**Amendment No. 4 (19th December 2017)**

**To**

**AIS-007 (Rev.5): 2014 - Information on Technical Specifications**

**to be submitted by the Vehicle Manufacturer.**

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| **1.0 Page 1/227,**  Add following List of tables. | |
|  | **List of tables** |

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|  | Table 30A | | Details of Location of Motor Caravan Identification Number and Code for Month and Year of Manufacture | |
|  |  | | | |
| 1. **Page 2/227, Clause 1.0** | | | |
|  | Add following paragraph at the end:  Subsequently this standard has been amended for covering Technical specifications of Quadricycle (category L7) under Table 1. | | | |
| **3.0** | **Page 2/227,** | | | |
|  | Add following new clauses after clause 2.3: | | | |
|  | **2.4** | **Application for Type approval of Automotive Trailer** | | |
|  |  | a) | List of provisions for which compliance is sought to be established. | |
|  |  | b) | The Technical Specifications of the Automotive Trailer are as per formats given in Table-24 and 24 A. | |
|  |  | c) | The technical details of the engine fitted to Automotive Trailer shall be as per Table -4B, Table-4C as applicable. | |
|  |  | d) | Copies of certificates or test reports of compliance to various provisions, which may have already been obtained from authorized Testing Agencies. | | |
|  |  | e) | Copies of previous certificates or test reports for other models, if any, which can be used for establishing compliance of the model to be type approved, with a note explaining the details. | | |
|  |  | f) | Publications available (Owner’s Manual and service manual). | | |
|  |  |  |  | | |
|  | **2.5** | **Application for Type approval of Truck Body.** | | | |
|  |  | a) | List of provisions for which compliance is sought to be established. | | |
|  |  | b) | The Technical Specifications of the Truck Body are as per formats given in Table-27. | | |
|  |  | c) | The technical details of the engine fitted to Automotive Trailer shall be as per Table -4B, Table-4C as applicable. | | |
|  |  | d) | Copies of certificates or test reports of compliance to various provisions, which may have already been obtained from authorized Testing Agencies. | | |
|  |  | e) | Copies of previous certificates or test reports for other models, if any, which can be used for establishing compliance of the model to be type approved, with a note explaining the details. | | |
|  |  | f) | Publications available (Owner’s Manual and service manual). | | |
|  |  |  |  | | |
|  | **2.6** | **Application for Type approval of Modular Hydraulic Trailer.** | | | |
|  |  | a) | List of provisions for which compliance is sought to be established. | | |
|  |  | b) | The Technical Specifications of the Modular Hydraulic Trailer are as per formats given in Table­ 28 and 28A. | | |
|  |  | c) | The technical details of the engine fitted to Automotive Trailer shall be as per Table -4D. | | |
|  |  | d) | Copies of certificates or test reports of compliance to various provisions, which may have already been obtained from authorized Testing Agencies. | | |
|  |  | e) | Copies of previous certificates or test reports for other models, if any, which can be used for establishing compliance of the model to be type approved, with a note explaining the details. | | |
|  |  | f) | Publications available (Owner’s Manual and service manual). | | |

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|  | **2.7** | **Application for Type approval of Road Ambulances.** | |
|  |  | a) | List of provisions for which compliance is sought to be established. |
|  |  | b) | The Technical Specifications of the Road Ambulance are as per formats given in Table­ 29 and Table 29A as applicable. |
|  |  | c) | Technical details of the engine fitted to Road Ambulance shall be as per Table -4, 4A, 4B, 4C as the case may be. |
|  |  | d) | Copies of certificates or test reports of compliance to various provisions, which may have already been obtained from authorized Testing Agencies. |
|  |  | e) | Copies of previous certificates or test reports for other models, if any, which can be used for establishing compliance of the model to be type approved, with a note explaining the details. |
|  |  | f) | Publications available (Owner’s Manual and service manual). |
|  | **2.8** | **Application for Type approval of Motor Caravan.** | |
|  |  | a) | List of provisions for which compliance is sought to be established. |
|  |  | b) | The Technical Specifications of the Motor Caravan are as per formats given in Table­ 30 and 30A. |
|  |  | c) | The technical details of the engine fitted to Automotive Trailer shall be as per Table -4B, Table-4C as applicable. |
|  |  | d) | Copies of certificates or test reports of compliance to various provisions, which may have already been obtained from authorized Testing Agencies. |
|  |  | e) | Copies of previous certificates or test reports for other models, if any, which can be used for establishing compliance of the model to be type approved, with a note explaining the details. |
|  |  | f) | Publications available (Owner’s Manual and service manual). |

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| **4.0** | **Page No 4/227, Clause 4.1** |
|  | Substitute the following text for the existing text: |
|  | 4.1 **Motor vehicles:** The format for detailed technical specifications for two and three wheelers and quadricycles is given in Table-1. The formats for detailed specifications for four wheelers and above are given in Tables-2 to 6. In case the application is being made for establishing conformity against specific provision, the details specified in the standard/document for that provision shall be submitted. This may be in the format specified in the applicable standard or a combination of Tables -2 and Tables - 3 to 6, as appropriate by which the information needed is complete. |
| **5.0** | **Page 7/227, Table 1 and Table 1A – Title:** |
|  | Substitute the following title for the existing title: |
|  | **DETAILED TECHNICAL SPECIFICATIONS**  **INFORMATION RELATING JOINTLY TO L1, L2, L5 AND L7 CATEGORY VEHICLES (2 Wheelers, 3 Wheelers and Quadricycles )** |
| **6.0** | **Page 21/227, Table 1 Clause 8.1 – List of all devices (Enclose annexure, if required):** |
|  | Substitute the following for row 7 in the table as below: |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Direction indicator lights, front, rear and side (as applicable) | |  |  |  |  |  |  |
|  |  | | | | | | | |
| **7.0** | **Page 21/227, Table 1 Clause 8.2** | | | | | | | |
|  | Substitute following text for existing text: | | | | | | | |
|  | 8.2 | Diagram showing the location of the lighting and light-signaling devices on vehicle with relevant dimensions (see AIS-009 for 2 &3 wheelers and AIS-008 for quadricycles ) | | | |  | | |
| **8.0** | **Page 24/227, Table 1 Clause 11.1.3** | | | | |  | | |
|  | Substitute following text for existing text: | | | | |  | | |
|  | 11.1.3 | Nos. of Handholds for passenger(s) in case of 3 Wheeler and quadricycle. | | | |  | | |

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| **9.0** | **Page 26/227, Table 1, after clause 2.3.4.1, insert following new clauses.** |
|  | **INFORMATION RELATING SOLELY TO L7 CATEGORY VEHICLES** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **1.0** | **Weights** |  |  |
|  | 1.1. | Maximum payload declared by manufacturer |  |  |
|  | **2.0** | **Equipments** |  |  |
|  | 2.1 | Windscreen and other glazing |  |  |
|  | 2.1.1. | Windscreen |  |  |
|  | 2.1.1.1 | Make and Materials used |  |  |
|  | 2.1.1.2 | Type Approval Number/E-marking / BIS license number: |  |  |
|  | 2.1.2 | Other glazing |  |  |
|  | 2.1.2.1 | Make and Materials used |  |  |
|  | 2.1.2.2 | Type Approval Number/E-marking / BIS license number: |  |  |
|  | 2.2 | Windscreen wiper(s) |  |  |
|  | 2.2.1 | No. of wipers |  |  |
|  | 2.3 | Wiper motor |  |  |
|  | 2.3.1 | Make |  |  |
|  | 2.3.2 | Type |  |  |
|  | 2.3.3 | Identification Mark |  |  |
|  | 2.3.4 | Rated Voltage |  |  |
|  | 2.3.5 | Number of sweep frequencies |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2.3.6 | Highest sweep frequency(Cycles/Min) |  |  |
|  | 2.3.7 | Lowest sweep frequency(Cycles/Min) |  |  |
|  | 2.4 | Wiper arm |  |  |
|  | 2.4.1 | Length |  |  |
|  | 2.4.2 | Make |  |  |
|  | 2.5 | Wiper blade |  |  |
|  | 2.5.1 | Length |  |  |
|  | 2.6 | Detailed technical description : Layout including location of "R" Point, "H' Point and related dimensions of wiping area and related dimensions of wiper arm(s) and co-ordinates of mounting (see AIS-045) |  |  |
|  | 2.7 | **Washer tank (If provided)** |  |  |
|  | 2.7.1 | Capacity, (l) |  |  |
|  | 2.7.2 | Nozzle(s) |  |  |
|  | 27.3 | No. Of Nozzles |  |  |
|  | **2.8** | **Seats** |  |  |
|  | 2.8.1 | Number(s) |  |  |
|  | 2.8.2 | Location |  |  |
|  | 2.8.3 | Coordinates or drawing of the R point declared by manufacturer |  |  |
|  | 2.8.3.1 | Driving seat |  |  |
|  | 2.8.4 | Intended seat-back inclination |  |  |
|  | 2.8.4.1 | Driving seat |  |  |
|  | **3.0** | **Seats, and their anchorages** |  |  |
|  | 3.1 | Make |  |  |
|  | 3.2 | Brief description and drawings of the seat type, its attachment fittings and its adjustment, displacement and locking systems including the minimum distance between fitting points. |  |  |
|  | 3.3 | Position and arrangement of seats including seat layout. |  |  |
|  | 3.4 | Seats if any which incorporate a safety belt anchorage. |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 3.5 | Driver Seat and Front Passenger Seat drawings, their anchorages on the vehicle, the floor layout, the adjustment and displacement system of the seats and their parts, and their locking devices, drawings showing ‘H point co-ordinates and seat anchorage co-ordinates with respect to reference point on vehicle | | |  | |  |
|  | 3.6 | Seat Identification No. / Part No/Drawing Number. | | |  | |  |
|  |  | Description | Make | | ID Number/ Part Number/Drawing number  (Seat Manufacturer/ Vehicle Manufacturer) | | Weight (kg) |
|  | **4.0** | **Interior Fittings as per AIS-047** | | |  | |  |
|  | 4.1 | Instrument Panel (Dash Board) | | |  | |  |
|  | 4.2 | Make | | |  | |  |
|  | 4.3 | Identification No. / Part No/Drawing No. | | |  | |  |
|  | 4.4 | Drawing showing the mounting details, overall size and all control switches with dimensions | | |  | |  |
|  | 4.5 | Additional details for interior fitting tests to be given (if test is already conducted, this information need not be submitted). | | |  | |  |
|  | 4.6 | Drawing of Instrument Panel Variants (With / without Airbag, Music system, AC) | | |  | |  |
|  | 4.7 | Material used for instrument Panel | | |  | |  |
|  | 4.8 | Drawings | | |  | |  |
|  | 4.9 | Instrument Panel mounting (With hardware details) | | |  | |  |
|  | 4.10 | ‘H’ point co-ordinates for each seating position | | |  | |  |
|  | 4.11 | Cross sectional drawings for each projection more than 3.2 | | |  | |  |
|  | 4.12 | Cross sectional Drawing of Gear shift lever | | |  | |  |
|  | 4.13 | Drawing of Grab handle with cross section | | |  | |  |
|  | 4.14 | Drawing of Sun visor with details of metal wire used | | |  | |  |
|  | 4.15 | Drawing of lamp assembly mounted at roof | | |  | |  |
|  | 4.16 | Drawing of Cigarrete lighter/ charging point | | |  | |  |
|  | 4.17 | Any other fitment | | |  | |  |
|  | **5.0** | **Information on safety belt / restraint system :** | | |  | |  |
|  | 5.1 | Safety belt | | |  | |  |
|  | 5.1.1 | Make of seat belt | | |  | |  |
|  | 5.1.2 | Type and configuration | | |  | |  |
|  | 5.1.3 | Identification No. / Part No. | | |  | |  |
|  | 5.2 | Restraint system | | |  | |  |
|  | 5.2.1 | Make | | |  | |  |
|  | 5.2.2 | Type and configuration | | |  | |  |
|  | 5.2.3 | Identification No. / Part No. | | |  | |  |
|  | 5.2.4 | Drawings of the relevant parts of the vehicle structure and any seat anchorage reinforcements | | |  | |  |
|  | 5.2.5 | Drawings of the seat, showing its structure, adjustment system and fixing components, with an indication of the materials used. | | |  | |  |
|  | 5.2.6 | Drawing or photograph of the restraint system as installed. | | |  | |  |
|  | 5.2.7 | Drawing showing the installation of belts on the vehicle. | | |  | |  |
|  | 5.3 | Safety belts and / or other restraint systems : | | |  | |  |
|  | 5.3.1 | Number and position of safety belts and restraint systems and seats on which they can be used | | |  | |  |
|  |  | Row of Seat | | Location\* | Type of seat belt | Variant  (if applicable) | Belt adjustment device for height  (indicate Yes/No/  optional) |
|  |  | First row of seats | | L |  |  |  |
|  |  | C |  |  |  |
|  |  | R |  |  |  |
|  |  | Second row of seats | | L |  |  |  |
|  |  | C |  |  |  |
|  |  | R |  |  |  |
|  |  | The table may be extended as necessary for vehicles with more than two rows of seats there are more than three seats across the width of the vehicle.  \*(L = left-hand side, R= right-hand side, C = centre) | | | | | |
|  | **6.0** | **Door, Door locks and hinges :** | | |  | |  |
|  | 6.1 | Doors | | |  | |  |
|  | 6.1.1 | No. of doors | | |  | |  |
|  | 6.1.2 | Position and type of door | | |  | |  |
|  | 6.1.3 | Detailed drawing of the door including location of the door strengthening bars, Dimensions of door reinforcements from door lower edge, cross section of the bars, material specification of the bar and door sheet metal, number of reinforcements and details of welding / bolting etc.,( for side door impact test ) | | |  | |  |
|  | 6.1.4 | Dimension from the top edge of the doors to adjacent seat base top surface; | | |  | |  |
|  | 6.2 | Door lock / latch | | |  | |  |
|  | 6.2.1 | Front | | |  | |  |
|  | 6.2.1.1 | Make | | |  | |  |
|  | 6.2.1.2 | Identification No. / Part No. | | |  | |  |
|  | 6.2.2 | Rear | | |  | |  |
|  | 6.2.2.1 | Make | | |  | |  |
|  | 6.2.2.2 | Identification No. / Part No. | | |  | |  |
|  | 6.3 | Door hinge | | |  | |  |
|  | 6.3.1 | Front | | |  | |  |
|  | 6.3.1.1 | Make | | |  | |  |
|  | 6.3.1.2 | Identification No. / Part No. | | |  | |  |
|  | 6.3.2 | Rear | | |  | |  |
|  | 6.3.2.1 | Make | | |  | |  |
|  | 6.3.2.2 | Identification No. / Part No. | | |  | |  |
|  | 6.4 | Wheel Fastener(s) and Hub cap : | | |  | |  |
|  | 6.4.1 | Wheel Nut (s) / Bolt (s) | | |  | |  |
|  | 6.4.2 | Make | | |  | |  |
|  | 6.4.3 | Size | | |  | |  |
|  | 6.4.4 | No. per wheel | | |  | |  |
|  | 6.4.5 | Tightening torque on vehicle (recommended by Vehicle Manufacturer ) | | |  | |  |
|  | 6.4.6 | Detailed dimensional drawing along with material specifications | | |  | |  |
|  | 6.5 | Wheel cap ( if provided ) | | |  | |  |
|  | 6.5.1 | Detailed dimensional drawing along with press fit diameter as applicable | | |  | |  |
|  | 6.6 | Hub cap | | |  | |  |
|  | 6.6.1 | Make | | |  | |  |
|  | 6.6.2 | Method of fitment (Press/bolted/others) | | |  | |  |
|  | 6.6.3 | Brief dimensional drawing along with press fit diameter as applicable | | |  | |  |
|  | **7.0** | **Arrangement of foot controls as per AIS-035 (in case of L7-M)** | | |  | |  |
|  | 7.1 | Distance between the contour points of the orthogonal projections on to plane “P” of the accelerator pedal and service brake pedal bearing surfaces, “E” in mm. | | |  | |  |
|  | 7.2 | Distance between the projection of the service brake pedal on to the reference plane “P”, to the right, “H” in mm. | | |  | |  |
|  | 7.3 | Distance between the projection of the service brake pedal on to the reference plane “P”, to the left, “J” in mm. | | |  | |  |
|  | 7.4 | Drawing showing the parts and arrangement of the foot controls along with dimensions “E”, “H” and “J” | | |  | |  |
|  | **8.0** | **Hood latch:** | | |  | |  |
|  | 8.1 | Make | | |  | |  |
|  | 8.2 | Type | | |  | |  |
|  | 8.3 | Identification No. / Part No. | | |  | |  |
|  | **9.0** | **Wheel guard (IS 13943):** | | |  | |  |
|  | 9.1 | Dimension C | | |  | |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 9.2 | Dimension p |  |  |
|  | 9.3 | Dimension q |  |  |
|  | **10.0** | **External Projections:** |  |  |
|  | 10.1 | Ornaments |  |  |
|  | 10.2 | Projection for head light |  |  |
|  | 10.3 | Radiator grills (Applicable of on external surface) |  |  |
|  | 10.4 | Gap between individual elements |  |  |
|  | 10.5 | Radius of curvature of individual element |  |  |
|  | 10.6 | Body Panel ( In case of radius of curvature of folds in body panels are less than 2.5mm the scaled drawing of folds contour and H value as per IS 13942 is required to be submitted) |  |  |
|  | 10.7 | Radius of curvature of lateral Rain/Air deflector |  |  |
|  | **11.0** | **Steering system :** |  |  |
|  | 11.1 | Make |  |  |
|  | 11.1.1 | Type (Manual / Power assisted – Hydraulic / Power assisted – Electric / Other) |  |  |
|  | 11.2 | Steering wheel |  |  |
|  | 11.2.1 | Identification Mark / Part No./Drawing No. |  |  |
|  | 11.2.2 | Position (center/offset) |  |  |
|  | 11.2.3 | Outside dia.(mm) |  |  |
|  | 11.2.4 | Steering column |  |  |
|  | 11.2.4.1 | Make |  |  |
|  | 11.2.4.2 | Type / Model |  |  |
|  | 11.2.4.3 | Detailed drawing with material specifications |  |  |
|  | 11.2.5 | Intermediate shaft |  |  |
|  | 11.2.5.1 | Make |  |  |
|  | 11.2.5.2 | Type / Model |  |  |
|  | 11.2.5.3 | Detailed drawing with material specifications |  |  |
|  | 11.3 | Maximum No. of rotation of steering wheel from lock to lock |  |  |
|  | 11.4 | Steering Gear |  |  |
|  | 11.4.1 | Type of steering gear (Re-circulating ball / Worm & Roller / Rack & Pinion / Others) |  |  |
|  | 11.4.2 | Make |  |  |
|  | 11.4.3 | Steering gear ratio |  |  |
|  | 11.5 | Wheel lock angle (deg.)  Inner  Outer |  |  |
|  | 11.5.1 | Left |  |  |
|  | 11.5.2 | Right |  |  |
|  | 11.5.3 | Toe in |  |  |
|  | 11.5.4 | Toe out |  |  |
|  | 11.5.5 | Caster Angle |  |  |
|  | 11.5.6 | Camber Angle |  |  |
|  | 11.6 | Min turning circle diameter (mm) (as per IS 12222) |  |  |
|  | 11.6 | Min. turning circle clearance diameter (mm) |  |  |
|  | **12.0** | **Service brakes.** |  |  |
|  | 12.1.1 | Make |  |  |
|  | 12.1.2 | Type (Mechanical/hydraulic/air/air assisted/vacuum assisted/others) |  |  |
|  | 12.1.3 | Control system & braking wheel |  |  |
|  | 12.1.4 | Schematic layout indicating method of split of brake system, location of valves, reservoirs, ABS components etc. (Attach drawing and indicate the drawing number) |  |  |
|  | 12.2. | Brake lining or pad |  |  |
|  | 12.2.1 | Nominal Dimensions, (mm) (Length x Width x thickness) |  |  |
|  | 12.2.1.1 | Front wheel |  |  |
|  | 12.2.1.2 | Rear wheel |  |  |
|  | 12.2.1.3 | Others |  |  |
|  | 12.2.1.4 | Type of liner wear indicator (window/ acoustic/ optical/ any other) |  |  |
|  | 12.2.2 | Effective area per axle (cm²) |  |  |
|  | 12.2.2.1 | Front |  |  |
|  | 12.2.2.2 | Rear |  |  |
|  | 12.2.2.3 | Others |  |  |
|  | 12.2.3 | Make |  |  |
|  | 12.2.3.1 | Front wheel / axle |  |  |
|  | 12.2.3.2 | Rear wheel / axle |  |  |
|  | 12.2.3.3 | Others |  |  |
|  | 12.2.3.4 | Whether asbestos or asbestos-free |  |  |
|  | 12.3 | Brake drum or disc |  |  |
|  | 12.3.1 | Front axle ( Disc / Drum ) |  |  |
|  | 12.3.1.1 | Effective Diameter (mm) |  |  |
|  | 12.3.2 | Rear axle ( Disc / drum ) |  |  |
|  | 12.3.2.1 | Effective Diameter (mm) |  |  |
|  | 12.3.3 | Other axle ( Disc / Drum ) |  |  |
|  | 12.3.3.1 | Effective diameter (mm) |  |  |
|  | 12.4. | Master cylinder or brake valve |  |  |
|  | 12.4.1 | Make |  |  |
|  | 12.4.2 | Inner diameter of the master cylinder (mm) |  |  |
|  | 12.4.3 | Operating stroke (mm) |  |  |
|  | 12.5. | Wheel cylinder / Wheel Chamber |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 12.5.1 | Diameter (mm) |  |  |
|  | 12.5.1.1 | Front |  |  |
|  | 12.5.1.2 | Rear |  |  |
|  | 12.5.1.3 | Booster |  |  |
|  | 12.5.1.3.1 | Make |  |  |
|  | 12.5.1.3.2 | Type |  |  |
|  | 12.2.1.3.3 | Boost Ratio |  |  |
|  | 12.2.1.3.4 | Size of Booster (mm) diameter |  |  |
|  | 12.2.1.3.5 | Vacuum/Air assisted |  |  |
|  | 12.5.1.3 | Others |  |  |
|  | 12.5.2 | Type (single acting/double acting) |  |  |
|  | 12.5.2.1 | Front |  |  |
|  | 12.5.2.2 | Rear |  |  |
|  | 12.5.2.3 | Others |  |  |
|  | 12.5.2.4 | Make of wheel cylinder / slave cylinder |  |  |
|  | 12.6. | Failure Warning device for braking |  |  |
|  | 12.6..1 | Type (Visual display/ audible/others) |  |  |
|  | 12.6..2 | Operation pressure (kg/cm2) or (bar) or kPa) |  |  |
|  | 12.6..3 | Type of safety device |  |  |
|  | 12.7.0 | Parking brake |  |  |
|  | 12.7.1 | Make |  |  |
|  | 12.7.2 | Type (mechanical/spring brake) |  |  |
|  | 12.7.3 | Acting on Transmission/wheel |  |  |
|  | 12.7.4 | Control System & Braking wheel |  |  |
|  | 12.7.5 | Lining/pad |  |  |
|  | 12.7.6 | Name of producer |  |  |
|  | 12.7.7 | Dimension (mm) |  |  |
|  | 12.7.8 | Area (cm 2) |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 12.7.9 | Material |  |  |
|  | 12.7.10 | Diameter of brake drum/disc (mm) |  |  |
|  | 12.8. | Secondary brake |  |  |
|  | 12.8..1 | Type |  |  |
|  | 12.8..2 | Description |  |  |
|  | **13.0** | **On Board Diagnosis (OBD I )** |  |  |
|  | 13.1 | Written description and/or drawing of the Malfunction Indicator(MI). |  |  |
|  | 13.2 | Criteria for MI activation (fixed number of driving cycles or statistical method) |  |  |
|  | 13.3 | List of all OBD output codes and formats used (with explanation of each). |  |  |
|  | 13.4 | A description of the type and number of the pre-conditioning cycles used for the original type approval of the vehicle. |  |  |
|  | **14.0** | **Head-On Collision as per AIS-096** |  |  |
|  | 14.1 | Brief description of the vehicle type as regards its structure, dimensions, lines and constituent materials: |  |  |
|  | 14.2 | Description of the protective system installed in the vehicle: |  |  |
|  | 14.3 | Description of interior arrangements or fittings that might affect the tests: |  |  |
|  | 14.4 | Photographs and/or diagrams and drawings permitting the basic identification of the type(s) of vehicle and its possible variants which are covered by the approval |  |  |
|  | **16.0** | **Temporary Spare Wheel / RFT- as per AIS-110 (If Provided)** |  |  |
|  | 16.1 | Make |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 16.2 | | Size | |  | | | |  | | |
|  | 16.3 | | Load and speed rating | | Commitment | | | |  | | |
|  | 16.4 | | Recommended max speed | |  | | | |  | | |
|  | **17.0** | | **Q-Label** | |  | | | |  | | |
|  | 17.1 | | Sketch showing the location of “Q” label at the front and rear of the vehicle | |  | | | |  | | |
|  | 17.2 | | Area of the label | |  | | | |  | | |
|  |  | | | | | | | | | | |
| **10.0** | **Page 27/227, Table 1,Clause 4.4.1** | | | | | | | | | | |
|  | Substitute following text for existing text: | | | | | | | | | | |
|  | **4.4.1** Type (manual/automatic/CVT (continuously variable transmission) | | | | | | | | | | |
|  | Index | | | Internal gearbox ratios (ratios of engine to gearbox output shaft revolutions) | | | Final drive ratios (ratio of gearbox output shaft to driven wheel revolutions) | | | | Total gear ratios |
|  | Maximum for Continuously Variable Transmission (CVT) | | |  | | |  | | | |  |
|  | 1 | | |  | | |  | | | |  |
|  | 2 | | |  | | |  | | | |  |
|  | 3 | | |  | | |  | | | |  |
|  | 4, 5, others | | |  | | |  | | | |  |
|  | Minimum for CVT | | |  | | |  | | | |  |
|  | Reverse | | |  | | |  | | | |  |
|  |  | | | | | | | | | | |
| **11.0** | **Page 27/227, Table 2,Clauses A3.3 and A 3.4** | | | | | | | | | | |
|  | Substitute following text for existing text: | | | | | | | | | | |
|  | **A3.3** | **CO2 (g/km) (Applicable for category M1 with GVW<3.5 T) Declared (rounded to 3 decimal places)** | | | | | | | | | |
|  |  |  | | | | Base | | Variant 1 | | Variant 2 | |
|  |  | **CO2 (g/km)** | | | |  | |  | |  | |
|  |  |  | | | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **A3.4** | | **Fuel consumption (l/100 km) for Petrol, LPG or Diesel  and (kg/100km) for CNG and (kWh/100km) for Electric Driven vehicles (Applicable for category M1 with GVW<3.5 T) (rounded to 3 decimal places) Calculated from declared CO2** | | | | | | |
|  |  | |  | Base | | | Variant 1 | | Variant 2 |
|  |  | | **Fuel Equivalent**  Fuel Consumption  (Actual Fuel) |  | | |  | |  |
|  |  | | **Petrol Equivalent**  Fuel Consumption  (Petrol Equivalent) |  | | |  | |  |
|  |  | | \*Calculated on the declared CO2 | | | | | | |
|  |  | |  | | | | | | |
| **12.0** | **Page 27/227, Table 2,**  Add new clause A3.5 after Clause A3.4: | | | | | | | | |
|  | **A 3.5** | | **CO2 Reducing technologies Available ( Yes/No)** | | | | | | |
|  |  | |  | | **Base** | **Variant1** | | **Variant 2** | |
|  |  | | Regenerative braking | |  |  | |  | |
|  |  | | Start-Stop System | |  |  | |  | |
|  |  | | Tyre pressure monitoring system | |  |  | |  | |
|  |  | | 6 or more Speed Transmission | |  |  | |  | |
|  |  | | Any other technology (manufacture to enclose detail) | |  |  | |  | |
|  |  | | | | | | | | |
| **13.0** | **Page 31 /227, Table 3,B 8.2.4.2** | | | | | | | | |
|  | Substitute following text for existing text | | | | | | | | |
|  | B 8.2.4.2 | Air Bag deployment time as per IS 11939/AIS 96/AIS 98 for steering impact | | | | | | | |
|  |  | | | | | | | | |
| **14.0** | **Page 32/227, Table 3, Clause No. B 9.1** | | | | | | | | |
|  | Substitute following text for existing text: | | | | | | | | |
|  | B 9.1 | Minimum ground clearance(For other than M1) | | | | | | | |

|  |  |  |
| --- | --- | --- |
| **15.0** | **Page 34/227, Table 3, Clause No. B 15.13** | |
|  | Substitute following text for existing text: | |
|  | B 15.13 | ABS |
|  | B 15.14 | Seat Belt Reminder |
|  | B 15.15 | Others (such as, Airbag, HVAC, Content gauge, LPG / CNG changeover switch etc.,) |
|  |  |  |
| **16.0** | **Page 39/227, Table 3, Clause No. B 30.0** | |
|  | Substitute following text for existing text: | |
|  |  | |
|  | B30.0 | **Wheel rim** |
|  | B30.1 | **Front** |
|  | B30.1.1 | Make |
|  | B30.1.2 | Size |
|  | B30.1.3 | Identification: Identification: TAC No. / BIS License No. / E- Marking |
|  | B30.2 | **Rear** |
|  | B30.2.1 | Make |
|  | B30.2.2 | Size |
|  | B30.2.3 | Identification: Identification: TAC No. / BIS License No. / E- Marking |
|  | B30.3 | **Others** |
|  | B30.3.1 | Make |
|  | B30.3.2 | Size |
|  | B30.3.3 | Identification: Identification: TAC No. / BIS License No. / E- Marking |
|  |  | |
| **17.0** | **Page 45/227, Table 3, Clause No. B 46.0 and B 47.0** | |
|  | Delete entire clause and renumber subsequent clauses. | |

