



# Modern Coach Factory Raebareli

## आधुनिक रेल डिब्बा कारखाना, रायबरेली

DOC NO.: MCF/RBL/QMF 8002

REV NO: 01

DATE: 17.04.2018

**ROLLING STOCK CERTIFICATE**

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2019-20/700

|     |   |   |   |   |           |   |   |   |   |   |   |   |   |                  |   |   |   |   |   |   |   |   |
|-----|---|---|---|---|-----------|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|
| RLY | N | W | R | - | Coach No. | 1 | 9 | 6 | 2 | 7 | 4 | / | C | DATE OF DISPATCH | 1 | 0 | - | 0 | 9 | - | 1 | 9 |
|-----|---|---|---|---|-----------|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|

|             |               |      |   |   |   |   |   |   |           |   |   |   |   |   |         |           |
|-------------|---------------|------|---|---|---|---|---|---|-----------|---|---|---|---|---|---------|-----------|
| DISPATCH TO | Sr.DME/C&W/JP | Type | L | W | A | C | C | W | Shell No. | 9 | 3 | 1 | 3 | 2 | FUR.NO. | L2T(T)-69 |
|-------------|---------------|------|---|---|---|---|---|---|-----------|---|---|---|---|---|---------|-----------|

- Railway Board's Order No. : 2019/M(C)/142/2, Dated- 03.06.2019
- Tare Weight of Coach : 44.5 Tonnes
- Carrying Capacity : (a) Seating: 52 (b) Sleeping: 52 (c) Luggage: NIL
- Special feature**
  - Due to fitment of L3T roof in L2T shell, more space available in transverse side.
  - Extend linen room to accommodate the space NPP end (width 270 mm)
  - Height (from floor level to ceiling) raised from 2250mm to 2510mm.
  - Gap extend between transverse side upper berth and ceiling from 830mm to 894mm.
  - Gap extend between transverse side lower berth and upper berth from 920mm to 1065mm.
  - Gap extend between transverse side floor level to lower berth from 420mm to 465mm.
  - Provision of sliding cum sleeping berth. (MAKE- M/S- ANANYA RAIL COACH COMPONENTS IND.LLJ)
  - Choke of 5/6 mm in DV side replace with 9 mm in both type (KBI & Faiveley) letter no.

MC/LHB/Brake, Dated 27.09.2018

F- RFID(Radio frequency identification) fitted for traceability of coach

**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 | 1) 1103 (NPPE) 2) 1105 (PPE) |

**6. TRACEABILITY OF SHELL ITEMS:**

| S NO | ITEM                  | MAKE/SUPPLIER                   | SERIAL NO                |
|------|-----------------------|---------------------------------|--------------------------|
| 1.   | Under frame           | PP END M/S- RFPL                | 02                       |
|      |                       | NPP END M/S- RFPL               | 06                       |
|      |                       | Complete MCF/RBL                | 93132                    |
| 2.   | Lav. side wall        | M/S- RAIL FAB, KXH              | LAV.1 - LAV.2 -          |
|      |                       | M/S- RAIL FAB, KXH              | LAV.3 - LAV.4 -          |
| 3.   | Side wall             | LH SIDE MCF/RBL(CONTRACTOR V4U) | 58/01                    |
|      |                       | RH SIDE MCF/RBL(CONTRACTOR V4U) | 58/02                    |
| 4.   | End wall              | PP END M/S-P.D,STEEL PACHKULA   | ---                      |
|      |                       | NPP END M/S-RSM MOHALI          | ---                      |
| 5.   | Roof                  | M/S -PIL                        | 59                       |
| 6.   | Centre Buffer Coupler | M/S- ESCORTS LTD.               | PP END 8611 NPP END 9563 |

