



# Modern Coach Factory Raebareli

आधुनिक रेल डिब्बा कारखाना, रायबरेली

DOC NO.: MCF/RBL/QMF 8002/PC

REV NO: 01

DATE: 17.04.2018

## ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: MCF/RBL/QC/RSC/ 18-19/992

|     |   |   |   |           |   |   |   |   |   |   |   |   |                  |   |   |   |   |   |   |   |   |
|-----|---|---|---|-----------|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|
| RLY | N | W | R | Coach No. | 1 | 8 | 2 | 9 | 6 | 5 | / | C | DATE OF DISPATCH | 0 | 4 | - | 0 | 1 | - | 1 | 9 |
|-----|---|---|---|-----------|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|

|             |                |      |   |   |   |   |   |   |           |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|----------------|------|---|---|---|---|---|---|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DISPATCH TO | Sr. DME/C&W/JP | Type | L | W | L | R | R | M | Shell No. | 8 | 8 | 0 | 6 | 7 | - | 2 | 0 | 1 | 8 | - | 1 | 9 |
|-------------|----------------|------|---|---|---|---|---|---|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|

1. Railway Board's Order No. : 2017/M(C)/142/2 Dated. - 14-09-2018
2. Tare Weight of Coach : 53.2 Tonnes
3. Carrying Capacity : (a) Seating: NIL (b) Sleeping: NIL (c) Luggage: 3.9 tones

### 4. SHELL LEADING DIMENSIONS:

| S NO | DESCRIPTION  | DIMENSION (MM)               |
|------|--|------------------------------|
| 1.   | Maximum length over body                             | 23700                        |
| 2.   | Maximum width over body                              | 3240                         |
| 3.   | Maximum height from Rail Level                       | 4039                         |
| 4.   | CBC height/Buffer height from Rail level 1105 +0/-10 | 1) 1095 (NPPE) 2) 1097 (PPE) |

### 5. TRACEABILITY OF SHELL ITEMS:

| S NO | ITEM                  | MAKE/SUPPLIER                   | SERIAL NO                    |
|------|-----------------------|---------------------------------|------------------------------|
| 1.   | Under frame           | PP END M/S- CHENAI RADHA ENGG.  | 09                           |
|      | Front Part            | NPP END M/S- CHENAI RADHA ENGG. | 09                           |
|      | Complete              | M/S- CHENAI RADHA ENGG.         | 09                           |
| 2.   | Lav. side wall        | M/S-COMPETEAT ENGG. JUC         | LAV.1 - LAV.2 -              |
|      |                       | M/S-COMPETEAT ENGG. JUC         | LAV.3 - LAV.4 -              |
| 3.   | Side wall             | LH SIDE MCF/RBL                 | 63/01                        |
|      | RH SIDE               | MCF/RBL                         | 63/02                        |
| 4.   | End wall              | PP END M/s- AMIT ENGG, MOHALI   | ---                          |
|      | NPP END               | M/s- OMEG, REWARI               | ---                          |
| 5.   | Roof                  | M/s- TI, CHENNAI                | 01                           |
| 6.   | Centre Buffer Coupler | M/S- SANROK, FARIDABAD          | PP END T-1107 NPP END T-1106 |
| 7.   | Buffers               | M/S- RANEKA INDS.LTD. DHAR      | N.A NPP END 88067            |

### 6. AIR BRAKE TEST REPORT:

| S NO | ITEM                                      | DESCRIPTION  | SPEC. VALUE  | OBSERVED VALUE                       |
|------|---|--|--|--------------------------------------|
| 1.   | Full brake application                    | Reduce pressure of BP from 5.0 to 3.4 kg/cm <sup>2</sup> .<br>Max. pressure in BC<br>All Brake are applied | 6 - 10 sec.<br>3.0 ±0.15 kg/cm <sup>2</sup> .<br>OK                        | 06 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@ 0.1kg/cm <sup>2</sup> /Sec, after 06 Sec.  | Brake must apply   | OK                                   |
| 4.   | Handbrake(Parking brake)for generator car | 1.Apply hand brake<br>2.Release hand brake   | 1.Hand Bk. indicator should be red<br>2.Hand Bk. indicator should be green | OK<br>OK                             |

