 TZ03-17	04867-7NL3 TZ03-17	08016-7006 TZ03-17	07318-70J4 TZ03-17
R.B. Nos.	05-16 99669	07-16 72511	05-16 96828	05-16 96703	05-16 99657	07-16 71873	05-16 99664	07-16 71867
CT R B Make	SKF		SKF		SKF		SKF	

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.	CMFSK-04-17-F-16-169-61	CMGBD-07-17-5137-46	CMFSK-04-17-F-16-169-29	CMGBD-07-17-51375-59	CMFSK-04-17-F-16-169-20	CMGBD-07-17-5137-338	CMFSK-04-17-F-16-169-76	CMGBD-07-17-51375-281
Compressed Ht. at Tested Load	513.5	466	513	468	511.5	468	511	466
Alignment deviation (mm)	12	11	09	11	15	06	15	06

10. TRACEABILITY OF BOGIE ITEMS:

S. NO	ITEM	MAKE/ SUPPLIER	SERIAL NO.	
			PP SIDE	NPP SIDE
1.	Primary outer Spring	CVFSK	05-17-F03-410(190,43,147,198)	05-17-F03-410(57,289,408,129)
2.	Primary Inner Spring	CVFSK	05-17-7143-284,12-16-7143-219-21,05-17-7143-284-194,03-17-F04-101	05-17-7143-284(79,59,29,146)
3.	Primary Damper	KNORR	07-17(9566,9572,9576,9633)	06-17(9519,9323),07-17-9556,07-16-9558
4.	Secondary Damper	KONI	15-2016(8419,7154)	15-2016 (7412,7226)
5.	Lateral Damper	KONI	42-2016 5851	42-2016 5620
6.	Brake Cylinder	FAV	G17-150, F17-354, F17-351, G17-146,	G17-153, G17-111, G17-106, F17-041,
7.	Brake Caliper	FAV	H17332B,H17330B,H17329B,H17331B	H17300B,H17298B,H17297B,H17229B
8.	Brake Disc	KBI	24103254-0018-22-17, 24103254-0009-22-17, 24103253-0035-22-17, 24103252-0006-22-17,	24103254-0017-22-17, 24103254-0021-22-17, 24103254-0019-22-17, 24103254-0007-22-17,
9.	Ball Joint Control Arm	GMT		
10.	Lateral Bump Stop	MTC		
11.	Traction Centre make	SARITA		
12.	Traction lever make	JI-01-17		
13.	Ball joint traction lever	S-BLOC		
14.	Ball joint traction centre	MTC		
15.	Secondary Rubber Pad	PRAG		
16.	Rubber Spring	MTC		
17.	Anti roll bar make	SARITA		
18.	Roll Link make	SARITA/ S-BLOC		
19.	Fork make	SARITA		

Signature of SSE/Bogie/QC

	Modern Coach Factory Raebareli **आधुनिक रेल डिब्बा कारख़ाना, रायबरेली**	DOC NO.: MCF/RBL/QMF 8002 REV NO: 00 DATE: 16.05.2016

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2017-18/265

Coach No.	1	7	9	6	3	/	C	-	DATE OF DISPATCH	2	1	-	0	9	-	1	7

RLY	C	R	-	-	Type	L	W	A	C	C	N	Shell No.	7	3	0	8	2	-	2	0	1	7	-	1	8

11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s Faively transport tech.india ltd baddi(HP)	F17082B
2.	Pull box	M/s Faively transport tech.india ltd baddi(HP)	
3.	Distribution valve	M/s Faively transport tech.india ltd baddi(HP)	17065593B
4.	Foot Step	M/s Super spark pvt.ltd.faridabad	
5.	Decoupling arrangement	M/s Kohinoor Industries Faridabad	
6.	Floor board	M/S Oriental mumbai	
7.	PVC	M/s-Responsive ind. Delhi	
8.	UIC Vestibule (PPE)	M/s Cemcon ind.DLI	
9.	UIC Vestibule (NPPE)	M/s Cemcon ind.DLI	
10.	Gangway bridge mounting (PPE)	M/s Mahaveer metal workshop KXH	
11.	Gangway bridge mounting (NPPE)	M/s Mahaveer metal workshop KXH	
12.	Body Side Window	M/s Rail tech KXH	
13.	Emergency Window	M/s Birkan engg.pvt.ltd.GAZIABAD	
14.	Lavatory/hopper Window	M/s Tech fab kanghra H.P	
15.	Roof Ceiling	M/s KAE Eng.pvt.ltd.esipl U.K	
16.	Door way /gang way ceiling	M/s Galexy enterprises Jalandhar	
17.	Supply Air Duct	M/s Hanspal coach products KXH	
18.	Partition panel	M/s Honey comb associate banglore	
19.	Partition pillar	M/s Rail tech KXH	
20.	Side Wall panel	M/s-Hindustan fibre ltd vadodara	
21.	AC Trough	M/s MSL CDG	
22.	Body Side Doors	M/s Sukata CDG	
23.	Compartment Door (PPE)	M/s Hanspal coach products KXH	
24.	Compartment Door (NPPE)	M/s Hanspal coach products KXH	
25.	Vestibule Door(PPE)	M/s Kalsi LDH	
26.	Vestibule Door(NPPE)	M/s Kalsi LDH	
27.	Bio Tank	M/s-Oriental veneer products	
28.	Auxiliary Water Tank	M/s manoj Engg, mohali	
29.	Under Slung Water Tank (2X685L)	M/s Amit Engg, Baddi	
30.	Under Slung Water Tank (1x450 L)	M/s Amit Engg, mohali	
31.	Flexible Faucet	M/s-HF Glass vadodara	
32.	Lotah Filler Tap	M/s-Metco delhi	
33.	Lavatory Modoules	M/s-Hindustan fibre ltd vadodara	
34.	Lavatory Doors	M/s-Hindustan fibre ltd vadodara	
35.	Waste Bin Arrangement	M/s-Hindustan fibre ltd vadodara	
36.	Fire Extinguisher	M/s Classic agnee	NPP-7546,PP-7547
37.	Seat & Berth	M/s Oriental veneer products mumbai	
38.	Light Luggage Rack	M/s- Techno ind. ALD	
39.	Snack Table	M/s-International tractors ltd. Hoshiarpur	