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| --- | --- |
| **18.0** | **Page 47/227, Table 3,** |
|  | Add following new clause B 55.0 after clause B 54.0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | **B 55.0** | | **Information for Speed alert** |  | | B 55.1 | | Detail**s** of audible alert (Alert above 80 km/h) |  | | B 55.2 | | Detail**s** of audible alert Continuous /intermittent.(Alert above 120 km/h) |  | | B 55.3. | | if intermittent, Interval between Alerts |  | | **B 56.0** | | **Information for Safety belt reminder** |  | | B 56.1. | | Whether Visual warning for Safety belt reminder provided |  | | B 56.2. | | Whether audible warning for Safety belt reminder provided |  | | **B 57.0** | | **Information for manual over-ride (Door, Door locks and hinges)(Yes/No):** |  | | B 58.0 | | Information for Reverse Parking Alert System |  | | B 58.1. | Type of System ( Sensor based / Camera based system) |  | | B 58.2. | Sensor based system(as applicable) information |  | | B 58.2.1 | Make |  | | B 58.2.2 | Identification No. / Part No. |  | | B 58.2.3 | Number of sensors and mounting location |  | | B 58.3. | Camera based System (as applicable) |  | | B 58.3.1 | Make |  | | B 58.3.2 | Identification No. / Part No. |  | | B 58.3.3 | Camera mounting location |  | | B 58.3.4 | Display Make |  | | B 58.3.5 | Display Identification No. / Part No. |  | | B 58.3.6 | Display location |  | | | | | |
| **19.0** | **Page 96/227,**  Insert following Tables 4E and 4F after Table 4D: | | |
| Table 4E  TECHNICAL SPECIFICATIONS FOUR WHEELER AND ABOVE WITH GVW≤3500 kg for BS VI Norms | | | |
| 1.0 | | Description of energy converters and power plant. (In the case of a vehicle that can run either on petrol, diesel, etc., or also in combination with another fuel, items shall be repeated.[[1]](#footnote-1)) |  |
| 1.1. | | Engine Manufacturer: |  |
| 1.1.1. | | Manufacturer's engine code (as marked on the engine, or other means of identification): |  |
| 1.1.2. | | Location of engine model code & engine serial number (drawing to be attached) |  |
| 1.2. | | Internal combustion engine: |  |
| 1.2.1. | | Specific engine information |  |
| 1.2.1.1. | | Working principle: positive ignition/compression-ignition, four-stroke/two-stroke/rotary cycle |  |
| 1.2.1.2. | | Number, arrangement of cylinders: |  |
| 1.2.1.2.1. | | Bore-------------------------------(mm) |  |
| 1.2.1.2.2. | | Stroke: --------------------------(mm) |  |
| 1.2.1.2.3. | | Firing order: |  |
| 1.2.1.3. | | Engine capacity:--------------------------(cm3 ) |  |
| 1.2.1.4. | | Volumetric compression ratio (specify tolerance): |  |
| 1.2.1.5. | | Drawings of combustion chamber and piston crown and, in the case of positive ignition engine, piston rings: |  |
| 1.2.1.6. | | Normal engine idling speed (specify tolerance): |  |
| 1.2.1.6.1. | | Carbon monoxide in % and HC (n hexane equivalent) in PPM content by volume in the exhaust gas with the engine idling,(for SI engines only) |  |
| 1.2.1.7. | | High idle engine speed (specify tolerance): - |  |
| 1.2.1.7.1. | | High Idle (2500 ± 200 rpm) Lambda value(For petrol driven four wheeled vehicles only) (1± 0.03) or as specified by the vehicle manufacturer) |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1.2.1.8. | Maximum net power:............ kW at min-1 | | | | |  | |
| 1.2.1.9. | Maximum permitted engine speed as prescribed by the manufacturer- min-1 | | | | |  | |
| 1.2.1.10. | Maximum net torque: ………Nm at: -------min-1  …(manufacturer's declared value) | | | | |  | |
| 1.2.1.11. | Maximum rated speed (Specify tolerance) | | | | |  | |
| 1.2.1.12. | Minimum rated speed (Specify tolerance) | | | | |  | |
| 1.2.1.13. | Engine Performance Declared speed and powers of the engine submitted for type approval) (Speeds to be agreed with the testing agency) | | | | |  | |
| 1.2.1.13.1 | Engine Power Table | | | | |  | |
| Measurement point\* | | Engine speed  rpm | New Power  kW\*\* | |  | |
| (1) | |  |  | |  | |
| (2) | |  |  | |  | |
| (3) | |  |  | |  | |
| (4) | |  |  | |  | |
| (5) | |  |  | |  | |
| (6) | |  |  | |  | |
| (7) | |  |  | |  | |
| \* See reference in AIS 137  \*\* Net power according to AIS 137 | | | | |  | |
| Note: In case, if data regarding the Moment of Inertia, is required by the test agency for carrying out the Full Throttle performance test for both the CI / SI engines, the same shall be provided by the manufacturer. | | | | | | |
| 1.2.2. | Fuel | | | | |  | |
| 1.2.2.1 | Type of fuel used : Mono Fuel / Bi-Fuel / Flex Fuel / Dual Fuel | | | | |  | |
| 1.2.2.2 | Fuel: Diesel/ Gasoline(E5)/ LPG/ CNG/ Biomethane/ Biogas/LNG/Ethanol((E85)/(E100))/Biodiesel up to 100%/Hydrogen | | | | |  | |
| 1.2.2.3 | Maximum amount of biofuel acceptable in fuel (manufacturer's declared value): per cent by volume | | | | |  | |
| 1.2.3. | Fuel feed | | | | |  | |
| 1.2.3.1 | By fuel injection (compression-ignition only): (Yes/No) | | | | |  | |
| 1.2.3.1.1 | System description: | | | | |  | |
| 1.2.3.1.2 | Working principle: direct-injection/pre-chamber/swirl Chamber | | | | |  | |
| 1.2.3.1.3 | Injection pump | | | | |  | |
| 1.2.3.1.3.1 | | Make(s): | | |  | |
| 1.2.3.1.3.2 | | Type(s) & Identification Number: | | |  | |
| 1.2.3.1.3.3 | | Maximum fuel delivery (1),(2). ........... (kg/hr) or (mm3 )stroke or cycle at max net power speed......... (min-1) or characteristic diagram:  If boost control is supplied, state the characteristics fuel delivery and boost pressure versus engine speed | | |  | |
| 1.2.3.1.3.4 | | Injection advance curve (Specify the tolerances): | | |  | |
| 1.2.3.1.4 | | Governor | | |  | |
| 1.2.3.1.4.1 | | Cut-off point: | | |  | |
| 1.2.3.1.4.1.1 | | Cut-off point under load:…(min-1) | | |  | |
| 1.2.3.1.4.1.2 | | Cut-off point without load (Maximum no-load speed)…(min-1 ) | | |  | |
| 1.2.3.1.5 | | Injector(s): | | |  | |
| 1.2.3.1.5.1 | | Make(s): | | |  | |
| 1.2.3.1.5.2 | | Type(s) & Identification Number: | | |  | |
| 1.2.3.1.5.3 | | Opening pressure (kPa) (specify the tolerances) or characteristic diagram | | |  | |
| 1.2.3.1.5.4 | | **Injection piping** | | |  | |
| 1.2.3.1.5.4.1 | | Length and internal diameter…(mm) | | |  | |
| 1.2.3.1.5.4.2 | | Common rail make & type | | |  | |
| 1.2.3.1.6 | | Cold start system | | |  | |
| 1.2.3.1.6.1 | | Make(s): | | |  | |
| 1.2.3.1.6.2 | | Type(s) & Identification Number:: | | |  | |
| 1.2.3.1.6.3 | | Description: | | |  | |
| 1.2.3.1.7 | | Auxiliary starting aid | | |  | |
| 1.2.3.1.7.1 | | Make(s): | | |  | |
| 1.2.3.1.7.2 | | Type(s): | | |  | |
| 1.2.3.1.7.3 | | System description: | | |  | |
| 1.2.3.1.8 | | **Electronic controlled injection: (Yes/No)** | | |  | |
| 1.2.3.1.8.1 | | Make(s): | | |  | |
| 1.2.3.1.8.2 | | Type(s): | | |  | |
| 1.2.3.1.8.3 | | Description of the system (in the case of systems other than continuous injection, give equivalent details): | | |  | |
| 1.2.3.1.8.3.1 | | Make and type of the control unit: | | |  | |
| 1.2.3.1.8.3.2 | | Make and type of the fuel regulator: | | |  | |
| 1.2.3.1.8.3.3 | | Make and type of air-flow sensor: | | |  | |
| 1.2.3.1.8.3.4 | | Make and type of fuel distributor: | | |  | |
| 1.2.3.1.8.3.5 | | Make and type of throttle housing: | | |  | |
| 1.2.3.1.8.3.6 | | Make and type of water temperature sensor: | | |  | |
| 1.2.3.1.8.3.7 | | Make and type of air temperature sensor: | | |  | |
| 1.2.3.1.8.3.8 | | Make and type of air pressure sensor: | | |  | |
| 1.2.3.2 | | **By fuel injection (positive ignition only): (Yes/No)** | | |  | |
| 1.2.3.2.1 | | Working principle: intake manifold (single/multi-point)/direct injection/other (specify) | | |  | |
| 1.2.3.2.2 | | Make(s): | | |  | |
| 1.2.3.2.3 | | Type(s): | | |  | |
| 1.2.3.2.4 | | System description (in the case of systems other than continuous injection give equivalent details): | | |  | |
| 1.2.3.2.4.1 | | Make and type of the control unit: | | |  | |
| 1.2.3.2.4.2 | | Make and type of the fuel regulator: | | |  | |
| 1.2.3.2.4.3 | | Make and type of the air-flow sensor: | | |  | |
| 1.2.3.2.4.4 | | Make and type of the micro-switch: | | |  | |
| 1.2.3.2.4.5 | | Make and type of the throttle housing: | | |  | |
| 1.2.3.2.4.6 | | Make and type of the water temperature sensor: | | |  | |
| 1.2.3.2.4.7 | | Make and type of the air temperature sensor: | | |  | |
| 1.2.3.2.5 | | Injectors: Opening pressure (Specify the tolerances):,................... (kPa) or characteristic diagram: | | |  | |
| 1.2.3.2.5.1 | | Make(s): | | |  | |
| 1.2.3.2.5.2 | | Type(s): | | |  | |
| 1.2.3.2.6 | | Injection timing: | | |  | |
| 1.2.3.2.7 | | Cold start system: | | |  | |
| 1.2.3.2.7.1 | | Operating principle(s): | | |  | |
| 1.2.3.2.7.2 | | Operating limits/settings(Specify the tolerances) | | |  | |
| 1.2.3.3 | | Feed pump | | |  | |
| 1.2.3.3.1 | | Pressure, (Specify the tolerances).......(kPa) or characteristic diagram: | | |  | |
| 1.2.4 | | Electrical system | | |  | |
| 1.2.4.1 | | Rated voltage:…V, positive/negative ground | | |  | |
| 1.2.4.2 | | Generator/ Alternator | | |  | |
| 1.2.4.2.1 | | Type: | | |  | |
| 1.2.4.2.2 | | Nominal output: …VA | | |  | |
| 1.2.5 | | Ignition | | |  | |
| 1.2.5.1 | | Make(s): | | |  | |
| 1.2.5.2 | | Type(s): | | |  | |
| 1.2.5.3 | | Working principle: | | |  | |
| 1.2.5.4 | | Ignition advance curve or map(Specify the tolerances): | | |  | |
| 1.2.5.5 | | Static ignition timing (Specify the tolerances):........degrees before TDC | | |  | |
| 1.2.5.6 | | Spark plugs | | |  | |
| 1.2.5.6.1 | | Make | | |  | |
| 1.2.5.6.2 | | Type | | |  | |
| 1.2.5.6.3 | | Identification number | | |  | |
| 1.2.5.6.4 | | Gap setting------------(mm) | | |  | |
| 1.2.5.6.5 | | Nominal resistance (kilo ohm) (if resistive type) | | |  | |
| 1.2.5.7 | | Ignition coil(s) | | |  | |
| 1.2.5.7.1 | | Make | | |  | |
| 1.2.5.7.2 | | Type | | |  | |
| 1.2.5.7.3 | | Identification number | | |  | |
| 1.2.5.8 | | **Ignition condenser** | | |  | |
| 1.2.5.8.1 | | Make | | |  | |
| 1.2.5.8.2 | | Type | | |  | |
| 1.2.5.8.3 | | Identification number | | |  | |
| 1.2.5.9 | | **EMI suppressor cap / Device / Electronic unit** | | |  | |
| 1.2.5.9.1 | | Make | | |  | |
| 1.2.5.9.2 | | Type (Resistive/Capacitive) | | |  | |
| 1.2.5.9.3 | | Identification number | | |  | |
| 1.2.5.9.4 | | Nominal resistance (kilo ohm) | | |  | |
| 1.2.5.9.5 | | Terminology and Drawing of interference Suppression equipment | | |  | |
| 1.2.5.10 | | **H.T. Cable** | | |  | |
| 1.2.5.10.1 | | Make and Place | | |  | |
| 1.2.5.10.2 | | Type (Resistive/Non-resistive) | | |  | |
| 1.2.5.10.3 | | Length (mm) (if resistive type) | | |  | |
| 1.2.5.10.4 | | Outside dia. (mm) (if resistive type) | | |  | |
| 1.2.5.10.5 | | Nominal resistance kilo ohm, (if resistive type) | | |  | |
| 1.2.5.11 | | **Radiator** | | |  | |
| 1.2.5.11.1 | | Radiator drawing(s) | | |  | |
| 1.2.5.11.2 | | Make | | |  | |
| 1.2.5.11.3 | | Type (s) | | |  | |
| 1.2.5.11.4 | | Relief valve pressure setting | | |  | |
| 1.2.5.12 | | Fan characteristics (Fan power, kW) Enclose the fan power curve corresponding to full load (v/s engine speed) of viscous fan. | | |  | |
| 1.2.5.12.1 | | Make (s) | | |  | |
| 1.2.5.12.1.1 | | No. of blades | | |  | |
| 1.2.5.12.1.2 | | Material of blades ( metal / plastic ) | | |  | |
| 1.2.5.12.2 | | Type(s) [Fixed / Viscous / Electrical driven] | | |  | |
| 1.2.5.12.3 | | Drive ratio | | |  | |
| 1.2.5.12.4 | | Fan diameter (mm) | | |  | |
| 1.2.5.12.5 | | Max. Speed of fan (in rev/min) | | |  | |
| 1.2.5.13 | | Radiator core open area (cm²) | | |  | |
| 1.2.6 | | Cooling system: liquid/air | | |  | |
| 1.2.6.1 | | Nominal setting of the engine temperature control mechanism (oC):: | | |  | |
| 1.2.6.2 | | Liquid | | |  | |
| 1.2.6.2.1 | | Nature of liquid: | | |  | |
| 1.2.6.2.2 | | Circulating pump(s): (Yes/No) | | |  | |
| 1.2.6.2.3 | | Characteristics of Circulating pump | | |  | |
| 1.2.6.2.3.1 | | Make(s): | | |  | |
| 1.2.6.2.3.2 | | Type(s): | | |  | |
| 1.2.6.2.4 | | Drive ratio(s): | | |  | |
| 1.2.6.2.5 | | Description of the fan and its drive mechanism: | | |  | |
| 1.2.6.3 | | Air | | |  | |
| 1.2.6.3.1 | | Blower: (Yes/No) | | |  | |
| 1.2.6.3.2 | | Characteristics of blower | | |  | |
| 1.2.6.3.2.1 | | Make(s): | | |  | |
| 1.2.6.3.2.2 | | Type(s): | | |  | |
| 1.2.6.3.3 | | Drive ratio(s): | | |  | |
| 1.2.7 | | Intake system: | | |  | |
| 1.2.7.1 | | Pressure charger: (Yes/No) | | |  | |
| 1.2.7.1.1 | | Make(s): | | |  | |
| 1.2.7.1.2 | | Type(s) & Identification Number: | | |  | |
| 1.2.7.1.3 | | Description of the system (maximum charge pressure:…..(kPa),  waste-gate, if applicable) | | |  | |
| 1.2.7.2 | | Inter-cooler: (Yes/No) | | |  | |
| 1.2.7.2.1 | | Type: air-air / air-water | | |  | |
| 1.2.7.2.2 | | Identification Number: | | |  | |
| 1.2.7.3 | | Intake depression at rated engine speed and at 100 per cent load (Specify location of measurement)  Minimum allowable:… (kPa)  Maximum allowable:… (kPa) | | |  | |
| 1.2.7.4 | | Description and drawings of inlet pipes and their accessories (plenum chamber, heating device, additional air intakes, etc.): | | |  | |
| 1.2.7.4.1 | | Intake manifold description (drawings and/or photographs): | | |  | |
| 1.2.7.4.2 | | Air filter, drawings: , or | | |  | |
| 1.2.7.4.2.1 | | Make(s): | | |  | |
| 1.2.7.4.2.2 | | Type(s) & Identification Number: | | |  | |
| 1.2.7.4.3 | | Intake silencer, drawings……………. , or | | |  | |
| 1.2.7.4.3.1 | | Make(s): | | |  | |
| 1.2.7.4.3.2 | | Type(s) & Identification Number: | | |  | |
| 1.2.8 | | Exhaust system | | |  | |
| 1.2.8.1 | | Description and drawing of the exhaust manifold: | | |  | |

|  |  |  |
| --- | --- | --- |
| 1.2.8.2 | Description and drawing with dimensions of the exhaust system:( Description with general arrangement of exhaust system along with its routing indicating the lengths of exhaust pipe, tail pipe and exhaust outlet location, indicated in a Schematic dimensional drawing.) |  |
| 1.2.8.2.1 | Effective volume of exhaust-system (specify the tolerance & range) in liters (from exhaust manifold / TC outlet to tail pipe end), Enclose the exhaust system dimensional drawing and indicate the volume of each parts clearly |  |
| 1.2.8.2.2. | Description and drawing of the exhaust Muffler/Silencer: |  |
| 1.2.8.2.2.1 | Type(s) & Identification Number: |  |
| 1.2.8.2.2.2 | Number:……….… |  |
| 1.2.8.2.3 | Internal diameter of exhaust pipe (mm)(min) |  |
| 1.2.8.2.4 | Minimum distance between exhaust pipe(s) and the fuel line |  |
| 1.2.8.2.5 | Auxiliary Noise shields for compliance to IS 3028 and / OR AIS-020 (If Provided) |  |
| 1.2.8.2.5.1 | Material |  |
| 1.2.8.2.5.2 | Layout of noise shield / Photographs / Diagram Showing arrangements indicating fitment on vehicle. |  |
| 1.2.8.3 | Maximum allowable exhaust back pressure at rated engine speed and at 100 per cent load (location of measurement): … (kPa) |  |
| 1.2.9 | Minimum cross-sectional areas of inlet and outlet ports: |  |
| 1.2.10 | **Valve timing or equivalent data:** |  |
| 1.2.10.1 | Max. lift of valves |  |
| 1.2.10.1.1 | Inlet (mm) |  |
| 1.2.10.1.2 | Exhaust (mm) |  |
| 1.2.10.2 | Angle of valves / port (w.r.t. top dead center) |  |
| 1.2.10.2.1 | Inlet |  |
| 1.2.10.2.1.1 | Opening |  |
| 1.2.10.2.1.2 | Closing |  |
| 1.2.10.2.2 | Exhaust |  |
| 1.2.10.2.2.1 | Opening |  |
| 1.2.10.2.2.2 | Closing |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1.2.10.2.3 | Transfer | | | |  |
| 1.2.10.2.3.1 | Opening | | | |  |
| 1.2.10.2.3.2 | Closing | | | |  |
| 1.2.10.3 | Reference and/or setting ranges (Specify the tolerances): | | | |  |
| 1.2.10.4 | Valve gap (Hot or Cold as applicable) | | | |  |
| 1.2.10.4.1 | Inlet | | | |  |
| 1.2.10.4.2 | Exhaust | | | |  |
| 1.2.10.5 | Distribution by ports | | | |  |
| 1.2.10.5.1 | Volume of crank-case cavity with piston at TDC | | | |  |
| 1.2.10.5.2 | Reed valve fitted ( Yes / No ) | | | |  |
| 1.2.10.5.3 | Description of inlet ports, scavenging and exhaust ports with corresponding timing. | | | |  |
| 1.2.11 | Measures taken against air pollution: | | | |  |
| 1.2.11.1 | Device for recycling crankcase gases (description and drawings): | | | |  |
| 1.2.11.2 | Additional pollution control devices - Lean NOx Trap/SCR/Lean NOx Catalyst (if any, and if not covered  by another heading: | | | |  |
| 1.2.11.2.1 | **Catalytic converter: (Yes/No)** | | | |  |
| 1.2.11.2.1.1 | Catalytic converter Make | | | |  |
| 1.2.11.2.1.2 | Catalytic converter Identification Number: | | | |  |
| 1.2.11.2.1.3 | Number of catalytic converters and elements (provide the information below for each separate unit: | | | |  |
| 1.2.11.2.1.4 | Dimensions and shape of the catalytic converter(s) (volume, etc.): | | | |  |
| 1.2.11.2.1.5 | Type of catalytic action: | | | |  |
| 1.2.11.2.1.6 | Total charge of precious metal: | | | |  |
| 1.2.11.2.1.7 | Relative concentration (%): Pt:Rh:Pd | | | |  |
| 1.2.11.2.1.8 | Substrate (structure and material): | | | |  |
| 1.2.11.2.1.9 | Cell density:…………..cells per sq. inch / cm | | | |  |
| 1.2.11.2.1.10 | Type of casing for catalytic converter(s): | | | |  |
| 1.2.11.2.1.11 | Positioning of the catalytic converter(s) (place and reference distances in the exhaust system): | | | |  |
| 1.2.11.2.1.12 | Heat shield: (Yes/No) | | | |  |
| 1.2.11.2.1.13 | | | **Selective Catalytic Reduction (SCR) and its components**:…………………. |  | |
| 1.2.11.2.1.13.1 | | | Principle and Characteristics: |  | |
| 1.2.11.2.1.13.2 | | | Make: |  | |
| 1.2.11.2.1.13.3 | | | Type and Identification number: |  | |
| 1.2.11.2.1.13.3.1 | | | Total charge of precious metal: |  | |
| 1.2.11.2.1.13.3.2 | | | Substrate (structure and material): |  | |
| 1.2.11.2.1.13.3.3 | | | Relative Concentration (%): |  | |
| 1.2.11.2.1.13.3.4 | | | Dimensions and shape of the SCR (volume, etc.): |  | |
| 1.2.11.2.1.13.4 | | | Dosing ECU: |  | |
| 1.2.11.2.1.13.4.1 | | | Make: |  | |
| 1.2.11.2.1.13.4.2 | | | Identification number: |  | |
| 1.2.11.2.1.13.4.3 | | | Calibration Identification number: |  | |
| 1.2.11.2.1.13.4.4 | | | Calibration Verification Number: |  | |
| 1.2.11.2.1.13.4.5 | | | **Urea Dosing Unit**: |  | |
| 1.2.11.2.1.13.4.5.1 | | | Dosing Unit: |  | |
| 1.2.11.2.1.13.4.5.1.1 | | | Make: |  | |
| 1.2.11.2.1.13.4.5.1.2 | | | Type and Identification number: |  | |
| 1.2.11.2.1.13.4.5.2 | | | Supply Unit: |  | |
| 1.2.11.2.1.13.4.5.2.1 | | | Make: |  | |
| 1.2.11.2.1.13.4.5.2.3 | | | Type and Identification number |  | |
| 1.2.11.2.1.13.4.5.3 | | | Dosing Injector: |  | |
| 1.2.11.2.1.13.4.5.3.1 | | | Make: |  | |
| 1.2.11.2.1.13.4.5.3.2 | | | Type and Idetification number : |  | |
| 1.2.11.2.1.13.4.6 | | | NOx Sensor (Before /After of SCR): |  | |
| 1.2.11.2.1.13.4.6.1 | | | Make: |  | |
| 1.2.11.2.1.13.4.6.2 | | | Type and Identification number: |  | |
| 1.2.11.2.1.13.4.7 | | | Ad Blue Tank: |  | |
| 1.2.11.2.1.13.4.7.1 | | | Tank Capacity (l) with minimum-maximum : |  | |
| 1.2.11.2.1.13.4.7.2 | | | Location : |  | |
| 1.2.11.2.1.14 | | | Regeneration systems/method of exhaust after-treatment systems, description: |  | |
| 1.2.11.2.1.14.1 | | The number of Type I operating cycles, or equivalent engine test bench cycles, between two cycles where regenerative phases occur under the conditions equivalent to Type I test (Distance "D" in t AIS 137: | |  | | |
| 1.2.11.2.1.14.2 | | Description of method employed to determine the number of cycles between two cycles where regenerative phases occur: | |  | | |
| 1.2.11.2.1.14.3 | | Parameters to determine the level of loading required before regeneration occurs (i.e. temperature, pressure etc.): | |  | | |
| 1.2.11.2.1.14.4 | | Description of method used to load system in the test procedure described in AIS 137 | |  | | |
| 1.2.11.2.1.14.5 | | Normal operating temperature range (°C): | |  | | |
| 1.2.11.2.1.14.6 | | Consumable reagents (where appropriate) | |  | | |
| 1.2.11.2.1.14.7 | | Type and concentration of reagent needed for catalytic action (where appropriate): | |  | | |
| 1.2.11.2.1.14.8 | | Normal operational temperature range of reagent (where appropriate): | |  | | |
| 1.2.11.2.1.14.9 | | International standard (where appropriate): | |  | | |
| 1.2.11.2.1.14.10 | | Frequency of reagent refill: continuous/maintenance (where appropriate): | |  | | |
| 1.2.11.2.2 | | **Oxygen sensor: (Yes/No)** | |  | | |
| 1.2.11.2.2.1 | | Type | |  | | |
| 1.2.11.2.2.2 | | Location of oxygen sensor: | |  | | |
| 1.2.11.2.2.3 | | Control range of oxygen sensor (Specify the tolerances): | |  | | |
| 1.2.11.2.2.4 | | Make of oxygen sensor: | |  | | |
| 1.2.11.2.2.5 | | Identifying part number: | |  | | |
| 1.2.11.2.3 | | Air injection: (Yes/No) | |  | | |
| 1.2.11.2.3.1 | | Type (pulse air, air pump, etc.) & Identification Number: | |  | | |
| 1.2.11.2.4 | | Exhaust gas recirculation (EGR): (Yes/No) | |  | | |
| 1.2.11.2.4.1 | | Make | |  | | |
| 1.2.11.2.4.2 | | Type ( Cooled / Non-cooled/Progressive/ On-Off/ Any Other ) | |  | | |
| 1.2.11.2.4.3 | | Identification Number: | |  | | |
| 1.2.11.2.4.4 | | Characteristics (flow rate, etc.): | |  | | |
| 1.2.11.2.4.5 | | Water cooled system: (Yes/No) | |  | | |
| 1.2.11.2.4.5.1 | | EGR Cooler Make and Identification Number | |  | | |
| 1.2.11.2.5 | | **Evaporative emission control system: (Yes/No)** | |  | | |
| 1.2.11.2.5.1 | | Detailed description of the devices and their state of tune: | |  | | |
| 1.2.11.2.5.2 | | Drawing with dimensions of the evaporative control system (including fuel hoses length and diameter): | |  | | |
| 1.2.11.2.5.3 | | Drawing with dimensions of the carbon canister: | |  | | |
| 1.2.11.2.5.4 | | Mass of dry charcoal:………………g | |  | | |
| 1.2.11.2.5.5 | | Canister working capacity:……………..g | |  | | |
| 1.2.11.2.5.6 | | Canister bed volume:…………………..litre | |  | | |
| 1.2.11.2.5.7 | | Canister Purge and vent strategy description: | |  | | |
| 1.2.11.2.5.8 | | Purge valve make and Identification Number | |  | | |
| 1.2.11.2.5.9 | | Fuel tank pressure control valve : (Yes/No) | |  | | |
| 1.2.11.2.5.9.1 | | Make and Identification Number | |  | | |
| 1.2.11.2.5.9.2 | | Operating pressure (kPa) | |  | | |
| 1.2.11.2.5.10 | | Liquid fuel hoses material : | |  | | |
| 1.2.11.2.5.11 | | Schematic drawing with dimensions of the fuel tank with indication of capacity and material: | |  | | |
| 1.2.11.2.5.12 | | Drawing of the heat shield between tank and exhaust system: | |  | | |
| 1.2.11.2.5.13 | | Regeneration system/method. Description and/or drawing: | |  | | |
| 1.2.11.2.5.13.1 | | The number of Type I operating cycles, or equivalent engine test bench cycle, between two cycles where regeneration phases occur under the conditions equivalent to Type I test (Distance 'D' in AIS 137): | |  | | |
| 1.2.11.2.5.13.2 | | Description of method employed to determine the number of cycles between two cycles where regenerative phases occur: | |  | | |
| 1.2.11.2.5.13.3 | | Parameters to determine the level of loading required before regeneration occurs (i.e. temperature, pressure, etc.): | |  | | |
| 1.2.11.2.5.13.4 | | Description of method used to load system in the test procedure described in AIS 137: | |  | | |
| 1.2.11.2.6 | | Particulate trap: (Yes/No) | |  | | |
| 1.2.11.2.6.1 | | Number of Particulate trap and elements (provide the information below for each separate unit: | |  | | |
| 1.2.11.2.6.2 | | Make and Identification Number | |  | | |
| 1.2.11.2.6.3 | | Dimensions and shape of the particulate trap (capacity): | |  | | |
| 1.2.11.2.6.4 | | Type and design of particulate trap: | |  | | |
| 1.2.11.2.6.5 | | Location of the particulate trap (reference distances in the exhaust line): | |  | | |
| 1.2.11.2.6.6 | | Total charge of precious metal: | |  | | |
| 1.2.11.2.6.7 | | Relative concentration (%): Pt:Rh:Pd | |  | | |
| 1.2.11.2.6.8 | | Substrate (structure and material): | |  | | |
| 1.2.11.2.7 | | Electronic Control Unit (ECU) | |  | | |
| 1.2.11.2.7.1 | | Make | |  | | |
| 1.2.11.2.7.2 | | Identification number | |  | | |
| 1.2.11.2.7.3 | | Calibration Identification Number | |  | | |
| 1.2.11.2.7.4 | | Calibration Verification Number | |  | | |
| 1.2.11.2.8 | | On-board-diagnostic (OBD) system: ((Yes/No)) | |  | | |
| 1.2.11.2.8.1 | | Written description and/or drawing of the Malfunction Indicator (MI): | |  | | |
| 1.2.11.2.8.2 | | List and purpose of all components monitored by the OBD system: | |  | | |
| 1.2.11.2.8.3 | | Written description (general working principles) for: | |  | | |
| 1.2.11.2.8.3.1 | | Positive ignition engines | |  | | |
| 1.2.11.2.8.3.1.1 | | Catalyst monitoring: | |  | | |
| 1.2.11.2.8.3.1.2 | | Misfire detection: | |  | | |
| 1.2.11.2.8.3.1.3 | | Oxygen sensor monitoring: | |  | | |
| 1.2.11.2.8.3.1.4 | | Other components monitored by the OBD system: | |  | | |
| 1.2.11.2.8.3. | | Compression-ignition engines | |  | | |
| 1.2.11.2.8.3.2.1 | | Catalyst monitoring | |  | | |
| 1.2.11.2.8.3.2.2 | | Particulate traps monitoring: | |  | | |
| 1.2.11.2.8.3.2.3 | | Electronic fuelling system monitoring: | |  | | |
| 1.2.11.2.8.3.2.4 | | NOx control system monitoring (SCR/LNT/NOx absorber): | |  | | |
| 1.2.11.2.8.3.2.5 | | Other components monitored by the OBD system: | |  | | |

