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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

(FORM NO. QMF 4254 VER.1.00)

1.	SHELL NO	**8045**	BOGIE NO	**185171 / 185172**		DISPATCH DATE	**29-AUG-18**		
2.	RAILWAY	**CR**	TYPE OF COACH	**MEMUMC AS**		COACH NO	**188026**		
3.	BOOKED TO		**SSE/C&W/CSTM**						
4.	Tare Weight of Coach		**61**						
5.	Carrying Capacity		Seating	**65**	Sleeping	**NIL**	Luggage	**NIL**	

6.	6.1	Leading Dimensions:			
	i)	Maximum height above rail to top of roof ventilator		4100 ± 5 (for NAC) 4250 +0/-5 (for WGACCN)	
	ii)	Maximum length over Body		21337 ± 10	
	iii)	Maximum length over Buffer		22297 ± 15	
	iv)	Maximum width over Body		3245 ± 5	
	v)	Maximum width over Flasher ligth		3402 +0/-5	
	vi)	CBC/Buffer/Shaku Coupler Height	Specified: 1104 +0/-10 mm (1035 +0/-5 mm for shaku coupler)	**1035**	**1104**
	vii)	CBC/Buffer/Shaku Coupler (Make)		**ESCORTS**	**ESCORTS**
	viii)	Draw Gear Make		**---**	**---**

7.	Air Brake Testing:			
	Description			Specified
	7.1	Emergency Application	Time for 0 to 36 Kg/cm2 of BC	Less than 05 Sec
			Brake release time to reach 0.4 Kg/cm2	Less than 20 Sec
	7.2	Insensitivity	BP dipped @ 0.30 Kg/cm2 in 60 Sec	No brake application
	7.3	Sensitivity	BP dipped @ 0.60 Kg/cm2 in 6 Sec	Brakes "ON"
	7.4	Passenger alarm by pulling chain		BP Blasts out, Brakes "ON"
	7.5	Piston stroke for BMBC type coach only		19 +10/-0 mm

8.	Painting Details:				
			Type of Paint	Make	Average Gloss Value
	8.1	Paint	**PU PAINT**	**VIBGYOR**	**85 / 85**
	8.2	Application of PCN-123	**SATISFACTORY**		
	8.3	Insulation	**SATISFACTORY**		

9.	Traceability of Furnishing Items:		
	1	**FLOOR BOARD**	**SRI RAM**
	2	**PVC**	**RESPONSIVE**
	3	**EP BRAK / BRAKE EQUIPMENT**	**ESCORTS**
	4	**UIC VESTIBULES**	**CEMCON**
	5	**SEAT & BEARTH**	**CPF**
10.	10.1	**Modification/ Trial (If any): NIL**	
	10.2	**Deviations (If any): NIL**	

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

QMF 9828, VER:1.00

11.	Bogie Details:	Shell No.	Railway	Type	Coach No.	Dispatch Date			
		8045	**CR**	**MEMUMC AS**	**188026**	**29-AUG-18**			
11.1	BOGIE GENERAL ARRANGEMENT DRAWING NO.: **CC00002 Alt "a"**								
11.2	**Wheel & Axle Details:**								
	i.	Bogie No.	**185171**				**185172**		
	ii.	Frame No.	**KE-40**				**KE-37**		
	iii	Bolster No.	**-**				**-**		
	iv.	Axle No.	**F-1753**		**F-1556**		**D-6804**		**F-1687**	
	v.	Wheel Diameter	**954.00**	**954.00**	**954.00**	**954.00**	**954.00**	**954.00**	**954.00**	**954.00**
	vi.	Wheel Disc No.	**17016-16566-SAIL**	**17252-16623-SAIL**	**77315-16758-SAIL**	**17359-16758-SAIL**	**28480-00295-SAIL**	**24990-01280-SAIL**	**28733-02510-SAIL**	**28062-01533-SAIL**
	vii	RB Nos	**Z0431**	**Z0621**	**Z0989**	**Z0997**	**Z0592**	**Z0424**	**Y286**	**Y271**
	viii	RB Make	**FAG**		**FAG**		**FAG**		**FAG**	
	ix	RB Type	**Direct Mounted Spherical Roller Bearing**							
11.3	Items traceability:									
	i.	Break Cylinder Make & No.	**PEW-E305,E231,K477,E234**				**AJTECH-256,0254,477,259**			
	ii.	Secondary shock Absorber Make & NO.	**GABRIEL-0221,0234**				**GABRIEL-390,348**			
	iii.	Lateral Shock Absorber Make & NO.	**GABRIEL-804,944**				**GABRIEL-1620,942**			
	iv.	Air Spring Make & NO.	**SI-1566,1543**				**SI-1571,1562**			
11.4	i.	Modification/Trail(if any):	**NIL**							
	ii.	Deviations (if any):	**NIL**							

MEMUMC AS - 8045

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP Shell No : 8045 COACH_NO : 188026

RAILWAY CR COUPLING TYPE : NONCBC DATE OF FITMENT: 29-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	NO GROUP DEFINED			
1	42983015-1, CABLE HARNESS LAYING & COMMISSIONING OF DMC COACH.	EPTS-200	M.V ELECTRO SYSTEM PVT. LTD.	NIL
Group Name	ABOVE ROOF			
2	31760041-1, PANTOGRAPH FOR MEMU COACHES	MEMU/DESC-I,REV.-A (QUALITY PLAN QEQ 0331,VER.-01	CONTRANSYS PVT. LTD.	B-4884
3	31760041-2, SERVO MOTOR FOR PANTOGRAPH	MEMU/DESC-I,REV.-A (QUALITY PLAN QEQ 0331,VER.-01	CONTRANSYS PVT. LTD.	B-4884
4	31907210-0, ROOF FEET INSULATOR FOR PANTOGRAPH	COS-033-P-052/R5	INSULATOR & ELECTRICAL CO.	IEC
5	45970038-18, EARTHING SWITCH	EMP/BHEL/MEMU2	BHEL	170204A0.....
6	45970804-0, METAL OXIDE GAPLESS LIGHTNING ARRESTOR	RDSO EI/2/05 AND QUALITY PLAN NO :QEQ320 VER-01	CGL (ZINC OXIDE)	212855
7	47986104-1, VACCUM CIRCUIT BREAKER 25KV	CLW/ES/C-47 AND QUALITY PLAN NO : QEQ 0309 VER-01.	AUTOMETERS ALLIANCE LTD.	VCB-1803513
Group Name	H.T.CABIN			
8	42982789-3, SMOKE SENSOR	EDTS087	AGNI INSTRUMENTS PVT LTD	GST MARKED
9	42982855-1, RESISTER BOX	BHEL CAT NO. 05750030020 REV-OO	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
10	42982855-2, RESISTER BOX	BHEL CAT NO. 05750030020 REV-OO	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
11	42982866-1, CONTACTOR BOX WITH GP RELAY	BHEL CAT NO. 15730030044 REV-02	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
12	42982866-2, CONTACTOR BOX WITH GP RELAY	BHEL CAT NO. 15730030044 REV-02	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
13	45211619-0, AUXILIARY COMPRESSOR WITH MOTOR	ICF/ELEC:050 DRG. NO :ICF/SK-9-O-565 ALT'F' AND QUALITY PLAN NO : Q	COIMBATORE COMPRESSOR ENGG.	CEC-R18E3465
14	45970038-19, CURRENT TRANSFORMER -1	EMP/BHEL/MEMU2	BHEL	2472990
15	45970038-20, CURRENT TRANSFORMER -2	EMP/BHEL/MEMU2	BHEL	2472991
16	45970038-21, CONSERVATOR TANK	EMP/BHEL/MEMU2	BHEL	NIL
17	45970038-22, HT BUSHING	EMP/BHEL/MEMU2	BHEL	N.N.K.ENTERPERISES

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188026

RAILWAY CR DATE OF FITMENT: 29-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	H.T.CABIN			
18	45970038-23, CHOKE	EMP/BHEL/MEMU2	BHEL	SR-2046206, DC-2046300, TC-2046394
19	45970622-1, ADDITIONAL SMOOTHING REACTOR	EDTS-126	RAMYAA ELECTROGEAR	1711-26-469
20	45970622-2, ADDITIONAL SMOOTHING REACTOR	EDTS-126	RAMYAA ELECTROGEAR	1711-26-489
Group Name	MLT PANEL			
21	42982662-5, CENTER ZERO METER	EDTS-069 REV-B.	ESS ESS KAY ENGG. CO./INDOTECH	INDOTECH MAKE
22	42982728-1, MLT PANEL	EDTS-053 REV-B CORG-1.	ABROL ENGG.CO.	11-05/2018
23	42982728-2, EARTH FAULT RELAY II	EDTS-053 REV-B CORG-1.	ABROL ENGG.CO.	MEGAWIN-17110003980
24	42982728-3, DIODE PANEL	EDTS-053 REV-B CORG-1.	ABROL ENGG.CO.	AECO
25	42982728-4, GOVERNOR CUT OUT SWITCH	EDTS-053 REV-B CORG-1.	ABROL ENGG.CO.	AECO
26	42982728-6, BATTERY ISOLATING SWITCH	EDTS-053 REV-B CORG-1.	ABROL ENGG.CO.	L & T DN2-250D
27	45970038-2, LIGHT CONTACTOR	EMP/BHEL/MEMU2	BHEL	NIL
28	45970038-3, FAN CONTACTOR	EMP/BHEL/MEMU2	BHEL	NIL
29	45970038-4, AUX.COMP CONTACTOR	EMP/BHEL/MEMU2	BHEL	1800248008
30	45970038-5, MAIN COMP. CONTACTOR	EMP/BHEL/MEMU2	BHEL	1700249063
31	45970038-6, PRIMARY OVER LOAD & EARTH FAULT RELAY	EMP/BHEL/MEMU2	BHEL	1700255122
32	45970038-7, MT RELAY PANEL	EMP/BHEL/MEMU2	BHEL	1700258114
33	45970038-8, RESISTANCE PANEL	EMP/BHEL/MEMU2	BHEL	170299B009
34	45970038-25, KNIFE SWITCH	EMP/BHEL/MEMU2	BHEL	180299A012
35	47986104-2, RC DAMPING RESISTANCE 1	CLW/ES/C-47 AND QUALITY PLAN NO : QEQ 0309 VER-01.	AUTOMETERS ALLIANCE LTD.	1803547
36	47986104-3, RC DAMPING RESISTANCE 2	CLW/ES/C-47 AND QUALITY PLAN NO : QEQ 0309 VER-01.	AUTOMETERS ALLIANCE LTD.	1803578
Group Name	DRIVING SECTION			
37	31726161-1, TWIN BEAM HEAD LIGHT WITH 24V HELOGEN LAMPS.	RDSO SPEC.NO.ELRS/SPEC/PR/0024,WITH DC-DC CONVERTER TO SPEC.NO.	MATSUSHI POWER TECH.	MPT
38	42982662-1, INTEGRATED DRIVER DESK PANEL	EDTS-069 REV-B.	ESS ESS KAY ENGG. CO.	68-07-18