**7. AIRBRAKE TEST REPORT:**

| S NO | ITEM                   | DESCRIPTION  | SPEC. VALUE   | OBSERVED                             |
|------|------------------------|--|---|--------------------------------------|
| 1.   | Full brake application | <ul style="list-style-type: none"> <li>Reduce pressure of BP from 5.0 to 3.4 kg/cm<sup>2</sup>.</li> <li>Max. pressure in BC</li> <li>All Brake are applied</li> </ul> | 6 – 10 sec.<br>3.0 ±0.15 kg/cm <sup>2</sup> .<br>OK | 07 sec.<br>3.0 kg/cm <sup>2</sup> OK |
| 2.   | Insensitivity          | Exhaust BP @ 0.3 kg/cm <sup>2</sup> /min.  | No brake application                                | OK                                   |
| 3.   | Sensitivity            | Exhaust BP @ 0.1 kg/cm <sup>2</sup> /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           | M/S -AXALTA | M/S-EMPRISE                                    | 96/94               | 10.06.19           |
| 2.   | Insulation  |               |             | Satisfactory                                   |                     |                    |

SSE/QC/MCF/RBL





MODERN COACH FACTORY, RAEBARELI

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DOC NO.: MCF/RBL/QMF 8002

REV NO.: 01

DATE: 16.05.2016

## ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/2019-20/700

|     |   |   |   |           |   |   |   |   |   |   |   |   |   |                  |   |   |   |   |   |   |   |   |
|-----|---|---|---|-----------|---|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|
| RLY | N | W | R | Coach No. | 1 | 9 | 6 | 2 | 7 | 4 | / | C | - | DATE OF DISPATCH | 1 | 0 | 0 | 9 | 2 | 0 | 1 | 9 |
|-----|---|---|---|-----------|---|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|

|          |               |      |   |   |   |   |   |   |           |   |   |   |   |   |         |          |
|----------|---------------|------|---|---|---|---|---|---|-----------|---|---|---|---|---|---------|----------|
| DISPATCH | Sr.DME/C&W/JP | Type | L | W | A | C | C | W | Shell No. | 9 | 3 | 1 | 3 | 2 | FUR .NO | L2T-T-69 |
|----------|---------------|------|---|---|---|---|---|---|-----------|---|---|---|---|---|---------|----------|

## 9. DETAIL OF BOGIES:

| ITEMS         | NPP Side               |                        |                        |                        | PP Side                |                        |                        |                        |
|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Bogie No      | 194045                 |                        |                        |                        | 194046                 |                        |                        |                        |
| Bogie Type    | FIAT                   |                        |                        |                        | FIAT                   |                        |                        |                        |
| Frame no.     | WIL- 206               |                        |                        |                        | WIL-231                |                        |                        |                        |
| Bolster no.   | AMITY-158              |                        |                        |                        | SCI-130                |                        |                        |                        |
| Axle No       | 19 R - 0837 RWF        |                        | 19 R - 1059 RWF        |                        | 19 P - 9681 RWF        |                        | 19 P -9443 RWF         |                        |
| Wheel Dia.    | 917.522                | 917.59                 | 917.487                | 917.563                | 917.511                | 917.572                | 917.45                 | 917.526                |
| Wheel Disc No | TZ 04-19<br>37185-90E5 | TZ 02-19<br>24775-9MM2 | TZ 04-19<br>37186-90E5 | TZ 04-19<br>35478-90E6 | TZ 02-19<br>24776-9MM2 | TZ 04-19<br>37187-90E5 | TZ 12-18<br>19799-8WV1 | TZ 12-18<br>14417-8WK0 |
| R.B. Nos.     | 09-18 24290            | 09-18 25940            | 09-18 25970            | 09-18 26449            | 09-18 29891            | 09-18 26443            | 09-18 10012            | 09-18 26464            |
| CT R B Make   | SKF                    |                        | SKF                    |                        | SKF                    |                        | SKF                    |                        |

## 10. SECONDARY SUSPENSION LOAD DEFLECTION VALUES :-

| DESCRIPTION | Bogie NPP side                  |                                 | Bogie PP side                   |                                 |
|-------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|             | Secondary 1                     | Secondary 2                     | Secondary 1                     | Secondary 2                     |
|             | TAYAL & CO.<br>Sr.NO.18-11 1278 | TAYAL & CO.<br>Sr.NO.18-11 1326 | TAYAL & CO.<br>Sr.NO.18-11 1344 | TAYAL & CO.<br>Sr.NO.18-11 1319 |