### 7. FIRE TESTING:

| S NO | ITEM          | DESCRIPTION     | SPEC. VALUE   | OBSERVED VALUE |
|------|---------------|-----------------|---|----------------|
| 1    | generator car | Smoke detection | 1.controller should display smoke in zone 1,2<br>2.strobe light & hooter should activate      | OK             |
|      |               | Heat detection  | 1.controller should display smoke/heat in zone 1,2<br>2 strobe light & hooter should activate | OK             |

### 8. PAINTING DETAILS:

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

*Signature*  
SSE/QC/MCF/RBL  
गुणवत्ता विभाग  
रेडिडका, रायबरेली (लालगंज)





MODERN COACH FACTORY, RAEBARELI

आधुनिक रेल डिब्बा कारखाना, रायबरेली

DOC NO.: MCF/RBL/QMF 8002

REV NO.: 01

DATE: 16.05.2016

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|-----------|---|---|---|------|---|---|---|---|---|------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Coach No. | 1 | 8 | 2 | 9    | 6 | 5 | / | C | - | DATE OF DISPATCH | 0         | 4 | . | 0 | 1 | . | 1 | 9 |   |   |   |   |   |   |
| RLY       | N | W | R | Type | L | W | L | R | R | M                | Shell No. | 8 | 8 | 0 | 6 | 7 | - | - | - | - | - | - | - | - |

#### 8. DETAIL OF BOGIES :

| ITEMS         | NPP Side              |                       |                       |                       | PP Side               |                       |                       |                       |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Bogie No      | 182024                |                       |                       |                       | 182023                |                       |                       |                       |
| Bogie Type    | FIAT                  |                       |                       |                       | FIAT                  |                       |                       |                       |
| Frame no.     | MCF/RBL-1138          |                       |                       |                       | MCF/RBL-1159          |                       |                       |                       |
| Bolster no.   | Amit-300              |                       |                       |                       | AMIT-299              |                       |                       |                       |
| Axle No       | 18G-9230 RWF          |                       | 18G-9269 RWF          |                       | 18G-1933 RWF          |                       | 18G-9216 RWF          |                       |
| Wheel Dia     | 917.495               | 917.557               | 917.503               | 917.557               | 917.6                 | 917.598               | 917.483               | 917.524               |
| Wheel Disc No | TZ05-18<br>16449-8MT2 | TZ07-18<br>41356-8RR3 | TZ04-18<br>12961-8MQ4 | TZ05-18<br>16448-8MW3 | TZ07-17<br>42221-8RR3 | TZ05-18<br>19804-8PQ2 | TZ05-18<br>22630-8QG6 | TZ05-18<br>23183-8PR6 |
| R.B. Nos.     | 05-18 40963           | 05-18 13864           | 07-18 42065           | 05-18 13811           | 05-18 26940           | 07-18 41231           | 06-18 16564           | 05-18 40894           |
| CT R B Make   | SKF                   |                       | SKF                   |                       | SKF                   |                       | SKF                   |                       |

#### 9. SECONDARY SUSPENSION LOAD DEFLECTION VALUES

| DESCRIPTION                   | Bogie NPP side              |                             |                             |                            | Bogie PP side            |                                |                          |                                |
|-------------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------------|--------------------------|--------------------------------|--------------------------|--------------------------------|
|                               | Secondary 1                 |                             | Secondary 2                 |                            | Secondary 1              |                                | Secondary 2              |                                |
|                               | Outer                       | Inner                       | Outer                       | Inner                      | Outer                    | Inner                          | Outer                    | Inner                          |
| Make & Nos.                   | CMRSK19-18-<br>8835-469-136 | CMFSK06-18-<br>8837-S07-738 | CMFSK19-18-<br>8835-469-113 | CMFSK06-18-<br>8837-S07-12 | CMGBD05-18-<br>146-54-34 | CMRSK07-16-F15-<br>N99-15Y-220 | CMGBD05-18-<br>146-54-31 | CMRSK01-16-F15-<br>N99-15Y-274 |
| Compressed Ht. at Tested Load | 512                         | 470                         | 512                         | 470                        | 512                      | 467                            | 512                      | 468                            |
| Alignment deviation (mm)      | 8                           | 12                          | 10                          | 12                         | 11                       | 23                             | 9                        | 23                             |