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188026

RAILWAY CR DATE OF FITMENT: 29-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	DRIVING SECTION			
39	*42982662-2, TRACTION AMMETER*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO./INDOTECH*	*INDOTECH MAKE*
40	*42982662-3, TRACTION VOLMETER*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO./INDOTECH*	*INDOTECH MAKE*
41	*42982662-4, BATTERY VOLTMETER*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO.*	*INDOTECH MAKE*
42	*42982662-6, DRIVER CONTROL SWITCH BOX (B.L.BOX)*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO./INDOTECH*	*MAA LUXMI-3447*
43	*42982662-7, DRIVER INDICATION PANEL*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO./INDOTECH*	*SSK 68.07.2018*
44	*45970038-1, PANTO OPERATING VALVE*	*EMP/BHEL/MEMU2*	*BHEL*	*ROTEX*
45	*45970038-9, ISOALTING SWITCH PANEL*	*EMP/BHEL/MEMU2*	*BHEL*	*AECO*
46	*45970038-11, MASTER CONTROLLER*	*EMP/BHEL/MEMU2*	*BHEL*	*1700269114*
47	*45970038-13, MOTOR SWITCH GROUP 1*	*EMP/BHEL/MEMU2*	*BHEL*	*18221AT008*
48	*45982752-0, RLY CARRIAGE FAN ,450MM SWEEP ,FIXED TYPE 140V, AC WITH FAN GUARD TO DRG NO ICF/SK3-7-6-026 ALT B.*	*RDSO/PE/SPEC/TL/0050(2010,REV-1)*	*KAPSON INDUS.*	*KIND*
49	*47980050-5, P.T CONTROL*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*MEDHA SERVO DRIVES*	*TPTU-3632*
Group Name	DRIVING END			
50	*31726161-2, 24V DC TO DC CONVERTER*	*RDSO SPEC.NO.ELRS/SPEC/PR/0024,WITH DC-DC CONVERTER TO SPEC.NO.*	*MITSUSHI POWER TECH.*	*MPT-15498*
51	*31727232-0, LED BASED MARKER/TAIL LIGHT COMPLETE FOR EMU FOR LEFTAND RIGHT (TYPE-E).*	*ELRS/SPEC/PR/0022 (REV-1,OCT-2004)*	*MITSHUSHI POWER TECH.*	*MPT-750*
52	*31750564-0, TERMINAL BOARDS END WALL FOR MEMU/DMC COACH*	*EM75005*	*NEC SW. GEARS & CONTROLS*	*2018-04-0390, 0261*
53	*45982697-0, SET OF INTERVEHICAL COUPLER*	*EDML003 REV-A WITH RCF ANNEXURE*	*S-INTERNATIONALS*	*S-INT.*
54	*47980050-1, PULSE GENERATOR*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*MEDHA SERVO DRIVES*	*18533*
Group Name	NON-DRIVING END			

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188026

RAILWAY CR DATE OF FITMENT: 29-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	NON-DRIVING END			
55	42027380-0, LIMIT SWITCH 10A,500V,1NO+1NC	LSRO M/S BOHMAN OR 3SE-2-100-0 OF M/S SIEMENS	GC CONTROL GEAR	NIL
56	45982697-0, SET OF INTERVEHICAL COUPLER	EDML003 REV-A WITH RCF ANNEXURE	S-INTERNATIONALS	S-INT.
Group Name	UNDER FRAME			
57	31710025-0, BATTERY BOX ARRANGMENT FOR MEMU MOTOR COACH WITH MODIFIED TROLLEY AND PACKING ARRANGEMENT TO DRG NO	DRG.NO. EMU/M-7-1-001 ALT.`j' DULY PAINTED AS PER NOTE 6	K.R.ENGG.YAMUNANAGAR	54 (07/2018)
58	33614477-0, 110V, 120AH, VRLA, SMF BATTERY SET WITH 19 MONO BLOCKS (6V MONO BLOCK EACH) PRECHARGED WITH INTER CE	RDSO/PE/Spec./AC/0009/2008 (Rev.1 WITH AM-1,RCF ANNX.-A)	AMARA RAJA BATTERIES LTD.	06/2018
59	35981647-0, TRANSFORMER OIL COOLER WITH BLOWER MOTOR	ICF/ELEC:014 AND QUALITY PLAN NO : QEQ 0313 VER-01.	ALLIED RADIATORS CORP.	NIL
60	43290007-0, AIR DRYER FOR MEMU COACHES	RDSO SPEC. NO. MP.0.01.00.09 (REV-0.00) MARCH 2001 WITH OVER ALL DIMENSION NOT TO EXCEED 750MM(L)X315MM(W)X660MM(H)	TRIDENT PNEUMATIC PVT.LTD.	LD2/01/3095/2018
61	45970038-10, HT EARTHING LINKS	EMP/BHEL/MEMU2	BHEL	1700263341,332,338
62	45970038-12, TRANSITION RESISTANCE	EMP/BHEL/MEMU2	BHEL	1700261118
63	45970038-14, MOTOR SWITCH GROUP 2	EMP/BHEL/MEMU2	BHEL	18221BT008
64	45970038-15, PFDR CUM FUSE BOX	EMP/BHEL/MEMU2	BHEL	18297AT007
65	45970038-16, TAP CHANGER	EMP/BHEL/MEMU2	BHEL	180207A014
66	45970038-17, MAIN TRANSFORMER	EMP/BHEL/MEMU2	BHEL	2045120
67	45970038-24, BUCHHOLZ RELAY	EMP/BHEL/MEMU2	BHEL	P&B 325M2
68	45970610-0, MAIN COMPRESSOR WITH 110V DC MOTOR	RDSO SPEC. NO 70-B-M-41 AND QUALITY PLAN NO : QEQ 0312 VER-01.	ELGI EQUIPMENTS PVT. LTD.	ERCSQ 50066

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188026

RAILWAY CR DATE OF FITMENT: 29-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	UNDER FRAME			
69	*45970634-0, MAIN SILICON RECTIFIER*	*ICF/ELECT/21 REV.-A CORRECTION SLIP NO:2AND QUALITY PLAN NO : QEQ 0311*	*RUTTONSHAH INTERNATIONAL RECTIFIER LTD.*	*1804/1866/1822*
70	*45980822-0, OIL PUMP WITH MOTER AND STARTING CAPACITOR*	*EDTS 088 and Quality Plan No.QEQ:0333 VER:01*	*FLOW TECH. PUMPS & MOTORS*	*18070830*
Group Name	COMPARTMENT			
71	*42980963-3, SPEAKERS*	*EDTS 292*	*PUNJAB RADIOS*	*AHUJA MAKE*
72	*45982752-0, RLY CARRIAGE FAN ,450MM SWEEP ,FIXED TYPE 140V, AC WITH FAN GUARD TO DRG NO ICF/SK3-7-6-026 ALT B.*	*RDSO/PE/SPEC/TL/0050(2010,REV-1)*	*KAPSON INDUS.*	*KIND*
Group Name	MLT SECTION			
73	*31726239-0, BATTERY CHARGER WITH FILTER CHOKE & CONDENSER*	*ICF/ELECT/067 REV-A, CS-1.*	*MB & COMPANY*	*078/2018*
74	*42980963-1, PUBLIC ADDRESSING SYSTEM*	*EDTS 292*	*PUNJAB RADIOS*	*AHUJA-4387136*
75	*42980963-2, SPEAKERS*	*EDTS 292*	*PUNJAB RADIOS*	*AHUJA*
76	*42982728-5, FLASHER UNIT*	*EDTS-053 REV-B CORG-1.*	*ABROL ENGG.CO.*	*MPT-18733*
77	*42982789-1, SMOKE DETECTOR UNIT*	*EDTS087*	*AGNI INSTRUMENTS PVT LTD*	*AG 500510*
78	*42982789-2, SMOKE SENSOR*	*EDTS087*	*AGNI INSTRUMENTS PVT LTD*	*GST MARKED*
79	*47980050-3, RECORDING CUM INDICATION UNIT*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*MEDHA SERVO DRIVES*	*2923*
80	*47980050-4, S.C.B CONTROL*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*MEDHA SERVO DRIVES*	*SCU-4265*
Group Name	BOGIE DRIVING END			
81	*45981930-0, MOTOR CONNECTION BOX FOR EMU'S*	*DRG.NO.EM71007 & QUALITY PLAN QEQ 0322 VERSION-01*	*INDIAN TELEPHONE & ELECTRIC CO*	*ITECO*
82	*47030003-1, TRACTION MOTOR/BOGIE 01*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4919122/185172*
83	*47030003-2, TRACTION MOTOR/BOGIE 01*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4919143/185172*
84	*47980050-2, PULSE GENERATOR JUNCTION BOX*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*MEDHA SERVO DRIVES*	*MEDHA*
Group Name	BOGIE NON-DRIVING END			

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP **COUPLING TYPE : NONCBC** **COACH_NO : 188026**

RAILWAY CR **DATE OF FITMENT: 29-AUG-18**

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	BOGIE NON-DRIVING END			
85	*45981930-0, MOTOR CONNECTION BOX FOR EMU'S*	*DRG.NO.EM71007 & QUALITY PLAN QEQ 0322 VERSION-01*	*INDIAN TELEPHONE & ELECTRIC CO*	*ITECO*
86	*47030003-3, TRACTION MOTOR/BOGIE 02*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4919121/185171*
87	*47030003-4, TRACTION MOTOR/BOGIE 02*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4919144/185171*

SSE/EL/QC	**AME/WM QC/DY CQM I**

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

(FORM NO. QMF 4254 VER.1.00)

1.	SHELL NO	**8046**	BOGIE NO	**185173 / 185174**		DISPATCH DATE	**30-AUG-18**		
2.	RAILWAY	**CR**	TYPE OF COACH	**MEMUMC AS**		COACH NO	**188027**		
3.	BOOKED TO		**SSE/C&W/CSTM**						
4.	Tare Weight of Coach		**61**						
5.	Carrying Capacity		Seating	**65**	Sleeping	**NIL**	Luggage	**NIL**	

