



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 (DEEN DAYALU)
Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2019-20/1684

| | | | | | | | |
|------|-----|-----------|----------|-------------|------------|------------------|-----------|
| RLY | SWR | COACH NO | 201663/C | DISPATCH TO | Sr.DME/MYS | DATE OF DISPATCH | 24-Feb-20 |
| Type | LWS | Shell No. | 96212 | | | FUR.NO. | DDG-351 |

- Railway Board's Order No. : 2019/M(C)/142/2,DATED-12-09-2019
- TARE WEIGHT OF COACH : 40.66 Tonnes
- Carrying Capacity : (a) Seating: 100 (c) Luggage: NIL

4. Special feature:

| S NO | DESCRIPTION | MAKE/SUPPLIER |
|------|--|--------------------------|
| A | Cushion transverse side luggage rack which can serve as seat during rush | M/S- H.F.G.W.VADODARA |
| B | Honey comb partition frame. | M/S- H.F.G.W.VADODARA |
| C | DGFRP/GFRE paneling. | M/S- H.F.G.W.VADODARA |
| D | Lavatory with DGFRP/GFRE paneling. | M/S- H.F.G.W.VADODARA |
| E | Additional Hand hold. | M/S- H.F.G.W.VADODARA |
| F | Counter top wash basin. | M/S- H.F.G.W.VADODARA |
| G | Gel coating & Anti Graffiti measures. | M/S-VIBGYOR |
| H | Air spring in secondary suspension (capacity-140KN). | M/s-AVADH RAIL INFRA |
| I | Fire Extinguishers | M/s-CHIRAG INDUSTRIES HR |
| J | Vestibule ends for inter-coach movement of passenger and the service staff (LWSCN type End wall) | |
| K | 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 | |

5. 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 | 4039 |
| 4 | CBC height/Buffer height from Rail level 1105 +0/-10 | NPP/PP 1097/1096 |

6. TRACEABILITY OF SHELL ITEMS:

| S NO | ITEM | MAKE/SUPPLIER | SERIAL NO |
|------|-----------------------|------------------|----------------------------|
| 1 | Under frame | Front PP END | M/S-OMAX AUTOS 34 |
| | | Part NPP END | M/S-OMAX AUTOS 34 |
| | | Complete | M/S-OMAX AUTOS 34 |
| 2 | Lav. side wall | M/S-ATHANACY ALD | LAV.1 LAV.2 |
| | | M/S-ATHANACY ALD | LAV.3 LAV.4 |
| 3 | Side wall | LH SIDE | MCFRBL-CONT.V4U 77/01 |
| | | RH SIDE | MCFRBL-CONT.V4U 77/02 |
| 4 | End wall | PP END | M/S-RAIL TECH KXH |
| | | NPP END | M/S-RAIL TECH KXH |
| 5 | Roof | MCF/CONT | 63 |
| 6 | Centre Buffer Coupler | M/S-SANROK ENT | PP END 14747 NPP END 15198 |

7. AIR BRAKE 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 . | 6 – 10 sec. | 08 sec |
| | | Max. pressure in BC | 3.0 ±0.15 kg/cm ² . | 3.0 kg/cm ² |
| | | All Brake are applied | OK | 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 |

8. PAINTING DETAILS:

| S NO | DESCRIPTION | TYPE OF PAINT | MAKE | APPLICATION BY MCF/ CONTRACTOR (SUPPLY & APPLY) | AVERAGE GLOSS VALUE | DATE OF COMPLETION |
|------|-------------|---------------|---------|---|---------------------|--------------------|
| 1 | Paint | P.U | VIBGYOR | M/S-VIBGYOR | 74/87 | 06-02-2020 |
| 2 | Insulation | | | Satisfactory | | |

Deen Dayalu
वरिष्ठ SSE/QC/MCF/RBL

गुणवत्ता विभाग
रेडिओ, रायबरेली (लालगंज)