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| --- | --- | --- |
| 1.2.11.2.8.4 | Criteria for MI activation (fixed number of driving cycles or statistical method): |  |
| 1.2.11.2.8.5 | List of all OBD output codes and formats used (with explanation of each): |  |
| 1.2.11.2.8.5.1 | OBD Communication protocol standard |  |
| 1.2.11.2.8.6 | The following additional information shall be provided by the vehicle manufacturer for the purposes of enabling the manufacture of OBD-compatible replacement or service parts and diagnostic tools and test equipment, unless such information is covered by intellectual property rights or constitutes specific know-how of the manufacturer or or its supplier(s). |  |
| 1.2.11.2.8.6.1 | A description of the type and number of the pre-conditioning cycles used for the original type approval of the vehicle. |  |
| 1.2.11.2.8.6.2 | A description of the type of the OBD demonstration cycle used for the original type-approval of the vehicle for the component monitored by the OBD system. |  |
| 1.2.11.2.8.6.3 | A comprehensive document describing all sensed components with the strategy for fault detection and MI activation (fixed number of driving cycles or statistical method), including a list of relevant secondary sensed parameters for each component monitored by the OBD system. A list of all OBD output codes and format used (with an explanation of each) associated with individual emission related power-train components and individual non-emission related components, where monitoring of the component is used to determine MI activation. In particular, a comprehensive explanation for the data given in service $05 Test ID $21 to FF and the data given in service $06 shall be provided. In the case of vehicle types that use a communication link in accordance with ISO 15765-4 "Road vehicles – Diagnostics on Controller Area Network (CAN) – Part 4: Requirements for emissions-related systems", a comprehensive explanation for the data given in service $06 Test ID $00 to FF, for each OBD monitor ID supported, shall be provided. |  |
| 1.2.11.2.8.6.4 | The information required by this paragraph may, for example, be defined by completing a table as follows, which shall be attached to this annex: |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Component** | **Fault code** | **Monitoring strategy** | **Fault detection criteria** | **MI activation criteria** | **Secondary  parameters** | **Preconditioning** | **Demonstration test** |
| Catalyst | P0420 | Oxygen sensor 1 and 2 signals | Difference between sensor 1 and sensor 2 signals | 3rd cycle | Engine speed, engine load, A/F mode, catalyst temperature | Two Type I cycles | Type I |
| 1.2.11.2.8.6.5 | | OBD vehicle family if any | | | |  | |
| 1.2.11.2.8.6.5.1 | | Parameters defining the OBD family (to be attached) (in reference with AIS 137) | | | |  | |
| 1.2.11.2.9 | | Torque limiter (Yes/No) | | | |  | |
| 1.2.11.2.9.1 | | Description of the torque limiter activation: | | | |  | |
| 1.2.11.2.9.2 | | Description of the full load curve limitation: | | | |  | |
| 1.2.11.2.10 | | Other systems (description and operation): | | | |  | |
| 1.2.11.2.10.1 | | Systems to ensure the correct operation of NOx control measures | | | |  | |
| 1.2.11.2.10.2 | | Driver inducement system if applicable | | | |  | |
| 1.2.11.2.10.2.1 | | Vehicle with permanent deactivation of the driver inducement, for use by the rescue services [Note: cross-reference to be determined]. : (Yes/No) | | | |  | |
| 1.2.11.2.10.2.2 | | Activation of the creep mode disable after restart /disable after fueling /disable after parking | | | |  | |
| 1.2.11.2.102.3 | | Lowest concentration of the active ingredient present in the reagent that does not activate the warning system (CD min): %(vol) | | | |  | |
| 1.2.11.2.10.2.4 | | When appropriate, manufacturer reference of the Documentation for installing in a vehicle the systems to ensure the correct operation of NOx control measures | | | |  | |
| 1.2.12 | | Details of any devices designed to influence fuel economy (if not covered by other items): | | | |  | |
| 1.2.13 | | LPG fuelling system: (Yes/No) | | | |  | |
| 1.2.13.1 | | Electronic engine management control unit for LPG fuelling | | | |  | |
| 1.2.13.1.1 | | Make(s): | | | |  | |
| 1.2.13.1.2 | | Type and Identification Number : | | | |  | |
| 1.2.13.1.3 | | Calibration Identification Number | | | |  | |
| 1.2.13.1.4 | | Calibration Verification Number (CVN) | | | |  | |

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| --- | --- | --- |
| 1.2.13.2.1 | Description of the safeguarding of the catalyst at switch-over from petrol to LPG or back: |  |
| 1.2.13.2.2 | System layout (electrical connections, vacuum connections, compensation hoses, etc.) |  |
| 1.2.14 | NG fuelling system: (Yes/No) |  |
| 1.2.14.1 | Approval number |  |
| 1.2.14.2 | Electronic engine management control unit for NG fuelling |  |
| 1.2.14.2.1 | Make(s): |  |
| 1.2.14.2.2 | Type and Identification Number : |  |
| 1.2.14.2.3 | Calibration Identification Number |  |
| 1.2.14.2.4 | Calibration Verification Number (CVN) |  |
| 1.2.14.2.5 | Emission-related adjustment possibilities: |  |
| 1.2.14.3 | Further documentation: |  |
| 1.2.14.3.1 | Description of the safeguarding of the catalyst at switch-over from petrol to NG or back |  |
| 1.2.14.3.2 | System layout (electrical connections, vacuum connections, compensation hoses, etc.): |  |
| 1.2.15 | Hydrogen fuelling system: (Yes/No) |  |
| 1.2.15.1 | Electronic engine management control unit for hydrogen fuelling |  |
| 1.2.15.1.1 | Make(s): |  |
| 1.2.15.1.2 | Identification Number : |  |
| 1.2.15.1.3 | Calibration Identification Number |  |
| 1.2.15.1.4 | Calibration Verification Number (CVN) |  |
| 1.2.15.1.5 | Emission-related adjustment possibilities: |  |
| 1.2.15.2 | Further documentation |  |
| 1.2.15.2.1 | Description of the safeguarding of the catalyst at switch-over from petrol to hydrogen or back: |  |
| 1.2.15.2. | System lay-out (electrical connections, vacuum connections compensation hoses, etc.): |  |
| 1.2.16 | H2NG fuelling system: (Yes/No) |  |

|  |  |  |
| --- | --- | --- |
| 1.2.16.1 | Percentage of hydrogen in the fuel (maximum specified by the manufacturer) |  |
| 1.2.16.2 | Electronic engine management control unit for H2NG fuelling |  |
| 1.2.16.2.1 | Make(s): |  |
| 1.2.16.2.2 | Identification Number : |  |
| 1.2.16.2.3 | Calibration Identification Number |  |
| 1.2.16.2.4 | Calibration Verification Number (CVN) |  |
| 1.2.16.2.5 | Emission-related adjustment possibilities: |  |
| 1.2.16.3 | Further documentation |  |
| 1.2.16.3.1 | Description of the safeguarding of the catalyst at switch-over from petrol to H2NG or back: |  |
| 1.2.16.3.2 | System lay-out (electrical connections, vacuum connections compensation hoses, etc.): |  |
| 1.3. | Electric motor(Traction) |  |
| 1.3.1. | Type (winding, excitation): |  |
| 1.3.1.1. | Maximum hourly output: kW(manufacturer’s declared value) |  |
| 1.3.1.1.1. | Maximum net power:[[2]](#footnote-2) kW (manufacturer’s declared value) |  |
| 1.3.1.1.2. | Maximum 30 minutes power: kW (manufacturer’s declared value) |  |
| 1.3.1.2. | Operating voltage: V |  |
| 1.3.2. | Battery (Traction) |  |
| 1.3.2.1. | Number of cells: |  |
| 1.3.2.2. | Mass: …………(kg) |  |
| 1.3.2.3. | Capacity: Ah (Amp-hours) |  |
| 1.3.2.4. | Position: |  |
| 1.4. | Engines or motor combinations |  |
| 1.4.1. | Hybrid Electric Vehicle: (Yes/No) |  |
| 1.4.2. | Category of Hybrid Electric vehicle Off Vehicle Charging/Not Off Vehicle Charging9 |  |
| 1.4.3. | Operating mode switch: with/without |  |
| 1.4.3.1. | Selectable modes |  |
| 1.4.3.1.1. | Pure electric: (Yes/No) |  |
| 1.4.3.1.2. | Pure fuel consuming: (Yes/No) |  |
| 1.4.3.1.3. | Hybrid modes: (Yes/No)(if yes, short description) |  |
| 1.4.4. | Description of the energy storage device: (traction battery, capacitor, flywheel/generator...) |  |
| 1.4.4.1. | Make(s): |  |
| 1.4.4.2. | Type(s) : |  |
| 1.4.4.3. | Identification number: |  |
| 1.4.4.4. | Kind of electrochemical couple: |  |
| 1.4.4.5. | Energy: ........... (for battery: voltage and capacity Ah in 2 h, for capacitor: J) |  |
| 1.4.4.6. | Charger: on board/external/without |  |
| 1.4.5. | Electric machines (describe each type of electric machine separately) |  |
| 1.4.5.1. | Make: |  |
| 1.4.5.2. | Type: |  |
| 1.4.5.3. | Primary use: traction motor/generator |  |
| 1.4.5.3.1. | When used as traction motor: mono motor / multi motors (number): |  |
| 1.4.5.4. | Maximum power: kW |  |
| 1.4.5.5. | Working principle: |  |
| 1.4.5.5.1. | Direct current/alternating current/number of phases: |  |
| 1.4.5.5.2. | Separate excitation/series/compound |  |
| 1.4.5.5.3. | Synchronous/asynchronous |  |
| 1.4.6. | Control unit |  |
| 1.4.6.1. | Make: |  |
| 1.4.6.2. | Type : |  |
| 1.4.6.3. | Identification number: |  |
| 1.4.7. | Power controller |  |
| 1.4.7.1. | Make: |  |
| 1.4.7.2. | Type: |  |
| 1.4.7.3. | Identification number: |  |
| 1.4.8. | Vehicle electric range................. km (according to AIS 137): |  |
| 1.4.9. | Manufacturer’s recommendation for preconditioning: |  |
| 1.5. | **CO2 (g/km) (Applicable for category M1 with GVW<3.5 T)** |  |
| 1.5.1 | Declared : **(rounded to 3 decimal places)** |  |
| 1.5.2 | Fuel consumption (l/100 km) for Petrol, LPG or Diesel  and (kg/100km) for CNG and (kWh/100 km) for Electric Driven Vehicles(Applicable for category M1 with GVW<3.5 T)  (rounded to 3 decimal places )\* |  |
| 1.5.2.1 | Fuel Equivalent  Fuel Consumption  (Actual Fuel) |  |
| 1.5.2.2 | Petrol Equivalent  Fuel Consumption  (Petrol Equivalent) |  |
| 1.5.2.3 | \*calculated on the declared CO2 |  |
| 1.5.3 | Electric energy consumption for electric vehicles Wh/km |  |
| 1.5.3.1 | Electric energy consumption for pure electric vehicles Wh/km |  |
| 1.5.3.2 | Electric energy consumption for externally chargeable hybrid electric vehicles |  |
| 1.5.3.2.1 | Electric energy consumption (condition A, combined) Wh/km |  |
| 1.5.3.2.2 | Electric energy consumption (condition B, combined) Wh/km |  |
| 1.5.3.2.3 | Electric energy consumption (weighted combined) ….Wh/km |  |
| 1.6 | Temperatures permitted by the manufacturer |  |
| 1.6.1. | Cooling system |  |
| 1.6.1.1. | Liquid cooling |  |
| 1.6.1.1.1. | Maximum temperature at outlet: …….(°C) |  |
| 1.6.1.2. | Air cooling |  |
| 1.6.1.2.1. | Reference point: |  |
| 1.6.1.2.2. | Maximum temperature at reference point: ……….(°C) |  |
| 1.6.2. | Maximum outlet temperature of the inlet intercooler: .. (°C) |  |
| 1.6.3. | Maximum exhaust temperature at the point in the exhaust pipe(s) adjacent to the outer flange(s) of the exhaust manifold: …(°C) |  |
| 1.6.4. | Fuel temperature |  |
| 1.6.4.1. | Minimum: .. (°C) |  |
| 1.6.4.2. | Maximum: .. (°C) |  |
| 1.6.5. | Lubricant temperature |  |
| 1.6.5.1. | Minimum: …(°C) |  |
| 1.6.5.2. | Maximum: …(°C) |  |
| 1.7 | Lubrication system |  |
| 1.7.1 | Description of the system |  |
| 1.7.1.1 | Position of the lubricant reservoir: |  |
| 1.7.1.2 | Feed system (by pump/injection into intake/mixing with fuel, etc.) |  |
| 1.7.2 | Lubricating pump |  |
| 1.7.2.1 | Make(s): |  |
| 1.7.2.2 | Type(s): |  |
| 1.7.3 | Mixture with fuel |  |
| 1.7.3.1 | Percentage: |  |
| 1.7.4 | Oil cooler: (Yes/No) |  |
| 1.7.4.1 | Drawing(s):…, or |  |
| 1.7.4.1.1 | Make(s): |  |
| 1.7.4.1.2 | Type(s): |  |
| 3.0 | Transmission |  |
| 3.1 | Moment of inertia of engine flywheel: |  |
| 3.1.1 | Additional moment of inertia with no gear engaged: |  |
| 3.2 | Clutch (type): |  |
| 3.2.1 | Maximum torque conversion: |  |
| 3.3 | Transmission Control Unit (ECU) (Yes/No): |  |
| 3.3.1 | Type and Identification Number : |  |
| 3.3.2 | Calibration Identification Number |  |
| 3.3.3 | Calibration Verification Number (CVN) |  |