6.	6.1	Leading Dimensions:			
	i)	Maximum height above rail to top of roof ventilator		4100 ± 5 (for NAC) 4250 +0/-5 (for WGACCN)	
	ii)	Maximum length over Body		21337 ± 10	
	iii)	Maximum length over Buffer		22297 ± 15	
	iv)	Maximum width over Body		3245 ± 5	
	v)	Maximum width over Flasher ligth		3402 +0/-5	
	vi)	CBC/Buffer/Shaku Coupler Height	Specified: 1104 +0/-10 mm (1035 +0/-5 mm for shaku coupler)	**1034**	**1104**
	vii)	CBC/Buffer/Shaku Coupler (Make)		**ESCORTS**	**ESCORTS**
	viii)	Draw Gear Make		**---**	**---**

7.	Air Brake Testing:			
	Description			Specified
	7.1	Emergency Application	Time for 0 to 36 Kg/cm2 of BC	Less than 05 Sec
			Brake release time to reach 0.4 Kg/cm2	Less than 20 Sec
	7.2	Insensitivity	BP dipped @ 0.30 Kg/cm2 in 60 Sec	No brake application
	7.3	Sensitivity	BP dipped @ 0.60 Kg/cm2 in 6 Sec	Brakes "ON"
	7.4	Passenger alarm by pulling chain		BP Blasts out, Brakes "ON"
	7.5	Piston stroke for BMBC type coach only		19 +10/-0 mm

8.	Painting Details:				
			Type of Paint	Make	Average Gloss Value
	8.1	Paint	**PU PAINT**	**VIBGYOR**	**85 / 86**
	8.2	Application of PCN-123	**SATISFACTORY**		
	8.3	Insulation	**SATISFACTORY**		

9.	Traceability of Furnishing Items:		
	1	**FLOOR BOARD**	**SRI RAM**
	2	**PVC**	**RESPONSIVE**
	3	**EP BRAK / BRAKE EQUIPMENT**	**ESCORTS**
	4	**UIC VESTIBULES**	**CEMCON**
	5	**SEAT & BEARTH**	**AAR KAY FOAM**
10.	10.1	**Modification/ Trial (If any): NIL**	
	10.2	**Deviations (If any): NIL**	

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

QMF 9828, VER:1.00

11.	Bogie Details:	Shell No.	Railway	Type	Coach No.	Dispatch Date			
		8046	**CR**	**MEMUMC AS**	**188027**	**30-AUG-18**			
11.1	BOGIE GENERAL ARRANGEMENT DRAWING NO.: **CC00002 Alt "a"**								
11.2	**Wheel & Axle Details:**								
	i.	Bogie No.	**185173**				**185174**		
	ii.	Frame No.	**ECBT-222**				**ECBT-218**		
	iii	Bolster No.	**-**				**-**		
	iv.	Axle No.	**C-3484**		**C-3469**		**F-1739**		**L-9973**
	v.	Wheel Diameter	**954.00**	**954.00**	**954.00**	**954.00**	**954.00**	**954.00**	**954.00**	**954.00**
	vi.	Wheel Disc No.	**20773-00349-SAIL**	**20758-00244-SAIL**	**21049-00449-SAIL**	**28949-01791-SAIL**	**28780-02738-SAIL**	**20833-00249-SAIL**	**00106-21266-SAIL**	**15802-12744-SAIL**
	vii	RB Nos	**Z0825**	**Z0810**	**Z0823**	**Z0754**	**Z0421**	**Z0642**	**Z0831**	**Z0817**
	viii	RB Make	**FAG**		**FAG**		**FAG**		**FAG**	
	ix	RB Type	**Direct Mounted Spherical Roller Bearing**							
11.3	Items traceability:									
	i.	Break Cylinder Make & No.	**PEW-K391,K376,K437,E411**				**PEW-K339,K701,K485,K496**			
	ii.	Secondary shock Absorber Make & NO.	**GABRIEL-349,389**				**GABRIEL-361,356**			
	iii.	Lateral Shock Absorber Make & NO.	**GABRIEL-709,620**				**IAI-198996,199030**			
	iv.	Air Spring Make & NO.	**SI-1556,1539**				**SI-1723,1720**			
11.4	i.	Modification/Trail(if any):	**NIL**							
	ii.	Deviations (if any):	**NIL**							

MEMUMC AS - 8046

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP Shell No : 8046 COACH_NO : 188027

RAILWAY CR COUPLING TYPE : NONCBC DATE OF FITMENT: 30-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	NO GROUP DEFINED			
88	42983015-1, CABLE HARNESS LAYING & COMMISSIONING OF DMC COACH.	EPTS-200	M.V ELECTRO SYSTEM PVT. LTD.	NIL
Group Name	ABOVE ROOF			
89	31760041-1, PANTOGRAPH FOR MEMU COACHES	MEMU/DESC-I,REV.-A (QUALITY PLAN QEQ 0331,VER.-01	CONTRANSYS PVT. LTD.	B-4882
90	31760041-2, SERVO MOTOR FOR PANTOGRAPH	MEMU/DESC-I,REV.-A (QUALITY PLAN QEQ 0331,VER.-01	CONTRANSYS PVT. LTD.	B-4882
91	31907210-0, ROOF FEET INSULATOR FOR PANTOGRAPH	COS-033-P-052/R5	INSULATOR & ELECTRICAL CO.	IEC
92	45970038-18, EARTHING SWITCH	EMP/BHEL/MEMU2	BHEL	180204A008
93	45970804-0, METAL OXIDE GAPLESS LIGHTNING ARRESTOR	RDSO EI/2/05 AND QUALITY PLAN NO :QEQ320 VER-01	CGL (ZINC OXIDE)	212853
94	47986104-1, VACCUM CIRCUIT BREAKER 25KV	CLW/ES/C-47 AND QUALITY PLAN NO : QEQ 0309 VER-01.	AUTOMETERS ALLIANCE LTD.	VCB-1803515
Group Name	H.T.CABIN			
95	42982789-3, SMOKE SENSOR	EDTS087	AGNI INSTRUMENTS PVT LTD	GST MARKED
96	42982855-1, RESISTER BOX	BHEL CAT NO. 05750030020 REV-OO	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
97	42982855-2, RESISTER BOX	BHEL CAT NO. 05750030020 REV-OO	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
98	42982866-1, CONTACTOR BOX WITH GP RELAY	BHEL CAT NO. 15730030044 REV-02	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
99	42982866-2, CONTACTOR BOX WITH GP RELAY	BHEL CAT NO. 15730030044 REV-02	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
**	45211619-0, AUXILIARY COMPRESSOR WITH MOTOR	ICF/ELEC:050 DRG. NO :ICF/SK-9-O-565 ALT'F' AND QUALITY PLAN NO : Q	COIMBATORE COMPRESSOR ENGG.	CEC-R18E3446
**	45970038-19, CURRENT TRANSFORMER -1	EMP/BHEL/MEMU2	BHEL	2472960
**	45970038-20, CURRENT TRANSFORMER -2	EMP/BHEL/MEMU2	BHEL	2472961
**	45970038-21, CONSERVATOR TANK	EMP/BHEL/MEMU2	BHEL	NIL
**	45970038-22, HT BUSHING	EMP/BHEL/MEMU2	BHEL	N.N.K.ENTERPERISES

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188027

RAILWAY CR DATE OF FITMENT: 30-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	H.T.CABIN			
**	*45970038-23, CHOKE*	*EMP/BHEL/MEMU2*	*BHEL*	*SR-2046182, DC-2046268, TC-2046354*
**	*45970622-1, ADDITIONAL SMOOTHING REACTOR*	*EDTS-126*	*RAMYAA ELECTROGEAR*	*1711-26-507*
**	*45970622-2, ADDITIONAL SMOOTHING REACTOR*	*EDTS-126*	*RAMYAA ELECTROGEAR*	*1711-26-501*
Group Name	MLT PANEL			
**	*42982662-5, CENTER ZERO METER*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO./INDOTECH*	*INDOTECH MAKE*
**	*42982728-1, MLT PANEL*	*EDTS-053 REV-B CORG-1.*	*ABROL ENGG.CO.*	*07-05/2018*
**	*42982728-2, EARTH FAULT RELAY II*	*EDTS-053 REV-B CORG-1.*	*ABROL ENGG.CO.*	*MEGAWIN-17110003978*
**	*42982728-3, DIODE PANEL*	*EDTS-053 REV-B CORG-1.*	*ABROL ENGG.CO.*	*AECO*
**	*42982728-4, GOVERNOR CUT OUT SWITCH*	*EDTS-053 REV-B CORG-1.*	*ABROL ENGG.CO.*	*AECO*
**	*42982728-6, BATTERY ISOLATING SWITCH*	*EDTS-053 REV-B CORG-1.*	*ABROL ENGG.CO.*	*L & T DN2-250D*
**	*45970038-2, LIGHT CONTACTOR*	*EMP/BHEL/MEMU2*	*BHEL*	*NIL*
**	*45970038-3, FAN CONTACTOR*	*EMP/BHEL/MEMU2*	*BHEL*	*NIL*
**	*45970038-4, AUX.COMP CONTACTOR*	*EMP/BHEL/MEMU2*	*BHEL*	*1800248007*
**	*45970038-5, MAIN COMP. CONTACTOR*	*EMP/BHEL/MEMU2*	*BHEL*	*1800249008*
**	*45970038-6, PRIMARY OVER LOAD & EARTH FAULT RELAY*	*EMP/BHEL/MEMU2*	*BHEL*	*1700255094*
**	*45970038-7, MT RELAY PANEL*	*EMP/BHEL/MEMU2*	*BHEL*	*1800258007*
**	*45970038-8, RESISTANCE PANEL*	*EMP/BHEL/MEMU2*	*BHEL*	*180299B007*
**	*45970038-25, KNIFE SWITCH*	*EMP/BHEL/MEMU2*	*BHEL*	*180299A007*
**	*47986104-2, RC DAMPING RESISTANCE 1*	*CLW/ES/C-47 AND QUALITY PLAN NO : QEQ 0309 VER-01.*	*AUTOMETERS ALLIANCE LTD.*	*1803566*
**	*47986104-3, RC DAMPING RESISTANCE 2*	*CLW/ES/C-47 AND QUALITY PLAN NO : QEQ 0309 VER-01.*	*AUTOMETERS ALLIANCE LTD.*	*1803581*
Group Name	DRIVING SECTION			
**	*31726161-1, TWIN BEAM HEAD LIGHT WITH 24V HELOGEN LAMPS.*	*RDSO SPEC.NO.ELRS/SPEC/PR/0024,WITH DC-DC CONVERTER TO SPEC.NO.*	*MATSUSHI POWER TECH.*	*MPT*
**	*42982662-1, INTEGRATED DRIVER DESK PANEL*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO.*	*72-07-18*

