

		Modern Coach Factory Raebareli आधुनिक रेल डिब्बा कारखाना, रायबरेली			DOC NO.: MCF/RBL/QMF 8002 REV NO: 02 DATE: 28.05.21				
ROLLING STOCK CERTIFICATE(AC COACH) Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2022-2023 478/8779									
RLY	NFR	COACH NO	224389/C	DATE OF DISPATCH			27-Sep-22		
Type	LWCBAC	Shell No.	BC22010	DISPATCH TO	Sr.DME/C&W/GHY	FUR.NO.	LBAC-162		
1	Railway Board's Order No. : 2022/M (C)/142/2,Dt- 28.03.2022								
2	Tare Weight & Carrying Capacity of Coach :								
S.N	COACH TYPE	LWACCN	LWACCW	LWLRRM	LWCBAC	LFCWAC	LWSCZAC	LWFAC	LWFCZAC
I	Tare Weight	45.6	44.5	53.2	39	42.5	40.28		39
II	Seating	72	52	NIL	15	10+28	78	24	56
III	Sleeping	72	52	NIL	15	10+28	NIL	24	NIL
IV	Luggage	NIL	NIL	3.9	NIL	NIL	NIL	NIL	NIL
3	Special feature:								
I	Choke of 5/6 mm in DV side replace with 9 mm in both type (KBI & Faiv.)letter no. MC/LHB/Brake, DT. 27.09.18								
II	Venturi arrangement in lavatory								
4	Smart feature: NIL								
5	SHELL LEADING DIMENSIONS:								
S.N	DESCRIPTION						DIMENSION (MM)		
I	Maximum Length over body						23540		
II	Maximum Width over body						3240		
III	Maximum Height from Rail Level			LWACCN , LWACCW		LWLRRM,LWCBAC,LFCWAC,LWSCZAC,LWFAC,LWFCZAC			
				4250		4039			
IV	CBC height/Buffer Height from Rail level			1105 +0/-10			NPP/PP	1099/1105	
6	TRACEABILITY OF SHELL ITEMS:								
S.N	ITEM			MAKE/SUPPLIER		SERIAL NO			
I	Under frame	Front	PP END	M/S-KANSAL MOHALI		40			
		Part	NPP END	M/S-KANSAL MOHALI		40			
		Complete	M/S-KANSAL MOHALI		40				
II	Lav. side wall			M/S-SIPL PALWAL		LAV.1	-----	LAV.2	-----
				M/S-SIPL PALWAL		LAV.3	-----	LAV.4	-----
III	Side wall	LH SIDE	M/S-KANSAL KIT		42				
		RH SIDE	M/S-KANSAL KIT		42				
IV		End wall	PP END	M/S-EEPL		-----			
	NPP END		M/S-EEPL		-----				
V	Roof		M/S-KANSAL KIT		----				
VI	Centre Buffer Coupler		M/S-FRONTIER		NPP/PP	220P3/164P3			
VII	Buffer		N/A		NPP/PP	N/A			
7	AIR BRAKE TEST REPORT:								
S.N	ITEM		DESCRIPTION			SPEC. VALUE		OBSERVED	
I	Full brake application		Reduce pressure of BP from 5.0 to 3.4 kg/cm ² .			6 – 10 sec.		6.5 Sec	
			Max. pressure in BC			3.0 ±0.15 kg/cm ² .		3.0 kg/cm ²	
			All Brake are applied			OK		OK	
II	Insensitivity		Exhaust BP @ 0.3 kg/cm ² /min.			No brake application		OK	
III	Sensitivity		Exhaust BP @ 0.1 kg/cm ² /Sec, after 06 Sec.			Brake must apply		OK	
IV	Handbrake(Parking brake)for generator car		1.Apply hand brake			1.Hand Bk. Indicator should be red		OK	
			2.Release hand brake			2. Hand Bk. indicator should be green		OK	
8	FIRE TESTING:								
S.N	DESCRIPTION		SPEC. VALUE				OBSERVED		
I	Smoke detection		A-controller should display smoke in zone 1,2		B-strobe light & hooter should activate		OK		
II	Heat detection		A-controller should display smoke/heat in zone 1,2		B- strobe light & hooter should activate		OK		
9	PAINTING DETAILS:								
S.N	DESCRIPTION	TYPE	MAKE	APPLICATION BY MCF/		AVERAGE GLOSS VALUE		DATE OF	