## 11. TRACEABILITY OF BOGIE ITEMS :-

| S. NO | ITEM                       | MAKE/<br>SUPPLIER | SERIAL NO.   |  |
|-------|----------------------------|-------------------|--|--|
|       |                            |                   | NPP SIDE   | PP SIDE  |
| 1.    | Yaw Damper                 | KBI               | 13209,12131  | 13287,12141  |
| 2.    | Primary outer Spring       | CMFSK             | 03-19 7411-545(1776,1500,1571,1536)  | 03-19 7411-545(1558,1338,1523,1540)  |
| 3.    | Primary Inner Spring       | CMFSK             | 01-19 7143-559(945,813,739,750)  | 01-19 7143-559(747,711,737,976)  |
| 4.    | Primary Damper             | KONI              | 03-19 (00477,03192,02660,02111)  | 03-19 (00203,02126,02588,00739)  |
| 5.    | Secondary Damper           | IAI               | 01-19 (238059,238257)  | 01-19 (238026,238095)  |
| 6.    | Lateral Damper             | GABRIEL           | 11-18 789  | 11-18 794  |
| 7.    | Brake Cylinder             | FAV               | D19(212,378,580,397)   | D19(353,577,377,213)   |
| 8.    | Brake Caliper              | FAV               | E19(252,250,1589,1591)B  | E19(1592,1590,249,251)B  |
| 9.    | Brake Disc                 | KBI               | 24173126 0059-08/19,24173126 0058-08/19<br>24173126 0067-08/19,24173126 0068-08/19 | 24172301 0065-04/19,24172302 0056-04/19<br>24172302 0056-04/19,24173123 0001-06/19 |
| 10.   | Ball Joint Control Arm     | GMT               |  |  |
| 11.   | Lateral Bump Stop          | AR                |  |  |
| 12.   | Traction Centre make       | SARITA            |  |  |
| 13.   | Traction lever make        | TAJ               |  |  |
| 14.   | Ball joint traction lever  | AR                |  |  |
| 15.   | Ball joint traction centre | ARYAN             |  |  |
| 16.   | Leveling Valve             | KNORR             | 16-19 B-3699,16-19 B-3663  | 16-19 B-3821,16-19 B-3583  |
| 17.   | Check Valve                | KNORR             | 06-19 19463  | 06-19 18630  |
| 18.   | Anti roll bar Make         | EMSON             |  |  |
| 19.   | Roll Link make             | SARITA/AR         |  |  |
| 20.   | Fork make                  | EMSON             |  |  |
| 21.   | Control Arm Upper          | CC                | 030619-2,040619-2,270519-2,020619-2  | 230519-2,250519-3,250519-2,070619-2  |
| 22.   | Control Arm Lower          | CC                | RVE,230519-3,1755019-3,270519-3  | 280519-3,275019-3,270519-3,280519-3  |
| 23.   | Phonic Wheel               | KNORR             | K-06-19  | K-06-19  |

Signature of SSE/Bogie/QC





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|-----|---|---|---|---|-----------|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|
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|-----|---|---|---|---|-----------|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|

|             |               |      |   |   |   |   |   |   |           |   |   |   |   |   |         |           |
|-------------|---------------|------|---|---|---|---|---|---|-----------|---|---|---|---|---|---------|-----------|
| DISPATCH TO | Sr.DME/C&W/JP | Type | L | W | A | C | C | W | Shell No. | 9 | 3 | 1 | 3 | 2 | FUR.NO. | L2T(T)-69 |
|-------------|---------------|------|---|---|---|---|---|---|-----------|---|---|---|---|---|---------|-----------|