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| **Table 4 F**  **TECHNICAL SPECIFICATIONS FOR Parent Engine fitted on FOUR WHEELER AND ABOVE WITH GVW>3.500 kg for BS VI Norms** | | | | | | | |
|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 0.0 | General |  |  |  |  |  |  |
| 0.1 | Make |  |  |  |  |  |  |
| 0.2 | Type |  |  |  |  |  |  |
| 0.3 | Engine type as separate technical unit / engine family as separate technical unit / vehicle with an approved engine with regard to emissions / vehicle with regard to emissions (1). |  |  |  |  |  |  |
| 0.3.1 | Commercial name(s) (if available) |  |  |  |  |  |  |
| 0.4 | Means of identification of type, if marked on the separate technical unit2 |  |  |  |  |  |  |
| 0.4.1 | Location of the marking |  |  |  |  |  |  |
| 0.5 | Name and address of manufacturer |  |  |  |  |  |  |
| 0.6 | In the case of components and separate technical units, location and method of affixing of the approval mark |  |  |  |  |  |  |
| 0.7 | Name(s) and address (es) of assembly plant(s) |  |  |  |  |  |  |
| 0.8 | Name and address of the manufacturer’s representative (if Any) |  |  |  |  |  |  |
|  |  |  |  |  |  |
| **1.0** | **Internal combustion engine** |  |  |  |  |  |  |
| 1.1. | Specific engine information |  |  |  |  |  |  |
| 1.1.1. | Working principle: positive ignition/ compression ignition (1)  Cycle four stroke / two stroke/ rotary (1): |  |  |  |  |  |  |
|  |  |  |  |  |  |
| 1.1.1.1 | Type of dual fuel  Type 1A/ Type 1B/ Type 2A/ Type 2B/ Type 3B (1) (14) |  |  |  |  |  |  |
|  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 1.1.1.2 | Gas energy ratio over the hot part of the WHTC test cycle. ..%(14) |  |  |  |  |  |  |
| 1.1.2. | Number and arrangement of cylinders: |  |  |  |  |  |  |
| 1.1.2.1. | Bore (l) (mm) |  |  |  |  |  |  |
| 1.1.2.2. | Stroke (l) (mm) |  |  |  |  |  |  |
| 1.1.2.3. | Firing order |  |  |  |  |  |  |
| 1.1.3. | Engine capacity (m) (cm³) |  |  |  |  |  |  |
| 1.1.4. | Volumetric compression ratio (2): |  |  |  |  |  |  |
| 1.1.5. | Drawings of combustion chamber, piston crown and, in the case of positive ignition engines, piston rings |  |  |  |  |  |  |
| 1.1.6. | Normal engine idling speed (2) min-1 |  |  |  |  |  |  |
| 1.1.6.1. | High engine idling speed (2) min-1 |  |  |  |  |  |  |
| 1.1.7. | Carbon monoxide content by volume in the exhaust gas with the engine idling (2): % as stated by the manufacturer (positive ignition engines only) |  |  |  |  |  |  |
| 1.1.8. | Maximum net power (n)…… kW at……. min-1 (manufacturer's declared value) |  |  |  |  |  |  |
| 1.1.9. | Maximum permitted engine speed as prescribed by the manufacturer: min-1 |  |  |  |  |  |  |
| 1.1.10. | Maximum net torque (n) …. Nm at ……. min-1 (manufacturer's declared value) |  |  |  |  |  |  |
| 1.1.11 | Manufacturer references of the Documentation package required by paragraphs 3.1, 3.2 and 3.3 of this Regulation enabling the approval authority to evaluate the emission control strategies and the systems on-board the engine to ensure the correct operation of NOx control measures |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| **1.2.** | **Fuel** |  |  |  |  |  |  |
| 1.2.1 | Heavy duty vehicles Diesel/Petrol/LPG/NG-H/NG-L/NG-HL/Ethanol (ED95)/ Ethanol (E85) (1) (6) |  |  |  |  |  |  |
| 1.2.2 | Fuels compatible with use by the engine declared by the manufacturer in accordance with paragraph 4.6.2. of this Regulation |  |  |  |  |  |  |
| **1.3** | **Fuel feed** |  |  |  |  |  |  |
| 1.3.1 | By fuel injection (compression ignition only): (Yes/No) (1) |  |  |  |  |  |  |
| 1.3.1.1 | System description |  |  |  |  |  |  |
| 1.3.1.2 | Working principle: direct injection/pre-chamber/swirl chamber (1) |  |  |  |  |  |  |
| 1.3.1.3 | Injection pump |  |  |  |  |  |  |
| 1.3.1.3.1 | Make(s) |  |  |  |  |  |  |
| 1.3.1.3.2 | Type(s) |  |  |  |  |  |  |
| 1.3.1.3.3 | Maximum fuel delivery (1) (2) …... (mm3) /stroke or cycle at an engine speed of …… min-1 or, alternatively, a characteristic diagram. (When boost control is supplied, state the characteristic fuel delivery and boost pressure versus engine speed) |  |  |  |  |  |  |
|  |  |  |  |  |  |
| 1.3.1.3.4. | Static injection timing (2) |  |  |  |  |  |  |
| 1.3.1.3.5. | Injection advance curve (2) |  |  |  |  |  |  |
| 1.3.1.3.6. | Calibration procedure: test bench/engine (1) |  |  |  |  |  |  |
| 1.3.1.4 | Governor |  |  |  |  |  |  |
| 1.3.1.4.1. | Type |  |  |  |  |  |  |
| 1.3.1.4.2. | Cut-off point |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 1.3.1.4.2.1. | Speed at which cut-off starts under load: min-1 |  |  |  |  |  |  |
| 1.3.1.4.2.2. | Maximum no-load speed: min-1 |  |  |  |  |  |  |
| 1.3.1.4.2.3. | Idling speed: min-1 |  |  |  |  |  |  |
| 1.3.1.5 | Injection piping |  |  |  |  |  |  |
| 1.3.1.5.1. | Length: (mm) |  |  |  |  |  |  |
| 1.3.1.5.2. | Internal diameter: (mm) |  |  |  |  |  |  |
| 1.3.1.5.3. | Common rail, make and type: |  |  |  |  |  |  |
| 1.3.1.6 | Injector(s) |  |  |  |  |  |  |
| 1.3.1.6.1 | Make(s) |  |  |  |  |  |  |
| 1.3.1.6.2 | Type(s) |  |  |  |  |  |  |
| 1.3.1.6.3 | Opening pressure (2): (kPa) or characteristic diagram (2): |  |  |  |  |  |  |
| 1.3.1.7. | Cold start system |  |  |  |  |  |  |
| 1.3.1.7.1. | Make(s): |  |  |  |  |  |  |
| 1.3.1.7.2 | Type(s): |  |  |  |  |  |  |
| 1.3.1.7.3 | Description |  |  |  |  |  |  |
| 1.3.1.8 | Auxiliary starting aid |  |  |  |  |  |  |
| 1.3.1.8.1 | Make(s) |  |  |  |  |  |  |
| 1.3.1.8.2. | Type(s) |  |  |  |  |  |  |
| 1.3.1.8.3 | System description |  |  |  |  |  |  |
| **1.3.1.9** | **Electronic controlled injection: (Yes/No) (1)** |  |  |  |  |  |  |
| 1.3.1.9.1. | Make(s) |  |  |  |  |  |  |
| 1.3.1.9.2. | Type(s): |  |  |  |  |  |  |
| 1.3.1.9.3. | Description of the system (in the case of systems other than continuous injection give equivalent details): |  |  |  |  |  |  |
| 1.3.1.9.3.1 | Make and type of the control unit (ECU) |  |  |  |  |  |  |
|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 1.3.1.9.3.2. | Make and type of the fuel regulator |  |  |  |  |  |  |
| 1.3.1.9.3.3. | Make and type of the air-flow sensor |  |  |  |  |  |  |
| 1.3.1.9.3.4. | Make and type of fuel distributor |  |  |  |  |  |  |
| 1.3.1.9.3.5. | Make and type of the throttle housing |  |  |  |  |  |  |
| 1.3.1.9.3.6. | Make and type of water temperature sensor |  |  |  |  |  |  |
| 1.3.1.9.3.7. | Make and type of air temperature sensor: |  |  |  |  |  |  |
| 1.3.1.9.3.8. | Make and type of air pressure sensor |  |  |  |  |  |  |
| 1.3.1.9.3.9. | Software calibration number(s): |  |  |  |  |  |  |
| **1.3.1.10** | **By fuel injection (positive ignition only): (Yes/No) (1)** |  |  |  |  |  |  |
| 1.3.1.10.1. | Working principle: intake manifold (single-/multi-point/direct injection (1)/other specify): |  |  |  |  |  |  |
| 1.3.1.10.2. | Make(s) |  |  |  |  |  |  |
| 1.3.1.10.3. | Type(s): |  |  |  |  |  |  |
| 1.3.1.10.4. | System description (In the case of systems other than continuous injection give equivalent details): |  |  |  |  |  |  |
| 1.3.1.10.5 | Make and type of the control unit (ECU) |  |  |  |  |  |  |
| 1.3.1.10.6 | Make and type of fuel regulator: |  |  |  |  |  |  |
| 1.3.1.10.7 | Make and type of air-flow sensor: |  |  |  |  |  |  |
| 1.3.1.10.8 | Make and type of fuel distributor: |  |  |  |  |  |  |
| 1.3.1.10.9 | Make and type of pressure regulator: |  |  |  |  |  |  |
| 1.3.1.10.10 | Make and type of micro switch: |  |  |  |  |  |  |
| 1.3.1.10.11 | Make and type of idling adjustment screw |  |  |  |  |  |  |
| 1.3.1.10.12 | Make and type of throttle housing: |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 1.3.1.10.13 | Make and type of water temperature sensor |  |  |  |  |  |  |
| 1.3.1.10.14 | Make and type of air temperature sensor |  |  |  |  |  |  |
| 1.3.1.10.15 | Make and type of air pressure sensor |  |  |  |  |  |  |
| 1.3.1.10.16 | Software calibration number(s): |  |  |  |  |  |  |
| 1.3.1.11 | Injectors: opening pressure (2): ..... (kPa) or characteristic diagram (2): |  |  |  |  |  |  |
| 1.3.1.11.1. | Make: |  |  |  |  |  |  |
| 1.3.1.11.2. | Type |  |  |  |  |  |  |
| 1.3.1.11.3 | Injection timing |  |  |  |  |  |  |
| 1.3.1.11.4 | Cold start system |  |  |  |  |  |  |
| 1.3.1.11.5 | Operating principle(s): |  |  |  |  |  |  |
| 1.3.1.11.6 | Operating limits/settings (1) (2) |  |  |  |  |  |  |
| 1.3.1.12 | Feed pump |  |  |  |  |  |  |
| 1.3.1.12.1 | Pressure (2): ………. (kPa) or characteristic diagram (2): |  |  |  |  |  |  |
| 1.3.1.13 | Electrical system |  |  |  |  |  |  |
| 1.3.1.13.1 | Rated voltage: ……… V, positive/negative ground (1) |  |  |  |  |  |  |
| 1.3.1.14 | Generator |  |  |  |  |  |  |
| 1.3.1.14.1 | Type: |  |  |  |  |  |  |
| 1.3.1.14.2 | Nominal output: VA |  |  |  |  |  |  |
| 1.3.1.15 | Ignition system (spark ignition engines only) |  |  |  |  |  |  |
| 1.3.1.15.1 | Make(s) |  |  |  |  |  |  |
| 1.3.1.15.2 | Type(s) |  |  |  |  |  |  |
| 1.3.1.15.3 | Working principle |  |  |  |  |  |  |
| 1.3.1.15.4 | Ignition advance curve or map (2): |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 1.3.1.15.5 | Static ignition timing (2): …………… degrees before TDC |  |  |  |  |  |  |
| 1.3.1.16 | Spark plugs |  |  |  |  |  |  |
| 1.3.1.16.1 | Make: |  |  |  |  |  |  |
| 1.3.1.16.2 | Type: |  |  |  |  |  |  |
| 1.3.1.16.3 | Gap setting: ……….. (mm) |  |  |  |  |  |  |
| 1.3.1.17 | Ignition coil(s) |  |  |  |  |  |  |
| 1.3.1.17.1 | Make: |  |  |  |  |  |  |
| 1.3.1.17.2 | Type: |  |  |  |  |  |  |
| 1.3.1.18 | Cooling system: liquid/air (1) |  |  |  |  |  |  |
| 1.3.1.18.1 | Liquid |  |  |  |  |  |  |
| 1.3.1.18.1.1 | Nature of liquid |  |  |  |  |  |  |
| 1.3.1.18.2 | Circulating pump(s): (Yes/No) (1) |  |  |  |  |  |  |
| 1.3.1.18.3 | Characteristics: ……… or |  |  |  |  |  |  |
| 1.3.1.18.3.1 | Make(s): |  |  |  |  |  |  |
| 1.3.1.18.3.2 | Type(s): |  |  |  |  |  |  |
| 1.3.1.18.3.3 | Drive ratio(s): |  |  |  |  |  |  |
| 1.3.1.18.3.4 | Air |  |  |  |  |  |  |
| 1.3.1.19 | Fan: (Yes/No) (1) |  |  |  |  |  |  |
| 1.3.1.19.1 | Characteristics ……………. or |  |  |  |  |  |  |
| 1.3.1.19.1.1 | Make(s) |  |  |  |  |  |  |
| 1.3.1.19.1.2 | Type(s): |  |  |  |  |  |  |
| 1.3.1.20 | Drive ratio(s) |  |  |  |  |  |  |
| **2.0** | **Intake system** |  |  |  |  |  |  |
| 2.1. | Pressure charger: (Yes/No) (1) |  |  |  |  |  |  |
| 2.1.1. | Make(s) |  |  |  |  |  |  |
| 2.1.2. | Type(s): |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 2.1.3 | Description of the system (e.g. maximum charge pressure …... (kPa), wastegate, if applicable): |  |  |  |  |  |  |
| 2.2 | Intercooler: (Yes/No) (1) |  |  |  |  |  |  |
| 2.2.1. | Type: air-air/air-water (1) |  |  |  |  |  |  |
| 2.3 | Intake depression at rated engine speed and at 100 % load (compression ignition engines only) |  |  |  |  |  |  |
| 2.3.1 | Minimum allowable: .............. (kPa) |  |  |  |  |  |  |
| 2.3.2. | Maximum allowable: ............. (kPa) |  |  |  |  |  |  |
| 2.4. | Description and drawings of inlet pipes and their accessories (plenum chamber, heating device, additional air intakes, etc) |  |  |  |  |  |  |
| 2.4.1. | Intake manifold description (include drawings and/or photos) |  |  |  |  |  |  |
| **3.0** | **Exhaust system** |  |  |  |  |  |  |
| 3.1. | Description and/or drawings of the exhaust manifold |  |  |  |  |  |  |
| 3.2. | Description and/or drawing of the exhaust system |  |  |  |  |  |  |
| 3.2.1. | Description and/or drawing of the elements of the exhaust system that are part of the engine system |  |  |  |  |  |  |
| 3.2.2. | Maximum allowable exhaust back pressure at rated engine speed and at 100 % load (compression ignition engines only):…..(kPa) |  |  |  |  |  |  |
| 3.2.3 | Exhaust system volume: ……. (cm³) |  |  |  |  |  |  |
| 3.2.4 | Acceptable Exhaust system volume: ……. (cm³) |  |  |  |  |  |  |
| 3.2.5 | Volume of the exhaust system that is part of the engine system….(cm³) |  |  |  |  |  |  |

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|  |  |  | | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | | **A** | **B** | **C** | **D** | **E** |
| 3.2.6 | Minimum cross-sectional areas of inlet and outlet ports |  | |  |  |  |  |  |
| 3.2.7 | Valve timing or equivalent data | | | | | | | |
| 3.2.8 | Maximum lift of valves, angles of opening and closing, or timing details of alternative distribution systems, in relation to dead centers. For variable timing system, minimum and maximum timing |  |  | |  |  |  |  |
| 3.2.9 | Reference and/or setting range (3): |  |  | |  |  |  |  |
| 3.2.10 | Measures taken against air pollution | | | | | | | |
| 3.2.11 | Device for recycling crankcase gases: (Yes/No) (2) |  |  | |  |  |  |  |
| If yes, description and drawings: |  |  | |  |  |  |  |
| If no, compliance with chapter 3 of this Regulation required |  |  | |  |  |  |  |
| 3.2.11.1. | Additional pollution control devices (if any, and if not covered by another heading) |  |  | |  |  |  |  |
| 3.2.11.2.1. | Catalytic converter: (Yes/No) (1) |  |  | |  |  |  |  |
| 3.2.11.2.1.1. | Number of catalytic converters and elements (provide this information below for each separate unit): |  |  | |  |  |  |  |
| 3.2.11.2.1.2. | Dimensions, shape and volume of the catalytic converter(s): |  |  | |  |  |  |  |
| 3.2.11.2.1.3. | Type of catalytic action |  |  | |  |  |  |  |
| 3.2.11.2.1.4. | Total charge of precious metals: |  |  | |  |  |  |  |
| 3.2.11.2.1.5. | Relative concentration |  |  | |  |  |  |  |
| 3.2.11.2.1.6. | Substrate (structure and material): |  |  | |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 3.2.11.2.1.7. | Cell density: |  |  |  |  |  |  |
| 3.2.11.2.1.8. | Type of casing for the catalytic converter(s): |  |  |  |  |  |  |
| 3.2.11.2.1.9. | Location of the catalytic converter(s) (place and reference distance in the exhaust line): |  |  |  |  |  |  |
| 3.2.11.2.1.10. | Heat shield: (Yes/No) (1) |  |  |  |  |  |  |
| 3.2.11.2.1.11. | Regeneration systems/method of exhaust after treatment systems, description: |  |  |  |  |  |  |
| 3.2.11.2.1.11.1. | Normal operating temperature range: …………………….. (°C) |  |  |  |  |  |  |
| 3.2.12.2.1.11.2. | Consumable reagents: (Yes/No) (1): |  |  |  |  |  |  |
| 3.2.12.2.1.11.3. | Type and concentration of reagent needed for catalytic action: |  |  |  |  |  |  |
| 3.2.12.2.1.11.4. | Normal operational temperature range of reagent (°C) |  |  |  |  |  |  |
| 3.2.12.2.1.11.5. | International standard: |  |  |  |  |  |  |
| 3.2.12.2.1.11.6. | Frequency of reagent refill: continuous/maintenance (1): |  |  |  |  |  |  |
| 3.2.12.2.1.12. | Make of catalytic converter |  |  |  |  |  |  |
| 3.2.12.2.1.13. | Identifying part number |  |  |  |  |  |  |
| 3.2.12.2.2. | Oxygen sensor: (Yes/No) (1) |  |  |  |  |  |  |
| 3.2.12.2.2.1. | Make: |  |  |  |  |  |  |
| 3.2.12.2.2.2. | Location: |  |  |  |  |  |  |
| 3.2.12.2.2.3. | Control range: |  |  |  |  |  |  |
| 3.2.12.2.2.4. | Type: |  |  |  |  |  |  |
| 3.2.12.2.2.5. | Identifying part number: |  |  |  |  |  |  |
| 3.2.12.2.3. | Air injection: (Yes/No) (1) |  |  |  |  |  |  |
| 3.2.12.2.3.1. | Type (pulse air, air pump, etc.): |  |  |  |  |  |  |
| 3.2.12.2.4. | Exhaust gas recirculation (EGR): (Yes/No) (1) |  |  |  |  |  |  |
| 3.2.12.2.4.1. | Characteristics (make, type, flow, etc): |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 3.2.12.2.5. | Particulate trap (PT): (Yes/No) (1): |  |  |  |  |  |  |
| 3.2.12.2.5.1. | Dimensions, shape and capacity of the particulate trap: |  |  |  |  |  |  |
| 3.2.12.2.5.2. | Design of the particulate trap: |  |  |  |  |  |  |
| 3.2.12.2.5.3. | Location (reference distance in the exhaust line): |  |  |  |  |  |  |
| 3.2.12.2.5.4. | Method or system of regeneration, description and/or drawing: |  |  |  |  |  |  |
| 3.2.12.2.5.5. | Make of particulate trap |  |  |  |  |  |  |
| 3.2.12.2.5.6. | Identifying part number: |  |  |  |  |  |  |
| 3.2.12.2.5.7. | Normal operating temperature: ... (°C) and pressure range: (kPa) |  |  |  |  |  |  |
| 3.2.12.2.5.8. | In the case of periodic regeneration |  |  |  |  |  |  |
| 3.2.12.2.5.8.1.1. | Number of WHTC test cycles without regeneration (n) |  |  |  |  |  |  |
| 3.2.12.2.5.8.2.1. | Number of WHTC test cycles with regeneration (nR): |  |  |  |  |  |  |
| 3.2.12.2.5.9. | Other systems: (Yes/No) (1) |  |  |  |  |  |  |
| 3.2.12.2.5.9.1 | Description and operation |  |  |  |  |  |  |
| 3.2.12.2.6. | On-board-diagnostic (OBD)system: |  |  |  |  |  |  |
| 3.2.12.2.6.1 | Number of OBD engine families within the engine family |  |  |  |  |  |  |
| 3.2.12.2.6.2. | List of the OBD engine families (when applicable) | OBD engine family 1: …………. | | | | | |
| OBD engine family 2: …………. | | | | | |
| 3.2.12.2.6.3 | Number of the OBD engine family the parent engine / the engine member belongs to: |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 3.2.12.2.6.4 | Manufacturer references of the OBD-Documentation required by paragraph 3.1.4. (c) and paragraph 3.3.4. of this Regulation and specified in chapter 8 of this Regulation for the purpose of approving the OBD system |  |  |  |  |  |  |
| 3.2.12.6.5 | When appropriate, manufacturer reference of the Documentation for installing in a vehicle an OBD equipped engine system |  |  |  |  |  |  |
| 3.2.12.2.6.2. | List and purpose of all components monitored by the OBD system (4) |  |  |  |  |  |  |
| 3.2.12.2.6.3. | Written description (general working principles) for |  |  |  |  |  |  |
| 3.2.12.2.6.3.1 | Positive-ignition engines (4) |  |  |  |  |  |  |
| 3.2.12.2.6.3.1.1. | Catalyst monitoring (4) |  |  |  |  |  |  |
| 3.2.12.2.6.3.1.2. | Misfire detection: (4) |  |  |  |  |  |  |
| 3.2.12.2.6.3.1.3. | Oxygen sensor monitoring: (4) |  |  |  |  |  |  |
| 3.2.12.2.6.3.1.4. | Other components monitored by the OBD system: |  |  |  |  |  |  |
| 3.2.12.2.6.3.2. | Compression-ignition engines: (4) |  |  |  |  |  |  |
| 3.2.12.2.7.3.2.1. | Catalyst monitoring: (4) |  |  |  |  |  |  |
| 3.2.12.2.6.3.2.2. | Particulate trap monitoring: (4) |  |  |  |  |  |  |
| 3.2.12.2.6.3.2.3. | Electronic fuelling system monitoring: (4) |  |  |  |  |  |  |
| 3.2.12.2.6.3.2.4. | De NOx system monitoring: (4) |  |  |  |  |  |  |
| 3.2.12.2.6.3.2.5 | Other components monitored by the OBD system: (4) |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 3.2.12.2.6.4. | Criteria for MI activation (fixed number of driving cycles or statistical method): (4) |  |  |  |  |  |  |
| 3.2.12.2.6.5. | List of all OBD output codes and formats used (with explanation of each): (4) |  |  |  |  |  |  |
| 3.2.12.2.6.6. | OBD Communication protocol standard: (4) |  |  |  |  |  |  |
| 3.2.12.2.6.7. | Manufacturer reference of the OBD related information required by of paragraphs 3.1.4. (d) and 3.3.4. this Regulation for the purpose of complying with the provisions on access to vehicle OBD, or |  |  |  |  |  |  |
| 3.2.12.2.6.7.1. | As an alternative to a manufacturer reference provided in paragraph 3.2.12.2.7.7. reference of the attachment to this chapter that contains the following table, once completed according to the given example: |  |  |  |  |  |  |
| Component - Fault code - Monitoring strategy - Fault detection criteria - MI activation criteria - Secondary parameters – Preconditioning - Demonstration test |  |  |  |  |  |  |
| Catalyst - PO420 - Oxygen sensor 1 and 2 signals - Difference between sensor 1 and sensor 2 signals - 3rd cycle - Engine speed, engine load, A/F mode, catalyst temperature - Two Type 1 cycles - Type 1 |  |  |  |  |  |  |
| 3.2.12.2.7. | Other system (description and operation): |  |  |  |  |  |  |
| 3.2.12.2.7.1. | Systems to ensure the correct operation of NOx control measures |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 3.2.12.2.7.2. | Driver inducement system. |  |  |  |  |  |  |
| 3.2.12.2.7.2.1 | Engine with permanent deactivation of the driver inducement, for use by the rescue services or in vehicles specified in [Note: cross-reference to be determined]. : (Yes/No) |  |  |  |  |  |  |
| 3.2.12.2.7.2.2 | Activation of the creep mode disable after restart /disable after fueling /disable after parking |  |  |  |  |  |  |
| 3.2.12.2.7.3. | Number of OBD engine families within the engine family considered when ensuring the correct operation of NOx control measures |  |  |  |  |  |  |
| 3.2.12.2.7.3.1 | List of the OBD engine families within the engine family considered when ensuring the correct operation of NOx control measures the parent engine /the engine member belongs to (when applicable) |  |  |  |  |  |  |
| 3.2.12.2.7.3.2 | Reference number of the OBD engine family considered when ensuring the correct operation of NOx control measures. |  |  |  |  |  |  |
| 3.2.12.2.7.4 | Lowest concentration of the active ingredient present in the reagent that does not activate the warning system (CDmin): %(vol) |  |  |  |  |  |  |
| 3.2.12.2.8. | When appropriate, manufacturer reference of the Documentation for installing in a vehicle the systems to ensure the correct operation of NOx control measures |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 3.2.12.2.8.1. | Heated /non heated reagent tank and dosing system |  |  |  |  |  |  |
| 3.2.12.2.9 | When appropriate manufacturer reference of the documentation for installing the dual fuel engine in a vehicle |  |  |  |  |  |  |
| 3.2.13. | Specific information related to gas fuelled engines for heavy-duty vehicles (in the case of systems laid out in a different manner, supply equivalent information) |  |  |  |  |  |  |
| 3.2.13.1. | Fuel: LPG /NG-H/NG-L /NG-HL (1) |  |  |  |  |  |  |
| 3.2.13.2. | Pressure regulator(s) or vaporiser/pressure regulator(s) (1) |  |  |  |  |  |  |
| 3.2.13.2.1. | Make(s): |  |  |  |  |  |  |
| 3.2.13.2.2. | Type(s): |  |  |  |  |  |  |
| 3.2.13.2.3. | Number of pressure reduction stages: |  |  |  |  |  |  |
| 3.2.13.2.4. | Pressure in final stage minimum: ….. (kPa) – maximum. (kPa) |  |  |  |  |  |  |
| 3.2.13.2.5. | Number of main adjustment points: |  |  |  |  |  |  |
| 3.2.13.2.6. | Number of idle adjustment points: |  |  |  |  |  |  |
| 3.2.13.2.7. | Type-approval number: |  |  |  |  |  |  |
| 3.2.13.3. | Fuelling system: mixing unit / gas injection / liquid injection / direct injection (1) |  |  |  |  |  |  |
| 3.2.13.3.1. | Mixture strength regulation: |  |  |  |  |  |  |
| 3.2.13.3.2. | System description and/or diagram and drawings: |  |  |  |  |  |  |
| 3.2.13.3.3. | Type-approval number: |  |  |  |  |  |  |
| 3.2.13.4. | Mixing unit |  |  |  |  |  |  |
| 3.2.13.4.1. | Number: |  |  |  |  |  |  |
| 3.2.13.4.2. | Make(s): |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 3.2.13.4.3. | Type(s): |  |  |  |  |  |  |
| 3.2.13.4.4. | Location: |  |  |  |  |  |  |
| 3.2.13.4.5. | Adjustment possibilities: |  |  |  |  |  |  |
| 3.2.13.4.6. | Type-approval number: |  |  |  |  |  |  |
| 3.2.13.5. | Inlet manifold injection |  |  |  |  |  |  |
| 3.2.13.5.1. | Injection: single point/multipoint (1) |  |  |  |  |  |  |
| 3.2.13.5.2. | Injection: continuous/simultaneously timed/sequentially timed (1) |  |  |  |  |  |  |
| 3.2.13.5.3. | Injection equipment |  |  |  |  |  |  |
| 3.2.13.5.3.1. | Make(s): |  |  |  |  |  |  |
| 3.2.13.5.3.2. | Type(s): |  |  |  |  |  |  |
| 3.2.13.5.3.3. | Adjustment possibilities: |  |  |  |  |  |  |
| 3.2.13.5.3.4. | Type-approval number: |  |  |  |  |  |  |
| 3.2.13.5.4. | Supply pump (if applicable): |  |  |  |  |  |  |
| 3.2.13.5.4.1. | Make(s): |  |  |  |  |  |  |
| 3.2.13.5.4.2. | Type(s): |  |  |  |  |  |  |
| 3.2.13.5.4.3. | Type-approval number: |  |  |  |  |  |  |
| 3.2.13.5.5. | Injector(s): |  |  |  |  |  |  |
| 3.2.13.5.5.1. | Make(s): |  |  |  |  |  |  |
| 3.2.13.5.5.2. | Type(s): |  |  |  |  |  |  |
| 3.2.13.5.5.3. | Type-approval number: |  |  |  |  |  |  |
| 3.2.13.6. | Direct injection |  |  |  |  |  |  |
| 3.2.13.6.1. | Injection pump/pressure regulator (1) |  |  |  |  |  |  |
| 3.2.13.6.1.1. | Make(s): |  |  |  |  |  |  |
| 3.2.13.6.1.2. | Type(s): |  |  |  |  |  |  |
| 3.2.13.6.1.3 | Injection timing: |  |  |  |  |  |  |
| 3.2.13.6.1.4. | Type-approval number: |  |  |  |  |  |  |
| 3.2.13.6.2. | Injector(s) |  |  |  |  |  |  |
| 3.2.13.6.2.1. | Make(s): |  |  |  |  |  |  |
| 3.2.13.6.2.2. | Type(s): |  |  |  |  |  |  |
| 3.2.13.6.2.3. | Opening pressure or characteristic diagram (2): |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 3.2.13.6.2.4. | Type-approval number: |  |  |  |  |  |  |
| 3.2.13.7. | Electronic control unit (ECU) |  |  |  |  |  |  |
| 3.2.13.7.1. | Make(s): |  |  |  |  |  |  |
| 3.2.13.7.2. | Type(s): |  |  |  |  |  |  |
| 3.2.13.7.3. | Adjustment possibilities: |  |  |  |  |  |  |
| 3.2.13.7.4. | Software calibration number(s): |  |  |  |  |  |  |
| 3.2.13.8. | NG fuel-specific equipment |  |  |  |  |  |  |
| 3.2.13.8.1. | Variant 1 (only in the case of approvals of engines for several specific fuel compositions) |  |  |  |  |  |  |
| 3.2.13.8.1.1. | Self-adaptive feature? (Yes/No) (1) |  |  |  |  |  |  |
| 3.2.13.8.1.2. | Calibration for a specific gas composition NG-H/NG-L/NG-HL (1) |  |  |  |  |  |  |
| Transformation for a specific gas composition NG-Ht/NG-Lt/NG-HLt (1) |  |  |  |  |  |  |
| 3.2.13.8.1.3. | Methane (CH4): .......... basis (%mole) min. (%mole) max. (%mole) | | | | | | |
|  | Ethane (C2H6): ........... basis: (%mole) min. (%mole) max. (%mole ) | | | | | | |
|  | Propane (C3H8): ......... basis: (%mole) min. (%mole) max. (%mole) | | | | | | |
|  | Butane (C4H10):.......... basis: (%mole) min. (%mole) max. (%mole) | | | | | | |
|  | C5/C5+: .......…. basis: (%mole) min. (%mole) max. (%mole) | | | | | | |
|  | Oxygen (O2): …..basis: (%mole) min. (%mole) max. (%mole) | | | | | | |
|  | Inert (N2, He etc):.........basis: (%mole) min. (%mole) max. (%mole) | | | | | | |
| 3.2.13.9 | When appropriate manufacturer reference of the documentation for installing the dual fuel engine in a vehicle |  |  |  |  |  |  |
| **3.3.1.** | **CO2 emissions for heavy duty engines** |  |  |  |  |  |  |
| 3.3.1.1. | CO2 mass emissions WHSC test (16)  (g/kWh) |  |  |  |  |  |  |
| 3.3.1.2. | CO2 mass emissions WHTC test in diesel mode (17) (g/kWh) |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 3.3.1.3 | CO2 mass emissions WHTC test in duel fuel mode (if applicable) (g/kWh) |  |  |  |  |  |  |
| 3.3.1.4 | CO2 mass emissions WHSC test (16)  (g/kWh) |  |  |  |  |  |  |
| 3.3.1.5 | CO2 mass emissions WHTC test in diesel mode (17) (g/kWh) |  |  |  |  |  |  |
| 3.3.1.6 | CO2 mass emissions WHTC test in duel fuel mode (14) (g/kWh) |  |  |  |  |  |  |
| **3.3.2.** | **Fuel consumption for heavy duty engines** |  |  |  |  |  |  |
| 3.3.2.1 | Fuel consumption WHSC test:(16) (g/kWh) |  |  |  |  |  |  |
| 3.3.2.2. | Fuel consumption WHTC test in diesle mode (5) (17) (g/kWh) |  |  |  |  |  |  |
| 3.3.2.3 | Fuel consumption WHTC test in duel fuel mode (14) |  |  |  |  |  |  |
| 3.3.2.4 | Fuel consumption WHSC test (5) (16) g/kWh |  |  |  |  |  |  |
| 3.3.2.5 | Fuel consumption WHTC test in diesel mode (5)(13) (g/kWh) |  |  |  |  |  |  |
| 3.3.2.6 | Fuel consumption WHTC test in duel fuel mode (14) |  |  |  |  |  |  |
| **3.4.** | **Temperatures permitted by the manufacturer** |  |  |  |  |  |  |
| 3.4.1. | Cooling system |  |  |  |  |  |  |
| 3.4.1.1. | Liquid cooling Maximum temperature at outlet: ………. (°C) |  |  |  |  |  |  |
| 3.4.1.2. | Air cooling |  |  |  |  |  |  |
| 3.4.1.2.1. | Reference point: |  |  |  |  |  |  |
| 3.4.1.2.2. | Maximum temperature at reference point: ……(°C) |  |  |  |  |  |  |
| 3.4.2. | Maximum outlet temperature of the inlet intercooler: ……(°C) |  |  |  |  |  |  |
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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 3.4.3. | Maximum exhaust temperature at the point in the exhaust pipe(s) adjacent to the outer flange(s) of the exhaust manifold(s) or turbocharger(s): ……(°C) |  |  |  |  |  |  |
| 3.4.4. | Fuel temperature Minimum: (°C) – maximum: (°C) |  |  |  |  |  |  |
| For diesel engines at injection pump inlet, for gas fuelled engines at pressure regulator final stage. |  |  |  |  |  |  |
| 3.4.5. | Lubricant temperature |  |  |  |  |  |  |
| Minimum: (°C) – maximum: (°C) |  |  |  |  |  |  |
| **3.5** | **Lubrication system** |  |  |  |  |  |  |
| 3.5.1. | Description of the system |  |  |  |  |  |  |
| 3.5.1.1. | Position of lubricant reservoir |  |  |  |  |  |  |
| 3.5.1.2. | Feed system (by pump/injection into intake/mixing with fuel, etc.) (1) |  |  |  |  |  |  |
| 3.5.2. | Lubricating pump |  |  |  |  |  |  |
| 3.5.2.1. | Make(s) |  |  |  |  |  |  |
| 3.5.2.2. | Type(s) |  |  |  |  |  |  |
| 3.5.3. | Mixture with fuel |  |  |  |  |  |  |
| 3.5.3.1. | Percentage: |  |  |  |  |  |  |
| 3.5.4. | Oil cooler: (Yes/No) (1) |  |  |  |  |  |  |
| 3.5.4.1. | Drawing(s) |  |  |  |  |  |  |
| 3.5.4.1.1. | Make(s): |  |  |  |  |  |  |
| 3.5.4.1.2. | Type(s) |  |  |  |  |  |  |
| 3.6 | Manufacturer of the engine |  |  |  |  |  |  |
| 3.6.1. | Manufacturer’s engine code (as marked on the engine or other means of identification) |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 3.6.2. | Approval number (if appropriate) including fuel identification marking: |  |  |  |  |  |  |
| **3.7** | **Fuel** |  |  |  |  |  |  |
| 3.7.1 | Fuel tank inlet: restricted orifice / label |  |  |  |  |  |  |
| 3.7.2 | Dual fuel vehicle: Yes /No |  |  |  |  |  |  |
| **3.8** | **Fuel tank(s)** |  |  |  |  |  |  |
| 3.8.1 | Service fuel tank(s) |  |  |  |  |  |  |
| 3.8.1.1 | Number and capacity of each tank: |  |  |  |  |  |  |
| 3.8.2 | Reserve fuel tank(s) |  |  |  |  |  |  |
| 3.8.2.1 | Number and capacity of each tank: |  |  |  |  |  |  |
| 3.9 | **Intake system** |  |  |  |  |  |  |
| 3.9.1 | Actual Intake system depression at rated engine speed and at 100% load on the vehicle: (kPa) |  |  |  |  |  |  |
| 3.9.2 | Air filter, drawings: …………………… or………………………………….. |  |  |  |  |  |  |
| 3.9.2.1 | Make(s) |  |  |  |  |  |  |
| 3.9.2.2 | Type(s): |  |  |  |  |  |  |
| 3.9.2.3 | Intake silencer, drawings |  |  |  |  |  |  |
| 3.9.2.3.1 | Make(s): |  |  |  |  |  |  |
| 3.9.2.3.2 | Type(s): |  |  |  |  |  |  |
| **3.10** | **Exhaust system** |  |  |  |  |  |  |
| 3.10.1 | Description and/or drawing of the exhaust system |  |  |  |  |  |  |
| 3.10.2 | Description and/or drawing of the elements of the exhaust system that are not part of the engine system |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 3.10.2.1 | Actual exhaust back pressure at rated engine speed and at 100 % load on the vehicle (compression ignition engines only):………..(kPa) |  |  |  |  |  |  |
| 3.10.3 | Exhaust system volume: ……. dm³ |  |  |  |  |  |  |
| 3.10.4 | Actual volume of the complete Exhaust system (vehicle and engine system): ……. (cm³) |  |  |  |  |  |  |
| **3.11** | **On-board-diagnostic (OBD) system**  Alternative approval as defined in point 2.4 of chapter 8A of this Regulation used. (Yes/No) (1) |  |  |  |  |  |  |
| 3.11.1 | OBD components on-board the vehicle |  |  |  |  |  |  |
| 3.11.2 | When appropriate, manufacturer reference of the documentation package related to the installation on the vehicle of the OBD system of an approved engine |  |  |  |  |  |  |
| 3.11.3 | Written description and/or drawing of the MI (10) |  |  |  |  |  |  |
| 3.11.4 | Written description and/or drawing of the OBD off-board communication interface (10) |  |  |  |  |  |  |
| 3.11.5 | OBD components on board the vehicle |  |  |  |  |  |  |
| 3.11.6 | Alternative approval as defined in paragraph 2.4 of chapter 8A of this standard |  |  |  |  |  |  |
| 3.11.6.1 | OBD Components on board the vehicle |  |  |  |  |  |  |