#### 10. TRACEABILITY OF BOGIE ITEMS:

| S. NO | ITEM                       | MAKE/SUPPLIER | SERIAL NO.                                  |  |
|-------|----------------------------|---------------|---|--|
|       |                            |               | NPP SIDE                                    | PP SIDE                                      |
| 1.    | Yaw Damper                 | GEREP         | 1466,1453                                   | 1446,1616                                    |
| 2.    | Primary outer Spring       | CVFSK         | 01-18 7142(250-300,350-262,350-235,350-190) | 01-18 7142(350-5,350-179,350-192,350-90)     |
| 3.    | Primary Inner Spring       | CMRSK         | 11-18-04Y(5060,4800,4663,4468)              | 10-18-04Y(4380,4401,4450,4471)               |
| 4.    | Primary Damper             | KNORR         | 05-18 (21067,21063,21028,21062)             | 05-18 (21039,21036,21031,21058)              |
| 5.    | Secondary Damper           | KNORR         | 07-18(5661,5660)                            | 05-18 (4532,5653)                            |
| 6.    | Lateral Damper             | KNORR         | 06-18 4154                                  | 06-18 4168                                   |
| 7.    | Brake Cylinder             | FAV           | F18-129,G18-004,F18(043,098)                | F18-088,G18-027,G18-036,F18-122              |
| 8.    | Brake Caliper              | FAV           | H18(052,050,094,096)                        | H(095,093,073,075)B                          |
| 9.    | Brake Disc                 | FAV           | 11-18(5324,5322,5607,5606)D133561-300       | 12-18(6645,6652),11-18(5317,5318)D133561-300 |
| 10.   | Ball Joint Control Arm     | AR            |   |  |
| 11.   | Lateral Bump Stop          | AR/BONY       |   |  |
| 12.   | Traction Centre make       | SARITA        |   |  |
| 13.   | Traction lever make        | JI/SARITA     |   |  |
| 14.   | Ball joint traction lever  | PPI/UK        |   |  |
| 15.   | Ball joint traction centre | AR            |   |  |
| 16.   | Secondary Rubber Pad       | DUREL         |   |  |
| 17.   | Rubber Spring              | AR            |   |  |
| 18.   | Anti roll bar make         | EMSON         |   |  |
| 19.   | Roll Link make             | SARITA/AR     |   |  |
| 20.   | Fork make                  | ASL           |   |  |
| 21.   | Control Arm Upper          | RVE           | 031118-2,031118-2,031118-2,RVE              | 031118-3,051118-2,021118-2,031118-1          |
| 22.   | Control Arm Lower          | RVE           | 290918-3,081018-1,081018-1,031118-3         | 280918-3,081018-4,271018-1,280918-3          |

*Rgandey*

Signature of SSE/Bogie/QC





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|-----|---|---|---|-----------|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|
| RLY | N | W | R | Coach No. | 1 | 8 | 2 | 9 | 6 | 5 | / | C | DATE OF DISPATCH | 0 | 4 | - | 0 | 1 | - | 1 | 9 |
|-----|---|---|---|-----------|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|---|

|             |                |      |   |   |   |   |   |   |           |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|----------------|------|---|---|---|---|---|---|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DISPATCH TO | Sr. DME/C&W/JP | Type | L | W | L | R | R | M | Shell No. | 8 | 8 | 0 | 6 | 7 | - | 2 | 0 | 1 | 8 | - | 1 | 9 |
|-------------|----------------|------|---|---|---|---|---|---|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|