**12. TRACEABILITY OF FURNISHING ITEMS:**

| S NO | ITEM                             | MAKE/SUPPLIER                                   | SERIAL NO                 |
|------|----------------------------------|---|---------------------------|
| 1.   | Air Brake Module                 | M/S- FAIVELY TRANSPORT TECH.INDIA LTD BADDI(HP) | F19001B                   |
| 2.   | Distribution valve               | M/S- FAIVELY TRANSPORT TECH.INDIA LTD BADDI(HP) | 1905572 B                 |
| 3.   | Pull box                         | M/S- KBI, FARIDABAD                             |                           |
| 4.   | FIBA                             | M/S- KBI, FARIDABAD                             | PP-7254/29<br>NPP-7248/29 |
| 5.   | Foot Step                        | M/s- SUPER SPARKS PVT. LTD. FARIDABAD           |                           |
| 6.   | D-coupling arrangement           | M/S-ELASTOMER LINING WORKS, MUMBAI              |                           |
| 7.   | Floor board                      | M/S- SHRI RAM PNL PANJAB                        |                           |
| 8.   | PVC                              | M/S RESPONSIVE IND.MUMBAI                       |                           |
| 9.   | UIC Vestibule (PPE)              | M/S-SUNCREST IND.KOLKATA                        |                           |
| 10.  | UIC Vestibule (NPPE)             | M/S-SUNCREST IND.KOLKATA                        |                           |
| 11.  | Gangway bridge mounting (PPE)    | M/S- MAHAVEER MATEL WORKS, KAPURTHALA           |                           |
| 12.  | Gangway bridge mounting (NPPE)   | M/S- MAHAVEER MATEL WORKS, KAPURTHALA           |                           |
| 13.  | Body Side Window                 | M/S- SHATABDHI SAFETY GLASS, VADODARA           |                           |
| 14.  | Emergency Window                 | M/S- SHATABDHI SAFETY GLASS, VADODARA           |                           |
| 15.  | Hopper Window                    | M/S- AIKON TECH.SALON H.P                       |                           |
| 16.  | Roof Ceiling                     | M/s-MOBILITY SOLUTION LTD.MOHALI                |                           |
| 17.  | Door way /gang way ceiling       | M/S- AMIRCHAND ENGG.WORKS, JALANDHAR            |                           |
| 18.  | Supply Air Duct                  | M/S- P.D.STEEL PKL                              |                           |
| 19.  | Partition panel                  | M/S- UNIVERSAL METAL TEK, NOIDA                 |                           |
| 20.  | Partition pillar                 | M/S- SIDHU INTERNATIONAL CO. ORG.(SICO) KXH     |                           |
| 21.  | Side Wall panel                  | M/s- HINDUSTAN FIBER GLASS, VADODRA (GUJARAT)   |                           |
| 22.  | AC Trough                        | M/s-FIBRO PLASTICS PVT LTD KOLKATA              |                           |
| 23.  | Body Side Doors                  | M/S- SUKATA INDS, CDG                           |                           |
| 24.  | Compartment Door (PPE)           | M/s- KALSI FAB PVT. LTD. LDH                    |                           |
| 25.  | Compartment Door (NPPE)          | M/s- KALSI FAB PVT. LTD. LDH                    |                           |
| 26.  | Vestibule Door(PPE)              | M/S -KALSI AUTOMATIC DOOR SYSTEM LTD.LDH        |                           |
| 27.  | Vestibule Door(NPPE)             | M/S -KALSI AUTOMATIC DOOR SYSTEM LTD.LDH        |                           |
| 28.  | Bio Tank                         | M/s- VEEPEE ENG.                                |                           |
| 29.  | Auxiliary Water Tank             | M/s- AMIT ENG MOHALI                            |                           |
| 30.  | Under Slung Water Tank ( 2X685L) | M/s- AMIT ENG MOHALI                            |                           |
| 31.  | Under Slung Water Tank (1x450 L) | M/s- AMIT ENG. BADDI                            |                           |
| 32.  | Health Faucet                    | M/s- HINDUSTAN FIBER GLASS, VADODRA             |                           |
| 33.  | Lotah Filler Tap                 | M/s- HINDUSTAN FIBER GLASS, VADODRA             |                           |
| 34.  | Bib cock                         | M/s- JAQUAR PVT.LTD.ALWAR                       |                           |
| 35.  | Lavatory Modules 1               | M/s- HINDUSTAN FIBER GLASS, VADODRA (GUJARAT)   |                           |
| 36.  | Lavatory Doors                   | M/s- HINDUSTAN FIBER GLASS, VADODRA (GUJARAT)   |                           |
| 37.  | Fire Extinguisher                | M/s-SAFETY PLUS ENG.                            | PP-2389,                  |
| 38.  | Fire Extinguisher                | M/S-CAPITAL FIRE COM.                           | NPP-07027                 |
| 39.  | Seat & Berth                     | M/S OVPL MUMBAI                                 |                           |
| 40.  | Light Luggage Rack               | M/S- LUCKY ENTT GUNGAON                         |                           |
| 41.  | Snack Table                      | M/S- INTERNATIONAL TRACTORS LTD. JALNDHAR       |                           |
| 42.  | RFID                             | M/S-TECH SOLUTION PVT LTD                       | Sr.104171,104172          |

