

L31-990



Modern Coach Factory Raebareli

आधुनिक रेल डिब्बा कारखाना, रायबरेली

DOC NO.: MCF/RBL/QMF 8002

REV NO: 01

DATE: 17.04.2018

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2018-19/643

RLY	N	W	R	Coach No.	1	8	1	7	3	7	/	C	DATE OF DISPATCH	1	3	-	1	0	-	1	8
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DISPATCH TO	SSE (C&W)/ BKN	Type	L	W	A	C	C	N	Shell No.	8	3	1	9	0	-	2	0	1	8	-	1	9
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1. Railway Board's Order No. : 2018/M(C)/142/2 dated -14-09-2018

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/-10	1) 1097 (NPPE) 2) 1103 (PPE)

5. TRACEABILITY OF SHELL ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Underframe	PP END M/s-OMAX AUTO LTD.	31
		NPP END M/s-OMAX AUTO LTD.	45
	Complete	MCF/RBL	83190
2.	Lav.side wall	M/s-CONTRACTOR V4U	LAV.1 559 LAV.2 560
		M/s-CONTRACTOR V4U	LAV.3 561 LAV.4 562
3.	Side wall	LH SIDE M/s-CONTRACTOR V4U	192/01
		RH SIDE M/s-CONTRACTOR V4U	192/02
4.	End wall	PP END M/S -ECBT, CHANDIGARH	2018
		NPP END M/s- OMAX, GURUGAON	2018
5.	Roof	M/s -ECBT	18
6.	Centre Buffer Coupler	M/S- ESCORTS LTD. RAILWAY EQUIPMENT, FBD.	PP END 5368 NPP END 5396

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/cm ² . ➤ Max. pressure in BC ➤ All Brake are applied	6 – 10 sec. 3.0 ±0.15 kg/cm ² . OK	08 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 06 Sec.	Brake must apply	OK

7. PAINTING DETAILS:

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

Sd/-

SSE/QC/MCF/RBL

चरि०अनु० अभियंता

गुणवत्ता विभाग

1 डिब्बा कारखाना, रायबरेली (उ०प्र०)



MODERN COACH FACTORY, RAEBARELI

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RLY	N	W	R		Type	L	W	A	C	C	N	Shell No.	8	3	1	9	0	-	-	-	-	-	-	-	-
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8. DETAIL OF BOGIES :

ITEMS	NPP Side				PP Side			
Bogie No	181475				181476			
Bogie Type	LWACCN				LWACCN			
Frame no.	SCI-1917				VS/RBL-1044			
Bolster no.	SFPL-357				SFPL-349			
Axle No	17 Z- 4437 RWF		17 Z- 4733 RWF		18F -8877 RWF		17 Z-9645 RWF	
Wheel Dia	917.602	917.545	917.608	917.514	917.675	917.554	917.47	917.517
Wheel Disc No	TZ-07-18 31866-8RH5	TZ-07-18 34254-8QN3	TZ-07-18 32550-8RH3	TZ07-18 34258-8RG3	TZ06-18 30643-8QN0	TZ06-18 29440-8QN7	TZ06-18 28851-8QM4	TZ07-18 31855-8RH5
R.B. Nos.	05-18 38970	04-18 25774	05-18 39421	05-18 11524	05-18 39368	05-18 12691	05-18 12574	05-18 39706
CT R B Make	SKF		SKF		SKF		SKF	

9. SECONDARY SUSPENSION LOAD DEFLECTION VALUES

DESCRIPTION	Bogie NPP side				Bogie PP side			
	Secondary 1		Secondary 2		Secondary 1		Secondary 2	
	Outer	Inner	Outer	Inner	Outer	Inner	Outer	Inner
Make & Nos.	CMFSK08-18- F16-S08-16Y-231	CMFSK07-18- 9513-401-232	CMFSK08-18- F16-S08-16Y-235	CMFSK07-18- 9513-443-3	RSK07-18F16- S07-16Y-263	CMFSK07-18- 9513-443-214	RSK08-18F16-537- 16Y-259	CMFSK07-18-9513- 443-129
Compressed Ht. at Tested Load	513	466	513	466	515	468	515	465
Alignment deviation (mm)	7	10	4	10	10	11	10	12