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|  |  |  | **Engine Family Members** | | | | |
| **Clause No** | **Description** | **Parent Engine or Engine Type** | **A** | **B** | **C** | **D** | **E** |
| 3.11.6.2 | When appropriate manufacturer reference of the documentation pacakage related to the installation of the OBD system of an approved engine. |  |  |  |  |  |  |
| 3.11.6.3 | written description and /or drawing of the MI (10) |  |  |  |  |  |  |
| 3.11.6.4 | Written description and /or drawing of the OBD off board communication interface |  |  |  |  |  |  |
| **3.12** | **Systems to ensure the correct operation of NOx control measures** |  |  |  |  |  |  |
| 3.12.1 | driver inducement system |  |  |  |  |  |  |
| 3.12.2 | engine with permanent deactivation of the driver inducement for use by the rescue services or in vehicles designed and constructed for use by the armed services, civil defense, fire protection services and forces responsible for maintaining public order: (Yes/No) |  |  |  |  |  |  |
| 3.12.3 | **Activation of the creep mode:**  “disable after restart” / “disable after fuelling” / “disable after parking” (7)  Components on board the vehicle of the systems ensuring the correct operation of Nox control measures |  |  |  |  |  |  |
| 3.12.4 | list of components on board the vehicle of the systems ensuring the correct operation of Nox control measures |  |  |  |  |  |  |

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|  | |  | |  | **Engine Family Members** | | | | | |
| **Clause No** | | **Description** | | **Parent Engine or Engine Type** | **A** | | **B** | **C** | **D** | **E** |
| 3.12.5 | | When appropriate, manufacturer reference of the documentation package related to the installation on the vehicle of the system ensuring the correct operation of NOx control measures of an approved engine | |  |  | |  |  |  |  |
| 3.12.6 | | Written description and/or drawing of the warning signal (6) | |  |  | |  |  |  |  |
| 3.12.7 | | Heated/non heated reagent tank and dosing system | |  |  | |  |  |  |  |
|  | Notes: | | | | | | | | | |
|  | 1 | Delete where not applicable (there are cases where nothing needs to be deleted when more than one entry is applicable). | | | | | | | | |
|  | 2 | If the means of identification of type contains characters not relevant to describe the vehicle, component or separate technical unit types covered by this information document, such characters shall be represented in the documentation by the symbol "?" (e.g. ABC?123??). | | | | | | | | |
|  | 3 | This figure shall be rounded off to the nearest tenth of a millimeter. | | | | | | | | |
|  | 4 | This value shall be calculated and rounded off to the nearest cm3. | | | | | | | | |
|  | 5 | Specify the tolerance | | | | | | | | |
|  | 6 | Determined in accordance with the requirements of AIS 137 PART 5. | | | | | | | | |
|  | 7 | Please fill in here the upper and lower values for each variant. | | | | | | | | |
|  | 8 | To be documented in case of a single OBD engine family and if not already documented in the documentation package(s) referred to in line 3.2.12.2.7.0.4. of Part 1 to Chapter2. | | | | | | | | |
|  | 9 | Fuel consumption for the combined WHTC including cold and hot part according to chapter 11. | | | | | | | | |
|  | 10 | To be documented if not already in the documentation referred to in line 3.2.12.2.7.2. of Part 2 to chapter 2. | | | | | | | | |
|  | 11 | Paragraph 2.1of chapter 10 has been reserved for future alternative approvals. | | | | | | | | |
|  | 12 | Delete as appropriate. | | | | | | | | |
|  | 13 | Duel fuel engines | | | | | | | | |
|  | 14 | In case of duel fuel engine or vehicle (type as defined in chapter 14 of this standard). | | | | | | | | |
|  | 15 | In case of duel fuel engine or vehicle the type of gaseous fuel used in duel fuel mode shall not be struck out. | | | | | | | | |
|  | 16 | Except duel fuel engines or vehicles (type as defined in chapter 14 of this standard.) | | | | | | | | |
|  | 17 | In the case of Type 1B Type 2B, and Type 3B of duel fuel engines (type as defined in chapter14 of this standard.) | | | | | | | | |
|  |  |  | | | | | | | | |
| **20.0** | **Page 101/227, Table 6** | | | | | | | | | |
|  | Add new clause no. E1.3: Rating (Ah) | | | | | | | | | |
| **21.0** | **Page 110/227, Table 6** | | | | | | | | | |
|  | Add following new Clause E 24.0 and E25.0 after E 23.0 and renumber subsequent clause: | | | | | | | | | |
|  |  | | | | | | | | | |
|  | **Clause No** | | **Description** | | |  | | | | |
|  | **E24.0** | | **Air Conditioning System for cabin of N2 and N3 categories of vehicle as per AIS-056(Rev.1) (Provided -Yes/No)** | | |  | | | | |
|  | E24.1 | | Make(s): | | |  | | | | |
|  | E24.2 | | Part No/Identification No: | | |  | | | | |
|  | E24.3 | | Schematic diagram of AC system | | |  | | | | |
|  | E24.4 | | Cooling Capacity (kW) | | |  | | | | |
|  | **E25.0** | | **Ventilation System for cabin of N2 and N3 categories of vehicle as per AIS-056(Rev.1) (Provided - Yes/No)** | | |  | | | | |
|  | E 25.1 | | Information for Ventilation system | | |  | | | | |
|  | E 25.1.1 | | Total area (cm2) of the unblocked openings and their locations excluding the area of Side Door Windows (Drawing to be provided) | | |  | | | | |
|  | E 25.1.2 | | Cabin volume (m3) | | |  | | | | |
|  | E 25.2 | | Name of manufacturer of the installed blower(s) | | |  | | | | |

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|  | E 25.3 | Total flow rate (m3 /hr ) of all the blowers installed |  |
|  | E 25.4 | No. of speeds offered in blower (s) |  |
|  | E 25.5 | Whether air vents have been provided for direction control, If yes, their locations |  |
|  | E 25.6 | Schematic diagram of the Cabin Ventilation System |  |
|  |  |  |  |
| **22.0** | **Page 113/227, Table 7,** | | |
|  | Substitute following text for existing text of table under title “Dimensions” | | |
|  | * Ground clearance for vehicle category M1 in accordance with IS 9435,(mm) * Min. ground clearance (mm) (other than M1) | | |
|  |  | | |
| **23.0** | **Page 113/227, Table 7,** | | |
|  | Substitute following text for existing text of table under title “Seating”: | | |
|  | Sketch showing seating layout with vehicle dimensions (mm) (all category of vehicles) | | |
|  |  | | |
| **24.0** | **Page 113/227, Table 7,** | | |
|  | Substitute following rows for last two rows of table under title “weight”: | | |
|  | **CO2 (g/km) (Applicable for category M1 with GVW<3.5 T)** | | |
|  | Declared : **(rounded to 3 decimal places)** | | |
|  | Fuel consumption (l/100 km) for Petrol, LPG or Diesel  and (kg/100km) for CNG and (kWh/100 km) for Electric Driven Vehicles(Applicable for category M1 with GVW<3.5 T)  (rounded to 3 decimal places )\* | | |
|  | Fuel Equivalent  Fuel Consumption  (Actual Fuel) | | |
|  | Petrol Equivalent  Fuel Consumption  (Petrol Equivalent) | | |
|  | \*calculated on the declared CO2 | | |

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| **25.0** | **Page 116/227, Table 8,** | |
|  | Substitute following rows after row 124/1 | |
|  |  | |
|  | 124(1)-5(b) | Requirements for behavior of steering mechanism of a vehicle in a Head-on collision |
|  | 124(1)-5(c) | Protection of Occupants in the event of an Offset Frontal collision |
|  | 124(1)-6(b) | Approval of vehicles with regard to the Protection of Occupants in the event of a Lateral collision |
|  | 124(1)-6(c) | Approval of vehicles with regard to the Protection of Pedestrian and other Vulnerable Road User in the event of a collision with a Motor vehicle |
|  | 124(1)-51 | Protective devices against unauthorized use for M & N category vehicles |
|  | 124(1)-52 | Vehicle Alarm Systems and Immobilizers for M1 category, and N1 category (having GVW not more than 2 ton) |
|  |  | |
| **26.0** | **Page 113/227, Table 13,** | |
|  | Substitute following table for existing table: | |
|  |  | |
|  | **1.0** | **General description of vehicle** |
|  | 1.1 | Vehicle Model |
|  | 1.2 | Vehicle Type |
|  | 1.3 | Drawing and /or Photographs of the vehicle |
|  | **2.0** | **Description of The Traction Battery Pack** |
|  | 2.1 | Make and Trade name (If any) |
|  | 2.2 | Kind of Electro – Chemical Chemistry |
|  | 2.3 | Nominal Voltage (V) at Pack level |
|  | 2.3.1 | Nominal Voltage (V) at Cell Level |
|  | 2.4 | Number of Cells/Modules and its Configuration |
|  | 2.5 | Battery Energy (kWh) |
|  | 2.6 | Battery Capacity (C5), |
|  | 2.7 | End of Discharge Voltage Value (V) at Pack Level |
|  | 2.8 | Provision of ventilation for battery Yes / No |
|  | 2.8.1 | Brief description of the battery pack ventilation system adopted in the vehicle. Provide drawing if necessary. |
|  | 2.9 | Traction Battery Approval as per AIS 048 :Report Number |
|  | 2.10 | On-board Indication of battery state of charge (SOC) |
|  | 2.10.1 | Details of indication when state of charge (SOC) of the battery reaches a level when the manufacturer recommends re-charging. |
|  | 2.10.1.1 | Indication format. |
|  | 2.10.1.2 | Relationship of state of charge indicator and the indication. |

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|  | 2.10.1.3 | Make |
|  | 2.10.1.4 | Model |
|  | 2.10.2 | Indication of state of charge of battery reaches a level at which driving vehicle further may cause damage to batteries |
|  | 2.10.2.1 | Indication format. |
|  | 2.10.2.2 | Relationship of state of charge indicator and the indication. |
|  | 2.11 | Battery Mass (kg) |
|  | 2.12 | Brief description of maintenance procedure of battery pack, if any |
|  | **3.0** | **Battery Management System (BMS)** |
|  | 3.1 | Make |
|  | 3.2 | Model Number / Part Number |
|  | 3.3 | Software Version |
|  | 3.4 | Hardware Version |
|  | 3.5 | Architecture (attach circuit board diagram and Cell configuration structure ) |
|  | 3.6 | Balancing Type (Active/Passive) |
|  | 3.7 | Communication Protocol |
|  | **4.0** | **DC – DC Converter** |
|  | 4.1 | Make |
|  | 4.2 | Model Number / Part Number |
|  | 4.3 | Hardware Version |
|  | 4.4 | Input Range (Current in A and Voltage in V) |
|  | 4.5 | Output Range (Current in A and Voltage in V) |
|  | **5.0** | **Description of The Drive Train** |
|  | 5.1 | General |
|  | 5.1.1 | Make |
|  | 5.1.2 | Type |
|  | 5.1.3 | Use : Mono motor / multi motors (number) |
|  | 5.1.4 | Transmission Arrangement parallel / Transaxial / others to precise |
|  | 5.1.5 | Test Voltage (V) |
|  | 5.1.6 | Motor Nominal Speed (min -1) |
|  | 5.1.7 | Motor Maximum Speed, Min –1 or by default reducer outlet shaft / gear box speed (specify gear engaged) |
|  | 5.1.8 | Maximum Power Speed (min –1) and (km/h) |
|  | 5.1.9 | Maximum Power (kW) |
|  | 5.1.10 | Maximum Thirty Minutes Power (kW) |
|  | 5.1.11 | Maximum Thirty Minutes speed km/h (Reference in AIS-039 (Rev.1) and AIS-040 (Rev.2) |
|  | 5.1.12 | Range as per AIS 040 (Rev.1) (km) |
|  | 5.1.13 | Speed at the beginning of the range (min –1) |
|  | 5.1.14 | Speed at the end of the range (min –1 ) |
|  | 5.2 | **Traction Motor** |
|  | 5.2.1 | Make |
|  | 5.2.2 | Model Number / Part number |
|  | 5.2.3 | Type (BLDC, DC, AC etc) |
|  | 5.2.4 | Working Principle |
|  | 5.2.4.1 | Direct current / alternating current / number of phases |
|  | 5.2.4.2 | Separate excitation / series / compound |
|  | 5.2.4.3 | Synchron / asynchron |
|  | 5.2.4.4 | Coiled rotor / with permanent magnets / with housing |
|  | 5.2.4.5 | Number of Poles of the Motor |
|  | 5.2.5 | Motor power curve (kW) with motor RPM (min-1) / vehicle speed in (km/h), (Provide Graph) |
|  | 5.3 | **Power Controller** |
|  | 5.3.1 | Make |
|  | 5.3.2 | Model Number / Part number |
|  | 5.3.3 | Software Version |
|  | 5.3.4 | Hardware Version |
|  | 5.3.5 | Type |
|  | 5.3.6 | Control Principle : vectorial / open loop / closed / other (to be specified ) |
|  | 5.3.7 | Maximum effective current supplied to the Motor (A) |
|  | 5.3.8 | Voltage range use (V to V) |

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|  | 5.4 | Cooling System  motor : liquid / air  controller : liquid / air  Battery : liquid / air |
|  | 5.4.1 | Liquid cooling equipment characteristics |
|  | 5.4.1.1 | Nature of the liquid ,  circulating pumps, yes / no |
|  | 5.4.1.2 | Characteristics or make(s) and type(s) of the pump |
|  | 5.4.1.3 | Thermostat : setting |
|  | 5.4.1.4 | Radiator : drawing(s) or make(s) and type(s) |
|  | 5.4.1.5 | Relief valve : pressure setting |
|  | 5.4.1.6 | Fan : Characteristics or make(s) and type(s) |
|  | 5.4.1.7 | Fan : duct |
|  | 5.4.2 | Air-cooling equipment characteristics |
|  | 5.4.2.1 | Blower : Characteristics or make(s) and type(s) |
|  | 5.4.2.2 | Standard air ducting |
|  | 5.4.2.3 | Temperature regulating system yes / no |
|  | 5.4.2.4 | Brief description |
|  | 5.4.2.5 | Air filter : make(s)  type(s) |
|  | 5.4.3 | **Maximum temperatures recommended by the manufacturer:** |
|  | 5.4.3.1 | Motor Outlet : oC |
|  | 5.4.3.2 | Controller inlet : oC |
|  | 5.4.3.3 | Battery inlet : oC |
|  | 5.4.3.4 | At motor reference point(s) oC |
|  | 5.4.3.5 | At controller reference point(s) oC |
|  | 5.4.3.6 | At Battery reference point(s) oC |
|  | 5.5 | Insulating Category : |
|  | 5.5.1 | Ingress Protection (IP)-Code : |
|  | 5.6 | Lubrication System Principle  Bearings : friction / ball  Lubricant : grease / oil  Seal : yes / no  Circulation : with / without |
|  | **6.0** | **Charger** : |
|  | 6.1 | Charger : on board / external |
|  | 6.1.1 | Make |
|  | 6.1.2 | Model |
|  | 6.1.3 | Software Version |
|  | 6.1.4 | Hardware Version |
|  | 6.1.5 | Type (AC/DC, Slow /Fast) |
|  | 6.1.6 | Standard Protocol (BEVC DC001(or) BEVC AC001(or) CCS (or) GB/T (or) CHAdeMO (or) SAE J1772 (or) if other specify) |
|  | 6.2 | Description of the normal profile of charging system |
|  | 6.3 | Specifications |
|  | 6.3.1 | Mains Supply : single phase/ three phase |
|  | 6.3.1 | Input Nominal Voltage (V) & frequency (Hz) with tolerances. |
|  | 6.3.3 | Output Voltage Range (V) and Current Range (A) |
|  | 6.4 | Reset period recommended between the end of the discharge and the start of the charge |
|  | 6.5 | Recommended duration of a complete charge |
|  | 6.6 | In case of on-board charger |
|  | 6.6.1 | Continuous rating of charger socket (A) : |
|  | 6.6.2 | Time rating (h) of charger socket, if any : |
|  | 6.6.3 | Whether soft-start facility Yes / No : |
|  | 6.6.4 | Maximum initial in-rush current (A) |
|  | **7.0** | **Electrical details of vehicle for functional safety** |
|  | 7.1 | Schematic diagram showing the electrical layout giving all major electrical items along with their physical location in the vehicle. It shall include batteries, power-train components, protection fuses, circuit breakers etc. |
|  | 7.2 | Specifications of circuit breakers/ fuses used for protection of batteries / power-train |
|  | 7.2.1 | IS / IEC specifications |
|  | 7.2.2 | Rating (A) |
|  | 7.2.3 | Opening time (ms) |
|  | 7.3 | Working voltage V |
|  | 7.4 | Schematic highlighting physical location of live parts having working voltage greater than 60 V DC or 25 V AC |
|  | 7.5 | Electric cables / connectors / wiring harness |
|  | 7.5.1 | IEC protection class |
|  | 7.5.2 | Insulation material used |
|  | 7.5.3 | Is Conduits provided? Write Yes / No |
|  | 7.6 | List of exposed conductive parts of on-board equipment. |
|  | 7.6.1 | Any potential equalization resistance used to electrically connect these parts Yes/ No |
|  | 7.6.2 | If yes, give details |
|  | 7.7 | List of failures due to which the vehicle will come to standstill |
|  | 7.8 | List of conditions under which the performance of vehicle is limited and how. |
|  | 8.0 | Electrical energy consumption of Vehicle in W-h/km, as per AIS-039 |

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| **27.0** | **Page 113/227, Table 17,** |
|  | Substitute following title for existing title: |
|  | **DETAILED TECHNICAL SPECIFICATIN FOR AGRICULTURAL TRACTORS /COMBINED HARVESTER** |
|  |  |
| **28.0** | **Page 113/227, Table 17,** |
|  | Substitute following table for existing table under clause 3.22.5: |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **3.22.5.1** | **Head lamp** |  |
|  | **3.22.5.1.1** | **Main beam** |  |
|  | 3.22.5.1.1.1 | Make |  |
|  | 3.22.5.1.1.2 | Type of lens (Glass / Plastic) |  |
|  | 3.22.5.1.1.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.1.1.4 | Numbers |  |
|  | **3.22.5.1.2** | **Dipped beam** |  |
|  | 3.22.5.1.2.1 | Make |  |
|  | 3.22.5.1.2.2 | Type of lens (Glass / Plastic) |  |
|  | 3.22.5.1.2.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.1.2.4 | Numbers |  |
|  | **3.22.5.2** | **Day Time Running Lamp (if provided)** |  |
|  | 3.22.5.2.1 | Make |  |
|  | 3.22.5.2.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.2.3 | Type of lens (Glass / Plastic) |  |
|  | 3.22.5.2.4 | Numbers |  |
|  | **3.22.5.3** | **Front Fog Lamp** |  |
|  | 3.22.5.3.1 | Make |  |
|  | 3.22.5.3.2 | Type of lens (Glass / Plastic) |  |
|  | 3.22.5.3.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.3.4 | Numbers |  |
|  | **3.22.5.4** | **Rear Fog Lamp** |  |
|  | 3.22.5.4.1 | Make |  |
|  | 3.22.5.4.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.4.3 | Numbers |  |
|  | **3.22.5.5** | **Registration Plate lamp** |  |
|  | 3.22.5.5.1 | Make |  |
|  | 3.22.5.5.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.5.3 | Numbers |  |
|  | **3.22.5.6** | **Position lamp / Parking Lamp – Front** |  |
|  | **3.22.5.6.1** | **Front Position Lamp** |  |
|  | 3.22.5.6.1.1 | Make |  |
|  | 3.22.5.6.1.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.6.1.3 | Numbers |  |
|  | **3.22.5.6.2** | **Front Parking Lamp** |  |
|  | 3.22.5.6.2.1 | Make |  |
|  | 3.22.5.6.2.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.6.2.3 | Numbers |  |
|  | **3.22.5.7** | **Position lamp / Parking Lamp – Rear** |  |
|  | **3.22.5.7.1** | **Rear Position Lamp** |  |
|  | 3.22.5.7.1.1 | Make |  |
|  | 3.22.5.7.1.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.7.1.3 | Numbers |  |
|  | **3.22.5.7.2** | **Rear Parking Lamp** |  |
|  | 3.22.5.7.2.1 | Make |  |
|  | 3.22.5.7.2.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.7.2.3 | Number and Colour of Lens |  |
|  | **3.22.5.8** | **Stop lamp (S1 / S2)** |  |
|  | 3.22.5.8.1 | Make |  |
|  | 3.22.5.8.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.8.3 | Numbers |  |
|  | **3.22.5.9** | **Reversing lamp** |  |
|  | 3.22.5.9.1 | Make |  |
|  | 3.22.5.9.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.9.3 | Numbers |  |
|  | **3.22.5.10** | **Direction indicator Lamp** |  |
|  | **3.22.5.10.1** | **Front** |  |
|  | 3.22.5.10.1.1 | Make |  |
|  | 3.22.5.10.1.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.10.1.3 | Numbers |  |
|  | **3.22.5.10.2** | **Rear** |  |
|  | 3.22.5.10.2.1 | Make |  |
|  | 3.22.5.10.2.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.10.2.3 | Numbers |  |
|  | **3.22.5.11** | **Reflector** |  |
|  | **3.22.5.11.1** | **Rear** |  |
|  | 3.22.5.11.1.1 | Make |  |
|  | 3.22.5.11.1.2 | Type |  |
|  | 3.22.5.11.1.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.11.1.4 | Numbers |  |
|  | 3.22.5.11.1.5 | Reflective surface Area |  |
|  | 3.22.5.11.1.6 | Shape (Square / rectangular / circular / elliptical /other) |  |
|  | **3.22.5.11.2** | **Side** |  |
|  | 3.22.5.11.2.1 | Make |  |
|  | 3.22.5.11.2.2 | Type |  |
|  | 3.22.5.11.2.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.11.2.4 | Numbers |  |
|  | 3.22.5.11.2.5 | Reflective surface Area |  |
|  | 3.22.5.11.2.6 | Shape (Square / rectangular / circular / elliptical /other) |  |