		OF PAINT		CONTRACTOR (SUPPLY & APPLY)	SIDE WALL/END WALL	COMPLETION
I	Paint	P.U	M/S-DEB PA	M/S-DEB PAINTS	87/88	11-Apr-22
II	Insulation-	Satisfactory		ANTIGRAFFITE COATING-	NIL	WET ON WET-
10	COACH FURNISH DETAILS :					
S.N	ACTIVITIES	FIRM	TURNKEY/WORK CONTRACT/SUPPLY&APPLY			
I	Coach Furnishing	M/S-CMT MECHANISED SYST	TURNKEY			
II	Air Brake	M/S-FLUID TEQ	SUPPLY& APPLY			
III	Bio toilet & flushing	M/S-VEDANSH ENT.	SUPPLY& APPLY			
IV	Fire detection	M/S-SANROK ENT.	M/S-SUPPLY&APPLY			
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	MODERN COACH FACTORY, RAEBARELI आधुनिक रेल डिब्बा कारखाना, रायबरेली	DOC NO.: MCF/RBL/QMF 8002
		REV NO.: 02
		DATE: 28.05.2021

ROLLING STOCK CERTIFICATE (AC COACH)
Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2022-23/ -478/8779

RLY	N	F	R	Coach No.	2	2	4	3	8	9	/	C	-	DATE OF DISPATCH	2	7	0	9	2	0	2	2
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DISPATCH	Sr.DME/C&W/GHY	Type	L	W	C	B	A	C	Shell No.	2	2	0	1	0	-	FUR .NO	LBAC -162
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15. DETAIL OF BOGIES:-

ITEMS	NPP Side				PP Side			
Bogie No	220682				220681			
Bogie Type	FIAT				FIAT			
Frame no.	KANSAL ENGG. -722				V.S - 1071			
Bolster no.	MCF/RBL/LS-5 - 3791				SHIVALIK - 1476			
Axle No	L - 2321 DSP		L - 2362 DSP		L - 02725 DSP		L - 02619 DSP	
Wheel Dia	917.61	917.62	917.66	917.63	917.57	917.58	917.69	917.64
Wheel Disc No	TZ 11-19 79117-9WE7	TZ 11-19 80811-9VE2	TZ 11-19 85963-9WF1	TZ 08-19 71847-9SK1	TZ 11-19 79115-9WE1	TZ 03-19 30782-9MH7	TZ 07-18 32270-8QN8	TZ 07-18 32271-8QN8
R.B. Nos.	01-22 403955	11-21 432886	01-22 404301	11-21 433797	01-22 401540	01-22 500671	02-22 502171	01-22 500212
CT R B Make	TIMKEN		TIMKEN		TIMKEN		TIMKEN	

16. SECONDARY SUSPENSION LOAD DEFLECTION VALUES :-

DESCRIPTION	Bogie NPP side		Bogie PP side	
Make & Nos.	Secondary 1	Secondary 2	Secondary 1	Secondary 2
	AVADH RAIL	AVADH RAIL	AVADH RAIL	AVADH RAIL
	SR.NO.- 04-22 7524	SR.NO.- 04-22 7529	SR.NO.- 04-22 7510	SR.NO.- 04-22 7494

17. TRACEABILITY OF BOGIE ITEMS:-

S. NO	ITEM	MAKE/SUPPLIER	SERIAL NO.	
			NPP SIDE	PP SIDE
1.	Yaw Damper	IAI	AB-(60539,60753)	AB-(60511,60892)
2.	Primary outer Spring	CMSTL	12-18-F03-530-03A-(1000,4293,4340,5047)	12-18-F03-530-03A-(4517,351,467,4314)
3.	Primary Inner Spring	CMAFJ	11-20-7412-(615,548,612,555)	11-20-7412-(628,246,349,619)
4.	Primary Damper	IAI	05-21-AB-(24222,24021,23955,23999)	05-21-AB-(23012,23353,23852,24055)
5.	Secondary Damper	IAI	08-21-(344712,337144)	08-21-(337254,337255)
6.	Lateral Damper	IAI	08-21-AB-44187	08-21-AB-44233
7.	Brake Cylinder	ESCORT	70280,69769,67350,69419	69420,69349,39779,70311
8.	Brake Caliper	ESCORT	45435,45920,43234,44685	44682,43233,45930,45410
9.	Brake Disc	FAV	08-21-(5809,4764,5811,5810)-D133561-300-1	08-21-(5805,5806,4766,4765)-D133561-300-1
10.	Ball Joint Control Arm	BONY		
11.	Lateral Bump Stop	BONY		
12.	Traction Centre make	SF		
13.	Traction lever make	MK		
14.	Ball joint traction lever	GMT		
15.	Ball joint traction centre	GMT		
16.	Leveling Valve	KNORR	11-21-D-(8997,8838)	11-21-D-(9281,8868)
17.	Check Valve	KNORR	11-21-32552	11-21-32634
18.	Anti roll bar Make	SF		
19.	Roll Link make	AV+GMT		
20.	Fork make	SF		
21.	Control Arm Upper	RV	060322-2,040322-1,080322-3,040322-2	040322-1,050322-2,020322-2,060322-3
22.	Control Arm Lower	RV	030322-1,050322-3,060322-1,020322-3	020322-3,060322-1,040322-3,020322-1
23.	Phonic Wheel	ESCORT	ESCORT	ESCORT