### 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)               | G 18004 B  |
| 2.   | Distribution Valve                            | M/S- FAIVELY TRANSPORT TECH.INDIA LTD BADDI(HP)               | 18075593 B |
| 3.   | Hand Brake Equipment                          | M/S- PALSTO POWER P.B.  |            |
| 4.   | Foot Step                                     | M/S- SUPER SPARK PVT.LTD. FARIDABAD                           |            |
| 5.   | Floor Board                                   | M/S- TWPL, MUMBAI   |            |
| 6.   | PVC   | M/S- RESPONSIV POLYFILM, NDLS                                 |            |
| 7.   | UIC Vestibule (NPPE)                          | M/S-SUNCREST IND.KOLKATA                                      |            |
| 8.   | Gangway Bridge Mounting (NPPE)                | M/S- COMPETANT ENG. JUC                                       |            |
| 9.   | AL Chequer Plate/Sheet                        | M/S- HANSPAL COACH PRODUCTS, KXH                              |            |
| 10.  | Automatic Fire Detection & Suppression System | M/S- SANROK, FARIDABAD  |            |
| 11.  | Body Side Window                              | M/S- BIRKAN ENGG.PVT.LTD.GAZIABAD                             |            |
| 12.  | Lavatory/Hopper Window                        | M/S- BIRKAN ENGG.PVT.LTD.GAZIABAD                             |            |
| 13.  | Roof Ceiling                                  | M/S-GANDHI SAFE & ALLIED, JALANDHAR (GUARD ROOM) , (CREW ROM) |            |
| 14.  | Generator Room Ceiling                        | M/S- RAIL TECH PVT.LTD. KXH                                   |            |
| 15.  | RMPU  | M/s- LLOYAD, HP   |            |
| 16.  | AC Trough                                     | M/S- HINDUSTAN FIBRE GLASS WORKS, VADODARA                    |            |
| 17.  | Luggage Sliding Door                          | M/s- GURU NANAK IND. PVT.LTD. PB                              |            |
| 18.  | Hatch Door                                    | M/s- RAIL TECH PVT.LTD. KXH                                   |            |
| 19.  | Body Side Doors                               | M/S- JVR INDUSTRIES ,LDH                                      |            |
| 20.  | Vestibule Door(NPPE)                          | M/S- HANSPAL, KXH   |            |
| 21.  | Crew/Gen. Room Door                           | M/S- JBM INDUSTRIES, FARIDABAD                                |            |
| 22.  | Crew/Guard Room Door                          | M/S- KALSI, LDH   |            |
| 23.  | Bio Tank (01 No Lav.)                         | M/S- AMIT ENGG. MOHALI  |            |
| 24.  | Auxiliary Water Tank(1x30l)                   | M/S- AMIT ENGG. MOHALI  |            |
| 25.  | Under Slung Water Tank (1x450 L)              | M/S- AMIT ENGG. BADDI   |            |
| 26.  | Fuel Tank (2x1500 L)                          | M/S- SHIVALIC FASTNERS PVT.LTD. MOHALI                        |            |
| 27.  | Flexible Faucet                               | M/S- HINDUSTAN FIBRE GLASS WORKS, VADODARA                    |            |
| 28.  | Lotah Filler Tap                              | M/S- HINDUSTAN FIBRE GLASS WORKS, VADODARA                    |            |
| 29.  | Bib Cock                                      | M/S- AGMECO INDIA LTD.  |            |
| 30.  | Composite Modular Toilet                      | M/S- HINDUSTAN FIBRE GLASS WORKS, VADODARA                    |            |
| 31.  | Lavatory Doors                                | M/S- KALSI, LDH   |            |
| 32.  | Seat & Berth                                  | M/S- ORIENTAL VENEER PRODUCTS, MUMBAI                         |            |
| 33.  | Luggage Rack                                  | M/s- RAIL TECH, KXH   |            |
| 34.  | Folding Table                                 | M/S- TECHNO IND. ALD  |            |