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|  | **3.22.5.12** | **End-outline marker lamp (Top light)** |  |
|  | **3.22.5.12.1** | **Front** |  |
|  | 3.22.5.12.1.1 | Make |  |
|  | 3.22.5.12.1.2 | Type of lens (Glass / Plastic) |  |
|  | 3.22.5.12.1.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 3.22.5.12.1.4 | Numbers |  |
|  | **3.22.5.12.2** | **Rear** |  |
|  | 3.22.5.12.2.1 | Make |  |
|  | 3.22.5.12.2.2 | Type of lens (Glass / Plastic) |  |

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|  | 3.22.5.12.2.3 | Identification: TAC No. / BIS License No. /  E- Marking |  |
|  | 3.22.5.12.2.4 | Numbers |  |
|  | **3.22.5.13** | Diagram of vehicle indicating nomenclature of the light and light signaling devices, installation dimensions w.r.t. ground, inner and outer distance between same lighting device, distance from extreme outer edge of the vehicle (in transverse plane). |  |
|  | **3.22.5.14** | **Warning Triangle** |  |
|  | 3.22.5.14.1 | Make |  |
|  | 3.22.5.14.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15** | **Automotive bulbs** |  |
|  | **3.22.5.15.1** | **Head lamp bulb (main beam)** |  |
|  | 3.22.5.15.1.1 | Make |  |
|  | 3.22.5.15.1.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.1.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.2** | **Head lamp bulb (Dipped beam)** |  |
|  | 3.22.5.15.2.1 | Make |  |
|  | 3.22.5.15.2.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.2.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.3** | **Parking Lamp bulb – Front** |  |
|  | 3.22.5.15.3.1 | Make |  |
|  | 3.22.5.15.3.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.3.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.4** | **Parking Lamp bulb – Rear** |  |
|  | 3.22.5.15.4.1 | Make |  |
|  | 3.22.5.15.4.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.4.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.5** | **Direction indicator lamp bulb - front** |  |
|  | 3.22.5.15.5.1 | Make |  |
|  | 3.22.5.15.5.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.5.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.6** | **Direction indicator lamp bulb - Rear** |  |
|  | 3.22.5.15.6.1 | Make |  |
|  | 3.22.5.15.6.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.6.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.7** | **Front Position Lamp bulb** |  |
|  | 3.22.5.15.7.1 | Make |  |
|  | 3.22.5.15.7.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.7.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.8** | **Rear Position Lamp ( tail lamp )Bulb** |  |
|  | 3.22.5.15.8.1 | Make |  |
|  | 3.22.5.15.8.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.8.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.9** | **Stop lamp bulb** |  |
|  | 3.22.5.15.9.1 | Make |  |
|  | 3.22.5.15.9.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.9.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.10** | **Number plate lamp bulb** |  |
|  | 3.22.5.15.10.1 | Make |  |
|  | 3.22.5.15.10.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.10.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.11** | **End out Marker bulb** |  |
|  | 3.22.5.15.11.1 | Make |  |
|  | 3.22.5.15.11.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.11.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.12** | **Reversing lamp bulb** |  |
|  | 3.22.5.15.12.1 | Make |  |
|  | 3.22.5.15.12.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.12.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.13** | **Front Fog Lamp Bulb** |  |
|  | 3.22.5.15.13.1 | Make |  |
|  | 3.22.5.15.13.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.13.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.14** | **Rear Fog Lamp Bulb** |  |
|  | 3.22.5.15.14.1 | Make |  |
|  | 3.22.5.15.14.2 | Category as per AIS-034 |  |
|  | 3.22.5.15.14.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.15** | **Day time Running lamp bulb (if provided)** |  |
|  | 3.22.5.15.15.1 | Make |  |
|  | 3.22.5.15.15.2 | Designation Category as per AIS-034 |  |
|  | 3.22.5.15.15.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **3.22.5.15.16** | **Work Lamp (Plough Lamp)** |  |
|  | 3.22.5.15.16.1 | Make |  |
|  | 3.22.5.15.16.2 | Designation Category as per AIS-034 |  |
|  | 3.22.5.15.16.3 | Identification: TAC No. / BIS License No. / E- Marking |  |

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| **29.0** | **Page 113/227, Table 17, Clause No. 6.0** | | |
|  | Substitute following text for existing text: | | |
|  |  | | |
|  | **6.0** | **Wheel Fastener(s) and Hub cap :** |  |
|  | **6.1** | **Wheel Nut** **(s) / Bolt (s)** |  |
|  | 6.1.1 | Make |  |
|  | 6.1.2 | Size |  |
|  | 6.1.3 | Numbers per wheel |  |
|  | 6.1.4 | Tightening torque on vehicle (recommended by Vehicle Manufacturer ) |  |
|  | 6.1.5 | Detailed dimensional drawing along with material specifications |  |
|  | **6.2** | **Wheel Disc / Hub cap** |  |
|  | 6.2.1 | Make |  |
|  | 6.2.3 | Method of fitment (Press/bolted/others) |  |
|  | 6.2.4 | Brief dimensional drawing along with press fit diameter as applicable |  |
|  |  | | |
| **30.0** | **Page 167/227, Table 17,** | | |
|  | Add following new clauses 26.28 to 26.35 after clause 26.27 and renumber subsequent clauses: | | |
|  |  | | |
|  | **26.27** | **Rear-view mirrors** |  |
|  | 26.27.1 | Make (s) |  |
|  | 26.27.2 | Type Approval Number / E- marking / BIS License No. |  |
|  | 26.27.3 | Nos. of mirrors installed on the vehicle |  |
|  | 26.27.4 | Drawing(s) showing the location & Installation dimension details of the rear-view mirror(s) in relation to the structure of the vehicle |  |
|  | **26.28** | **Windscreen Wiping system** (If drivers cabin is provided) |  |
|  | **26.28.1** | **Wind Screen Wiper** |  |
|  | 26.28.1.1 | Type (Manual/power) |  |
|  | 26.28.1.2 | No. of wipers |  |
|  | **26.28.2** | **Wiper motor** |  |
|  | 26.28.2.1 | Make |  |
|  | 26.28.2.2 | Type |  |
|  | 26.28.2.3 | Identification mark |  |
|  | 26.28.2.4 | Rated voltage |  |
|  | 26.28.2.5 | Number of sweep Frequencies |  |
|  | 26.28.2.6 | Highest sweep frequency (Cycles/min) |  |
|  | 26.28.2.7 | Lowest sweep frequency (Cycles/min) |  |
|  | **26.28.3** | **Wiper arm** |  |
|  | 26.28.3.1 | Length |  |
|  | 26.28.3.2 | Make |  |
|  | 26.28.3.3 | Identification |  |
|  | **26.28.4** | **Wiper blade** |  |
|  | 26.28.4.1 | Length |  |
|  | 26.28.4.2 | Make |  |
|  | 26.28.4.3 | Identification |  |
|  | **26.28.5** | **Drivers ‘R’ Point coordinates** (Drawing showing drivers ‘R’ point co-ordinates shall be provided) |  |
|  | **26.29** | **Safety glass** |  |
|  | **26.29.1** | **Front wind shield (laminated)** |  |
|  | 26.29.1.1 | Make |  |
|  | 26.29.1.2 | Identification: TAC No. / BIS License No. / E-Marking |  |
|  | 26.29.1.3 | Type (flat/curved, clear/tinted) |  |
|  | 26.29.1.4 | Thickness (mm) |  |
|  | 26.29.1.5 | No. of pieces |  |
|  | **26.29.2** | **Side Windows (Left & Right)** |  |
|  | 26.29.2.1 | Make |  |
|  | 26.29.2.2 | Identification: TAC No. / BIS License No. / E-Marking |  |
|  | 26.29.2.3 | Type (flat/curved, clear/tinted, toughened/laminated) |  |
|  | 26.29.2.4 | Thickness (mm) |  |
|  | **26.29.3** | **Rear Window** |  |
|  | 26.29.3.1 | Make |  |
|  | 26.29.3.2 | Identification: TAC No. / BIS License No. / E-Marking |  |
|  | 26.29.3.3 | Type (flat/curved, clear/tinted, toughened/laminated) |  |
|  | 26.29.3.4 | Thickness (mm) |  |
|  | **26.30** | **Hydraulic Brake Hose:** |  |
|  | 26.30.1 | Make |  |
|  | 26.30.2 | Identification: TAC No. / BIS License No. / E-Marking |  |
|  | **26.31** | **Brake fluid** |  |
|  | 26.31.1 | Make |  |
|  | 26.31.2 | Trade name |  |
|  | 26.31.3 | Specification / grade as per Indian standard |  |
|  | **26.32** | **Tow Hook:** (Whenever used) |  |
|  | 26.32.1 | Make |  |
|  | 26.32.2 | Part No. |  |
|  | 26.32.3 | Designed loading capacity |  |
|  | **26.33** | **Mechanical Coupling:** |  |
|  | 26.33.1 | Make |  |
|  | 26.33.2 | Part No. |  |
|  | 26.33.3 | Designed loading capacity |  |
|  | **26.34** | **Front Coupling Device:** |  |
|  | 26.34.1 | Make |  |
|  | 26.34.2 | Part No. |  |
|  | 26.34.3 | Designed loading capacity |  |

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| **31.0** | **Page 113/227, Table 18** | | | | | |
|  | Substitute following Table 18 for existing Table 18: | | | | | |
|  | **Table 18 of AIS-007 (Revision 5)**  **LIST OF COMPONENT TEST REPORTS / CERTIFICATES FOR**  **AGRICULTURAL TRACTORS / COMBINED HARVESTERS** | | | | | |
|  | **Rule No.** | **Subject** | **Name of the Manufacturer**  (Please give information for every supplier / vendor under the same para, separate lines ) | **TAC No. /**  **BIS License No / Test Report No.**  (As applicable) | **Possible date of submission** of required approval, if the same is in process | **CoP Cert No.** with  validity date  (where ever applicable) |
|  | 95 (A) | **Tyre** |  |  |  |  |
|  |  | Front |  |  |  |  |
|  |  | Rear Table 214 |  |  |  |  |
|  | 100 | **Safety Glass** (For Agricultural Tractors having drivers cabin) |  |  |  |  |
|  |  | Windscreen |  |  |  |  |
|  |  | Side |  |  |  |  |
|  |  | Rear |  |  |  |  |
|  | 101  (2-B) | **Windscreen Wiping System** |  |  |  |  |
|  |  | Wiper Blade |  |  |  |  |
|  |  | Wiper Arm |  |  |  |  |
|  |  | Wiper motor |  |  |  |  |

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| --- | --- | --- | --- | --- | --- | --- |
|  | 104  (1) | **Reflex Reflector** |  |  |  |  |
| Rear, Red |  |  |  |  |
|  |  | Side, Amber |  |  |  |  |
|  | 119  (1) | **Horns(s)** |  |  |  |  |
|  |  | Horn Installation |  |  |  |  |
|  | 124-A  (1) | **Automotive Bulbs**  [ Mention category of bulb/s as per AIS 034 (Part-1) (Rev-1): 2010 ] |  |  |  |  |
|  |  | Main Beam head Lamp |  |  |  |  |
|  |  | Dipped Beam Head Lamp |  |  |  |  |
|  |  | Parking light (Front Position) |  |  |  |  |
|  |  | Front Direction Indicator Lamp |  |  |  |  |
|  |  | Rear Direction indicator Lamp |  |  |  |  |
|  |  | Tail lamp (Rear position) |  |  |  |  |
|  |  | Reversing Lamp |  |  |  |  |
|  |  | Stop Lamp |  |  |  |  |
|  |  | Rear Registration Plate Lamp |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Front End-out Marker Lamp |  |  |  |  |
|  | Rear End-out Marker Lamp |  |  |  |  |
|  | Front Fog Lamp |  |  |  |  |
|  |  | Rear Fog Lamp |  |  |  |  |
|  |  | Work lamp |  |  |  |  |
|  | 124-A  (2) | Lighting and light signaling devices |  |  |  |  |
| Main Beam head Lamp |  |  |  |  |
| Dipped Beam Head Lamp |  |  |  |  |
| Parking light (Front Position) |  |  |  |  |
|  | 124-A  (2) | Front Direction Indicator Lamp |  |  |  |  |
|  |  | Rear Direction indicator Lamp |  |  |  |  |
|  |  | Tail lamp (Rear position) |  |  |  |  |
|  |  | Reversing Lamp |  |  |  |  |
|  |  | Stop Lamp |  |  |  |  |
|  |  | Rear Registration Plate Lamp |  |  |  |  |
| Front End-out Marker Lamp |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Rear End-out Marker Lamp |  |  |  |  |
| Front Fog Lamp |  |  |  |  |
| Rear Fog Lamp |  |  |  |  |
| Work lamp |  |  |  |  |
| SMV Rear marking plate (Rear warning triangle) |  |  |  |  |
| Installation of lighting and light signaling devices |  |  |  |  |
|  |  | Report No(s). for Base Model / Variants (if already issued) |  |  |  |  |
|  | 124-A  (2) | Lighting and light signaling devices |  |  |  |  |
| Main Beam head Lamp |  |  |  |  |
| Dipped Beam Head Lamp |  |  |  |  |
| Parking light (Front Position) |  |  |  |  |
| Front Direction Indicator Lamp |  |  |  |  |
| Rear Direction indicator Lamp |  |  |  |  |

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| --- | --- | --- | --- | --- | --- | --- |
|  |  | Tail lamp (Rear position) |  |  |  |  |
| Reversing Lamp |  |  |  |  |
| Stop Lamp |  |  |  |  |
| Rear Registration Plate Lamp |  |  |  |  |
| Front End-out Marker Lamp |  |  |  |  |
| Rear End-out Marker Lamp |  |  |  |  |
| Front Fog Lamp |  |  |  |  |
| Rear Fog Lamp |  |  |  |  |
| Work lamp |  |  |  |  |
| Rear warning Triangle |  |  |  |  |
|  | 124-A  (2) | Installation of lighting and light signaling devices  (For Agricultural Tractors) |  |  |  |  |
|  |  | Report No(s). for Base Model / Variants (if already issued) |  |  |  |  |
|  | 124-A  (3) | Hydraulic Brake hoses |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 124-A  (4) | Hydraulic Brake Fluid  (When used on Agri. Tractor / Combine Harvester) |  |  |  |  |
|  | 124-A  (5) | Tow hook  (When used on Agri. Tractor / Combine Harvester) |  |  |  |  |
|  | 124-A  (5a) | Mechanical couplings |  |  |  |  |
|  | 124-A  (6) | Fuel Tank (Provide details in case of multiple capacities / suppliers) |  |  |  |  |
|  |  | Metallic fuel tank |  |  |  |  |
|  |  | Plastic fuel tank |  |  |  |  |
|  | 124-A  (7) | Wheel Nuts /Bolts,  Wheel Caps / Hub Caps (Only for Agricultural Tractors and Combine Harvesters) |  |  |  |  |
|  | 124-A  (7) | Front – Wheel Nuts / Bolts |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Rear - Wheel Nuts / Bolts |  |  |  |  |
|  | Front – Hub cap |  |  |  |  |
|  |  | Rear – Hub cap |  |  |  |  |
|  | 124-A  (8) | Ballast Mass |  |  |  |  |
|  | 124-A  (9) | Protective Structures  (When used on Agri. Tractor) |  |  |  |  |
|  | 124-A  (10) | Load Platform  (When used on Agri. Tractor) |  |  |  |  |
|  | 124-A  (11) | Attendant’s Seat  (When used on Agri. Tractor) |  |  |  |  |
|  | 124-A  (12) | Drivers Field of Vision: Report No(s). for Base Model / Variants (if already issued) |  |  |  |  |
|  | 124-A  (13) | Maximum Design Speed  Report No(s). for Base Model / Variants (if already issued) |  |  |  |  |
|  | 124-A  (14) | Front coupling device |  |  |  |  |
|  | 125(2) | Rear View Mirror |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 125(2) | Rear View Mirror Installation Requirements:  Report No(s). for Base Model / Variants (if already issued) | |  |  |  |  |
|  | **Note** :   1. Please enclose copies for TAC / CoP / BIS License / ECE Certificate / Test Reports wherever required by the testing agency. 2. Fill all the columns. If any clause is not applicable, mention “NA” in corresponding column. Do not keep it blank. 3. In case samples are submitted to testing agency, please provide Reference No. if the approval is in process.) | | | | | | |
| **32.0** | **Page 193/227, Table 20** | | | | | | |
|  | Substitute word “PESO” for word “DOE” wherever it appears in a table. | | | | | | |
| **33.0** | **Page 195/227, Table 20** | | | | | | |
|  | Substitute following text for existing text: | | | | | | |
|  | **13.0**: Wiring Harness (for CNG system) | | | | | | |
| **34.0** | **Page 226/227, Table 24** | | | | | | |
|  | Substitute following table for existing table: | | | | | | |
|  |  | | | | | | |
|  | **TABLE 24**  **BRIEF TECHNICAL INFORMATION ON AUTOMOTIVE TRAILERS** | | | | | | |
|  | **1.0** | | **Details of Trailer manufacturer** | | |  | |
|  | 1.1 | | Name & address of the trailer manufacturer or importer | | |  | |
|  | 1.2 | | Telephone No. | | |  | |
|  | 1.3 | | Fax. No. | | |  | |
|  | 1.4 | | E-mail address | | |  | |
|  | 1.5 | | Contact person | | |  | |
|  | 1.6 | | Address of the Plant(s)of manufacture | | |  | |
|  | **2.0** | | **General details of the trailer:** | | |  | |
|  | 2.1 | | Model of the trailer | | |  | |
|  | 2.1.1 | | Category of Trailer-T2/T3/T4 | | |  | |
|  | 2.2 | | Type & Brief Description of the trailer | | |  | |
|  | 2.3 | | GVW of the trailer, (kg) | | |  | |
|  | 2.3.1 | | Unladen weight of the trailer, (kg) | | |  | |
|  | 2.4 | | Loads, (kg) | | |  | |
|  | 2.4.1 | | Max Permissible FAW of the trailer for Full Trailer, (kg) | | |  | |
|  | 2.4.2 | | Unladen FAW of the trailer for Full Trailer, (kg) | | |  | |
|  | 2.4.3 | | Max Permissible Load at Kingpin for Semi Trailer, (kg) | | |  | |
|  | 2.4.4 | | Unladen Load at Kingpin for Semi Trailer, (kg) | | |  | |
|  | 2.5 | | Max Permissible RAW of the trailer, (kg) | | |  | |
|  | 2.5.1 | | Unladen RAW of the trailer, (kg) | | |  | |
|  | 2.6 | | Compatible Prime mover Configurations | | |  | |
|  | 2.7 | | Maximum Gross Combination Weight ( GCW) of the tractor and trailer, (kg) | | |  | |
|  | 2.8 | | Axles : (Make) | | |  | |
|  | 2.8.1 | | Number and Description - | | |  | |
|  | 2.8.2 | | Front axle- - **(for Full Trailer only)** | | |
|  | 2.8.3 | | Rear axle - | | |
|  | 2.9 | | Suspension - Type and Description: | | |  | |
|  | 2.9.1 | | Front - | | |
|  | 2.9.2 | | Rear - | | |
|  | 2.10 | | Tyre – Number and Size : | | |  | |
|  | 2.10.1 | | Front - | | |
|  | 2.10.2 | | Rear - | | |
|  | 2.11 | | Brake System Description : | | |  | |
|  | 2.11.1 | | Front - **(for Full Trailer only)** | | |  | |
|  | 2.11.2 | | Rear - | | |
|  | 3.0 | | **Trailer Dimensions, (mm)** | | |  | |
|  | 3.1 | | Length ,(mm) | | |  | |
|  | 3.1.1 | | With draw bar (for independent trailer),(mm) | | |  | |
|  | 3.1.2 | | Without draw bar (for independent trailer), (mm) | | |  | |
|  | 3.1.3 | | Length (in case of semi trailer), (mm) | | |  | |
|  | 3.2 | | Distance between king pin and rear end (Max. length),(mm) | | |  | |
|  | 3.3 | | Height (unladen condition), (mm) | | |  | |
|  | 3.3.1 | | Height of floor from ground at rear, (mm) | | |  | |
|  | 3.3.2 | | Overall Height at rear, (mm) | | |  | |
|  | 3.3.3. | | Height of draw bar (hinge point on trailer), (mm) | | |  | |
|  | 3.3.4 | | Height at front end (for full trailer), (mm) | | |  | |
|  | 3.3.5 | | Height at Kingpin (for semi-trailer), (mm) | | |  | |
|  | 3.3.5.1 | | Landing gear is fully open, (mm) | | |  | |
|  | 3.3.5.2 | | At the level where kingpin – fifth wheel mating plate is in horizontal position, (mm) | | |  | |
|  | 3.4 | | Width, (mm) | | |  | |
|  | 3.5 | | Wheel Track, (mm) | | |  | |
|  | 3.5.1 | | Front (in case of draw bar trailer), (mm) | | |  | |
|  | 3.5.2 | | Rear, (mm) | | |  | |
|  | 3.6 | | Body overhang, (mm) | | |  | |
|  | 3.6.1 | | Front (from fifth wheel in case of semi trailer), (mm) | | |
|  | 3.6.2 | | Rear (from the rearmost axle), (mm) | | |
|  | 3.7 | | Wheel base (from fifth wheel king pin in case of semi trailer), (mm) | | |  | |
|  | 3.8 | | Center of gravity (height of CG from ground & distance from one end) Laden/Unladen, if applicable, (mm) | | |  | |
|  | 3.9 | | Dimensional drawing No. | | |  | |
|  | 4.0 | | Others : | | |  | |
|  | 4.1 | | Colour of the trailer | | | Golden yellow / National permit brown | |

**Table 24A**

**DETAILED TECHNICAL INFORMATION ON AUTOMOTIVE TRAILERS**

|  |  |  |
| --- | --- | --- |
| **1.0** | **Details of Trailer manufacturer** |  |
| 1.1 | Name & address of the trailer manufacturer |  |
| 1.2 | Telephone No. |  |
| 1.3 | Fax. No. |  |
| 1.4 | E-mail address |  |
| 1.5 | Contact person |  |
| 1.6 | Plant(s)of manufacture |  |
| 1.7 | Type and Brief Description of Trailer |  |
| 1.8 | **Category of Trailer- T2/T3/T4** |  |
| **2.0** | **Trailer Dimensions, (mm)** |  |
| 2.1 | Length, (mm) |  |
| 2.1.1 | With draw bar (for independent trailer), (mm) |  |
| 2.1.2 | Without draw bar (for independent trailer), (mm) |  |
| 2.1.3 | Length (in case of semi-trailer), (mm) |  |
| 2.2 | Distance between kingpin and rear end (Max. length), (mm) |  |
| 2.3 | Height (unladen condition), (mm) |  |
| 2.3.1 | Height at front end (for full trailer), (mm) |  |
| 2.3.1.1 | Height of floor from ground at rear, (mm) |  |
| 2.3.2 | Overall Height at rear, (mm) |  |
| 2.3.3. | Height of draw bar (hinge point on trailer), (mm) |  |
| 2.4 | Width, (mm) |  |
| 2.5 | Wheel Track, (mm) |  |
| 2.5.1 | Front( in case of draw bar trailer) |  |
| 2.5.2 | Rear |  |