SSE/QC/MCF/RBL

गुणवत्ता विभाग  
रेडिओका, रायबरेली (लालगंज)





# Modern Coach Factory Raebareli

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|-----|---|---|---|---|-----------|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|
| RLY | N | W | R | - | Coach No. | 1 | 9 | 6 | 2 | 7 | 4 | / | C | DATE OF DISPATCH | 1 | 0 | - | 0 | 9 | - | 1 | 9 |
|-----|---|---|---|---|-----------|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|

|             |               |      |   |   |   |   |   |   |           |   |   |   |   |   |         |           |
|-------------|---------------|------|---|---|---|---|---|---|-----------|---|---|---|---|---|---------|-----------|
| DISPATCH TO | Sr.DME/C&W/JP | Type | L | W | A | C | C | W | Shell No. | 9 | 3 | 1 | 3 | 2 | FUR.NO. | L2T(T)-69 |
|-------------|---------------|------|---|---|---|---|---|---|-----------|---|---|---|---|---|---------|-----------|

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<br>Frequency | REFERENCE &<br>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 30 months from the date of supply of material whichever is earlier. |

**NOTE:**

1. This warranty covers free supply of parts which wear out and fails within warranty period of normal service.
2. This doesn't covers faults arising out of accident, non standard maintenance practices, abnormal use or mishandling, vandal activity, arson & deficient/pilferage etc.
3. This doesn't cover any consequential liabilities or damages/loss incurred by anybody; furthermore, it shall in no case extend to repayment, return of the coach or replacement of complete coach.
4. Whether a defective part is to be replaced or repaired shall be at the discretion of MCF/RBL.
5. For any complain/ suggestion please Mail at qualityrcfrbl@gmail.com
6. Painting on supply & apply contract :- supply of material and application shall be warranted for a period of three years from date of Application for any manufacturing /Application as per clause -4,para- V of RDSO specification no .M&C/PCN/100/2013-Given below

| S.No | Time period  | Gloss Retention<br>(initial gloss >85<br>unit at 60°) | Colour Retention rating on 0-10 scale<br>(initial rating of painted panels/coach or<br>ISC/RAL shade card shall be taken as 10) | Adherence of paints (with each other and<br>with substrate )Cross-cut tape adhesion<br>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.

|  |  |   |
|--|--|---|
|  |  |   |
| SSE/QC/MCF/RBL<br>वरिष्ठ यांत्रिक अभियन्ता/गुणवत्ता<br>गुणवत्ता विभाग<br>रेडिओका, रायबरेली (लालमज) | SME/QC/MCF/RBL<br>वरिष्ठ यांत्रिक अभियन्ता/गुणवत्ता<br>Senior Mechanical Engineer/Quality<br>आधुनिक रेल डिब्बा कारखाना, रायबरेली<br>Modern Coach Factory Raebareli | Dy.CQM/MCF/RBL<br>उप मुख्य गुणवत्ता प्रबन्धक/शेन<br>Dy. Chief<br>आधुनिक रेल डिब्बा कारखाना, रायबरेली<br>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