*Reema*  
SSE/QC/MCF/RBL  
गुणवत्ता विभाग  
रेलवे कारखाना, रायबरेली (लालगंज)





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|----------------|-------------------|---|------|-----------|---|---|---|---|---|-----------|---|---|------------------|---|---|---|---|---|---|---|---|---|---|
| RLY            | N                 | W | R    | Coach No. | 1 | 8 | 2 | 9 | 6 | 5         | / | C | DATE OF DISPATCH | 0 | 4 | - | 0 | 1 | - | 1 | 9 |   |   |
| DISPATCH<br>TO | Sr.<br>DME/C&W/IP |   | Type | L         | W | L | R | R | M | Shell No. | 8 | 8 | 0                | 6 | 7 | - | 2 | 0 | 1 | 8 | - | 1 | 9 |

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, 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:


- 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 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 (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.

|  |  |  |
|--|--|--|
|  |  |  |
| SSE/QC/MCF/RBL                             | AME/QC/MCF/RBL   | Dy. QC/MCF/RBL   |
| गुणवत्ता विभाग<br>रेलवे, रायबरेली (लालयंज) | आधुनिक रेल डिब्बा कारखाना, रायबरेली<br>Modern Coach Factory, Raebareli | उप मुख्य गुणवत्ता अधिकारी<br>Dy. Chief Quality Manager<br>आधुनिक रेल डिब्बा कारखाना, रायबरेली<br>Modern Coach Factory, Raebareli |

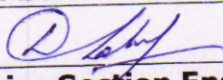


|   |   |                           |
|---|---|---------------------------|
|  | <b>Modern Coach Factory Raebareli</b><br><b>आधुनिक रेल डिब्बा कारखाना, रायबरेली</b> | DOC NO.: MCF/RBL/QEF/8001 |
|   |   | REV NO: 00                |
|   |   | DATE: 11.09.2017          |

**FOR ELECTRICAL ITEMS**

ROLLING STOCK CERTIFICATE OF LHB POWER CAR  
ELECTRICAL TEST CERTIFICATE FOR LHB POWER CAR

| ROLLING STOCK CERTIFICATE OF LHB POWER CAR    |  |                   |                  |          |
|---|--|-------------------|------------------|----------|
| ELECTRICAL TEST CERTIFICATE FOR LHB POWER CAR |  |                   |                  |          |
| TYPE COACH                                    |  | LWRRM             | SHELL/COACH NO   | 182965/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  | 12.28 Cub mtr/min |                  | OK       |
| 3.2   | Return Air   | 23.13 Cub mtr/min |                  | OK       |
| 3.3   | Exhaust Air  | NIL Cub mtr/min   |                  | OK       |
| 3.4   | Conditioned Air  | 54.49Cub mtr/min  |                  | OK       |
| 4.0   | <b>PRE COOLING TEST: Max 01 hr.</b><br>Time taken to pre cool from 45 deg centigrade to 24/22 deg C during OFF LOAD condition<br><br><b>Not done due to Ambient temp. below 22°C</b> |                   |                  | OK       |
| 5.0   | <b>PULL DOWN TEST: Max 02 hrs.</b><br>Time taken to pull down from 45 deg C to 24/22 deg C during FULL LOAD condition.<br><br><b>Not done due to Ambient temp. below 22°C</b>        |                   |                  | OK       |

  
**Senior Section Engineer**  
**Quality control / Electrical**  
**Modern Coach Factory Raebareli**





Modern Coach Factory Raebareli  
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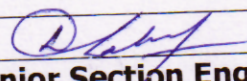
PAGE 2 OF 6