|  |  |  |
| --- | --- | --- |
| 2.6 | Body overhang, (mm) |  |
| 2.6.1 | Front (from fifth wheel in case of semi-trailer) |  |
| 2.6.2 | Rear (from the rearmost axle) |  |
| 2.7 | Wheel base (from fifth wheel king pin in case of semi-trailer) , (mm) |  |
| 2.8 | Center of gravity (height of CG from ground & distance from one end in mm Laden/Unladen, If applicable |  |
| 2.9 | Dimensional drawing No. |  |
| **3.0** | **Height of fifth wheel coupling (king**  **pin) from ground in unladen condition, (mm)** |  |
| **3.1** | Landing gear is fully open, (mm) |  |
| **3.2** | At the level where kingpin – fifth wheel mating plate is in horizontal position, (mm) |  |
| **4.0** | **T-sign (as per IS 9942)** |  |
| 4.1 | Make |  |
| 4.2 | Identification mark |  |
| **5.0** | **Axles (Make)** |  |
| 5.1 | No. of Axles |  |
| 5.2 | First axle |  |
| 5.2.1 | Type |  |
| 5.3 | Second axle |  |
| 5.3.1 | Type |  |
| 5.4 | Third axle |  |
| 5.4.1 | Type |  |
| 5.5 | Axle spacing (provide drawing) |  |
| **6.0** | **Trailer Weights** |  |
| 6.1 | Unladen weight of the trailer |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 6.2 | Total unladen vehicle weight (TUVW)  4800 kg. For variants pl. refer Annexure-1 | TUVW |  | | | |
| 6.3 | Gross Vehicle Laden Weight (GLW)  34230 kg. For variants pl. refer Annexure-1 | GLW |  | | | |
| 6.4 | Gross Combination Vehicle Weight (GCVW) (Applicable for articulated vehicle) | |  | | | |
| 6.5 | Payload details | |  | | | |
| 6.5.2 | Weight (kg) | |  | | | |
| 6.5.3 | Location details( to be shown in drawing) | |  | | | |
| **7.0** | **Tyres** | |  | | | |
| 7.1 | No. and arrangement of wheels | |  | | | |
| 7.1.1 | 1st axle | |  | | | |
| 7.1.2 | 2nd axle | |  | | | |
| 7.1.3 | 3rd axle | |  | | | |
| 7.1.4 | Others (for articulated/combination trailer) | |  | | | |
| 7.2 | Tyre type (Radial/cross ply) (with Tube / Tube less), size designation including ply rating, speed rating, Load rating or Load index. Use symbols as per IS 15633 / IS 15636 as may be applicable. | |  | | | |
| 7.3 | Rolling radius, (mm) | |  | | | |
| 7.3.1 | Static | |  | | | |
| 7.3.2 | Dynamic (if data is available) | |  | | | |
| 7.4 | Inflation pressure – Unladen in (kg/cm2) or (kPa) | |  | | | |
| 7.4.1 | 1st axle | |  | | | |
| 7.4.2 | 2nd axle | |  | | | |
| 7.4.3 | 3rd axle | |  | | | |
| 7.4.4 7.5 | Other axle(s) Inflation pressure-Laden in (kg/cm2) or (kPa) | |  | | | |
| 7.5.1 | 1st axle | |  | | | |
| 7.5.2 | 2nd axle | |  | | | |
| 7.5.3 | Other axle(s) | |  | | | |
| 7.6 | Make **of Tyre** | |  | | | |
| 7.7 | Tread Wear Indicator, Provided (Yes/No) | |  | | | |
| 7.8 | Month & Year code of manufacture, Provided (Yes/No) | |  | | | |
| **8.0** | **Suspension** | |  | | | |
| 8.1 | Type and description (Leaf / Air / Semi-pneumatic / | |  | | | |
|  | Hydraulic) | |  | | | |
| 8.1.1 | Front | |  | | | |
| 8.1.2 | Rear | |  | | | |
| 8.2 | Make | |  | | | |
| 8.2.1 | Front | |  | | | |
| 8.2.2 | Rear | |  | | | |
| 8.3 | Type of spring | |  | | | |
| 8.4 | If leaf spring | |  | | | |
| 8.4.1 | Main spring | |  | | | |
| 8.4.1.1 | Stack height | |  | | | |
| 8.4.1.2 | Width at the center point /  stack point | |  | | | |
| 8.4.1.3 | Thickness at the center point/stack point | |  | | | |
| 8.4.1.4 | Flat length | |  | | | |
| 8.4.1.5 | Free camber | |  | | | |
| 8.4.1.6 | No. of leaves | |  | |  | |
| 8.4.1.7 | No. of spacers | |  | |  | |
| 8.4.2 | Auxiliary Spring | |  | | | |
| 8.4.2.1 | Stack height | |  | | | |
| 8.4.2.2 | Width at the center point/stack point | |  | | | |
| 8.4.2.3 | Thickness at the center point/stack point | |  | | | | |
| 8.4.2.4 | Flat length | |  | | | | |
| 8.4.2.5 | Free camber | |  | | | | |
| 8.4.2.6 | No. of leaves | |  | |  | | |
| 8.4.2.7 | No. of spacers | |  | | | | |
| 8.5 | If air suspension or semi pneumatic | |  | | | | |
| 8.5.1 | Ride height | |  | | | | |
| 8.5.2 | Suspension stroke | |  | | | | |
| 8.5.3 | Size of the air bellows | |  | | | | |
| 8.5.4 | Make of air bellows | |  | | | | |
| 8.5.5 | Type of Height control valve | |  | | | | |
| 8.5.6 | Make of height control valve | |  | | | | |
| 8.6 | If Hydraulic suspension | |  | | | | |
| 8.6.1 | Size of cylinder | |  | | | | |
| 8.6.2 | Ride height of suspension | |  | | | | |
| 8.6.3 | Suspension stroke | |  | | | | |
| 8.7 | Suspension-Shock absorber | |  | | | | |
| 8.7.1 | Type and Number | |  | | | | |
| 8.7.1.1 | Front | |  | | | | |
| 8.7.1.2 | Rear | |  | | | | |
| 8.8 | Suspension configuration-Single/Tandem/Tridem | |  | | | | |
| 8.9 | Any load equalizing device provided | |  | | | | |
| **9.0** | **Rear Under run Protective device** | |  | | | | |
| 9.1 | Height of lower edge of the device from the ground, (mm) | |  | | | | |
| 9.2 | Width of the device (mm) | |  | | | | |
| 9.3 | Drawing of the rear under-run protective device with dimensions. (Including part drawing) | |  | | | | |
| 9.4 | Material (Metal/Fiber/etc.) | |  | | | | |
| **10.0** | **Lateral Protection(Side Guards)** | |  | | | | |
| 10.1 | Height of the lower edge of the Side Guard. | |  | | | | |
| 10.2 | Drawing of the lateral protection device fitted  on the vehicle with dimensions | |  | | | | |
| 10.3 | Material (Metal/Fiber/etc.) | |  | | | | |
| **11.0** | **Chassis Frame** | |  | | | | |
| 11.1 | Type | |  | | | | |
| 11.2 | Drawing with dimensions | |  | | | | |
| 11.3 | Type of platform | |  | | | | |
| **12.0** | **Brakes** | |  | | | | |
| 12.1 | Type and Brief Description | |  | | | | |
| 12.2 | Service brakes | |  | | | | |
| 12.2.1 | Name of producer | |  | | | |
| 12.2.2 | Type (Mechanical/hydraulic/air assisted/ vacuum assisted/others) | |  | | | |
| 12.2.3 | Control system & braking wheel | |  | | | |
| 12.2.4 | Schematic layout indicating method of split of brake system, location of valves, reservoirs etc. | |  | | | |
| 12.3 | Anti-Lock braking system Provided (Yes/No) | |  | | | |
| 12.3.1 | If yes, details | |  | | | |
| 12.3.2 | ABS make | |  | | | |
| 12.4 | Electronic Control Unit (ECU) | |  | | | |
| 12.4.1 | Make | |  | | | |
| 12.4.2 | Identification mark | |  | | | |
| 12.5 | Wheel Speed Sensor | |  | | | |
| 12.5.1 | Make | |  | | | |
| 12.5.2 | Identification mark | |  | | | |
| 12.5.3 | No. of sensors used | |  | | | |
| 12.6 | Hydraulic Modulator | |  | | | |
| 12.6.1 | Make | |  | | | |
| 12.6.2 | Identification mark | |  | | | |
| 12.7 | Solenoid Valve | |  | | | |
| 12.7.1 | Make | |  | | | |
| 12.7.2 | Identification mark | |  | | | |
| 12.7.3 | Max. designed pressure, (kg/cm2) | |  | | | |
| 12.7.4 | Max. working pressure, (kg/cm2) | |  | | | |
| 12.8 | Safety lamp provided (Yes/No) | |  | | | |
| 12.9 | Schematic layout of the ABS system | |  | | | | |
| 12.10 | If ASR is used, give details | |  | | | | |
| 12.11 | Brake lining (or) Pad | |  | | | | |
| 12.11.1 | Nominal Dimensions, (mm) (Length x Width x thickness) | |  | | | | |
| 12.11.1.1 | Front wheel | |  | | | | |
| 12.11.1.2 | Rear wheel | |  | | | | |
| 12.11.1.3 | Others (in case of Tandem axle, give axle wise data) | |  | | | | |
| 12.11.2 | Effective area per axle (cm2) | |  | | | | |
| 12.11.2.1 | Front axle | |  | | | | |
| 12.11.2.2 | Rear axle | |  | | | | |
| 12.11.2.3 | Others (in case of Tandem axle, give axle wise data) | |  | | | | |
| 12.11.3 | Material | |  | | | | |
| 12.11.4 | Make and Designation | |  | | | | |
| 12.11.4.1 | Front wheel / axle | |  | | | | |
| 12.11.4.2 | Rear wheel / axle | |  | | | | |
| 12.11.4.3 | Others (In case of Tandem axle provide data for each axle) | |  | | | | |
| 12.11.5 | Whether asbestos or asbestos-free? | |  | | | | |
| 12.12 | Brake drum or disc | |  | | | | |
| 12.12.1 | Effective diameter, (mm) | |  | | | | |
| 12.12.1.1 | Front wheel | |  | | | | |
| 12.12.1.2 | Rear wheel | |  | | | | |
| 12.12.1.3 | Others (in case of tandem axle or articulated trailers) | |  | | | | |
| 12.12.2 | Material (if the braking surface is non ferrous) | |  | | | | |
| 12.12.2.1 | Front | |  | | | | |
| 12.12.2.2 | Rear | |  | | | | |
| 12.12.2.3 | Others | |  | | | | |
| 12.13 | Master cylinder or brake valve | |  | | | | |
| 12.13.1 | Make | |  | | | | |
| 12.13.2 | Type | |  | | | | |
| 12.13.3 | Inner diameter of the master cylinder, (mm) | |  | | | | |
| 12.13.4 | Operating stroke (mm) | |  | | | | |
| 12.14 | Type of supply tank | |  | | | | |
| 12.15 | Wheel cylinder diameter, (mm) | |  | | | | |
| 12.15.1 | Front | |  | | | | |
| 12.15.2 | Rear | |  | | | | |
| 12.15.3 | Others | |  | | | | |
| 12.16 | Wheel cylinder type  (single acting/double acting) | |  | | | | |
| 12.16.1 | Front | |  | | | | |
| 12.16.2 | Rear | |  | | | | |
| 12.16.3 | Others | |  | | | | |
| 12.17 | Booster | |  | | | | |
| 12.17.1 | Name of producer | |  | | | | |
| 12.17.2 | Type | |  | | | | |
| 12.17.3 | Boost ratio | |  | | | | |
| 12.17.4 | Size of the booster, (mm) (diameter) | |  | | | | |
| 12.17.5 | Vacuum or air assistance | |  | | | | |
| 12.17.6 | Pressure (kg/cm2) | |  | | | | |
| 12.17.6.1 | Nominal (P2 as per IS 11852-2001) | |  | | | | |
| 12.17.6.2 | Cut in | |  | | | | |
| 12.17.6.3 | Cut out | |  | | | | |
| 12.18 | Type of vacuum pump or air compressor | |  | | | | |
| 12.19 | Type of pressure regulator | |  | | | | |
| 12.20 | No. of tanks | |  | | | | |
| 12.20.1 | Tank Capacity, lit. | |  |  | | | |
| 12.20.1.1 | Tank 1 | |  |  | | | |
| 12.20.1.2 | Tank 2 | |  |  | | | |
| 12.20.1.3 | Tank 3 | |  |  | | | |
| 12.20.1.4 | Tank 4 | |  |  | | | |
| 12.21 | Brake Chamber | | Front | Rear | | Parking | |
| 12.21.1 | Make and type | |  |  | |  | |
| 12.21.2 | Size, (mm) | |  |  | |  | |
| 12.21.3 | Internal diameter, (mm) | |  |  | |  | |
| 12.21.4 | Stroke, (mm) | |  |  | |  | |
| 12.22 | Slack adjuster – Manual/Automatic | |  | | | | |
| 12.22.1 | Make | |  | | | | |
| 12.22.2 | Lever length in (mm) | |  | | | | |
| 12.22.3 | Load sensing valve | |  | | | | |
| 12.22.3.1 | Make | |  | | | | |
| 12.22.3.2 | Model No. | |  | | | | |
| 12.22.4 | Set pressure, unladen in kg/cm2 | |  | | | | |
| **13.0** | **Safety Critical Components** | |  | | | | |
| 13.1 | Wheel rim | |  | | | | |
| 13.1.1 | Size | |  | | | | |
| 13.1.1.1 | 1st axle | |  | | | | |
| 13.1.1.2 | 2nd axle | |  | | | | |
|  | 3rd axle | |  | | | | |
| 13.1.1.3 | Other axle(s) | |  | | | | |
| 13.1.2 | Name of manufacturer | |  | | | | |
| 13.1.3 | Identification mark | |  | | | | |

|  |  |  |
| --- | --- | --- |
| 13.1.4 | Pitch circle diameter of mounting bolts, (mm) |  |
| 13.1.5 | Number of mounting bolts |  |
| 13.1.6 | Material (Steel/Aluminum alloy etc.) |  |
| 13.2 | Wheel nut, Wheel cap and Hub cap |  |
| 13.2.1 | Wheel Nut |  |
| 13.2.1.1 | Name of manufacturer |  |
| 13.2.1.2 | Size |  |
| 13.2.1.3 | No. of nuts Per wheel |  |
| 13.2.1.4 | Tightening torque |  |
| 13.2.2 | Wheel cap / wheel disc |  |
| 13.2.2.1 | Name of manufacturer |  |
| 13.2.2.2 | Size |  |
| 13.2.2.3 | Material (Plastic / Metal) |  |
| 13.2.2.4 | Method of fitment (Press/bolted/others) |  |
| 13.2.3 | Hub cap |  |
| 13.2.3.1 | Name of manufacturer |  |
| 13.2.3.2 | Size |  |
| 13.2.3.3 | Method of fitment (Press/bolted/others) |  |
| 13. 3 | Fifth wheel coupling (Make) |  |
| 13. 3.1 | Size |  |
| 13. 3.2 | Drawings with dimensions |  |
| 13. 3.3 | Compliance to IS 15101 (Yes/ No) |  |
| 13. 4 | Fifth wheel king pin (Make) |  |
| 13. 4.1 | Size |  |
| 13. 4.2 | Drawings with dimensions |  |
| 13. 4.3 | Compliance to IS : 6763 (Yes/ No) |  |
| 13. 5 | Draw bar and Draw bar coupling |  |
| 13. 5.1 | Size |  |
| 13. 5.2 | Drawings with dimensions |  |
| 13. 5.3 | Compliance to IS : 13284 (Yes/ No) |  |
| 13. 6 | Landing gear (Make) |  |
| 13. 6.1 | Size |  |
| 13. 6.2 | Drawings with dimensions |  |
| 13. 6.3 | Compliance to IS 10752  (Yes/ No) |  |
| 13. 7 | Tow hook |  |
| 13. 7.1 | Size |  |
| 13. 7.2 | Drawings with dimensions |  |
| 13. 7.3 | Compliance to IS : AIS-091, Part 1  (Yes/ No) |  |
| 13. 8 | Towing jaw |  |
| 13. 8.1 | Size |  |
| 13. 8.2 | Drawings with dimensions |  |
| 13. 8.3 | Compliance to IS : AIS-091, Part 1  (Yes/ No) |  |
| 13. 9 | Draw bar eye |  |
| 13. 9.1 | Size |  |
| 13. 9.2 | Drawings with dimensions |  |
| 13. 9.3 | Compliance to IS :12807 (Yes/ No) |  |
| 13. 10 | Turn table |  |
| 13. 10.1 | Size |  |
| 13. 10.2 | Drawings with dimensions |  |
| 13. 10.3 | Compliance to IS :13544 (Yes/ No) |  |
| 13. 11 | Towing devices, if any |  |
| 13. 11.1 | Type |  |
| 13. 11.2 | Name of manufacturer |  |
| 13. 11.3 | Capacity |  |
| 13. 12 | Coupling devices, if any |  |
| 13. 12.1 | Name of the manufacturer |  |
| 13. 12.2 | Identification mark |  |
| 13. 12.3 | Type of coupling device for mechanical |  |
| 13. 12.4 | Type of coupling device for electrical |  |
| 13. 12.5 | Type of coupling device for brake |  |
| 13.13 | Any other Accessories provided |  |
| 13.13.1 | Compliance to any Standard |  |
| **14.0** | Electrical items |  |
| 14.1 | Rear Fog Lamp : |  |
| 14.1.1 | Make |  |
| 14.1.2 | Type of lens (Glass / Plastic) |  |
| 14.1.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.1.4 | Number and Colour of Lens |  |
| 14.2 | Registration Plate lamp : |  |
| 14.2.1 | Make |  |
| 14.2.2 | Type of lens (Glass / Plastic) |  |
| 14.2.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.2.4 | Number and colour of Lens |  |
| 14.3 | Position Lamp |  |
| 14.3.1 | Front position Lamp |  |
| 14.3.1.1 | Make |  |
| 14.3.1.2 | Type of lens (Glass / Plastic) |  |
| 14.3.1.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.3.1.4 | Number and colour of Lens |  |
| 14.3.2 | Side Marker (Position) Lamp |  |
| 14.3.2.1 | Make |  |
| 14.3.2.2 | Type of lens (Glass / Plastic) |  |
| 14.3.2.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.3.2.4 | Number and colour of Lens |  |
| 14.3 3 | Rear Position Lamp |  |
| 14.3.3.1 | Make |  |
| 14.3.3.2 | Type of lens (Glass / Plastic) |  |
| 14.3.3.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.3.3.4 | Number and colour of Lens |  |
| 14.3.2 | Side |  |
| 14.4 | Rear Parking Lamp |  |
| 14.4.1 | Make |  |
| 14.4.2 | Type of lens (Glass / Plastic) |  |
| 14.4.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.4.4 | Number and colour of Lens |  |
| 14.5 | Stop lamp (S1 / S2) |  |
| 14.5.1 | Make |  |
| 14.5.2 | Type of lens (Glass / Plastic) |  |
| 14.5.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.5.4 | Number and colour of Lens |  |
| 14.6 | Reversing lamp : |  |
| 14.6.1 | Make |  |
| 14.6.2 | Type of lens (Glass / Plastic) |  |
| 14.6.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.6.4 | Number and colour of Lens |  |
| 14.7 | Direction indicator Lamp : |  |
| 14.7.1 | Rear |  |
| 14.7.1.1 | Make |  |
| 14.7.1.2 | Type of lens (Glass / Plastic) |  |
| 14.7.1.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.7.1.4 | Number and colour of Lens |  |
| 14.7.2 | Side |  |
| 14.7.2.1 | Make |  |
| 14.7.2.2 | Type of lens (Glass / Plastic) |  |

|  |  |  |
| --- | --- | --- |
| 14.7.2.3 | Identification: TAC No./BIS Licence No./E-Marking. |  |
| 14.7.2.4 | Number and colour of Lens |  |
| 14.7.3 | Type of flasher |  |
| 14.7.4 | Side Marker lamps |  |
| 14.7.4.1 | Make |  |
| 14.7.4.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 14.7.4.3 | Number and Colour of Lens |  |
| 14.8 | Hazard warning signal : |  |
| 14.8.1 | Rear |  |
| 14.8.1.1 | Make |  |
| 14.8.1.2 | Type of lens (Glass / Plastic) |  |
| 14.8.1.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.8.1.4 | Number and colour of Lens |  |
| 14.8.2 | Side |  |
| 14.8.2.1 | Make and Country of origin (if imported) |  |
| 14.8.2.2 | Type of lens (Glass / Plastic) |  |
| 14.8.2.3 | Identification No. / Part No. |  |
| 14.8.2.4 | Number and colour of Lens |  |
| 14.9 | Reflector : |  |
| 14.9.1 | Rear |  |
| 14.9.1.1 | Make |  |
| 14.9.1.2 | Type |  |
| 14.9.1.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.9.1.4 | Number and colour of Lens |  |
| 14.9.1.5 | Reflective Surface Area |  |
| 14.9.1.6 | Shape(Square/Rectangular/Circular/Elliptical/Other) |  |
| 14.9.2 | Side |  |
| 14.9.2.1 | Make |  |
| 14.9.2.2 | Type |  |
| 14.9.2.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.9.2.4 | Number and colour of Lens |  |
| 14.9.2.5 | Reflective Surface Area |  |
| 14.9.2.6 | Shape(Square/Rectangular/Circular/Elliptical/Other) |  |
| 14.9.3 | Front |  |
| 14.9.3.1 | Make |  |
| 14.9.3.2 | Type |  |
| 14.9.3.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.9.3.4 | Number and colour of Lens |  |
| 14.9.3.5 | Reflective Surface Area |  |
| 14.9.3.6 | Shape(Square/Rectangular/Circular/Elliptical/Other) |  |
| 14.10 | End – outline marker lamp (Top light) |  |
| 14.10.1 | Front |  |
| 14.10.1.1 | Make |  |
| 14.10.1.2 | Type of lens (Glass / Plastic) |  |
| 14.10.1.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.10.1.4 | Number and colour of Lens |  |
| 14.10.2 | Rear |  |
| 14.10.2.1 | Make and Country of origin (if imported) |  |
| 14.10.2.2 | Type of lens (Glass / Plastic) |  |
| 14.10.2.3 | Identification No. / Part No. |  |
| 14.10.2.4 | Number and colour of Lens |  |
| 14.11 | Diagram of vehicle indicating location, reference axis, mark of apparent surface, contour of vehicle parts limiting geometric  visibility of all lights and light signaling devices, location of extreme outer edges and longitudinal median plane of vehicle including following dimensions in (mm). |  |
| 14.12 | Along width of vehicle-horizontal distance between inner illuminating surfaces, distance between inner illuminating surfaces and outer most part of vehicle and distance between nearest point of illuminating surfaces of indicators and dipped- beam head lamp |  |
| 14.13 | Along length of vehicle (where applicable)-distance between the transverse plane corresponding to the longitudinal rearmost extremity to center of reference of rear indicators |  |
| 14.14 | Heights of highest and lowest point of illuminating surfaces |  |
| 14.15 | Automotive bulbs : |  |
| 14.15.1 | Parking Lamp bulb – Rear |  |
| 14.15.1.1 | Make |  |
| 14.15.1.2 | Designation as per AIS-034 |  |
| 14.15.1.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.15.2 | Direction indicator lamp bulb -rear |  |
| 14.15.2.1 | Make |  |
| 14.15.2.2 | Designation as per AIS-034 |  |
| 14.15.2.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.15.3 | Direction indicator lamp bulb -side |  |
| 14.15.3.1 | Make |  |
| 14.15.3.2 | Designation as per AIS-034 |  |
| 14.15.3.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.15.4 | Rear Position Lamp ( tail lamp )Bulb |  |
| 14.15.4.1 | Make |  |
| 14.15.4.2 | Designation as per AIS-034 |  |
| 14.15.4.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.15.5 | Stop lamp bulb |  |
| 14.15.5.1 | Make |  |
| 14.15.5.2 | Designation as per AIS-034 |  |
| 14.15.5.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.15.6 | Number plate lamp bulb |  |
| 14.15.6.1 | Make |  |
| 14.15.6.2 | Designation as per AIS-034 |  |
| 14.15.6.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.15.7 | End out Marker bulb |  |
| 14.15.7.1 | Make |  |
| 14.15.7.2 | Designation as per AIS-034 |  |
| 14.15.7.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.15.8 | Reversing lamp bulb |  |
| 14.15.8.1 | Make |  |
| 14.15.8.2 | Designation as per AIS-034 |  |
| 14.15.8.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.15.9 | Stop Lamp Bulb (S3) |  |
| 14.15.9.1 | Make |  |
| 14.15.9.2 | Designation as per AIS-034 |  |
| 14.15.9.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.15.10 | Rear Fog Lamp Bulb |  |
| 14.15.10.1 | Make |  |
| 14.15.10.2 | Designation as per AIS-034 |  |
| 14.15.10.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 14.15.11 | Side Marker Lamp Bulb |  |
| 14.15.11.1 | Make |  |
| 14.15.11.2 | Designation as per AIS-034 |  |
| 14.15.11.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 15.0 | Reflective Tape |  |
| 15.1 | Rear |  |
| 15.1.1 | Make and Country of origin(if imported) |  |
| 15.1.2 | Type |  |
| 15.1.3 | Identification : TAC No./BIS License No./E-Marking |  |
| 15.1.4 | Width in (mm) |  |
| 15.2 | Side |  |
| 15.2.1 | Make and Country of origin(if imported) |  |
| 15.2.2 | Type |  |
| 15.2.3 | Identification : TAC No./BIS License No./E-Marking |  |
| 15.2.4 | Width in (mm) |  |
| 16.0 | Rear Marking Plate (as per AIS-089) |  |
| 16.1 | Make |  |
| 16.2 | Identification : TAC No./BIS License No./E-Marking |  |
| 17.0 | Spray Suppression System |  |
| 17.1 | Make, , Country of Origin(if imported) |  |
| 17.2 | Type (Water separator/Energy absorber) |  |
| 17.3 | Identification: TAC No./ BIS License No./ E-Marking |  |
| 17.4 | Size |  |
| 17.5 | Drawing/Photographs showing the mounting details with dimensions. |  |

**Table 24 B**

**DETAILS OF LOCATION OF AUTOMOTIVE TRAILER IDENTIFICATION NUMBER AND CODE FOR MONTH AND YEAR OF MANUFACTURE**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of the Trailer Manufacturer & Address : | | |  | |
| Name of the basic model : | | |  | |
| Name of Variants, if any : | | |  | |
| Place of embossing or etching the trailer identification number details by drawing or pictures may be provided if necessary | | |  | |
| Position of the code for month of production in the Trailer Identification Number | | |  | |
| Position of the code for year of production in the Trailer Identification Number | | |  | |
| Height of the Trailer Identification Number – Min. 7 (mm) | | |  | |
| Month | Code used | Year | | Code used |
| January | A | 2016 | | 16 |
| February | B | 2017 | | 17 |
| March | C | 2018 | | 18 |
| etc. for 12 months |  | 2019 | | 19 |
|  |  | etc. for 30 years | |  |

Below plate on trailer chassis needs to be permanently fixed near to goose neck portion. In case of any wrong punching, the procedure for making the correction as indicated in AIS-065 shall be followed.

|  |  |
| --- | --- |
| **NAME OF THE TRAILER MANUFACTURER**  **Payload Capacity of trailer (kg)**  **Tyre Sizes**  **Trailer Identification Number**  **Date of Manufacturing Month and Year**  **Number of Axles & Kerb Weight (kg)**  **Type Approval Number:** | |
|  |  |
|  |  |
|  |  |
| **King Pin Size (Dia (mm) & Load Bearing Capacity (kN)) (Semi-trailer)**  **GCW (Semi trailer) / GVW (Full Trailer) (kg)** |  |
|  |  |
| **Max Permissible**  **Rear Axle(s) load (kg) -**  **Max Permissible -**  **Front Axle Load (kg) - (Full Trailer) /**  **King Pin Load (kg) - (Semi Trailer)** |  |
|  |  |
|  |  |
|  |  |
|  |  |

**AUTOMOTIVE TRAILER IDENTIFICATION NUMBER**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Mfr Name | | | Trailer Abbreviation | | | Axles | Overall Length | Month | Year | | Serial Number | | |
| EXAMPLE | | | | | | | | | | | | | |
| T | D | L | S | K | T | 3 | F | K | 0 | 8 | 1 | 2 | 3 |

**Manufacturers Name**:

It is a three letter code, which can be assigned to respective trailer manufacturer and registered to BIS through ISO. (Or) the respective trailer manufacturer may assign as per his own choice.

**For Overall Length** (Feet):

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Overall Length (Feet)** | **Code** |
|  | Upto 20 | A |
| 2) | 21-30 | B |
| 3) | 31-40 | C |
| 4) | 41-50 | D |
| 5) | Special | E |
| 6) | Ministry Approved | F |

**For Month** : A – January ; B – February ; C- March; D - April ; E- May ; F - June ; G – July ; H - August; J – September ; K – October ; L – November ; M – December.