SSE/QC/MCF/RBL

विद्युत अभियंता
गुणवत्ता विभाग
रेल डिब्बा कारख़ाना, रायबरेली (लालगंज)

	Modern Coach Factory Raebareli आधुनिक रेल डिब्बा कारख़ाना, रायबरेली	DOC NO.: MCF/RBL/QMF 8002 REV NO: 00 DATE: 16.05.2016

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2017-18/265

Coach No.	1	7	9	6	3	/	C	-	DATE OF DISPATCH	2	1	-	0	9	-	1	7

RLY	C	R	-	-	Type	L	W	A	C	C	N	Shell No.	7	3	0	8	2	-	2	0	1	7	-	1	8

11. MODIFICATION (IF ANY) : NIL

12. DEVIATION (IF ANY) : NIL

13. ITEM FITTED ON THE COACH ON TRIAL : NIL

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

15. WARRANTY:

S NO	COMPONENTS	WARRANTY
1	Brake Pad, wheels, flushing valves, push gravity cocks, moldings, window glasses, mirrors, curtain 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 MCF/RBL.
5. For any complain/ suggestion please Mail at qualityrcfrbl@gmail.com
6. Painting on supply & apply contract :- supply of material and application shall be warranted for a period of three years from date of Application for any manufacturing /Application as per clause -4,para- V of RDSO specification no .M&C/PCN/100/2013-Given below -

S.No	Time period	Gloss Retention (initial gloss >85 unit at 60°)	Colour Retention rating on 0-10 scale (initial rating of painted panels/coach or ISC/RAL shade card shall be taken as 10)	Adherence of paints (with each other and with substrate)Cross-cut tape adhesion test as per ASTM D:3359/97(or latest)
1	After 1 year	80% of initial gloss	7	5B
2	After 2 year	70% of initial gloss	6	5B
3	After 3 year	60% of initial gloss	5	4B

If any imperfection is noticed or any defect arises during the warranty –period due to improper material used or due to bad workmanship, the contractor shall be bounded to set right the defect/ imperfection on free of cost basis at the base depot of the coach.

वरि0अन0 अभियंता गुणवत्ता विभाग रे0डि0का0, रायबरेली (लालगंज) SSE/QC/MCF/RBL	जी.एस. पाण्डेय G.S. Pandey सहायक यांत्रिक अभियन्ता Assistant Mechanical Engineer आधुनिक रेल डिब्बा कारखाना, रायबरेली Modern Coach Factory, Raebareli AME/QC/MCF/RBL	Jogindar Singh Dy. Chief Quality Manager आधुनिक रेल डिब्बा कारखाना, रायबरेली Modern Coach Factory, Raebareli Dy.CQM/MCF/RBL

3T-649

Modern Coach Factory Raebareli आधुनिक रेल डिब्बा कारख़ाना, रायबरेली	DOC NO.: MCF/RBL/QEF/8001 REV NO: 00 DATE:18.01.2017

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**	**17963/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	**29.04** Cub mtr/min	OK
3.2	Return Air	**76.52** Cub mtr/min	OK
3.3	Exhaust Air	**7.93** Cub mtr/min	OK
3.4	Conditioned Air	**171.73** 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 :22.7 **^{0}C** NPP Side :20.4 **^{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

Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli

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
Modern Coach Factory Raebareli