**FOR ELECTRICAL ITEMS**

ROLLING STOCK CERTIFICATE OF LHB POWER CAR  
ELECTRICAL TEST CERTIFICATE FOR LHB POWER CAR

| Sr no | Description of test                     | Remarks |
|-------|---|---------|
| 6.0   | HUMIDITY CONTROL                        | OK      |
| 7.0   | PUMP EQUIPMENTS                         | OK      |
| 8.0   | WORKING OF EXHAUST FAN OVER             | OK      |
| 10.0  | LIGHT                                   | OK      |
| 11.0  | PUBLIC ADDRESSING SYSTEM ( PAS )        | OK      |
| 12.0  | WHEEL SLIDE PROTECTION SYSTEM ( WSP )   | OK      |
| 13.0  | WORKING OF 60KVA TRANSFORMERS           | OK      |
| 15.0  | WORKING OF EMERGENCY BATTERY CHARGERS   | OK      |
| 16.0  | SAFETIES :                              |         |
| 16.1  | THERMOSTAT :                            | OK      |
| 16.2  | ROTARY 07 SET POINTS (NORMAL CONDITION) | OK      |
| 16.3  | HYGROSTAT                               | OK      |
| 16.4  | CONTROL CIRCUIT                         | OK      |
| 16.5  | POWER CIRCUIT                           | OK      |
| 16.6  | ALTERNATER EARTH LEAKAGE RELAY          | OK      |
| 16.7  | FEEDER EARTH LEAKAGE RELAY              | OK      |
| 16.8  | UNDER VOLTAGE RELAY                     | OK      |
| 16.9  | OVER VOLTAGE RELAY                      | OK      |
| 16.10 | BUS COUPLAR                             | OK      |
| 16.11 | FEEDER CONTACTOR                        | OK      |
| 16.12 | SMOKE TEST                              | OK      |
| 17.0  | REFRIGERANT USED                        | OK      |

**R 407C**

  
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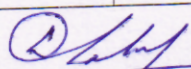
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ROLLING STOCK CERTIFICATE OF LHB/ POWER CAR

| Sr no | Description   | Drg/Spec no.                    | Quantity per Coach |
|-------|---|---------------------------------|--------------------|
| 01.   | Roof mounted AC package unit for LHB AC coaches Make : <b>LEEL</b><br>Sr no of RMPU (PP side): <b>18.12.1660</b><br>Sr no of Microprocessor: <b>18.12.003 -A PAUL</b>                             | RDSO/pe/spes/ac/0061/rev-1/2005 | <b>02</b>          |
| 02.   | Power and Control Panel for LHB Power car, Make: <b>TRINITRON</b> Sr no : <b>18/06/TCS/RBL/3414/LHB/0013</b>  | EDTS-103 ,REV-c                 | <b>01</b>          |
| 04.   | Switch board cabinet<br>Make : <b>ABROL</b><br>Sr no : <b>46-11/2017</b>  | EDTS 104, REV-a                 | <b>01</b>          |
| 05.   | Pump equipment with PLC controller & pump box Make: <b>DR AUTO</b><br>Sr no PA- <b>2018/10/50</b><br>Sr no.1- <b>18090388</b><br>Sr no.2- <b>18090410</b><br>Sr no.CPA- <b>7439/08/2018-KALSI</b> | EDTS 186,Rev-a, Am- 2           | <b>01</b>          |
| 06.   | Lavatory light fitting assly<br>Make : <b>RT VISION</b>   | LW 76001,Alt nil                | <b>01</b>          |
| 07.   | Passenger alarm coach indication light<br>Make : <b>DR AUTO</b>   | LW 76005,Alt-e                  | <b>02</b>          |
| 08.   | Razor socket for WC 110/240V<br>Make : <b>SSK</b>   | EDML 047 ,Rev nil               | <b>01</b>          |
| 09.   | Terminal strip Make : <b>WAGO</b>   | EDML 034,Rev-a                  | <b>01</b>          |
| 10.   | Terminal connector Make : <b>WAGO</b>   | EDML 037,Rev`a`                 | <b>01</b>          |
| 11.   | Single switch 06A/250V/AC ONE WAY ,complete with steel plate & cover frame<br>Make: <b>SSK</b>  | EDML 047,Rev- C, Item 1.        | <b>02</b>          |
| 12.   | PA system for LHB coaches<br>Make : <b>AHUJA</b>  | EDTS 173,TYPE -II               | <b>01 set</b>      |
| 13.   | 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>HBL</b> Lug date : <b>11/18</b>             | EDTS 129,Rev nil                | <b>01 set</b>      |