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188027

RAILWAY CR DATE OF FITMENT: 30-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	DRIVING SECTION			
**	*42982662-2, TRACTION AMMETER*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO./INDOTECH*	*INDOTECH MAKE*
**	*42982662-3, TRACTION VOLMETER*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO./INDOTECH*	*INDOTECH MAKE*
**	*42982662-4, BATTERY VOLTMETER*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO.*	*INDOTECH MAKE*
**	*42982662-6, DRIVER CONTROL SWITCH BOX (B.L.BOX)*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO./INDOTECH*	*MAA LUXMI 06/2018*
**	*42982662-7, DRIVER INDICATION PANEL*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO./INDOTECH*	*SSK 72.07.2018*
**	*45970038-1, PANTO OPERATING VALVE*	*EMP/BHEL/MEMU2*	*BHEL*	*ROTEX*
**	*45970038-9, ISOALTING SWITCH PANEL*	*EMP/BHEL/MEMU2*	*BHEL*	*AECO*
**	*45970038-11, MASTER CONTROLLER*	*EMP/BHEL/MEMU2*	*BHEL*	*1700269094*
**	*45970038-13, MOTOR SWITCH GROUP 1*	*EMP/BHEL/MEMU2*	*BHEL*	*18221AT002*
**	*45982752-0, RLY CARRIAGE FAN ,450MM SWEEP ,FIXED TYPE 140V, AC WITH FAN GUARD TO DRG NO ICF/SK3-7-6-026 ALT B.*	*RDSO/PE/SPEC/TL/0050(2010,REV-1)*	*KAPSON INDUS.*	*KIND*
**	*47980050-5, P.T CONTROL*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*MEDHA SERVO DRIVES*	*TPTU-3626*
Group Name	DRIVING END			
**	*31726161-2, 24V DC TO DC CONVERTER*	*RDSO SPEC.NO.ELRS/SPEC/PR/0024,WITH DC-DC CONVERTER TO SPEC.NO.*	*MITSUSHI POWER TECH.*	*MPT-15492*
**	*31727232-0, LED BASED MARKER/TAIL LIGHT COMPLETE FOR EMU FOR LEFTAND RIGHT (TYPE-E).*	*ELRS/SPEC/PR/0022 (REV-1,OCT-2004)*	*MITSHUSHI POWER TECH.*	*MPT-747*
**	*31750564-0, TERMINAL BOARDS END WALL FOR MEMU/DMC COACH*	*EM75005*	*NEC SW. GEARS & CONTROLS*	*2018-04-0388, 0248*
**	*45982697-0, SET OF INTERVEHICAL COUPLER*	*EDML003 REV-A WITH RCF ANNEXURE*	*S-INTERNATIONALS*	*S-INT.*
**	*47980050-1, PULSE GENERATOR*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*MEDHA SERVO DRIVES*	*18519*
Group Name	NON-DRIVING END			

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188027

RAILWAY CR DATE OF FITMENT: 30-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	NON-DRIVING END			
**	*42027380-0, LIMIT SWITCH 10A,500V,1NO+1NC*	*LSRO M/S BOHMAN OR 3SE-2-100-0 OF M/S SIEMENS*	*GC CONTROL GEAR*	*NIL*
**	*45982697-0, SET OF INTERVEHICAL COUPLER*	*EDML003 REV-A WITH RCF ANNEXURE*	*S-INTERNATIONALS*	*S-INT.*
Group Name	UNDER FRAME			
**	*31710025-0, BATTERY BOX ARRANGMENT FOR MEMU MOTOR COACH WITH MODIFIED TROLLEY AND PACKING ARRANGEMENT TO DRG NO*	*DRG.NO. EMU/M-7-1-001 ALT.`j' DULY PAINTED AS PER NOTE 6*	*K.R.ENGG.YAMUNANAGAR*	*66 (08/2018)*
**	*33614477-0, 110V, 120AH, VRLA, SMF BATTERY SET WITH 19 MONO BLOCKS (6V MONO BLOCK EACH) PRECHARGED WITH INTER CE*	*RDSO/PE/Spec./AC/0009/2008 (Rev.1 WITH AM-1,RCF ANNX.-A)*	*AMARA RAJA BATTERIES LTD.*	*06/2018*
**	*35981647-0, TRANSFORMER OIL COOLER WITH BLOWER MOTOR*	*ICF/ELEC:014 AND QUALITY PLAN NO : QEQ 0313 VER-01.*	*NIPPON KUHLERS*	*2018-07-31*
**	*43290007-0, AIR DRYER FOR MEMU COACHES*	*RDSO SPEC. NO. MP.0.01.00.09 (REV-0.00) MARCH 2001 WITH OVER ALL DIMENSION NOT TO EXCEED 750MM(L)X315MM(W)X660MM(H)*	*TRIDENT PNEUMATIC PVT.LTD.*	*LD2/01/2957/2018*
**	*45970038-10, HT EARTHING LINKS*	*EMP/BHEL/MEMU2*	*BHEL*	*1800263022,023,024*
**	*45970038-12, TRANSITION RESISTANCE*	*EMP/BHEL/MEMU2*	*BHEL*	*1700261110*
**	*45970038-14, MOTOR SWITCH GROUP 2*	*EMP/BHEL/MEMU2*	*BHEL*	*18221BT001*
**	*45970038-15, PFDR CUM FUSE BOX*	*EMP/BHEL/MEMU2*	*BHEL*	*18297AT005*
**	*45970038-16, TAP CHANGER*	*EMP/BHEL/MEMU2*	*BHEL*	*180207A015*
**	*45970038-17, MAIN TRANSFORMER*	*EMP/BHEL/MEMU2*	*BHEL*	*2046110*
**	*45970038-24, BUCHHOLZ RELAY*	*EMP/BHEL/MEMU2*	*BHEL*	*P&B 354L2*
**	*45970610-0, MAIN COMPRESSOR WITH 110V DC MOTOR*	*RDSO SPEC. NO 70-B-M-41 AND QUALITY PLAN NO : QEQ 0312 VER-01.*	*ELGI EQUIPMENTS PVT. LTD.*	*ERCSQ 50076*

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188027
RAILWAY CR DATE OF FITMENT: 30-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	UNDER FRAME			
**	*45970634-0, MAIN SILICON RECTIFIER*	*ICF/ELECT/21 REV.-A CORRECTION SLIP NO:2AND QUALITY PLAN NO : QEQ 0311*	*RUTTONSHAH INTERNATIONAL RECTIFIER LTD.*	*1804/1866/1819*
**	*45980822-0, OIL PUMP WITH MOTER AND STARTING CAPACITOR*	*EDTS 088 and Quality Plan No.QEQ:0333 VER:01*	*FLOW TECH. PUMPS & MOTORS*	*18070821*
Group Name	COMPARTMENT			
**	*42980963-3, SPEAKERS*	*EDTS 292*	*PUNJAB RADIOS*	*AHUJA MAKE*
**	*45982752-0, RLY CARRIAGE FAN ,450MM SWEEP ,FIXED TYPE 140V, AC WITH FAN GUARD TO DRG NO ICF/SK3-7-6-026 ALT B.*	*RDSO/PE/SPEC/TL/0050(2010,REV-1)*	*KAPSON INDUS.*	*KIND*
Group Name	MLT SECTION			
**	*31726239-0, BATTERY CHARGER WITH FILTER CHOKE & CONDENSER*	*ICF/ELECT/067 REV-A, CS-1.*	*MB & COMPANY*	*2018-05-022*
**	*42980963-1, PUBLIC ADDRESSING SYSTEM*	*EDTS 292*	*PUNJAB RADIOS*	*AHUJA-4387123*
**	*42980963-2, SPEAKERS*	*EDTS 292*	*PUNJAB RADIOS*	*AHUJA*
**	*42982728-5, FLASHER UNIT*	*EDTS-053 REV-B CORG-1.*	*ABROL ENGG.CO.*	*MPT-18737*
**	*42982789-1, SMOKE DETECTOR UNIT*	*EDTS087*	*AGNI INSTRUMENTS PVT LTD*	*AG 500529*
**	*42982789-2, SMOKE SENSOR*	*EDTS087*	*AGNI INSTRUMENTS PVT LTD*	*GST MARKED*
**	*47980050-3, RECORDING CUM INDICATION UNIT*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*MEDHA SERVO DRIVES*	*2922*
**	*47980050-4, S.C.B CONTROL*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*MEDHA SERVO DRIVES*	*SCU-4270*
Group Name	BOGIE DRIVING END			
**	*45981930-0, MOTOR CONNECTION BOX FOR EMU'S*	*DRG.NO.EM71007 & QUALITY PLAN QEQ 0322 VERSION-01*	*INDIAN TELEPHONE & ELECTRIC CO*	*ITECO*
**	*47030003-1, TRACTION MOTOR/BOGIE 01*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4919134/185178*
**	*47030003-2, TRACTION MOTOR/BOGIE 01*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4919078/185178*
**	*47980050-2, PULSE GENERATOR JUNCTION BOX*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*MEDHA SERVO DRIVES*	*MEDHA*
Group Name	BOGIE NON-DRIVING END			

RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP **COUPLING TYPE : NONCBC** **COACH_NO : 188027**

RAILWAY CR **DATE OF FITMENT: 30-AUG-18**

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	**BOGIE NON-DRIVING END**			
**	*45981930-0, MOTOR CONNECTION BOX FOR EMU'S*	*DRG.NO.EM71007 & QUALITY PLAN QEQ 0322 VERSION-01*	*INDIAN TELEPHONE & ELECTRIC CO*	*ITECO*
**	*47030003-3, TRACTION MOTOR/BOGIE 02*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4919197/185174*
**	*47030003-4, TRACTION MOTOR/BOGIE 02*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4919138/185174*

SSE/EL/QC	**AME/WM QC/DY CQM I**

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

(FORM NO. QMF 4254 VER.1.00)

1.	SHELL NO	**8047**	BOGIE NO	**185179 / 185180**		DISPATCH DATE	**31-AUG-18**		
2.	RAILWAY	**CR**	TYPE OF COACH	**MEMUMC AS**		COACH NO	**188028**		
3.	BOOKED TO		**SSE/C&W/CSTM**						
4.	Tare Weight of Coach		**61**						
5.	Carrying Capacity		Seating	**65**	Sleeping	**NIL**	Luggage	**NIL**	

6.	6.1	Leading Dimensions:			
	i)	Maximum height above rail to top of roof ventilator		4100 ± 5 (for NAC) 4250 +0/-5 (for WGACCN)	
	ii)	Maximum length over Body		21337 ± 10	
	iii)	Maximum length over Buffer		22297 ± 15	
	iv)	Maximum width over Body		3245 ± 5	
	v)	Maximum width over Flasher ligth		3402 +0/-5	
	vi)	CBC/Buffer/Shaku Coupler Height	Specified: 1104 +0/-10 mm (1035 +0/-5 mm for shaku coupler)	**1035**	**1104**
	vii)	CBC/Buffer/Shaku Coupler (Make)		**ESCORTS**	**ESCORTS**
	viii)	Draw Gear Make		**---**	**---**