10. TRACEABILITY OF BOGIE ITEMS :

S. NO	ITEM	MAKE/ SUPPLIER	SERIAL NO.	
			NPP SIDE	PP SIDE
1.	Yaw Damper	GEREP	1773,1791	1286,1780
2.	Primary outer Spring	RSK	08-18 03Y-(4223,2931,4422,3337)	08-18 -03Y-2758,07-18 03Y(3173,2650,3481)
3.	Primary Inner Spring	YR	12-17 (4.93-394,4.61-388,2.33-379,5.15-374)	12-17 (368,385,387,380,)
4.	Primary Damper	KNOOR	07-18(37254,27227,27266,27255)	07-18(27242,27613,27206,27241)
5.	Secondary Damper	KNORR	05-18(4810,4810)	05-18 (4812,4809)
6.	Lateral Damper	KNORR	06-18 3773	06-18 3770
7.	Brake Cylinder	ESCORT	44214,44166,44168,44212	44213,44169,44167,44215
8.	Brake Caliper	ESCORT	24394,24347,24348,24392	24393,24349,34346,34395
9.	Brake Disc	FAV	09-18(1793,1795,1641,1653)-D133561-300	09-18(1658,1659,1677,1722)- D133561-300
10.	Ball Joint Control Arm	AR		
11.	Lateral Bump Stop	J		
12.	Traction Centre make	SARITA		
13.	Traction lever make	JI		
14.	Ball joint traction lever	AR		
15.	Ball joint traction centre	AR		
16.	Secondary Rubber Pad	WINLANE		
17.	Rubber Spring	AR		
18.	Anti roll bar make	SARITA		
19.	Roll Link make	SARITA/PRAG		
20.	Fork make	EMSON		
21.	Control Arm Upper	RVE	130818-1,120818-2,200818-1,RVE	170818-2,130818-1,170818-2,130818-1
22.	Control Arm Lower	RVE	140818-2,140818-1,160818-1,030818-1	170818-1,140818-2,RVE,170818-2

Signature of SSE/Bogie/QC



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DISPATCH TO	SSE (C&W)/ BKN			Type	L	W	A	C	C	N	Shell No.	8	3	1	9	0	-	2	0	1	8	-	1	9