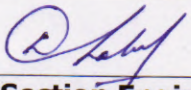
PAGE 1 OF 5

**FOR ELECTRICAL ITEMS**

ROLLING STOCK CERTIFICATE OF LHB/EOG 2T AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES

| ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES |   |                    |                  |          |
|--|---|--------------------|------------------|----------|
| TYPE COACH   |   | LWACCW             | SHELL/COACH NO   | 196274/C |
| RAILWAY  |   | NWR                | DATE OF DESPATCH |          |
| Sr no  | Description of tests  |                    |                  | Remarks  |
| 1.0  | REFERENCE SPECIFICATION : L 446   |                    |                  |          |
| 1.1  | AIR CONDITIONING TEST : ELPS/TP/AC 01.  |                    |                  |          |
| 1.2  | CODE OF PRACTICE OF WIRING : ELPS/SPEC/EOG/AC-01  |                    |                  |          |
| 2.0  | INSULATION RESISTANCE : Setting of insulation monitoring relay at 30K ohms as per TD 111 of M/s LHB.  |                    |                  |          |
|  | Observed status : HEALTHY   |                    |                  |          |
| 3.0  | AIR DELIVERY MEASUREMENT  | OBSERVED VALUE     |                  | OK       |
| 3.1  | Fresh Air   | 19.80 Cub mtr/min  |                  | OK       |
| 3.2  | Return Air  | 72.27 Cub mtr/min  |                  | OK       |
| 3.3  | Exhaust Air   | 7.15 Cub mtr/min   |                  | OK       |
| 3.4  | Conditioned Air   | 172.97 Cub mtr/min |                  | OK       |
| 4.0  | PRE COOLING TEST: Max 01 hr.<br>Time taken to pre cool from 45 deg centigrade to 24/22 deg C during OFF LOAD condition.<br><br>PP Side :23.0°C NPP Side :21.9°C |                    |                  | OK       |
| 5.0  | PULL DOWN TEST: Max 02 hrs.<br>Time taken to pull down from 45 deg C to 24/22 deg C during FULL LOAD condition.<br><br>Not done                                 |                    |                  | --       |

  
 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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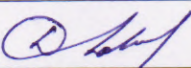
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**FOR ELECTRICAL ITEMS**

ROLLING STOCK CERTIFICATE OF LHB/EOG 2T AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB EOG AC COACHES

| Sr no | Description of test                        | Remarks |
|-------|--|---------|
| 6.0   | HUMIDITY CONTROL                           | OK      |
| 7.0   | PUMP EQUIPMENTS                            | OK      |
| 8.0   | WORKING OF EXHAUST FANS OVER LAVATORIES    | OK      |
| 9.0   | WORKING OF COMPOSITE PANTRY                | OK      |
| 10.0  | BERTH READING LIGHTS                       | OK      |
| 11.0  | COMPARTMENT LIGHT                          | OK      |
| 12.0  | PUBLIC ADDRESSING SYSTEM ( PAS )           | OK      |
| 13.0  | WHEEL SLIDE PROTECTION SYSTEM ( WSP )      | OK      |
| 14.0  | WORKING OF 60KVA TRANSFORMER               | OK      |
| 15.0  | WORKING OF REGULATED BATTERY CHARGER       | OK      |
| 16.0  | WORKING OF EMERGENCY BATTERY CHARGER       | OK      |
| 17.0  | SAFETIES :                                 |         |
| 17.1  | THERMOSTAT :                               | OK      |
| 17.2  | ROTARY 07 SET POINTS (NORMAL CONDITION)    | OK      |
| 17.3  | MID SET POINTS (SENSORS FAILED CONDITIONS) | OK      |
| 17.4  | HYGROSTAT                                  | OK      |
| 17.5  | CONTROL CIRCUIT                            | OK      |
| 17.6  | POWER CIRCUIT                              | OK      |
| 18.0  | REFRIGERANT USED R 407C                    | OK      |