7.	Air Brake Testing:			
	Description			Specified
	7.1	Emergency Application	Time for 0 to 36 Kg/cm2 of BC	Less than 05 Sec
			Brake release time to reach 0.4 Kg/cm2	Less than 20 Sec
	7.2	Insensitivity	BP dipped @ 0.30 Kg/cm2 in 60 Sec	No brake application
	7.3	Sensitivity	BP dipped @ 0.60 Kg/cm2 in 6 Sec	Brakes "ON"
	7.4	Passenger alarm by pulling chain		BP Blasts out, Brakes "ON"
	7.5	Piston stroke for BMBC type coach only		19 +10/-0 mm

8.	Painting Details:				
			Type of Paint	Make	Average Gloss Value
	8.1	Paint	**PU PAINT**	**VIBGYOR**	**85 / 86**
	8.2	Application of PCN-123	**SATISFACTORY**		
	8.3	Insulation	**SATISFACTORY**		

9.	Traceability of Furnishing Items:		
	1	**FLOOR BOARD**	**SRI RAM**
	2	**PVC**	**RESPONSIVE**
	3	**EP BRAK / BRAKE EQUIPMENT**	**ESCORTS**
	4	**UIC VESTIBULES**	**CEMCON**
	5	**SEAT & BEARTH**	**CPF**
10.	10.1	**Modification/ Trial (If any): NIL**	
	10.2	**Deviations (If any): NIL**	

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

QMF 9828, VER:1.00

11.	Bogie Details:	Shell No.	Railway	Type	Coach No.	Dispatch Date
		8047	**CR**	**MEMUMC AS**	**188028**	**31-AUG-18**

11.1	BOGIE GENERAL ARRANGEMENT DRAWING NO.: **CC00002 Alt "a"**									
11.2	**Wheel & Axle Details:**									
	i.	Bogie No.	**185179**				**185180**			
	ii.	Frame No.	**ECBT-213**				**KE-32**			
	iii	Bolster No.	**BI-5179**				**BI-5180**			
	iv.	Axle No.	**F-1550**		**F-1813**		**F-1756**		**F-1707**	
	v.	Wheel Diameter	**954.00**	**954.00**	**953.00**	**953.00**	**953.00**	**953.00**	**954.00**	**954.00**
	vi.	Wheel Disc No.	**29953-01791-SAIL**	**15075-15802-SAIL**	**33247-03511-SAIL**	**28786-02730-SAIL**	**20808-00244-SAIL**	**20987-00349-SAIL**	**21165-10733-SAIL**	**20985-00349-SAIL**
	vii	RB Nos	**Z0404**	**Z0420**	**Z0397**	**Z0645**	**Z0468**	**Z0634**	**Z0836**	**Z0829**
	viii	RB Make	**FAG**		**FAG**		**FAG**		**FAG**	
	ix	RB Type	**Direct Mounted Spherical Roller Bearing**							
11.3	Items traceability:									
	i.	Break Cylinder Make & No.	**AJTECH-0243,0241,0240,0212**				**AJTECH-0237,0242,0187,0267**			
	ii.	Secondary shock Absorber Make & NO.	**IAI-198001,197991**				**IAI-198337,198340**			
	iii.	Lateral Shock Absorber Make & NO.	**IAI-198816,199002**				**IAI-198292,198917**			
	iv.	Air Spring Make & NO.	**SI-1614,1621**				**SI-1623,1694**			
11.4	i.	Modification/Trail(if any):	**NIL**							
	ii.	Deviations (if any):	**NIL**							

MEMUMC AS - 8047

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP Shell No : 8047 COACH_NO : 188028

RAILWAY CR COUPLING TYPE : NONCBC DATE OF FITMENT: 31-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	NO GROUP DEFINED			
**	42983015-1, CABLE HARNESS LAYING & COMMISSIONING OF DMC COACH.	EPTS-200	M.V ELECTRO SYSTEM PVT. LTD.	NIL
Group Name	ABOVE ROOF			
**	31760041-1, PANTOGRAPH FOR MEMU COACHES	MEMU/DESC-I,REV.-A (QUALITY PLAN QEQ 0331,VER.-01	CONTRANSYS PVT. LTD.	B-4886
**	31760041-2, SERVO MOTOR FOR PANTOGRAPH	MEMU/DESC-I,REV.-A (QUALITY PLAN QEQ 0331,VER.-01	CONTRANSYS PVT. LTD.	B-4886
**	31907210-0, ROOF FEET INSULATOR FOR PANTOGRAPH	COS-033-P-052/R5	INSULATOR & ELECTRICAL CO.	IEC
**	45970038-18, EARTHING SWITCH	EMP/BHEL/MEMU2	BHEL	170204A091
**	45970804-0, METAL OXIDE GAPLESS LIGHTNING ARRESTOR	RDSO EI/2/05 AND QUALITY PLAN NO :QEQ320 VER-01	CGL (ZINC OXIDE)	212854
**	47986104-1, VACCUM CIRCUIT BREAKER 25KV	CLW/ES/C-47 AND QUALITY PLAN NO : QEQ 0309 VER-01.	AUTOMETERS ALLIANCE LTD.	VCB-1805097
Group Name	H.T.CABIN			
**	42982789-3, SMOKE SENSOR	EDTS087	AGNI INSTRUMENTS PVT LTD	GST MARKED
**	42982855-1, RESISTER BOX	BHEL CAT NO. 05750030020 REV-OO	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
**	42982855-2, RESISTER BOX	BHEL CAT NO. 05750030020 REV-OO	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
**	42982866-1, CONTACTOR BOX WITH GP RELAY	BHEL CAT NO. 15730030044 REV-02	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
**	42982866-2, CONTACTOR BOX WITH GP RELAY	BHEL CAT NO. 15730030044 REV-02	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
**	45211619-0, AUXILIARY COMPRESSOR WITH MOTOR	ICF/ELEC:050 DRG. NO :ICF/SK-9-O-565 ALT'F' AND QUALITY PLAN NO : Q	COIMBATORE COMPRESSOR ENGG.	CEC-R18E3435
**	45970038-19, CURRENT TRANSFORMER -1	EMP/BHEL/MEMU2	BHEL	2473027
**	45970038-20, CURRENT TRANSFORMER -2	EMP/BHEL/MEMU2	BHEL	2473029
**	45970038-21, CONSERVATOR TANK	EMP/BHEL/MEMU2	BHEL	NIL
**	45970038-22, HT BUSHING	EMP/BHEL/MEMU2	BHEL	N.N.K.ENTERPERISES

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188028

RAILWAY CR DATE OF FITMENT: 31-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	H.T.CABIN			
**	*45970038-23, CHOKE*	*EMP/BHEL/MEMU2*	*BHEL*	*SR-2046207, DC-2046293, TC-2046379*
**	*45970622-1, ADDITIONAL SMOOTHING REACTOR*	*EDTS-126*	*RAMYAA ELECTROGEAR*	*1711-26-495*
**	*45970622-2, ADDITIONAL SMOOTHING REACTOR*	*EDTS-126*	*RAMYAA ELECTROGEAR*	*1711-26-490*
Group Name	MLT PANEL			
**	*42982662-5, CENTER ZERO METER*	*EDTS-069 REV-B.*	*ABROL ENGG. CO.*	*INDOTECH MAKE*
**	*42982728-1, MLT PANEL*	*EDTS-053 REV-B CORG-1.*	*NEC SWITCHGEARS & CONTROLS*	*2017-12-5138*
**	*42982728-2, EARTH FAULT RELAY II*	*EDTS-053 REV-B CORG-1.*	*NEC SWITCHGEARS & CONTROLS*	*MEGAWIN-17110003442*
**	*42982728-3, DIODE PANEL*	*EDTS-053 REV-B CORG-1.*	*NEC SWITCHGEARS & CONTROLS*	*NEC*
**	*42982728-4, GOVERNOR CUT OUT SWITCH*	*EDTS-053 REV-B CORG-1.*	*NEC SWITCHGEARS & CONTROLS*	*NEC*
**	*42982728-6, BATTERY ISOLATING SWITCH*	*EDTS-053 REV-B CORG-1.*	*NEC SWITCHGEARS & CONTROLS*	*L & T DN2-250D*
**	*45970038-2, LIGHT CONTACTOR*	*EMP/BHEL/MEMU2*	*BHEL*	*NIL*
**	*45970038-3, FAN CONTACTOR*	*EMP/BHEL/MEMU2*	*BHEL*	*NIL*
**	*45970038-4, AUX.COMP CONTACTOR*	*EMP/BHEL/MEMU2*	*BHEL*	*1700248092*
**	*45970038-5, MAIN COMP. CONTACTOR*	*EMP/BHEL/MEMU2*	*BHEL*	*1700249094*
**	*45970038-6, PRIMARY OVER LOAD & EARTH FAULT RELAY*	*EMP/BHEL/MEMU2*	*BHEL*	*1800255004*
**	*45970038-7, MT RELAY PANEL*	*EMP/BHEL/MEMU2*	*BHEL*	*1700258093*
**	*45970038-8, RESISTANCE PANEL*	*EMP/BHEL/MEMU2*	*BHEL*	*180299B004*
**	*45970038-25, KNIFE SWITCH*	*EMP/BHEL/MEMU2*	*BHEL*	*170299A092*
**	*47986104-2, RC DAMPING RESISTANCE 1*	*CLW/ES/C-47 AND QUALITY PLAN NO : QEQ 0309 VER-01.*	*AUTOMETERS ALLIANCE LTD.*	*1803549*
**	*47986104-3, RC DAMPING RESISTANCE 2*	*CLW/ES/C-47 AND QUALITY PLAN NO : QEQ 0309 VER-01.*	*AUTOMETERS ALLIANCE LTD.*	*1803557*
Group Name	DRIVING SECTION			
**	*31726161-1, TWIN BEAM HEAD LIGHT WITH 24V HELOGEN LAMPS.*	*RDSO SPEC.NO.ELRS/SPEC/PR/0024,WITH DC-DC CONVERTER TO SPEC.NO.*	*MATSUSHI POWER TECH.*	*MPT*
**	*42982662-1, INTEGRATED DRIVER DESK PANEL*	*EDTS-069 REV-B.*	*ABROL ENGG. CO.*	*07-06/2018*