MODERN COACH FACTORY, RAEBARELI

आधुनिक रेल डिब्बा कारखाना, रायबरेली

DOC NO.: MCF/RBL/QMF 8002

REV NO.: 01

DATE: 16.05.2016

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2019-20/1684

| | | | | | | | | | | | | | | | | | | | | | | | |
|------|---|---|---|---|-----------|---|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|
| RLY. | S | W | R | - | Coach No. | 2 | 0 | 1 | 6 | 6 | 3 | / | C | - | DATE OF DISPATCH | 2 | 4 | 0 | 2 | 2 | 0 | 2 | 0 |
|------|---|---|---|---|-----------|---|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | |
|----------|------------|------|---|---|---|---|-----------|---|---|---|---|---|--------|---------|
| DISPATCH | Sr.DME/MYS | Type | L | W | S | - | Shell No. | 9 | 6 | 2 | 1 | 2 | FUR.NO | DDG-351 |
|----------|------------|------|---|---|---|---|-----------|---|---|---|---|---|--------|---------|

9. DETAIL OF BOGIES:

| ITEMS | NPP Side | | | | PP Side | | | |
|---------------|-------------------------|-------------------------|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Bogie No | 193387 | | | | 193388 | | | |
| Bogie Type | FIAT | | | | FIAT | | | |
| Frame no. | SCI - 2278 | | | | MCF/RBL/LS-5-1040 | | | |
| Bolster no. | AMIT - 46 | | | | AMIT - 40 | | | |
| Axle No | 20 V - 0917 RWF | | 20 T - 8353 RWF | | 19 S - 9793 RWF | | 20 T - 8413 RWF | |
| Wheel Dia | 917.488 | 917.526 | 917.478 | 917.531 | 917.534 | 917.568 | 917.521 | 917.56 |
| Wheel Disc No | TZ 03 -19 32832-9MG2 | TZ 04 -19 36584-9OF8 | TZ 05 -19 43204-PJ3 | TZ 05 -19 47830-9PG7 | TZ 04 -19 33956-9OF8 | TZ 05 -19 44828-9O10 | TZ 05 -19 40541-9PD1 | TZ 03 -19 37905-9MG2 |
| R.B. Nos. | 11 -19 33648 | 11 -19 42833 | 11 -19 44281 | 11 -19 32048 | 11 -19 31914 | 11 -19 44101 | 11 -19 43877 | 11 -19 44262 |
| CT R B Make | TIMKEN | | TIMKEN | | TIMKEN | | TIMKEN | |

10. SECONDARY SUSPENSION LOAD DEFLECTION VALUES :-

| DESCRIPTION | Bogie NPP side | | Bogie PP side | |
|-------------|---|---|---|---|
| | Secondary 1 | Secondary 2 | Secondary 1 | Secondary 2 |
| Make & Nos. | Avadh Rail indra.LTD SR.NO- 01-20 6912 | Avadh Rail indra.LTD SR.NO- 01-20 6916 | Avadh Rail indra.LTD SR.NO- 12-19 6586 | Avadh Rail indra.LTD SR.NO- 12-19 6934 |

11. TRACEABILITY OF BOGIE ITEMS :-

| S. NO | ITEM | MAKE/SUPPLIER | SERIAL NO. | |
|-------|----------------------------|---------------|-------------------------------------|-------------------------------------|
| | | | NPP SIDE | PP SIDE |
| 1. | Yaw Damper | IAI | 278513,266774 | 278497,273331 |
| 2. | Primary outer Spring | CMGBD/CMFSK | 10-19 F07-873(594,663,745,763) | 11-19 1100-115(1746,1752,1906,1755) |
| 3. | Primary Inner Spring | CMGBD/CMFSK | 10-19 F06-842(332,160,79,324) | 11-19 1101-103(1556,1570,1564,1616) |
| 4. | Primary Damper | IAI | 08-19 (267736,267874,267936,267856) | 08-19 (267826,267946,267663,267712) |
| 5. | Secondary Damper | IAI | 08-19 (268198,268182) | 08-19 (268216,268184) |
| 6. | Lateral Damper | KONI | 08-19 - 268479 | 08-19 - 268537 |
| 7. | Brake Cylinder | KBI | C(2283,1202,1129,2214)-K-29 | C(2260,1119,1167,2257)-K-29 |
| 8. | Brake Caliper | KBI | B(8879,8984,8910,8780)-29 | B(8816,8946,8950,8814)-29 |
| 9. | Brake Disc | FAV | 01-20 D133561-300(611,612,610,609) | 01-20 D133561-300(202,201,200,199) |
| 10. | Ball Joint Control Arm | GMT | | |
| 11. | Lateral Bump Stop | GMT | | |
| 12. | Traction Centre make | SARITA | | |
| 13. | Traction lever make | J1 | | |
| 14. | Ball joint traction lever | GMT | | |
| 15. | Ball joint traction centre | GMT | | |
| 16. | Leveling Valve | ESCORT | 1912, 1912 | 1912, 1912 |
| 17. | Check Valve | ESCORT | 1912 | 1912 |
| 18. | Anti roll bar Make | RF | | |
| 19. | Roll Link make | EMSON/ ARYAN | | |
| 20. | Fork make | RNG | | |
| 21. | Control Arm Upper | SG IRPL | 1938L07,1911G42,1911L07,1911G98 | 1901J02,1926I78,1926L76,1920L11 |
| 22. | Control Arm Lower | SG IRPL | 1928L79,1918G61,1911G76,1910L07 | 1919G72,1913G49,1908G26,1920G99 |
| 23. | Phonic Wheel | -- | K-08-19, K-08-19 | K-08-19, K-08-19 |