  
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ROLLING STOCK CERTIFICATE OF LHB/EOG 2T AC COACHES

| Sr no | Description   | Drg/Spec no.                                     | Quantity per Coach |
|-------|---|--|--------------------|
| 01.   | Roof Mounted AC package unit for LHB AC coaches<br>Make : <b>AMIT ENGG.</b><br>Sr no of RMPU 1(NPP side) <b>2661 E</b><br>Sr no of RMPU 2(PP side): <b>3651 F</b><br>Sr no of Microprocessor: <b>AE 19.03.315</b> | As per rdso/pe/spes/ac/0061/rev-1/2005           | <b>02</b>          |
| 02.   | Switch board cabinet<br>Make : <b>TRINITRON</b><br>Sr no<br>: <b>18/12/TCS/RBL/3423/0184/0053</b>   | As per spec no .EDTS073,REV-D,AM-6               | <b>01</b>          |
| 03.   | Pump equipment with PLC controller& pump box Make: <b>DR AUTO</b> Sr no PA: <b>2019/07/0036</b><br>Sr no.1: <b>2956</b><br>Sr no.2: <b>2979</b><br>Srno.CPA: <b>2019/07/165-DR AUTO</b>                           | As per spec EDTS 186,Rev-a, Am-2                 | <b>01</b>          |
| 04.   | Double inlet centrifugal blower<br>415V/03Ph /50Hz /120W/450 cummtr/hr discharge for exhausting air from lavatory & switch board cabinet<br>Make : <b>INTEG</b>   | EDTS331, TYPE-1 CORR.-1&2                        | <b>02</b>          |
| 05.   | Passenger area Light(Cabin)<br>Make: <b>DR AUTO</b>   | As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-L  | <b>09</b>          |
| 06.   | Corridor Light with Night light<br>Make: <b>RT VISION</b>   | As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-M  | <b>09</b>          |
| 07.   | Doorway/Gangway light,<br>Make: <b>DR AUTO</b>  | As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-N  | <b>06</b>          |
| 08.   | Emergency light system for EOG type coaches (AEL)Make: <b>DR AUTO</b>   | EDTS 151,Rev -c Am-1 & 2                         | <b>04</b>          |
| 09.   | Lavatory light fitting assly<br>Make: <b>RT VISION</b>  | LW 76001,Alt nil                                 | <b>04</b>          |
| 10.   | Toilet indication (WC) light,<br>Make: <b>DR AUTO</b>   | As per RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-H1 | <b>04</b>          |

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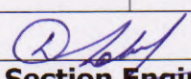
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ROLLING STOCK CERTIFICATE OF LHB/EOG 2T AC COACHES

| Sr no | Description  | Drg/Spec no.  | Quantity per Coach |
|-------|--|---|--------------------|
| 11.   | Reading light for longitudinal berth ( LHS)<br>Make: <b>DR AUTO</b>  | As per<br>RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-F1 | <b>9</b>           |
| 12.   | Reading light for upper berth<br>Make: <b>DR AUTO</b>  | As per<br>RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-F2 | <b>26</b>          |
| 13.   | Reading light for transverse berth (RHS)<br>Make: <b>DR AUTO</b>   | As per<br>RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-F3 | <b>8</b>           |
| 14.   | Reading light for berth transverse ( LHS)<br>Make: <b>DR AUTO</b>  | As per<br>RDSO/PE/SPEC/TL/0091-2016,REV-01, TYPE-F4 | <b>9</b>           |
| 15.   | Passenger alarm coach indication light<br>Make: <b>KAVERI</b>  | LW 76005,Alt-e                                      | <b>02</b>          |
| 16.   | Razor socket for WC 110/240V.<br>Make: <b>SSK</b>  | EDML 047<br>,Rev nil                                | <b>04</b>          |
| 17.   | Terminal strip<br>Make: <b>WAGO</b>  | EDML 033,Rev-c                                      | <b>01</b>          |
| 18.   | Terminal connector<br>Make: <b>WAGO</b>  | EDML 037,Rev`a`                                     | <b>04</b>          |
| 19.   | Single switch 06A/250V/AC ONE WAY<br>,complete with steel plate & cover frame<br>Make: <b>SSK</b>  | EDML 047,Rev_C, Item 1.                             | <b>09</b>          |
| 20.   | Single switch 06A/250V/AC ONE WAY<br>complete with steel plate & cover frame<br>Make: <b>SSK</b>   | EDML 047,Rev_A ,Item 2.                             | <b>09</b>          |
| 21.   | Switch socket combined 5PIN (06A, 250V<br>AC) along with 1A glass fuse fitted powder<br>coated steel plate & cover frame<br>Make: <b>SSK</b> | EDML 0,64,Rev-B,<br>Item -16.                       | <b>09</b>          |
| 22.   | PA system for LHB coaches<br>Make : <b>AHUJA</b>   | EDTS 173 Rev- a Am-1,2&3                            | <b>01 set</b>      |