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188028

RAILWAY CR DATE OF FITMENT: 31-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	DRIVING SECTION			
**	*42982662-2, TRACTION AMMETER*	*EDTS-069 REV-B.*	*ABROL ENGG. CO.*	*AE MAKE*
**	*42982662-3, TRACTION VOLMETER*	*EDTS-069 REV-B.*	*ABROL ENGG. CO.*	*AE MAKE*
**	*42982662-4, BATTERY VOLTMETER*	*EDTS-069 REV-B.*	*ABROL ENGG. CO.*	*AE MAKE*
**	*42982662-6, DRIVER CONTROL SWITCH BOX (B.L.BOX)*	*EDTS-069 REV-B.*	*ABROL ENGG. CO.*	*MAA LUXMI-3385*
**	*42982662-7, DRIVER INDICATION PANEL*	*EDTS-069 REV-B.*	*ABROL ENGG. CO.*	*AECO 07-06/2018*
**	*45970038-1, PANTO OPERATING VALVE*	*EMP/BHEL/MEMU2*	*BHEL*	*ROTEX*
**	*45970038-9, ISOALTING SWITCH PANEL*	*EMP/BHEL/MEMU2*	*BHEL*	*NEC*
**	*45970038-11, MASTER CONTROLLER*	*EMP/BHEL/MEMU2*	*BHEL*	*1800269001*
**	*45970038-13, MOTOR SWITCH GROUP 1*	*EMP/BHEL/MEMU2*	*BHEL*	*18221AT003*
**	*45982752-0, RLY CARRIAGE FAN ,450MM SWEEP ,FIXED TYPE 140V, AC WITH FAN GUARD TO DRG NO ICF/SK3-7-6-026 ALT B.*	*RDSO/PE/SPEC/TL/0050(2010,REV-1)*	*LIGHT ENGINEERING CORPORATION*	*CONCORDE*
**	*47980050-5, P.T CONTROL*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*AUTOMETERS ALLAINCE LTD.*	*TPTU-1806031*
Group Name	DRIVING END			
**	*31726161-2, 24V DC TO DC CONVERTER*	*RDSO SPEC.NO.ELRS/SPEC/PR/0024,WITH DC-DC CONVERTER TO SPEC.NO.*	*MITSUSHI POWER TECH.*	*MPT-15471*
**	*31727232-0, LED BASED MARKER/TAIL LIGHT COMPLETE FOR EMU FOR LEFTAND RIGHT (TYPE-E).*	*ELRS/SPEC/PR/0022 (REV-1,OCT-2004)*	*MITSHUSHI POWER TECH.*	*MPT-758*
**	*31750564-0, TERMINAL BOARDS END WALL FOR MEMU/DMC COACH*	*EM75005*	*NEC SW. GEARS & CONTROLS*	*2017-11-4634, 4537*
**	*45982697-0, SET OF INTERVEHICAL COUPLER*	*EDML003 REV-A WITH RCF ANNEXURE*	*S-INTERNATIONALS*	*S-INT.*
**	*47980050-1, PULSE GENERATOR*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*AUTOMETERS ALLAINCE LTD.*	*PGD-1802241*
Group Name	NON-DRIVING END			

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188028

RAILWAY CR DATE OF FITMENT: 31-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	NON-DRIVING END			
**	*42027380-0, LIMIT SWITCH 10A,500V,1NO+1NC*	*LSRO M/S BOHMAN OR 3SE-2-100-0 OF M/S SIEMENS*	*GC CONTROL GEAR*	*NIL*
**	*45982697-0, SET OF INTERVEHICAL COUPLER*	*EDML003 REV-A WITH RCF ANNEXURE*	*S-INTERNATIONALS*	*S-INT.*
Group Name	UNDER FRAME			
**	*31710025-0, BATTERY BOX ARRANGMENT FOR MEMU MOTOR COACH WITH MODIFIED TROLLEY AND PACKING ARRANGEMENT TO DRG NO*	*DRG.NO. EMU/M-7-1-001 ALT.`j' DULY PAINTED AS PER NOTE 6*	*K.R.ENGG.YAMUNANAGAR*	*65 (08/2018)*
**	*33614477-0, 110V, 120AH, VRLA, SMF BATTERY SET WITH 19 MONO BLOCKS (6V MONO BLOCK EACH) PRECHARGED WITH INTER CE*	*RDSO/PE/Spec./AC/0009/2008 (Rev.1 WITH AM-1,RCF ANNX.-A)*	*AMARA RAJA BATTERIES LTD.*	*06/2018*
**	*35981647-0, TRANSFORMER OIL COOLER WITH BLOWER MOTOR*	*ICF/ELEC:014 AND QUALITY PLAN NO : QEQ 0313 VER-01.*	*NIPPON KUHLERS*	*2018-07-30*
**	*43290007-0, AIR DRYER FOR MEMU COACHES*	*RDSO SPEC. NO. MP.0.01.00.09 (REV-0.00) MARCH 2001 WITH OVER ALL DIMENSION NOT TO EXCEED 750MM(L)X315MM(W)X660MM(H)*	*TRIDENT PNEUMATIC PVT.LTD.*	*LD2/01/3077/2018*
**	*45970038-10, HT EARTHING LINKS*	*EMP/BHEL/MEMU2*	*BHEL*	*1700263271,272,273*
**	*45970038-12, TRANSITION RESISTANCE*	*EMP/BHEL/MEMU2*	*BHEL*	*1800261010*
**	*45970038-14, MOTOR SWITCH GROUP 2*	*EMP/BHEL/MEMU2*	*BHEL*	*18221BT003*
**	*45970038-15, PFDR CUM FUSE BOX*	*EMP/BHEL/MEMU2*	*BHEL*	*17297AT120*
**	*45970038-16, TAP CHANGER*	*EMP/BHEL/MEMU2*	*BHEL*	*170207A112*
**	*45970038-17, MAIN TRANSFORMER*	*EMP/BHEL/MEMU2*	*BHEL*	*2046132*
**	*45970038-24, BUCHHOLZ RELAY*	*EMP/BHEL/MEMU2*	*BHEL*	*P&B 213M2*
**	*45970610-0, MAIN COMPRESSOR WITH 110V DC MOTOR*	*RDSO SPEC. NO 70-B-M-41 AND QUALITY PLAN NO : QEQ 0312 VER-01.*	*ELGI EQUIPMENTS PVT. LTD.*	*ERCSQ 50080*

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188028
RAILWAY CR DATE OF FITMENT: 31-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	UNDER FRAME			
**	*45970634-0, MAIN SILICON RECTIFIER*	*ICF/ELECT/21 REV.-A CORRECTION SLIP NO:2AND QUALITY PLAN NO : QEQ 0311*	*RUTTONSHAH INTERNATIONAL RECTIFIER LTD.*	*1804/1866/1824*
**	*45980822-0, OIL PUMP WITH MOTER AND STARTING CAPACITOR*	*EDTS 088 and Quality Plan No.QEQ:0333 VER:01*	*FLOW TECH. PUMPS & MOTORS*	*18070825*
Group Name	COMPARTMENT			
**	*42980963-3, SPEAKERS*	*EDTS 292*	*PUNJAB RADIOS*	*AHUJA MAKE*
**	*45982752-0, RLY CARRIAGE FAN ,450MM SWEEP ,FIXED TYPE 140V, AC WITH FAN GUARD TO DRG NO ICF/SK3-7-6-026 ALT B.*	*RDSO/PE/SPEC/TL/0050(2010,REV-1)*	*LIGHT ENGINEERING CORPORATION*	*CONCORDE*
Group Name	MLT SECTION			
**	*31726239-0, BATTERY CHARGER WITH FILTER CHOKE & CONDENSER*	*ICF/ELECT/067 REV-A, CS-1.*	*MB & COMPANY*	*2018-05-.....*
**	*42980963-1, PUBLIC ADDRESSING SYSTEM*	*EDTS 292*	*PUNJAB RADIOS*	*AHUJA-4387095*
**	*42980963-2, SPEAKERS*	*EDTS 292*	*PUNJAB RADIOS*	*AHUJA*
**	*42982728-5, FLASHER UNIT*	*EDTS-053 REV-B CORG-1.*	*NEC SWITCHGEARS & CONTROLS*	*MPT-18757*
**	*42982789-1, SMOKE DETECTOR UNIT*	*EDTS087*	*AGNI INSTRUMENTS PVT LTD*	*AG 500504*
**	*42982789-2, SMOKE SENSOR*	*EDTS087*	*AGNI INSTRUMENTS PVT LTD*	*GST MARKED*
**	*47980050-3, RECORDING CUM INDICATION UNIT*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*AUTOMETERS ALLAINCE LTD.*	*MTAME 1801081*
**	*47980050-4, S.C.B CONTROL*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*AUTOMETERS ALLAINCE LTD.*	*SCU-1801159*
Group Name	BOGIE DRIVING END			
**	*45981930-0, MOTOR CONNECTION BOX FOR EMU'S*	*DRG.NO.EM71007 & QUALITY PLAN QEQ 0322 VERSION-01*	*INDIAN TELEPHONE & ELECTRIC CO*	*ITECO*
**	*47030003-1, TRACTION MOTOR/BOGIE 01*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4918878/185180*
**	*47030003-2, TRACTION MOTOR/BOGIE 01*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4919162/185180*
**	*47980050-2, PULSE GENERATOR JUNCTION BOX*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*AUTOMETERS ALLAINCE LTD.*	*AAL*
Group Name	BOGIE NON-DRIVING END			

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP RAILWAY CR **COUPLING TYPE : NONCBC** **COACH_NO : 188028**
DATE OF FITMENT: 31-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	BOGIE NON-DRIVING END			
**	*45981930-0, MOTOR CONNECTION BOX FOR EMU'S*	*DRG.NO.EM71007 & QUALITY PLAN QEQ 0322 VERSION-01*	*INDIAN TELEPHONE & ELECTRIC CO*	*ITECO*
**	*47030003-3, TRACTION MOTOR/BOGIE 02*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4919198/185179*
**	*47030003-4, TRACTION MOTOR/BOGIE 02*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4919202/185179*

SSE/EL/QC	**AME/WM QC/DY CQM I**

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

(FORM NO. QMF 4254 VER.1.00)

1.	SHELL NO	**8048**	BOGIE NO	**185181 / 185182**		DISPATCH DATE	**31-AUG-18**		
2.	RAILWAY	**CR**	TYPE OF COACH	**MEMUMC AS**		COACH NO	**188029**		
3.	BOOKED TO		**SSE/C&W/CSTM**						
4.	Tare Weight of Coach		**61**						
5.	Carrying Capacity		Seating	**65**	Sleeping	**NIL**	Luggage	**NIL**	