Signature of SSE/Bogie/QC



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| RLY | SWR | COACH NO | 201663/C | DISPATCH TO | Sr.DME/MYS | DATE OF DISPATCH | 24-Feb-20 |
| Type | LWS | Shell No. | 96212 | | | FUR.NO. | DDG-351 |

12. TRACEABILITY OF FURNISHING ITEMS:

| S NO | ITEM | MAKE/SUPPLIER | SERIAL NO(NPP/PP) |
|------|-----------------------------------|--------------------------------------|-------------------|
| 1 | Air Brake Module | M/S- KBI | 4595-52/19 |
| 2 | Distribution valve | M/S- KBI | 2019M9975 |
| 3 | Pull box | M/S- KBI | |
| 4 | FIBA | M/S- KBI | 7453/29,7482/29 |
| 5 | Foot Step | M/S-SSPL FARIDABAD | |
| 6 | Decoupling arrangement | M/S-KOHINOOR MUMBAI | |
| 7 | Floor board | M/S-TWPL MUMBAI | |
| 8 | PVC | M/S- H.F.G.W.VADODARA | |
| 9 | Lavatory inlay | M/S- H.F.G.W.VADODARA | |
| 10 | UIC Vestibule (PPE) | M/S-KIRAN RUBBER PRODUCT MUMBAI | |
| 11 | UIC Vestibule (NPPE) | M/S-KIRAN RUBBER PRODUCT MUMBAI | |
| 12 | Gangway bridge mounting (PPE) | M/S-MAHAVEER MATEL WORKS, KAPURTHALA | |
| 13 | Gangway bridge mounting (NPPE) | M/S-MAHAVEER MATEL WORKS, KAPURTHALA | |
| 14 | Body Side Window | M/S- H.F.G.W.VADODARA | |
| 15 | Emergency Window | M/S- H.F.G.W.VADODARA | |
| 16 | Lavatory/hopper Window | M/S- H.F.G.W.VADODARA | |
| 17 | Roof Ceiling | M/S- H.F.G.W.VADODARA | |
| 18 | Door way /gang way ceiling | M/S- H.F.G.W.VADODARA | |
| 19 | Body Side Doors | M/S- H.F.G.W.VADODARA | |
| 20 | Vestibule Door(PPE) | M/S-JBM FARIDABAD | |
| 21 | Vestibule Door(NPPE) | M/S-JBM FARIDABAD | |
| 22 | Bio Tank | M/S-OMAX AUTOS LTD. | |
| 23 | Pressurized flushing(ele.pneu.) | M/S-IMI | |
| 24 | Over head water tank (4x390L) | M/S-RAIL FAB KXH | |
| 25 | Bib cock/controlled discharge tap | M/s-JAQUAR PVT LTD ALWAR | |
| 26 | Lavatory Doors | M/S- H.F.G.W.VADODARA | |
| 27 | Fire Extinguisher | M/s-CHIRAG INDUSTRIES HR | 5325/5353 |
| 28 | Water purified | M/S- H.F.G.W.VADODARA | |
| 29 | Seat & Berth | M/S- H.F.G.W.VADODARA | |
| 30 | Luggage Rack | M/S- H.F.G.W.VADODARA | |
| 31 | Light Luggage Rack | NA | |
| 32 | Ventury grill | NA | |
| 33 | RFID | NA | |