  
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| Sr no | Description  | Drg/Spec no.  | Quantity per Coach |
|-------|--|---|--------------------|
| 14.   | SET OF BATTERY FOR DA (A & B)<br>(A) Make: <b>MICROTEX</b> Lug date: <b>12/17</b><br>(B) Make: <b>MICROTEX</b> Lug date: <b>12/17</b>  |   | <b>02 sets</b>     |
| 15.   | Battery box for LHB coaches.<br>MAKE- <b>ANKUR ENGG.</b>   | 1 10113.0.76.700.005 w/o<br>item 5,22 ,23 ,26 & 27.ALT<br>C                 | <b>01</b>          |
| 16.   | Battery fuse box +ve<br>Make : <b>AECO</b>   | LW 71001,Alt-F  | <b>01</b>          |
| 17.   | Battery fuse box -ve<br>Make : <b>NEC</b>  | LW 71002,Alt-F  | <b>01</b>          |
| 18.   | 60KVA TFR<br>Make- <b>VIMAL</b><br>Sr no:1. <b>VTC-3089-LHB-6244</b><br>Make- <b>VIMAL</b><br>Sr no:2. <b>VTC-3089-LHB-6637</b><br>Make- <b>VIMAL</b><br>Sr no:3. <b>VTC-3089-LHB-6570</b> | EDTS 076, Rev-0.<br>1.for panel<br>2.for Rad. Motor A<br>3.for Rad. Motor B | <b>03</b>          |
| 19.   | Capacitor Bank<br>Make: <b>S.INTERNATIONAL</b><br>SL.no <b>408-04/18</b>   | EDML-130 Rev-1,Corr-1   | <b>01</b>          |
| 20.   | Emergency Battery Charger<br>Make- <b>BHASIN</b> Sr no:1. <b>10181789</b><br>Make- <b>BHASIN</b> Sr no:2. <b>10181814</b>  | EDTS-163 REV-C, corg-2&3  | <b>02</b>          |
| 21.   | Wheel set earthling equipment.<br>Make : <b>DARSHAN INTERPRISES.</b>   | EDTS101,REV-C,AM-1  | <b>02</b>          |
| 22.   | Wheel Slide Protection System (WSP)<br>Make- <b>FAIVELEY</b><br>Sr no : <b>17/18/724</b>   | MDTS 077 REV-2  | <b>01 set</b>      |
| 23.   | 500KVA/750V/03Ph DIESEL<br>ALTERNATOR set, complete with Power &<br>Control panel.   | EDTS 102, Rev `c`   | <b>02</b>          |
| 23.a1 | Sr no of Alternator "A"<br>Make- <b>GREAVES</b><br>Sr No- <b>3309121808422</b>   | EDTS 102, Rev `c`   | <b>01</b>          |
| 23.a2 | Sr no of Diesel Engine "A"<br>Make- <b>GREAVES</b><br>Sr no- <b>1309121808422</b>  | EDTS 102, Rev `c`   | <b>01</b>          |