6.	6.1	Leading Dimensions:			
	i)	Maximum height above rail to top of roof ventilator		4100 ± 5 (for NAC) 4250 +0/-5 (for WGACCN)	
	ii)	Maximum length over Body		21337 ± 10	
	iii)	Maximum length over Buffer		22297 ± 15	
	iv)	Maximum width over Body		3245 ± 5	
	v)	Maximum width over Flasher ligth		3402 +0/-5	
	vi)	CBC/Buffer/Shaku Coupler Height	Specified: 1104 +0/-10 mm (1035 +0/-5 mm for shaku coupler)	**1035**	**1104**
	vii)	CBC/Buffer/Shaku Coupler (Make)		**ESCORTS**	**ESCORTS**
	viii)	Draw Gear Make		**---**	**---**

7.	Air Brake Testing:			
	Description			Specified
	7.1	Emergency Application	Time for 0 to 36 Kg/cm2 of BC	Less than 05 Sec
			Brake release time to reach 0.4 Kg/cm2	Less than 20 Sec
	7.2	Insensitivity	BP dipped @ 0.30 Kg/cm2 in 60 Sec	No brake application
	7.3	Sensitivity	BP dipped @ 0.60 Kg/cm2 in 6 Sec	Brakes "ON"
	7.4	Passenger alarm by pulling chain		BP Blasts out, Brakes "ON"
	7.5	Piston stroke for BMBC type coach only		19 +10/-0 mm

8.	Painting Details:				
			Type of Paint	Make	Average Gloss Value
	8.1	Paint	**PU PAINT**	**VIBGYOR**	**86 / 87**
	8.2	Application of PCN-123	**SATISFACTORY**		
	8.3	Insulation	**SATISFACTORY**		

9.	Traceability of Furnishing Items:		
	1	**FLOOR BOARD**	**SRI RAM**
	2	**PVC**	**RESPONSIVE**
	3	**EP BRAK / BRAKE EQUIPMENT**	**ESCORTS**
	4	**UIC VESTIBULES**	**CEMCON**
	5	**SEAT & BEARTH**	**CPF**
10.	10.1	**Modification/ Trial (If any): NIL**	
	10.2	**Deviations (If any): NIL**	

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

QMF 9828, VER:1.00

11.	Bogie Details:	Shell No.	Railway	Type	Coach No.	Dispatch Date
		8048	**CR**	**MEMUMC AS**	**188029**	**31-AUG-18**

11.1	BOGIE GENERAL ARRANGEMENT DRAWING NO.: **CC00002 Alt "a"**									
11.2	**Wheel & Axle Details:**									
	i.	Bogie No.	**185181**				**185182**			
	ii.	Frame No.	**ECBT-214**				**ECBT-207**			
	iii	Bolster No.	**BI-5181**				**ECBT-5182**			
	iv.	Axle No.	**F-1858**		**F-1767**		**F-1799**		**F-1563**	
	v.	Wheel Diameter	**955.00**	**955.00**	**952.00**	**952.00**	**953.00**	**953.00**	**953.00**	**953.00**
	vi.	Wheel Disc No.	**20960-00349-SAIL**	**28782-02738-SAIL**	**28757-02510-SAIL**	**33225-03511-SAIL**	**28044-01533-SAIL**	**33254-03511-SAIL**	**33168-03497-SAIL**	**32456-03704-SAIL**
	vii	RB Nos	**Z0448**	**Z0809**	**Z0392**	**Z0391**	**Z0636**	**Z0632**	**Z0349**	**Z0401**
	viii	RB Make	**FAG**		**FAG**		**FAG**		**FAG**	
	ix	RB Type	**Direct Mounted Spherical Roller Bearing**							
11.3	Items traceability:									
	i.	Break Cylinder Make & No.			**PEW-E988,E371,E569,E819**		**PEW-E986,E1011,E1064,E423**			
	ii.	Secondary shock Absorber Make & NO.			**IAI-198339,198336**		**IAI-198346,198347**			
	iii.	Lateral Shock Absorber Make & NO.			**IAI-198893,198896**		**IAI-199029,199041**			
	iv.	Air Spring Make & NO.			**SI-1635,1615**		**SI-1691,1725**			
11.4	i.	Modification/Trail(if any):	**NIL**							
	ii.	Deviations (if any):	**NIL**							

MEMUMC AS - 8048

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP Shell No : 8048 COACH_NO : 188029

RAILWAY CR COUPLING TYPE : NONCBC DATE OF FITMENT: 31-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	NO GROUP DEFINED			
**	42983015-1, CABLE HARNESS LAYING & COMMISSIONING OF DMC COACH.	EPTS-200	M.V ELECTRO SYSTEM PVT. LTD.	NIL
Group Name	ABOVE ROOF			
**	31760041-1, PANTOGRAPH FOR MEMU COACHES	MEMU/DESC-I,REV.-A (QUALITY PLAN QEQ 0331,VER.-01	CONTRANSYS PVT. LTD.	B-4885
**	31760041-2, SERVO MOTOR FOR PANTOGRAPH	MEMU/DESC-I,REV.-A (QUALITY PLAN QEQ 0331,VER.-01	CONTRANSYS PVT. LTD.	B-4885
**	31907210-0, ROOF FEET INSULATOR FOR PANTOGRAPH	COS-033-P-052/R5	INSULATOR & ELECTRICAL CO.	IEC
**	45970038-18, EARTHING SWITCH	EMP/BHEL/MEMU2	BHEL	170204A092
**	45970804-0, METAL OXIDE GAPLESS LIGHTNING ARRESTOR	RDSO EI/2/05 AND QUALITY PLAN NO :QEQ320 VER-01	CGL (ZINC OXIDE)	212832
**	47986104-1, VACCUM CIRCUIT BREAKER 25KV	CLW/ES/C-47 AND QUALITY PLAN NO : QEQ 0309 VER-01.	AUTOMETERS ALLIANCE LTD.	VCB-1805116
Group Name	H.T.CABIN			
**	42982789-3, SMOKE SENSOR	EDTS087	PRECISION SAFETY EQUIPMENTS	GST MARKED
**	42982855-1, RESISTER BOX	BHEL CAT NO. 05750030020 REV-OO	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
**	42982855-2, RESISTER BOX	BHEL CAT NO. 05750030020 REV-OO	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
**	42982866-1, CONTACTOR BOX WITH GP RELAY	BHEL CAT NO. 15730030044 REV-02	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
**	42982866-2, CONTACTOR BOX WITH GP RELAY	BHEL CAT NO. 15730030044 REV-02	BHOPAL ELECTRICAL INSULATION LTD.	BEIL
**	45211619-0, AUXILIARY COMPRESSOR WITH MOTOR	ICF/ELEC:050 DRG. NO :ICF/SK-9-O-565 ALT'F' AND QUALITY PLAN NO : Q	COIMBATORE COMPRESSOR ENGG.	CEC-R18E3460
**	45970038-19, CURRENT TRANSFORMER -1	EMP/BHEL/MEMU2	BHEL	2471089
**	45970038-20, CURRENT TRANSFORMER -2	EMP/BHEL/MEMU2	BHEL	2471090
**	45970038-21, CONSERVATOR TANK	EMP/BHEL/MEMU2	BHEL	NIL
**	45970038-22, HT BUSHING	EMP/BHEL/MEMU2	BHEL	N.N.K.ENTERPERISES

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188029

RAILWAY CR DATE OF FITMENT: 31-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	H.T.CABIN			
**	*45970038-23, CHOKE*	*EMP/BHEL/MEMU2*	*BHEL*	*SR-2046205, DC-2046291, TC-2046377*
**	*45970622-1, ADDITIONAL SMOOTHING REACTOR*	*EDTS-126*	*RAMYAA ELECTROGEAR*	*1806-26-662*
**	*45970622-2, ADDITIONAL SMOOTHING REACTOR*	*EDTS-126*	*RAMYAA ELECTROGEAR*	*1806-26-596*
Group Name	MLT PANEL			
**	*42982662-5, CENTER ZERO METER*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO.*	*INDOTECH MAKE*
**	*42982728-1, MLT PANEL*	*EDTS-053 REV-B CORG-1.*	*NEC SWITCHGEARS & CONTROLS*	*2018-04-0028*
**	*42982728-2, EARTH FAULT RELAY II*	*EDTS-053 REV-B CORG-1.*	*NEC SWITCHGEARS & CONTROLS*	*MEGAWIN-17110003979*
**	*42982728-3, DIODE PANEL*	*EDTS-053 REV-B CORG-1.*	*NEC SWITCHGEARS & CONTROLS*	*NEC*
**	*42982728-4, GOVERNOR CUT OUT SWITCH*	*EDTS-053 REV-B CORG-1.*	*NEC SWITCHGEARS & CONTROLS*	*NEC*
**	*42982728-6, BATTERY ISOLATING SWITCH*	*EDTS-053 REV-B CORG-1.*	*NEC SWITCHGEARS & CONTROLS*	*L & T DN2-250D*
**	*45970038-2, LIGHT CONTACTOR*	*EMP/BHEL/MEMU2*	*BHEL*	*NIL*
**	*45970038-3, FAN CONTACTOR*	*EMP/BHEL/MEMU2*	*BHEL*	*NIL*
**	*45970038-4, AUX.COMP CONTACTOR*	*EMP/BHEL/MEMU2*	*BHEL*	*1700248091*
**	*45970038-5, MAIN COMP. CONTACTOR*	*EMP/BHEL/MEMU2*	*BHEL*	*1700249093*
**	*45970038-6, PRIMARY OVER LOAD & EARTH FAULT RELAY*	*EMP/BHEL/MEMU2*	*BHEL*	*1700255113*
**	*45970038-7, MT RELAY PANEL*	*EMP/BHEL/MEMU2*	*BHEL*	*1800258003*
**	*45970038-8, RESISTANCE PANEL*	*EMP/BHEL/MEMU2*	*BHEL*	*170299B091*
**	*45970038-25, KNIFE SWITCH*	*EMP/BHEL/MEMU2*	*BHEL*	*170299A092*
**	*47986104-2, RC DAMPING RESISTANCE 1*	*CLW/ES/C-47 AND QUALITY PLAN NO : QEQ 0309 VER-01.*	*AUTOMETERS ALLIANCE LTD.*	*1806097*
**	*47986104-3, RC DAMPING RESISTANCE 2*	*CLW/ES/C-47 AND QUALITY PLAN NO : QEQ 0309 VER-01.*	*AUTOMETERS ALLIANCE LTD.*	*1805108*
Group Name	DRIVING SECTION			
**	*31726161-1, TWIN BEAM HEAD LIGHT WITH 24V HELOGEN LAMPS.*	*RDSO SPEC.NO.ELRS/SPEC/PR/0024,WITH DC-DC CONVERTER TO SPEC.NO.*	*MATSUSHI POWER TECH.*	*MPT*
**	*42982662-1, INTEGRATED DRIVER DESK PANEL*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO.*	*73-07/2018*