  
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ROLLING STOCK CERTIFICATE OF LHB/EOG 2T AC COACHES

| Sr no | Description  | Drg/Spec no.  | Quantity per Coach |
|-------|--|---|--------------------|
| 23.   | 70AH/110V,54 Cells,02V each ,maintenance free pure lead acid tin monoblock ,battery set with 09 modules 12V each. , factory pre charged.<br>Make : <b>AMARA RAJA</b> Lug date : <b>07/19</b> | EDTS 129,Rev nil  | <b>01 set</b>      |
| 24.   | Battery box for LHB coaches.<br>Make: <b>HITECH</b>  | As per drgno 1 10113 0 76<br>700 005,Alt C                        | <b>01</b>          |
| 25.   | Battery fuse box +ve<br>Make : <b>AECO</b>   | LW 71001,Alt-F  | <b>01</b>          |
| 26.   | Battery fuse box -ve<br>Make : <b>RADIANT</b>  | LW 71002,Alt-F  | <b>01</b>          |
| 27.   | Regulated battery charger<br>Make : <b>M.B &amp; COMPANY</b><br>Sr no: <b>201907344</b>  | RDSO/PE/SPEC/AC/0183<br>(REV -0 )                                 | <b>01</b>          |
| 28.   | Emergency battery charger<br>Make : <b>M.B &amp; COMPANY</b><br>Sr no: <b>201907290</b>  | EDTS 163,Rev `c` corg.-2&3  | <b>01</b>          |
| 29.   | 5KVA Transformer<br>Make: <b>WAVES</b><br>SL.no : <b>WLDT 5L 19536</b>   | As Per EDTS-366,REV-NIL &<br>CC-71510                             | <b>01</b>          |
| 30.   | Capacitor Bank<br>Make: <b>KONTACT</b><br>SL.no : <b>KT-973</b>  | As per EDML-130 Rev-1,Corr-1                                      | <b>01</b>          |
| 31.   | 60KVA transformer<br>Make : <b>VIMAL</b><br>Sr no : <b>VTC-R-3089 LHB-1217</b>   | As per<br>rdso/pe/spec/ac/0080/rev-0<br>(2007)/Am-1&2/Corr. 1,2&3 | <b>01</b>          |
| 32.   | ZS coupling 400A/750V/03Ph/50hz.<br>Make : <b>PRIME ELECT.</b>   | As per spec No EDTS<br>105,Rev`e` Am-2                            | <b>02 sets</b>     |
| 33.   | Feeder junction boxes.<br>Make : <b>AECO</b>   | EDTS-328 REV-C  | <b>02</b>          |
| 34.   | Wheel set earthing equipment.<br>Make : <b>PRIME ELECT.</b>  | EDTS101,REV-C,AM-1  | <b>02</b>          |
| 35.   | Wheel Slide Protection System (WSP)<br>Make: <b>FAIVELEY</b> Sr no : <b>11/19/394</b>  | M/s : <b>FAIVELEY</b>   | <b>01 set</b>      |
| 36.   | PANTRY EQUIPMENTS :<br>Hot Case, Bottle cooler cum deep freezer<br>Make : <b>NIL</b>   | As per spec no EDTS 139,<br>Rev- E<br>,Sec II.                    | <b>00</b>          |

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|  |   |
| <b>SSE/EL/QC</b><br>वरिष्ठ अनुभाग अभियन्ता | <b>AWM(ELECT.)/MCF/RBL</b><br><b>DY CEE (PLG)/MCF/RBL</b> |

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S.S.E./Elect-OC/M.C.F./LLJ/RBL

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