Deema

SSE/QC/MCF/RBL

वरि०अनु० अभियंता

गुणवत्ता विभाग

मे०डि०का०, रायबरेली (लालगंज)



Modern Coach Factory Raebareli
आधुनिक रेल डिब्बा कारखाना, रायबरेली

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| Type | LWS | Shell No. | 96212 | | | FUR.NO. | DDG-351 |

13. MODIFICATION (IF ANY) : NIL
14. DEVIATION (IF ANY) : NIL
15. ITEM FITTED ON THE COACH ON TRIAL : NIL

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

16. WARRANTY:

| S NO | COMPONENTS | WARRANTY |
|------|---|--|
| 1 | Brake Pad, wheels, flushing valves, push gravity cocks, moldings, window glasses, mirrors, curtain clutch wire etc. (items which are consumable in nature) | NIL |
| 2 | Other coach furnishing sub assemblies(bought out items) | 24 months from the date of dispatch of coach OR 30months from the date of supply of material whichever is earlier. |

NOTE:

- This warranty covers free supply of parts which wear out and fails within warranty period of normal service.
- This doesn't covers faults arising out of accident, non standard maintenance practices, abnormal use or mishandling, vandal activity, arson & deficient/pilferage etc.
- 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.
- Whether a defective part is to be replaced or repaired shall be at the discretion of MCF/RBL.
- For any complain/ suggestion please Mail at qualityrcfrbl@gmail.com
- Painting on supply & apply contract :- supply of material and application shall be warranted for a period of three years from 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.

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| SSE/OC/MCF/RBL वरिष्ठ अनुष्ठानिक अभियन्ता | SME/AME/QC/MCF/RBL | Dy.CQM/MCF/RBL |

गुणवत्ता विभाग
रेडि०का०, रायबरेली (लाहौरांश)

वरिष्ठ यांत्रिक अभियन्ता/गुणवत्ता
Senior Mechanical Engineer/Quality
आधुनिक रेल डिब्बा कारखाना, रायबरेली
Modern Coach Factory Raebareli

जोगिंदर सिंह
Joginder Singh
उप मुख्य गुणवत्ता प्रबन्धक
Dy. Chief Quality Manager
आधुनिक रेल डिब्बा कारखाना, रायबरेली
Modern Coach Factory Raebareli



Modern Coach Factory Raebareli
आधुनिक रेल डिब्बा कारखाना, रायबरेली

DOC NO.: MCF/RBL/QEF/8001

REV NO: 00

DATE: 18.01.2017

FOR ELECTRICAL ITEMS**ROLLING STOCK CERTIFICATE OF LHB/EOG/HOG NONAC DD COACHES**

PAGE 1 OF 3

| ELECTRICAL TEST CERTIFICATE FOR LHB/EOG/HOG NON AC GS COACHES | | | | | |
|---|---------------------------------------|------------|--|------------|--|
| SHELL/COACH NO | | 201663/C | | TYPE COACH | |
| RAILWAY | | SWR | | LWS/DDG | |
| ELECT.FIT DATE | | 23-02-2020 | | FUR.NO | |
| DDG-351 | | | | | |
| Sr no | Description of test | Remarks | | | |
| 2. | LIGHTS, CHARGING SOCKETS | OK | | | |
| 3. | RAILWAY CARRIAGE FAN | OK | | | |
| 4. | WHEEL SLIDE PROTECTION SYSTEM (WSP) | OK | | | |
| 5. | WORKING OF 9 KVA TRANSFORMER | OK | | | |
| 6. | WORKING OF REGULATED BATTERY CHARGER | OK | | | |
| 7. | SAFETIES : | | | | |
| 7.1. | FUSES AND THEIR RATING | OK | | | |
| 7.2. | CONTROL CIRCUIT | OK | | | |
| 7.3. | POWER CIRCUIT | OK | | | |

Senior Section Engineer
Quality control / Electrical
Modern Coach Factory Raebareli