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ROLLING STOCK CERTIFICATE OF LHB/POWER CAR

| Sr no     | Description   | Drg/Spec no.     | Quantity per Coach |
|-----------|---|------------------|--------------------|
| 23.b<br>1 | Sr no of Alternator "B"<br>Make- <b>GREAVES</b><br>Sr No- <b>3309121808429</b>  | EDTS 102, Rev`c' | <b>01</b>          |
| 23.b<br>2 | Sr no of Diesel Engine "B"<br>Make- <b>GREAVES</b><br>Sr No- <b>1309121808429</b>   | EDTS 102,        | <b>01</b>          |
| 24.       | Control Panel for ventilator Fan motor for Diesel Engine "A"<br>Make- <b>ISG</b><br>Sr no- <b>CPVF-MCF-18-05-0006</b>                                     | EDTS 110,REV-NIL | <b>01</b>          |
| 25.       | Ventilator Fan Motor for Diesel Engine "A"<br>1.Make: <b>GREAVES</b><br>Sl no: <b>RDAM 8650</b><br>2.Make: <b>GREAVES</b><br>Sl no: <b>REAM 8241</b>      | EDTS 110,Rev nil | <b>01</b>          |
| 26.       | Radiator Fan Motor for Diesel Engine -"A"<br>Make: <b>GREAVES</b><br>SL no: <b>RHG 95731</b>  | EDTS 104, Rev`a' | <b>01</b>          |
| 27.       | Control Panel for Radiator Fan motor for Diesel Engine "A"<br>Make- <b>NEC</b><br>Sr no- <b>2018071990</b>  | EDTS-104,REV-A   | <b>01</b>          |
| 28.       | Ventilator Fan Motor for Diesel Engine "B"<br>1.Make: <b>GREAVES</b> Sl no: <b>RDAM8708</b><br>2.Make: <b>KIRLOSKAR</b><br>2.Sl no: <b>DRT 41/XV-1514</b> | EDTS 110,Rev nil | <b>01</b>          |
| 29.       | Control Panel for ventilator Fan motor for Diesel Engine "B"<br>Make- <b>RSI SWICHGEAR LTD</b><br>Sr no- <b>447763/02B</b>                                | EDTS 110,REV-NIL | <b>01</b>          |

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ROLLING STOCK CERTIFICATE OF LHB/POWER CAR

| Sr no | Description   | Drg/Spec no.   | Quantity per Coach |
|-------|---|--|--------------------|
| 30.   | Radiator Fan Motor for Diesel Engine -"B"<br>Make: <b>GREAVES</b><br>Sr no- <b>RHG 95721</b>                                      | EDTS 104, Rev`a'                                     | <b>01</b>          |
| 31.   | Control Panel for Radiator Fan motor for Diesel Engine "B"<br>Make- <b>NEC</b><br>Sr no- <b>2018071987</b>                        | EDTS-104,REV-A                                       | <b>01</b>          |
| 32..  | Starter Battery Charging Control Panel -A & B<br>Make : <b>INDORAIL</b><br>Sr no: <b>2018050095</b>                               | EDTS 116,Rev nil                                     | <b>01</b>          |
| 33.   | Feeder Junction box.<br>Make: <b>AECO</b>   | EDML 020, Rev`a'.                                    | <b>01 set</b>      |
| 34.   | Single Inlet Radial Blower, 415V/03Ph/185W/ 1045Cub mtr/hr discharge from S1 & S2 & Lavatory.<br>Make- <b>INTEG</b>               | EDTS-331, TYPE-2                                     | <b>01</b>          |
| 35.   | Lights<br>Make : <b>DR AUTO</b>   | RDSO/PE/SPEC/TL/0091-2016, REV-01, TYPE-N & LW 76099 | <b>20</b>          |
| 36.   | Smoke Detector Unit.<br>Make: <b>AGANI</b><br>Sr no: <b>2155</b>  | EDTS 087,Rev`a',Type II                              | <b>01</b>          |
| 37.   | Provision of Tail light switch 2P/16A/ SG16, mounted in ABC plastic enclosure with round padlock, 90DEG, ON/OFF. Make: <b>SSK</b> | As per Cat no. SG 16                                 | <b>02</b>          |
| 38.   | ZS coupling 400A , 750V ,03Ph,50Hz.<br>Make<br>1.(NPP): <b>MAA LAXMI INDUSTRIES.</b><br>2.(PP): <b>MAA LAXMI INDUSTRIES.</b>      | EDTS 105, Rev`c'.                                    | <b>01 set</b>      |
| 39.   | Connector for External supply socket.<br>Make: <b>MV</b>  | EDML 013, Rev nil.                                   | <b>02</b>          |

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