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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):**1732-I** Sr no of RMPU (PP side) :**1775-B** Sr no of Microprocessor: **AE-1707105**	As per rdso/pe/spes/ac/0061/rev -1/2005	**02**
02.	Switch board cabinet Make : **ISG** Sr no :**17-06-0053**	RDSO/PE/SPEC/AC/0184-2015 REV-0	**01**
03.	Pump equipment with PLC controller & pump box Make :**KALSI** Sr no PA :**4625/10/15** Sr no.1 :**259808** Sr no.2 :**259809** Sr no.CPA :**4645/10/2015**	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 :**EYYANI**	EDTS331, TYPE-1 CORR.-1&2	**02**
05.	Vestibule Light Fitting Single Make :**DR.AUTO**	0091 Rev-1,type-N	**07**
06.	Ceiling light fitting DOUBLE w/o diffuser. Make :**INTEG**	LW 76011,Alt -c	**09**
07.	Ceiling light fitting with NL w/o diffuser w/o item 2&3 Make :**DEW**	LW 76013,Alt -c	**09**
08.	Emergency light system for EOG type coaches (AEL) Make :**VGS**	EDTS 151,Rev –c Am-1 & 2	**04**
09.	Lavatory light fitting assly Make :NIL	LW 76001,Alt nil	**04**
10.	WC gauge signal light Make :**DR. AUTO**	LW 76006,Alt-c	**02**
11.	Passenger alarm coach indication light Make :**DR. AUTO**	LW 76005,Alt-e	**02**
12.	Fluorescent lamp 18W	RDSO/PE/SPEC/D/TL 0011-2000,Rev I, Sec- I , 07/2001	**34**

Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
13.	Diffuser complete w/o item 1& 2.	LW 76012,Alt-a	**25**
14.	Razor socket for WC 110/240V. Make : **SSK**	EDML 047 ,Rev nil	**04**
15.	Terminal strip Make :**WAGO**	EDML 034,Rev-a	**01**
16.	Terminal connector Make :**WAGO**	EDML 037,Rev`a'	**04**
17.	Single switch 06A/250V/AC ONE WAY ,complete with steel plate & cover frame Make : **SSK**	EDML 0,64,Rev-B, Item 04.	**09**
18.	Single switch 06A/250V/AC ONE WAY complete with steel plate & cover frame Make :**SSK**	EDML 0,64,Rev-B, Item 05.	**09**
19.	Provision of switch socket combined 5PIN (06A, 250V AC) along with 1A glass fuse fitted powder coated steel plate & cover frame Make :**SSK**	EDML 0,64,Rev-B, Item -16.	**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 :**12/2015**	EDTS 129,Rev nil	**01 set**
22.	Battery box for LHB coaches. Make :**HI-TECH**	1 10113 0 76 700 005 w/o item 5,22 ,23 ,26 & 27.	**01**
23.	Battery fuse box +ve Make :**AECO**	As per LW 71001,Alt-F	**01**
24.	Battery fuse box –ve Make :**INDORAIL**	As per LW 71002,Alt-F	**01**

Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli

रेडिका / रायबरेली

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
25.	Regulated battery charger Make :**IC ELECT.** Sr no:**1703066**	As per RDSO/pe/spec/ac/0129, Rev.-1 (2009)	**01**
26.	Emergency battery charger Make :**WAVES** Sr no:**WEBCC172470**	EDTS 163,Rev `c' corg.-2&3	**01**
27.	Provision of 5KVA TFR Make :**AUTOMATIC Elect Ltd** SL.no :**12/16/T509081/48**	As Per EDTS-366,REV-NIL & CC-71510	**01**
28.	Provision of capacitor Bank Make :**STANDARD CAPACITORS** SL.no :**17A335**	As per EDML-130 Rev-1,Corr-1	**01**
29.	60KVA transformer Make :**PANTRONICS** Sr no :**160111710**	As per rdso/pe/spec/ac/0080/rev-0 (2007)/Am-1&2/Corr. 1,2&3	**01**
30.	ZS coupling 400A/750V/03Ph/50hz. Make :**MAA LAXMI INDUSTRIES**	As per spec No EDTS 105,Rev`e' Am-2	**01 set**
31.	Feeder junction boxes. Make :**NEC**	EDTS-328 REV-C	**01 set**
32.	Wheel set earthling equipment. Make :**CHANDA & CHANDA**	EDTS101,REV-C,AM-1	**02 sets**
33.	Wheel Slide Protection System (WSP) Make :**FAIVELEY** Sr no :**22/17/652**	M/s :**FAIVELEY**	**01 set**
34.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make :**ZUMAX**	As per EDTS -139, Rev- E ,Sec II.	**01**

SSE/EL/QC	**SEE(P)/MCF/RBL**

वरिष्ठ अनुभाग अभियन्ता
गुणवत्ता नियंत्रण
आरसीएफ/लालगंज/रायबरेली
S.S.E./Elect-QC/M.C.F./LLJ/RBL

वरिष्ठ विद्युत अभियन्ता
रेल कोच फैक्टरी, रायबरेली, लखनऊ
Sr. Electrical Engineer / RCF / RBL / Lucknow

रेल्वे / रायबरेली