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DEB PAINTS PVT. LIMITED

(An ISO 14001 : 2015 & ISO 9001 : 2015 Certified Co.)
Regd. Office & Factory : METHOPARA, P.O. : GANGANAGAR
KOLKATA - 700 132 (W.B.)
Phone : 9831855567, 7044478005, 7044478010, 7044478009
E-mail : debsanjoy65@gmail.com Web : www.debpaints.in
CIN No. : U24222WB1984PTC037257
GSTIN : 19AABCD1133F1Z5

WARRANTY CERTIFICATE

DATE: 26-04-22

TO,

DY.CME/FUR/PAINT
MODERN COACH FACTORY,
RAEBAREI LALGANJ-229120

SUBJECT- PERFORMANCE WARRANTY CERTIFICATES.

REF:-PO NO: 06211006100838 dated-18.06.2021

NAME OF WORK SUPPLY AND APPLY OF PU PAINT FOR LHB TYPE RAJDHANI COCHES

Dear sir

With reference to above, we do here by confirm the warranty for three years from the date of application of the delivered below mention coaches vide your above referred purchase order after application & due inspection at your end.

SL.NO	SHELL NO	FURNISHING NO	COACH NO	RAILWAY NO	DATE OF COMPLETION
106	LNCBAC BC-22010	LBAC-162			11-04-22

The warranty is applicable from date of dispatch against the below mention defects as per RDSO specification no M&C/PCN/100/2013.

Gloss level value of applied paint initial 85 unit (on the date of painting) and minimum 80% 70% 60% of initial gloss after one year, two years, three years respectively from the date of application.

Decolonization of paint film.

Cracking of paint film.

Peeling of paint film.

Blistering of the paint film.

Top coat gloss value- 88.43

For DEB PAINTS PVT LTD
Authorized signatory



	Modern Coach Factory Raebareli आधुनिक रेल डिब्बा कारखाना, रायबरेली	DOC NO.: MCF/RBL/QEF/8001
		REV NO: 00
		DATE:25.01.2019

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FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG HOG AC HOT BUFFET CAR

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG HOG AC HOT BUFFET CAR

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG HOG AC HOT BUFFET CAR							
TYPE COACH		LWCBAC		SHELL/COACH NO		224389/C	
RAILWAY		NFR	ELECT.FIT DATE	21-05-2022	FUR.NO	LWCBAC-162	
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			30.97 Cub mtr/min		OK	
3.2	Return Air			79.88 Cub mtr/min		OK	
3.3	Exhaust Air			5.63 Cub mtr/min		OK	
3.4	Conditioned Air			183.90 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 :21.0°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					---	

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FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG/HOG AC HOT BUFFET CAR

ELECTRICAL TEST CERTIFICATE FOR LHB EOG/HOG AC HOT BUFFET CAR

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 PANTRY EQUIPMENTS	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 TRANSFORMERS	OK
14.0	WORKING OF REGULATED BATTERY CHARGER	OK
15.0	WORKING OF EMERGENCY BATTERY CHARGER	OK
16.0	SAFETY :	----
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/HOG AC HOT BUFFET CAR

Sr no	Description	Drg/Spec no.	Quantity per Coach
01.	Roof mounted AC package unit for LHB AC coaches Make : AMIT ENGG. Sr no of RMPU (NPP side): 8581C22 Sr no of RMPU (PP side): 8575C22 Sr no of Microprocessor: AE 2201086	As per rdso/pe/spes/ac/0061/rev-1/2005	02
02.	Switch board cabinet Make : SSK Sr no : 202006006	As per Spec no.EDTS134,REV.D,AM-5	01
03.	Pump equipment with PLC controller & pump box Make : KIND Sr no PA : KIND/ASY/21120043 Sr no.1 : 21120085 Sr no.2 : 21120086 Sr no.CPA : 21040002-GEM	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 : NEORAIL POWER	EDTS331, TYPE-1 CORR.-1&2	01
05.	Provision & mounting of Passenger area light(Cabin) Make : WAVES	RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-L & Drg no LW76090	09
06.	Provision & mounting of Corridor Light with Night light Make : ENSAVE	RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-M & Drg no LW76091	09
07.	Provision & mounting of Doorway/ Gangway light Make : DHINGRA	RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-N & Drg no. LW 76099	06
08.	Provision & Mounting of PACIL Assly. Make : KAVERI	RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-I Drg no. LW 76098.	02
09.	Provision & Mounting of Toilet indication light, Make : DHINGRA	RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-H1 Drg no. LW 76097.	01
10.	Provision & Mounting of Lavatory Light Make : IMT	RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-D & Drg no. LW 76092.	02
11.	Provision of Razor socket for WC for 110/240V. Make: SSK	As per EDML047,ITEM-4	02