11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/S- ESCORTS LTD RAILWAY EQUIPMENT, FBD.	2018080039
2.	Pull box	M/S- FAIVELY TRANS. TECH.INDIA LTD. BADDI(HP)	
3.	Distribution valve	M/S- ESCORTS LTD RAILWAY EQUIPMENT, FBD.	1808A039
4.	Foot Step	M/S- SUPER SPARK PVT.LTD.FARIDABAD	
5.	Decoupling arrangement	M/S- KOHINOOR INDUSTRIES, FARIDABAD	
6.	Floor board	M/s- T.W.P.L. INDUS. MUMBAI	
7.	PVC	M/s- RESPONSIVE INDS. LTD. MUMBAI	
8.	UIC Vestibule (PPE)	M/S- ELASTOMER LINING WORKS, MUMBAI	
9.	UIC Vestibule (NPPE)	M/S- ELASTOMER LINING WORKS, MUMBAI	
10.	Gangway bridge mounting (PPE)	M/S- RAKESH IRON STORE, KXH	
11.	Gangway bridge mounting (NPPE)	M/S- RAKESH IRON STORE, KXH	
12.	Body Side Window	M/S- RAIL TECH, KXH	
13.	Emergency Window	M/S- RAIL TECH, KXH	
14.	Lavatory/hopper Window	M/S- AIKON IND.SALON H.P	
15.	Roof Ceiling	M/s-MSL (MOBILITY SOLUTION LTD.) MOHALI	
16.	Door way /gang way ceiling	M/S- AMIRCHAND ENGG.WORKS, JALANDHAR	
17.	Supply Air Duct	M/S- HANSPAL TRADERS, KXH	
18.	Partition panel	M/S- RAIL TECH, KXH	
19.	Partition pillar	M/S- JR INDS. JALANDHAR	
20.	Side Wall panel	M/S HINDUSTAN FIBRE LTD. VADODARA	
21.	AC Trough	M/s- MEENA FIBER GLASS INDUS. PUDUCHERY	
22.	Body Side Door 1,2,3	M/S- JVR INDUSTRIES ,LDH	
23.	Body Side Door 4	M/S- SUKATA TRACTOR PARTS PVT.LTD. CDG	
24.	Compartment Door (PPE)	M/S- HANSPAL COACH PRODUCTS, KXH	
25.	Compartment Door (NPPE)	M/S- HANSPAL COACH PRODUCTS, KXH	
26.	Vestibule Door(PPE)	M/S -KALSI AUTOMATIC DOOR SYSTEM LTD.LDH	
27.	Vestibule Door(NPPE)	M/S -KALSI AUTOMATIC DOOR SYSTEM LTD.LDH	
28.	Bio Tank LAV-2,4	M/s- FLASH FORGE (P) LTD. VIZAG	
29.	Bio Tank LAV-1,3	M/S- MOHAN RAIL COMPONENT	
30.	Auxiliary Water Tank	M/s- AMIT ENGG, MOHALI	
31.	Under Slung Water Tank (2X685L)	M/s- AMIT ENGG, BADDI	
32.	Under Slung Water Tank (1x450 L)	M/s- AMIT ENGG, BADDI	
33.	Flexible Faucet	M/s-ARHAM HI-TECH DEG. SOLUTION PVT.LTD. MUMBAI	
34.	Lotah Filler Tap	M/s-ARHAM HI-TECH DEG. SOLUTION PVT.LTD. MUMBAI	
35.	Bib cock	M/s- KPR INDUSTRIES LTD. MOHALI	
36.	Lavatory Modules	M/s-ARHAM HI-TECH DEG. SOLUTION PVT.LTD. MUMBAI	
37.	Lavatory Doors	M/s-ARHAM HI-TECH DEG. SOLUTION PVT.LTD. MUMBAI	
38.	Fire Extinguisher	M/s- SAFE TECH FIRE SERVICE LTD.	PP-51,NPP-185
39.	Seat & Berth	M/S- ORIENTAL VENEER PRODUCTS, MUMBAI	
40.	Light Luggage Rack	M/S- TECHNO IND. ALD	
41.	Snack Table	M/s-MACHINO PLASTIC LTD. GURUGOAN	

[Signature]
SSE/QC/MCF/RBL

गुणवत्ता विभाग

रेलवे, रायबरेली (लालगंज)

वरि०अनु० अभियंता
गुणवत्ता विभाग
रे०डि०का०, रायवरेली (ला०)