Modern Coach Factory Raebareli
आधुनिक रेल डिब्बा कारखाना, रायबरेली

DOC NO.: MCF/RBL/QEF/8001

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FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG/HOG NONAC DD COACHES

PAGE 2 OF 3

| | | | |
|-----|---|---|-----------|
| 01. | Switch board cabinet Make : ABROL On Board Sr no : 2019/11/416 B HT Panel Sr no : 2019/11/416 A | EDTS 333, Rev`01`Am-1 | 01 |
| 02. | Emergency light system for EOG type coaches (AEL), Make : DR AUTO | EDTS 151,Rev -c Am-1 & 2 | 04 |
| 03. | Provision & Mounting of PACIL Assly. Make: RT VISION | As per RDSO/PE/SPEC/TL/0091- 2016,REV-01, TYPE-I Drg no. LW 76098. | 02 |
| 04. | Fitment of Switch Plate Assly (Cabin Side) Make : SSK | EDML 127,Rev-1& DRG NO 4248ALT-a | 10 |
| 05. | Fitment of Switch Plate Assly (Corridor Side) Make : SSK | EDML 127,Rev-1 & DRG NO 4249 ALT-a | 10 |
| 06. | Fitment of Railway carriage Fan 400mm Sweep, 110V DC with crash worthy features. Make : LIGHT ENGG. | IS 6680/92,First Rev, RCF Amdt 4, Col I, Ty XI, RCF Cor I. | 30 |
| 07. | Provision of Cabin, Corridor, doorway and Gangway Lights. Make: DR AUTO | As per RDSO/PE/SPEC/TL- 0091(REV-1) TYPE B-1 | 28 |
| 08. | Provision & Mounting of Lavatory Light Make: ENSAVE | As per RDSO/PE/SPEC/TL/0091 -2016,REV-01, TYPE-D & Drg no. LW 76092. | 04 |

Senior Section Engineer
Quality control / Electrical
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FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG/HOG NONAC DD COACHES

PAGE 3 OF 3

| | | | |
|-----|--|---|----------------|
| 09. | Battery fuse box +ve Make : RICHMOND | LW 71001,Alt-F | 01 |
| 10 | Battery fuse box -ve Make : RICHMOND | LW 71002,Alt-F | 01 |
| 11. | Regulated battery charger Make : ELECTRIC EQUIPMENT COMPANY Sr no: 12190057 | As per RDSO/pe/spec/ac/0129, Rev.-1 (2009) | 01 |
| 12. | 9KVA transformer Make : VIMAL Sr no : VTC 3089 LHB-2936 | As per RDSO/PE/SPEC/TL 0158,2010, Rev `0', TypeI. | 01 |
| 13. | ZS coupling 400A/750V/03Ph/50hz. Make : PRIME ELECT. | As per spec No EDTS 105,Rev`e' Am-3 TYPE-2 | 01 set |
| 14. | Feeder junction boxes. Make : MV ELECTRO | EDTS-328 REV-C | 01 set |
| 15. | Wheel set earthling equipment. Make : PRIME ELECT. | EDTS101,REV-C,AM-1 | 02 sets |
| 16. | Wheel Slide Protection System (WSP) Make : KNORR Sr no : 0119232141 | M/s : KNORR | 01 set |
| 17. | 110V,120AH,VRLA SMF BATTERY SET WITH 19 MONOBLOCK (6V EACH) PRECHARGED,WIH MODIFIED TRAY TOSKED-644 Make : HBL Lug date : 11/19 | RDSO/pe/spec/ac-0009 rev-1- 2008 amdt-1 | 01 set |
| 18. | Battery box for LHB coaches. Make : M/S MEENAKSHI | CC 91205 | 01 |

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| SSE/EL/QC वरिष्ठ अनुभाग अभियन्ता गुणवत्ता नियंत्रण आधुनिक रेल डिब्बा कारखाना / लालगंज / रायबरेली SSE/EL/Elect-QC/M.C.F./LLJ/RBL | AWM(ELECT.)/MCF/RBL SEE(P)/MCF/RBL वरिष्ठ विद्युत अभियन्ता रेल कोच फैक्टरी, रायबरेली, Sr. Electrical Engineer / RCF / RBL |