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ROLLING STOCK CERTIFICATE OF LHB/EOG/HOG AC HOT BUFFET CAR

Sr no	Description	Drg/Spec no.	Quantity per Coach
12.	Provision of Four Switch 6A/250V AC Complete With Steel Plate & Cover Frame. Make: SSK	As per Spec no.EDML043,CORR-1 -	04 nos
13.	Provision of Twin Switch 6A/250V,Complete With Steel Plate & Cover Frame. Make: SSK	As per Spec no.EDML044,REVNIL,CORR-1 -	03 nos
14.	Provision of Single Switch 16A,250V & 6/16A,250V.AC 6-Pin Shuttered Socket Compl. With Steel Plate & Cover Frame, Make: SSK	As per Spec no.EDML045,CORR-1 -	06 nos
15.	Provision of PA System for LHB EOG Rajdhani Rake . Make:- AHUJA Call box Make: AHUJA	As per Spec no.EDTS173,REV.A,AM-3	01 SET
16.	Jumper Cable with Connector for PA System. Make:- LEC	As per drg no.LW75206,Alt' c	01 SET
17.	70AH/110V,54 Cells,02V each ,maintenance free pure lead acid tin monoblock ,battery set with 09 modules 12V each. , factory pre charged. Make : AMARA RAJA Sr no : 1756 TO 1764 Lug date : 02/22	EDTS 129,Rev nil	01 set
18.	Battery box for LHB coaches. Make : METAFIL	1 10113 0 76 700 005 w/o item 5,22 ,23 ,26 & 27.	01
19.	Battery fuse box +ve Make : RADIANT ELECTRICAL	As per LW 71001,Alt-F	01
20.	Battery fuse box -ve Make : RADIANT ELECTRICAL	As per LW 71002,Alt-F	01
21.	Provision of Regulated Battery Charger Make: IC Sr. no.: 09/21/0100	As per spec no. RDSO/PE/SPEC/AC/0183-(REV.-0) . Or RDSO/PE/SPEC/AC/0183-2015(REV.-1)- For Under slung RBC cum EBC.	01
22.	Provision of capacitor Bank Make : KONTACT SL.no: KT-2816	As per EDML-130 Rev-1,Corr-1	01
23.	60KVA transformer Make : VIMAL Sr no : VTC-V-3089-LHB-2003 Make: VIMAL Sr no : VTC-V-3089-LHB-1947	As per rdso/pe/spec/ac/0080/rev-0 (2007)/Am-1&2/Corr. 1,2&3	02

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ROLLING STOCK CERTIFICATE OF LHB/EOG/HOG AC HOT BUFFET CAR

Sr no	Description	Drg/Spec no.	Quantity per Coach
24.	ZS coupling 400A/750V/03Ph/50hz. Make : PRIME ELECT.	As per spec No EDTS 105,Rev`e` Am-2	01 set
25.	Fitment of external supply sockets (125A/415V/IP67/5Pole with pilot contacts.) Make:- JAI BALAJI	As per drg no 1948036/UIV 4125-6.	02
26.	Feeder junction boxes. Make : SIDWAL	EDTS-328 REV-C	01 set
27.	Wheel set earthing equipment. Make : KAMLESH	EDTS101,REV-C,AM-1	02 sets
28.	Wheel Slide Protection System (WSP) Make : ESCORTS Sr no : 210500-63642-0128	As per M/s Sab Webco, M/s Knorr Bremse, M/s Escorts.	01 Set
29.	Provision of fitment of modular Integrated Pantry unit.	As per spec no EDTS 118,REV-E,AM-2	01 Set
30.	Hot Plate:		03
(a)	Make:- S.D. ENGINEERS		
(b)	Geysers Make: S.D. ENGINEERS		01
(c)	Hot Water Boilers, Make: S.D. ENGINEERS		02
(d)	Bottle Coolers, Make: S.D. ENGINEERS		01 set
(e)	Deep Freezers Make: S.D. ENGINEERS		01 set
(f)	Hot Case, Make: S.D. ENGINEERS		01 set
(g)	Chimneys, Make: S.D. ENGINEERS		03
h)	Oven Toaster Griller Make: BAJAJ		01
(i)	Refrigerator Make: SAMSUNG		01
(j)	Insect Killer Make: PROVIDED BY HINDUSTAN		02
(k)	Water Purifier(RO). Make: PROVIDED BY HINDUSTAN		01

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