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
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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	181737/C
RAILWAY		NWR	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	19.64 Cub mtr/min		OK
3.2	Return Air	76.79 Cub mtr/min		OK
3.3	Exhaust Air	7.26 Cub mtr/min		OK
3.4	Conditioned Air	160.98 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 :20.3 °C NPP Side :21.3 °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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
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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 :	
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 : SIDWAL Sr no of RMPU (NPP side): 18A 1321 Sr no of RMPU (PP side) : 18A 1319 Sr no of Microprocessor: 18.05.1571	As per rdso/pe/spes/ac/0061/rev-1/2005	02
02.	Switch board cabinet Make : ISG Sr no : SBC-MCF-17-05-0046	RDSO/PE/SPEC/AC/0184-2015 REV-0	01
03.	Pump equipment with PLC controller & pump box Make : DR AUTO Sr no PA : 2018/09/085 Sr no.1 : 18070328 Sr no.2 : 18070213 Sr no.CPA : 2018/09/122	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 : ECOFIT	EDTS331, TYPE-1 CORR.-1&2	02
05.	Door way/Gangway Light Make : DR AUTO	RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-N	07
06.	Provision of Passenger area light(Cabin) Make: DR AUTO	As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-L	09
07.	Corridor Light with Night light Make: RT VISION	RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-M	09
08.	Emergency light system for EOG type coaches (AEL) Make: VGS AND CONCORD CONTROL SYSTEM.	EDTS 151,Rev -c Am-1 & 2	04
09.	Lavatory light fitting assly Make : ARHAM	LW 76001,Alt nil	04
10.	Toilet indication (WC) light, Make: AGASTYA	As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-H1	04
11.	Passenger alarm coach indication light Make : KAVERI	LW 76005,Alt-e	02

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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
12.	Razor socket for WC 110/240V. Make : SSK	EDML 047,Rev nil	04
13.	Terminal strip Make : WAGO	EDML 034,Rev-a	01
14.	Terminal connector Make : WAGO	EDML 037,Rev`a`	04
15.	Single switch 06A/250V/AC ONE WAY ,complete with steel plate & cover frame Make : SSK	EDML 0,64,Rev-B, Item 04.	09
16.	Single switch 06A/250V/AC ONE WAY complete with steel plate & cover frame Make : SSK	EDML 0,64,Rev-B, Item 05.	09
17.	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
18.	PA system for LHB coaches Make : AHUJA	EDTS 173,Rev- a Am- 1,2&3	01 set
19.	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 : 05/17	EDTS 129,Rev nil	01 set
20.	Battery box for LHB coaches. Make : ANKUR ENGG.	1 10113 0 76 700 005 w/o item 5,22 ,23 ,26 & 27.	01
21.	Battery fuse box +ve Make : AECO	As per LW 71001,Alt- F	01
22.	Battery fuse box -ve Make : SSK	As per LW 71002,Alt- F	01


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Sr no	Description	Drg/Spec no.	Quantity per Coach
23.	Emergency battery charger Make : WAVES Sr no: WEBCD-184087 Make : WAVES Sr no: WEBCD-184774	EDTS 163,Rev `c' corg.-2&3	02
24.	Provision of 5KVA TFR Make : VIMAL SL.no : VTC-3089-LHB-261	As Per EDTS-366,REV-NIL & CC-71510	01
25.	Provision of capacitor Bank Make : S.INTERNATIONAL SL.no : 314-02/18	As per EDML-130 Rev-1,Corr-1	01
26.	60KVA transformer Make : VIMAL SL.no : VTC-3089-LHB-6241	As per rdso/pe/spec/ac/0080/rev-0 (2007)/Am-1&2/Corr. 1,2&3	01
27.	Inter Vehicle (ZS)coupler Make: PRIME ELECT.	As per RDSO PE SPEC-0177-2013 REV-0	01 set
28.	Feeder junction boxes. Make : MAA LAXMI INDUSTRIES	EDTS-328 REV-C	01 set
29.	Wheel set earthing equipment. Make : MAA LAXMI INDUSTRIES	EDTS101,REV-C,AM-1	02 sets
30.	Wheel Slide Protection System (WSP) Make : ESCORT Sr no : 180055-59399-0027	M/s : ESCORT	01 set
31.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : NIL	As per EDTS -139, Rev- E ,Sec II.	01

SSE/EL/QC	SEE(P)/MCF/RBL/ DYCEE/P&P/MCF/RBL

वरिष्ठ अनुभाग अभियन्ता
गुणवत्ता नियंत्रण
आधुनिक रेल डिब्बा कारखाना / लालगंज / रायबरेली
S.S.E./Elect-QC/M.C.F./LJ/RBL

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