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188029

RAILWAY CR DATE OF FITMENT: 31-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	DRIVING SECTION			
**	*42982662-2, TRACTION AMMETER*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO.*	*INDOTECH MAKE*
**	*42982662-3, TRACTION VOLMETER*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO.*	*INDOTECH MAKE*
**	*42982662-4, BATTERY VOLTMETER*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO.*	*INDOTECH MAKE*
**	*42982662-6, DRIVER CONTROL SWITCH BOX (B.L.BOX)*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO.*	*MAA LUXMI-3442*
**	*42982662-7, DRIVER INDICATION PANEL*	*EDTS-069 REV-B.*	*ESS ESS KAY ENGG. CO.*	*SSK-73-07/2018*
**	*45970038-1, PANTO OPERATING VALVE*	*EMP/BHEL/MEMU2*	*BHEL*	*ROTEX*
**	*45970038-9, ISOALTING SWITCH PANEL*	*EMP/BHEL/MEMU2*	*BHEL*	*NEC*
**	*45970038-11, MASTER CONTROLLER*	*EMP/BHEL/MEMU2*	*BHEL*	*1700269111*
**	*45970038-13, MOTOR SWITCH GROUP 1*	*EMP/BHEL/MEMU2*	*BHEL*	*17221AT093*
**	*45982752-0, RLY CARRIAGE FAN ,450MM SWEEP ,FIXED TYPE 140V, AC WITH FAN GUARD TO DRG NO ICF/SK3-7-6-026 ALT B.*	*RDSO/PE/SPEC/TL/0050(2010,REV-1)*	*KAPSON INDUS.*	*KIND*
**	*47980050-5, P.T CONTROL*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*AUTOMETERS ALLAINCE LTD.*	*TPTU-1806038*
Group Name	DRIVING END			
**	*31726161-2, 24V DC TO DC CONVERTER*	*RDSO SPEC.NO.ELRS/SPEC/PR/0024,WITH DC-DC CONVERTER TO SPEC.NO.*	*MITSUSHI POWER TECH.*	*MPT-15502*
**	*31727232-0, LED BASED MARKER/TAIL LIGHT COMPLETE FOR EMU FOR LEFTAND RIGHT (TYPE-E).*	*ELRS/SPEC/PR/0022 (REV-1,OCT-2004)*	*MITSHUSHI POWER TECH.*	*MPT-.....*
**	*31750564-0, TERMINAL BOARDS END WALL FOR MEMU/DMC COACH*	*EM75005*	*NEC SW. GEARS & CONTROLS*	*2018-04-0030, 0028*
**	*45982697-0, SET OF INTERVEHICAL COUPLER*	*EDML003 REV-A WITH RCF ANNEXURE*	*S-INTERNATIONALS*	*S-INT.*
**	*47980050-1, PULSE GENERATOR*	*RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02*	*AUTOMETERS ALLAINCE LTD.*	*PGD-1806047*
Group Name	NON-DRIVING END			

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188029

RAILWAY CR DATE OF FITMENT: 31-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	NON-DRIVING END			
**	*42027380-0, LIMIT SWITCH 10A,500V,1NO+1NC*	*LSRO M/S BOHMAN OR 3SE-2-100-0 OF M/S SIEMENS*	*GC CONTROL GEAR*	*NIL*
**	*45982697-0, SET OF INTERVEHICAL COUPLER*	*EDML003 REV-A WITH RCF ANNEXURE*	*S-INTERNATIONALS*	*S-INT.*
Group Name	UNDER FRAME			
**	*31710025-0, BATTERY BOX ARRANGMENT FOR MEMU MOTOR COACH WITH MODIFIED TROLLEY AND PACKING ARRANGEMENT TO DRG NO*	*DRG.NO. EMU/M-7-1-001 ALT.`j' DULY PAINTED AS PER NOTE 6*	*K.R.ENGG.YAMUNANAGAR*	*64 (08/2018)*
**	*33614477-0, 110V, 120AH, VRLA, SMF BATTERY SET WITH 19 MONO BLOCKS (6V MONO BLOCK EACH) PRECHARGED WITH INTER CE*	*RDSO/PE/Spec./AC/0009/2008 (Rev.1 WITH AM-1,RCF ANNX.-A)*	*AMARA RAJA BATTERIES LTD.*	*06/2018*
**	*35981647-0, TRANSFORMER OIL COOLER WITH BLOWER MOTOR*	*ICF/ELEC:014 AND QUALITY PLAN NO : QEQ 0313 VER-01.*	*NIPPON KUHLERS*	*2018-07-35*
**	*43290007-0, AIR DRYER FOR MEMU COACHES*	*RDSO SPEC. NO. MP.0.01.00.09 (REV-0.00) MARCH 2001 WITH OVER ALL DIMENSION NOT TO EXCEED 750MM(L)X315MM(W)X660MM(H)*	*TRIDENT PNEUMATIC PVT.LTD.*	*LD2/01/3096/2018*
**	*45970038-10, HT EARTHING LINKS*	*EMP/BHEL/MEMU2*	*BHEL*	*1700263274,275,276*
**	*45970038-12, TRANSITION RESISTANCE*	*EMP/BHEL/MEMU2*	*BHEL*	*1700261111*
**	*45970038-14, MOTOR SWITCH GROUP 2*	*EMP/BHEL/MEMU2*	*BHEL*	*17221BT094*
**	*45970038-15, PFDR CUM FUSE BOX*	*EMP/BHEL/MEMU2*	*BHEL*	*17297AT112*
**	*45970038-16, TAP CHANGER*	*EMP/BHEL/MEMU2*	*BHEL*	*170207A118*
**	*45970038-17, MAIN TRANSFORMER*	*EMP/BHEL/MEMU2*	*BHEL*	*2046096*
**	*45970038-24, BUCHHOLZ RELAY*	*EMP/BHEL/MEMU2*	*BHEL*	*P&B 174M2*
**	*45970610-0, MAIN COMPRESSOR WITH 110V DC MOTOR*	*RDSO SPEC. NO 70-B-M-41 AND QUALITY PLAN NO : QEQ 0312 VER-01.*	*ELGI EQUIPMENTS PVT. LTD.*	*ERCSQ 50079*

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP COUPLING TYPE : NONCBC COACH_NO : 188029

RAILWAY CR DATE OF FITMENT: 31-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	UNDER FRAME			
**	45970634-0, MAIN SILICON RECTIFIER	ICF/ELECT/21 REV.-A CORRECTION SLIP NO:2AND QUALITY PLAN NO : QEQ 0311	RUTTONSHAH INTERNATIONAL RECTIFIER LTD.	1804/1866/1818
**	45980822-0, OIL PUMP WITH MOTER AND STARTING CAPACITOR	EDTS 088 and Quality Plan No.QEQ:0333 VER:01	FLOW TECH. PUMPS & MOTORS	18070838
Group Name	COMPARTMENT			
**	42980963-3, SPEAKERS	EDTS 292	PUNJAB RADIOS	AHUJA MAKE
**	45982752-0, RLY CARRIAGE FAN ,450MM SWEEP ,FIXED TYPE 140V, AC WITH FAN GUARD TO DRG NO ICF/SK3-7-6-026 ALT B.	RDSO/PE/SPEC/TL/0050(2010,REV-1)	KAPSON INDUS.	KIND
Group Name	MLT SECTION			
**	31726239-0, BATTERY CHARGER WITH FILTER CHOKE & CONDENSER	ICF/ELECT/067 REV-A, CS-1.	MB & COMPANY	2018-05-014
**	42980963-1, PUBLIC ADDRESSING SYSTEM	EDTS 292	PUNJAB RADIOS	AHUJA-4386978
**	42980963-2, SPEAKERS	EDTS 292	PUNJAB RADIOS	AHUJA
**	42982728-5, FLASHER UNIT	EDTS-053 REV-B CORG-1.	NEC SWITCHGEARS & CONTROLS	MPT-18789
**	42982789-1, SMOKE DETECTOR UNIT	EDTS087	PRECISION SAFETY EQUIPMENTS	SR.NO. 2056
**	42982789-2, SMOKE SENSOR	EDTS087	PRECISION SAFETY EQUIPMENTS	GST MARKED
**	47980050-3, RECORDING CUM INDICATION UNIT	RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02	AUTOMETERS ALLAINCE LTD.	MTAME 1806015
**	47980050-4, S.C.B CONTROL	RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02	AUTOMETERS ALLAINCE LTD.	SCU-1806032
Group Name	BOGIE DRIVING END			
**	45981930-0, MOTOR CONNECTION BOX FOR EMU'S	DRG.NO.EM71007 & QUALITY PLAN QEQ 0322 VERSION-01	INDIAN TELEPHONE & ELECTRIC CO	ITECO
**	47030003-1, TRACTION MOTOR/BOGIE 01	RDSO/PE/SPEC/D/EMU/0047-2003	BHEL	4919170/185181
**	47030003-2, TRACTION MOTOR/BOGIE 01	RDSO/PE/SPEC/D/EMU/0047-2003	BHEL	4919163/185181
**	47980050-2, PULSE GENERATOR JUNCTION BOX	RDSO/PE/SPEC/EMU/003 -2002REV-0 OCT02	AUTOMETERS ALLAINCE LTD.	AAL
Group Name	BOGIE NON-DRIVING END			

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RAIL COACH FACTORY, KAPURTHALA

ROLLING STOCK CERTIFICATE (NON-LHB)

FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF

MEMU WITH AIR SPRING ICF TYPE BOGIE

TYPE OF COACH : MEMUASP RAILWAY CR **COUPLING TYPE : NONCBC** **COACH_NO : 188029**
DATE OF FITMENT: 31-AUG-18

S.No	PL No & Item Description	Drawing No	Make	Item Sr.No.(if any
Group Name	BOGIE NON-DRIVING END			
**	*45981930-0, MOTOR CONNECTION BOX FOR EMU'S*	*DRG.NO.EM71007 & QUALITY PLAN QEQ 0322 VERSION-01*	*INDIAN TELEPHONE & ELECTRIC CO*	*ITECO*
**	*47030003-3, TRACTION MOTOR/BOGIE 02*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4919169/185182*
**	*47030003-4, TRACTION MOTOR/BOGIE 02*	*RDSO/PE/SPEC/D/EMU/0047-2003*	*BHEL*	*4919196/185182*

SSE/EL/QC	**AME/WM QC/DY CQM I**