**ABBREVIATIONS :**

|  |  |  |
| --- | --- | --- |
| 2.1 | “Semi-trailer” | SLB SSL SDD SSD SFB SCT SKT,STT,SMT |
| 2.2 | “Full Trailer” | FLB FSL FDD FSD FFB FCT FKT,FTT,FMT |
| 2.3 | “Center Axle Trailer” | SCT FCT |
| 2.4 | “Low Bed Trailer” | LB |
| 2.5 | “Semi low-bed trailer” | SL |
| 2.6 | “Double drop frame trailer” | DD |
| 2.7 | “Single drop frame trailer” | SD |
| 2.8 | “Flat Bed trailers” | FB |
| 2.9 | Central Axle Trailer” | CT |
| 3.0 | “Skeleton Trailer” | KT |
| 3.1 | “Tipping type” | TT |
| 3.2 | “Monocoque Type” | MT |

|  |  |  |  |
| --- | --- | --- | --- |
| **35.0** | **Page 226/227,** | | |
|  | Add following Table 27 and Table 28 after Table 26 | | |
|  |  | | |
|  | **Table 27** | | |
|  | (To be submitted by the Vehicle Manufacturer / Body Builder to the Test Agency)  **TECHNICAL INFORMATION ON TRUCK CAB, LOAD BODY & RELATED TECHNICAL FEATURES** | | |
|  | **1.0** | Details of Vehicle Manufacturer |  |
|  | 1.1 | Name & address of the vehicle manufacturer |  |
|  | 1.2 | Telephone No. |  |
|  | 1.3 | Fax. No. |  |
|  | 1.4 | E-mail address |  |
|  | 1.5 | Contact person |  |
|  | 1.6 | Plant(s)of manufacture |  |
|  | 2.0 | Details of Truck Body / Tanker Builder |  |
|  | 2.1 | Name & address of the body builder |  |
|  | 2.2 | Telephone No. |  |
|  | 2.3 | Fax. No. |  |
|  | 2.4 | E-mail address |  |
|  | 2.5 | Contact person |  |
|  | 3.0 | Name of model and variants (if any) |  |
|  | **3.1** | **CMVR certificate reference(s)** |  |
|  | 3.2 | Type and General commercial description (s) |  |
|  | **4.0** | **Vehicle type** |  |
|  | 4.1 | Type of vehicle (rigid / articulated / combination) |  |
|  | 4.2 | Usage (goods / passenger / tractor / / others) |  |
|  | 4.3 | Control (forward / semi-forward / normal / others) |  |
|  | 4.4 | Drive (4x2 / 4x4 / 6x4 / others) |  |
|  | 4.5 | Cab type (fully built cab/sleeper cab/cowl/front end structure/with wind shield/without wind shield) |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | 4.6 | Load body, type and drawing |  |
|  | **5.0** | Category of vehicle |  |
|  | 5.1 | As per AIS-053 as amended from time to time |  |
|  | 6.0 | Vehicle Details |  |
|  | 6.1 | Chassis types approved for body installation |  |
|  | 6.2 | Type of Control (normal control / full forward control etc. |  |
|  | 6.3 | Number of axles and wheels |  |
|  | 6.4 | Chassis (overall drawing) |  |
|  | 6.5 | Frame type |  |
|  | 6.6 | Cross section and view drawing |  |
|  | 6.7 | Dimensions mm: length and width |  |
|  | 6.8 | Position and arrangement of engine |  |
|  | **7.0** | **Vehicle Dimensions (Specify drawing reference)** |  |
|  | 7.1 | Length (mm) |  |
|  | 7.2 | Width (mm) |  |
|  | 7.3 | Height (Unladen) (mm) |  |
|  | 7.4 | Wheel base (mm) |  |
|  | 7.5 | Minimum axle spacing, (mm) (for articulated/combination vehicles) |  |
|  | 7.6 | **Wheel track (mm)** |  |
|  | 7.6.1 | Front |  |
|  | 7.6.2 | Rear |  |
|  | 7.6.3 | Other axles (for articulated/combination vehicles) |  |
|  | 7.7 | **Body overhang (mm)** |  |
|  | 7.7.1 | Front end |  |
|  | 7.7.2 | Rear end |  |
|  | 7.8 | Frame overhang (mm)(in case of vehicles without complete body) |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | 7.8.1 | Front end |  |
|  | 7.8.2 | Rear end |  |
|  | 7.9 | Inner dimensions of room or platform (For goods carriage vehicles only) |  |
|  | 7.9.1 | Length |  |
|  | 7.9.2 | Width |  |
|  | 7.9.3 | Height |  |
|  | 7.10 | Lateral projection |  |
|  | **8.0** | **Weights** |  |
|  | 8.1 | Vehicle kerb weight (kg) |  |
|  | 8.1.2 | Front axle |  |
|  | 8.1.3 | Rear axle |  |
|  | 8.1.5 | Total |  |
|  | 8.2 | Gross vehicle weight (kg) |  |
|  | 8.3 | Maximum permissible axle weights (kg) |  |
|  | 8.3.1 | Front axle |  |
|  | 8.3.2 | Rear axle |  |
|  | 8.4 | Gross combination weight |  |
|  | 8.4.1 | Front axle |  |
|  | 8.4.2 | Rear axle |  |
|  | **9.0** | **Body** |  |
|  | 9.1 | Type of Truck / Tanker |  |
|  | 9.2 | Comfort Category |  |
|  | 9.3 | Dimension drawing and photograph of the vehicle with representative body |  |
|  | 9.4 | Range of vehicle dimension (overall) |  |
|  | 9.5 | Dimensional drawings of the body depicting chassis connecting members |  |
|  | 9.6 | Material used for construction |  |
|  | 9.7 | Material used for Cab |  |
|  | 9.8 | Structure Material (as per ISO : 3795) |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | 9.9 | Size of sections (A Table with details of cross sectional dimensions of the sections be enclosed) |  |
|  | 9.10 | Material used for cab other than Structural (ISO :3795) |  |
|  | 9.11 | Method of construction |  |
|  | 9.12 | (Brief construction method) |  |
|  | 9.13 | Area for Cab (m2) |  |
|  | 9.14 | Number of Seats |  |
|  | 9.14.1 | Driver Seat |  |
|  | 9.14.2 | Co-Driver Seat |  |
|  | 9.15 | Number of sleeper berths, layout with dimensions |  |
|  |  | (As per Seat Layout) |  |
|  | 9.16 | Number of Service doors, layout with dimensions |  |
|  | 9.17 | Number of emergency exit, layout with dimensions |  |
|  | 9.18 | Number of escape hatches, layout with dimensions |  |
|  | 9.19 | Area of luggage Transportation on roof (m2), layout with dimensions |  |
|  | **10.0** | **Clearance** |  |
|  | 10.1 | Minimum ground clearance |  |
|  | 10.2 | Approach angle |  |
|  | 10.3 | Departure angle |  |
|  | 10.4 | Ramp-over angle |  |
|  | **11.0** | **Seating capacity** |  |
|  | 11.1 | Maximum (including driver) for completely built vehicles |  |
|  | 11.2 | Sketch showing layout of seats with appropriate dimensions of seats & their location on the vehicle platform |  |
|  | **12.0** | **Maximum Stable inclination** |  |
|  | 12.1 | Left |  |
|  | 12.2 | Right |  |
|  | 13.0 | Body Panels |  |
|  | **13.1** | **Outer Panels** |  |
|  | 13.1.1 | Material |  |
|  | 13.1.2 | Thickness |  |
|  | **13.2** | **Inner Panels** |  |
|  | 13.2.1 | Material |  |
|  | 13.2.2 | Thickness |  |
|  | **13.3** | **Roof Panels (If closed type load carrier)** |  |
|  | 13.3.1 | Material |  |
|  | 13.3.2 | Thickness |  |
|  | **13.4** | **Floor Panels** |  |
|  | 13.4.1 | Material |  |
|  | 13.4.2 | Thickness |  |
|  | 13.5 | Type of anti-slip coating |  |
|  | **14.0** | **Step well Guard** |  |
|  | 14.1 | Height from the floor |  |
|  | 14.2 | Projection from the side wall |  |
|  | **15.0** | **Cab Luggage Rack** |  |
|  | 15.1 | Width from sidewall |  |
|  | 15.2 | Height from Roof |  |
|  | **16.0** | **Driver Partition** |  |
|  | 16.1 | Dimension of partition with respect to rear edge of driver seat |  |
|  |  | **(Rear most position of driver seat)** |  |
|  | 17.0 | Driver’s Work Area (Refer Figure-2 of Section –2) **A separate figure or drawing be attached** |  |
|  | **17.1** | Overall length of the cab, (mm) |  |
|  | 17.2 | Height of floor from 2nd foot step top, (mm) |  |
|  | 17.3 | Distance from floor to the driver's seat top, (mm) |  |
|  | 17.4 | Distance from the floor to the bottom of the steering wheel, (mm) |  |
|  | 17.5 | Distance from the roof to the floor, (mm) |  |
|  | 17.6 | Height of the cab from ground, (mm) |  |
|  | 17.7 | Thickness of the berth, (mm) |  |
|  | 17.8 | Roof to upper berth gap, (mm) (Min) |  |
|  | 17.9 | Lower berth top to upper berth bottom , (mm) (Min) |  |
|  | 17.10 | |  | | --- | | Berth width, (mm) | |  |
|  | 17.11 | Lower berth height from the floor at rear, (mm) |  |
|  | 17.12 | Height of cab at rear, (mm) |  |
|  | 17.13 | Seat to steering wheel gap, (mm) |  |
|  | 17.14 | Width of the door , (mm) (Min) |  |
|  | 17.15 | Height of door, (mm) (Min) |  |
|  | 17.16 | Width of window, (mm) (Min) |  |
|  | 17.17 | Height of window, (mm) (Min) |  |
|  | 17.18 | Width of observation window (on door) at top, (mm) |  |
|  | 17.19 | Width of observation window (on door) at bottom, (mm) |  |
|  | 17.20 | Height of observation glass, (mm) |  |
|  | 17.21 | Minimum length of the sleeper berth measured from the longitudinal axis of the berth (left to right), (mm) |  |
|  | 17.22 | Minimum distance from H point to roof measured along the back rest at 12 degree angle, (mm) (head room) |  |
|  | 17.23 | Thigh clearance for the driver-The vertical distance measured from top of the seat cushion of the driver's seat the bottom of the steering Wheel, (mm) |  |
|  | 17.24 | Heel point –Minimum distance from the inner face of the bulk head, (mm) |  |
|  | 17.25 | Adjustment range for the thigh clearance, (mm) |  |
|  | 18.0 | Hand hold / Climb facility ( Refer Figure –3 of Section –2 ) A separate figure or drawing shall be attached. |  |
|  | **18.1** | Maximum height from ground to surface of first step, (mm) |  |
|  | 18.2 | Maximum vertical distance between top surface of subsequent steps, (mm) |  |
|  | 18.3 | Minimum step depth, (mm) |  |
|  | 18.4 | Minimum step clearance including step depth, (mm) |  |
|  | 18.5 | Minimum step width (other than first step) , (mm) |  |
|  | 18.6 | Minimum step width for lower step, (mm) |  |
|  | 18.7 | Reference point specified by chassis manufacturer (SGRP) , (mm) |  |
|  | 18.8 | Cross section of handle, (mm) |  |
|  | 18.9 | Width of grab handle on "B pillar", (mm) |  |
|  | 18.10 | Width of grab handle on "A pillar", (mm) |  |
|  | 18.11 | First hand hold/ hand rail height from ground level (max) , (mm) |  |
|  | 18.12 | Maximum height of the grab handle at Rear-"Hold-U" from bottom of rear floor (B pillar side) , (mm) |  |
|  | 18.13 | Maximum height of the grab handle to floor bottom at front (for hand "Hold-V") (A pillar side) , (mm) |  |
|  | 18.14 | Minimum thickness of the foot step, (mm) |  |
|  | 18.15 | Minimum height of the upper most step to floor, (mm) |  |
|  | 18.16 | **Compliance to AIS-046 established (Yes / No)** |  |
|  | 19.0 | External Projections |  |
|  | **19.1** | Ornaments |  |
|  | 19.2 | Projection for headlight |  |
|  | 19.3 | Radiator grills (Applicable of on external surface) |  |
|  | 19.4 | Gap between individual elements |  |
|  | 19.5 | Radius of curvature of individual element |  |
|  | 19.6 | Body Panel ( In case of radius of curvature of folds in body panels are less than 2.5(mm) |  |
|  | 19.7 | The scaled drawing of folds contour and H value as per Annex A of SS29/IS 13942 is required (to be submitted) |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | 19.8 | Radius of curvature of lateral Rain/Air deflector |  |
|  | 19.9 | Hinges |  |
|  | **19.10** | **Handles** |  |
|  | 20.0 | Rear Under run Protective device ( RUPD ) |  |
|  | **20.1** | Height of lower edge of the device from the ground (mm) |  |
|  | 20.2 | Width of the device (mm) |  |
|  | 20.3 | Drawing of the rear under-run protective device with dimensions. |  |
|  | 20.4 | Material (Metal/Fibre/etc.) |  |
|  | 21.0 | Lateral Protection (Side Guards) |  |
|  | 21.1 | Height of the lower edge of the Side Guard. |  |
|  | 21.2 | Drawing of the lateral protection device fitted on the vehicle with dimensions |  |
|  | 21.3 | Material (Metal/Fiber/etc.) |  |
|  | 22.0 | Driver / Co-driver door |  |
|  | 22.1 | Make & identification |  |
|  | 22.2 | Name of the producer |  |
|  | 22.3 | Position of controls |  |
|  | 22.4 | Control Circuit (schematic diagram) |  |
|  | **23.0** | **Door locks and hinges** |  |
|  | 23.1 | Doors |  |
|  | 23.1.1 | No. of doors |  |
|  | 23.1.2 | Position and type of door |  |
|  | 23.2 | Door lock |  |
|  | 23.2.1 | Name of manufacturer |  |
|  | 23.2.2 | Identification mark |  |
|  | 23.3 | Door hinge |  |
|  | 23.3.1 | Name of manufacturer |  |
|  | 23.3.2 | Identification mark |  |
|  | **24.0** | **Hood latch** |  |
|  | 24.1 | Name of manufacturer |  |
|  | 24.2 | Type |  |
|  | 24.3 | Identification mark |  |
|  | **25.0** | **Windows on driver / co-driver door** |  |
|  | 25.1 | Winding type provided (Yes/No) |  |
|  | **26.0** | **Windows other than door windows** |  |
|  | 26.1 | Type and description |  |
|  | 26.2 | Drawing with dimensions |  |
|  | **27.0** | **Safety glass** |  |
|  | 27.1 | Front windshield (laminated) |  |
|  | 27.1.1 | Make and identification |  |
|  | 27.1.2 | Type (flat/curved, clear/tinted) |  |
|  | 27.1.3 | Thickness (mm) |  |
|  | 27.1.4 | No. of pieces |  |
|  | 27.1.5 | Radius of curvature (If curved) |  |
|  | 27.2 | Side Windows |  |
|  | 27.2.1 | Make and identification |  |
|  | 27.2.2 | Type (flat/curved, clear/tinted, toughened) |  |
|  | 27.2.3 | Thickness (mm) |  |
|  | 27.2.4 | Radius of curvature (If curved) |  |
|  | 27.3 | Rear Window |  |
|  | 27.3.1 | Make and identification |  |
|  | 27.3.2 | Type (flat/curved, clear/tinted, toughened) |  |
|  | 27.3.3 | Thickness (mm) |  |
|  | 27.3.4 | Radius of curvature (If curved) |  |
|  | **28.0** | **Rear view mirror** |  |
|  | 28.1 | Left |  |
|  | 28.1.1 | Name of producer |  |
|  | 28.1.2 | Type |  |
|  | 28.1.3 | Class of mirror |  |
|  | 28.1.4 | Manufacturer’s ID number |  |
|  | 28.1.5 | Trade name or mark location |  |
|  | 28.1.6 | Dimension & radius of curvature |  |
|  | 28.2 | Right |  |
|  | 28.2.1 | Name of producer |  |
|  | 28.2.2 | Type |  |
|  | 28.2.3 | Class of mirror |  |
|  | 28.2.4 | Manufacturer’s ID number |  |
|  | 28.2.5 | Trade name or mark location |  |
|  | 28.2.6 | Dimension & radius of curvature |  |
|  | 28.3 | Inside |  |
|  | 28.3.1 | Name of producer |  |
|  | 28.3.2 | Type |  |
|  | 28.3.3 | Class of mirror |  |
|  | 28.3.4 | Manufacturer’s ID number |  |
|  | 28.3.5 | Trade name or mark location |  |
|  | 28.3.6 | Dimension & radius of curvature |  |
|  | 28.4 | Sketch showing mounting arrangement of mirrors |  |
|  | **29.0** | **Wind Screen Wiper** |  |
|  | 29.1 | Type |  |
|  | 29.2 | No. of wipers |  |
|  | 29.3 | Wiper motor |  |
|  | 29.3.1 | Name of manufacturer |  |
|  | 29.3.2 | Type and identification |  |
|  | 29.3.3 | Rated voltage |  |
|  | 29.3.4 | Frequency of wiping |  |
|  | 29.4 | Wiper arm |  |
|  | 29.4.1 | Length |  |
|  | 29.4.2 | Manufacturer and Identification |  |
|  | 29.5 | Wiper blade |  |
|  | 29.5.1 | Length |  |
|  | 29.5.2 | Manufacturer and Identification |  |
|  | 29.5.3 | Rubber material |  |
|  | 29.5.4 | Type of fixing (as per IS:7827) |  |
|  | 29.6 | Drawing indicating the seat back angle, seat travel, H point, Rake angle ,F dimension And steering wheel position (Ref document ARAI005CMVR101(2) December 1992) |  |
|  | 30.0 | Wind Screen Washer |  |
|  | 30.1 | Name of producer |  |
|  | 30.2 | Type |  |
|  | 30.3 | Number of nozzles |  |
|  | 30.4 | Spray Area |  |
|  | 31.0 | Equipment for occupant's safety |  |
|  | 31.1 | Driver Seat belt |  |
|  | 31.1.1 | Name of producer |  |
|  | 31.1.2 | Identification Type |  |
|  | 31.1.3 | Number |  |
|  | 31.2 | Head restraint |  |
|  | 31.2.1 | Name of producer |  |
|  | 31.2.2 | Type |  |
|  | 31.3 | Passenger Seat |  |
|  | 31.3.1 | Name of producer |  |
|  | 31.3.2 | Type |  |
|  | 31.3.3 | Frame structure Material |  |
|  | 31.3.4 | Section size |  |
|  | 31.3.5 | Pad material |  |
|  | 31.3.6 | Upholstery |  |
|  | **32.0** | **Super Structure (Load body)** |  |
|  | 32.1 | Type and description |  |
|  | 32.2 | Floor Height from the ground (unladen) |  |
|  | 32.3 | Slope of floor |  |
|  | 32.4 | Material used for Floor construction |  |
|  | 32.5 | No. of Cross sections used |  |
|  | 32.6 | (If more than two tabulate in a table) |  |
|  | 32.7 | Details of the Load Body Carrier |  |
|  | 32.8 | Maximum Height |  |
|  | 32.9 | Maximum Width |  |
|  | 32.10 | Maximum Length |  |
|  | 33.0 | Bumper |  |
|  | 33.1 | Size |  |
|  | 33.1.1 | Front |  |
|  | 33.1.2 | Rear |  |
|  | 33.2 | External Projection |  |
|  | 33.3 | Clearance between bumper & body |  |
|  | **34.0** | **Spray Suppression System** |  |
|  | 34.1 | Make, Country of origin (If imported) |  |
|  | 34.2 | Type ( Water separator / Pulveriser ) |  |
|  | 34.3 | Identification No. / Part No. |  |
|  | 34.4 | Size |  |
|  | 34.5 | Drawing / Photographs showing the mounting details with dimensions |  |
|  | **35.0** | **Fuel filler** |  |
|  | 35.1 | Aperture |  |
|  | 35.2 | Position |  |
|  | **36.0** | **Fire Extinguisher** |  |
|  | 36.1 | Number |  |
|  | 36.2 | Type |  |
|  | 36.3 | Capacity |  |
|  | 36.4 | Name of Producer |  |
|  | **37.0** | **First Aid Equipment** |  |
|  | 37.1 | Number |  |
|  | 37.2 | Contents |  |
|  | **38.0** | **Towing devices** |  |
|  | 38.1 | Type |  |
|  | 38.2 | Name of manufacturer |  |
|  | 38.3 | Capacity |  |
|  | **39.0** | **Horn :** |  |
|  | 39.1 | Make |  |
|  | 39.2 | Type (As per IS 1884 – 1993) |  |
|  | 39.3 | Operating voltage |  |
|  | 39.4 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 39.5 | Number |  |
|  | 39.6 | Sketch showing mounting of horn |  |
|  | 39.7 | Brief Dimensional Drawing indicating the shape and material of the body work at the front of the horn, which might affect the level of the sound, emitted by the horn and have a masking effect |  |
|  | 39.8 | Maximum vehicle speed for continuous operation, km/h. (Only for AC horns) |  |
|  | **40.0** | **Lighting Installation requirements :** |  |
|  | 40.1 | External shape of the vehicle |  |
|  | 40.2 | Head lamp leveling system |  |
|  | 40.3 | Initial inclination |  |
|  | 40.4 | Tell-Tale |  |
|  | 40.5 | Description and sketch showing the detail positions of Tell-Tale and seating layout ( for M category vehicles ) |  |
|  | **41.0** | **Head lamp** |  |
|  | 41.1 | **Main beam** |  |
|  | 41.1.1 | Make |  |
|  | 41.1.2 | Type of lens (Glass / Plastic) |  |
|  | 41.1.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 41.1.4 | Number and Colour of Lens |  |
|  | 41.2 | **Dipped beam** |  |
|  | 41.2.1 | Make |  |
|  | 41.2.2 | Type of lens (Glass / Plastic) |  |
|  | 41.2.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 41.2.4 | Number and Colour of Lens |  |
|  | 41.3 | **Head Lamp cleaning device provided (Yes / No) ( For Headlamps having intensity more than 2000 lumen)** |  |
|  | 41.3.1 | Cleaner Type as per AIS-083 |  |
|  | 41.3.1.1 | Make |  |
|  | 41.3.2 | A list, specifying the parts which constitute the headlamp cleaner and drawings thereof, (e.g. pumps, nozzles, valves, motors and wipers); |  |
|  | 41.3.3 | A brief technical description indicating the length of the cleaning period, the consumption of cleaning fluid during the cleaning period and the minimum capacity of the container provided; |  |
|  | 41.3.4 | Capacity class of the fluid container: 25/50 |  |
|  | 41.3.5 | Drawings showing the installation to a vehicle |  |
|  | 41.3.6 | Drawings showing the relative attachment between the headlamp(s) and the wiper(s), nozzle(s), or corresponding parts, |  |
|  | 41.3.7 | Drawings showing the cleaning principle employed |  |
|  | 41.3.8 | where appropriate, the part of the illuminating surface of the headlamp relevant to the cleaner shall also be shown |  |
|  | 41.4 | **Bend Lighting , provided (Yes / No)** |  |
|  | 41.4.1 | Cornering Lamp (if provided) |  |
|  | 41.4.2 | Make |  |
|  | 41.4.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 41.4.4 | Type of lens (Glass / Plastic) |  |
|  | 41.4.5 | Number and Colour of Lens |  |
|  | 41.5 | **Day Time Running Lamp (if provided)** |  |
|  | 41.5.1 | Make |  |
|  | 41.5.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 41.5.3 | Type of lens (Glass / Plastic) |  |
|  | 41.5.4 | Number and Colour of Lens |  |
|  | **42.0** | **Front Fog Lamp** |  |
|  | 42.1 | Make |  |
|  | 42.2 | Type of lens (Glass / Plastic) |  |
|  | 42.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 42.4 | Number and Colour of Lens |  |
|  | **43.0** | **Rear Fog Lamp** |  |
|  | 43.1 | Make |  |
|  | 43.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 43.3 | Number and Colour of Lens |  |
|  | **44.0** | **Side Marker lamps** |  |
|  | 44.1 | Make |  |
|  | 44.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 44.3 | Number and Colour of Lens |  |
|  | **45.0** | **Registration Plate lamp** |  |
|  | 45.1 | Make |  |
|  | 45.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 45.3 | Number and Colour of Lens |  |
|  | **46.0** | **Position lamp / Parking Lamp – Front** |  |
|  | 46.1 | **Front Position Lamp** |  |
|  | 46.1.1 | Make |  |
|  | 46.1.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 46.1.3 | Number and Colour of Lens |  |
|  | 46.2 | **Front Parking Lamp** |  |
|  | 46.2.1 | Make |  |
|  | 46.2.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 46.2.3 | Number and Colour of Lens |  |
|  | **47.0** | **Position lamp / Parking Lamp – Rear** |  |
|  | 47.1 | **Rear Position Lamp** |  |
|  | 47.1.1 | Make |  |
|  | 47.1.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 47.1.3 | Number and Colour of Lens |  |
|  | 47.2 | **Rear Parking Lamp** |  |
|  | 47.2.1 | Make |  |
|  | 47.2.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 47.2.3 | Number and Colour of Lens |  |
|  | **48.0** | **Stop lamp (S1 / S2)** |  |
|  | 48.1 | Make |  |
|  | 48.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 48.3 | Number and Colour of Lens |  |
|  | **49.0** | **Reversing lamp** |  |
|  | 49.1 | Make |  |
|  | 49.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 49.3 | Number and Colour of Lens |  |
|  | **50.0** | **Direction indicator Lamp** |  |
|  | 50.1 | **Front** |  |
|  | 50.1.1 | Make |  |
|  | 50.1.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 50.1.3 | Number and Colour of Lens |  |
|  | 50.2 | **Rear** |  |
|  | 50.2.1 | Make |  |
|  | 50.2.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 50.2.3 | Number and Colour of Lens |  |
|  | 50.3 | **Side** |  |
|  | 50.3.1 | Make |  |
|  | 50.3.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 50.3.3 | Number and Colour of Lens |  |
|  | 50.4 | **Flasher for Direction Indicators** |  |
|  | 50.4.1 | Flashing Frequency ( No of flashes / minute ) |  |
|  | **51.0** | **Hazard warning signal** |  |
|  | 51.1 | **Front** |  |
|  | 51.1.1 | Make |  |
|  | 51.1.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 51.1.3 | Number and Colour of Lens |  |
|  | 51.2 | **Rear** |  |
|  | 51.2.1 | Make |  |
|  | 51.2.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 51.2.3 | Number and Colour of Lens |  |
|  | 51.3 | **Side** |  |
|  | 51.3.1 | Make |  |
|  | 51.3.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 51.3.3 | Number and Colour of Lens |  |
|  | **52.0** | **Reflector** |  |
|  | 52.1 | **Front** |  |
|  | 52.1.1 | Make |  |
|  | 52.1.2 | Type |  |
|  | 52.1.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 52.1.4 | Number and Colour of Lens |  |
|  | 52.1.5 | Reflective surface Area |  |
|  | 52.1.6 | Shape (Square / rectangular / circular / elliptical /other) |  |
|  | 52.2 | **Rear** |  |
|  | 52.2.1 | Make |  |
|  | 52.2.2 | Type |  |
|  | 52.2.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 52.2.4 | Number and Colour of Lens |  |
|  | 52.2.5 | Reflective surface Area |  |
|  | 52.2.6 | Shape (Square / rectangular / circular / elliptical /other) |  |
|  | 52.3 | **Side** |  |
|  | 52.3.1 | Make |  |
|  | 52.3.2 | Type |  |
|  | 52.3.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 52.3.4 | Number and Colour of Lens |  |
|  | 52.3.5 | Reflective surface Area |  |
|  | 52.3.6 | Shape (Square / rectangular / circular / elliptical /other) |  |
|  | **53.0** | **End-outline marker lamp (Top light)** |  |
|  | 53.1 | **Front** |  |
|  | 53.1.1 | Make |  |
|  | 53.1.2 | Type of lens (Glass / Plastic) |  |
|  | 53.1.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 53.1.4 | Number and colour of Lens |  |
|  | 53.2 | **Rear** |  |
|  | 53.2.1 | Make |  |
|  | 53.2.2 | Type of lens (Glass / Plastic) |  |
|  | 53.2.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 53.2.4 | Number and colour of Lens |  |
|  | 41.0 to 53.0 - Installation details. | Diagram of vehicle indicating location, reference axis, mark of apparent surface, contour of vehicle parts limiting geometric visibility of all lights and light signaling devices, location of extreme outer edges and longitudinal median plane of vehicle including following dimensions in (mm). Along width of vehicle-horizontal distance between inner illuminating surfaces, distance between inner illuminating surfaces and outer most part of vehicle and distance between nearest point of illuminating surfaces of indicators and dipped-beam head lamp. Along length of vehicle (where applicable) – distance between the transverse plane corresponding to the longitudinal rearmost extremity to center of reference of rear indicators. Heights of highest and lowest point of illuminating surfaces. |  |
|  | **54.0** | **Automotive bulbs** |  |
|  | 54.1 | **Head lamp bulb (main beam)** |  |
|  | 54.1.1 | Make |  |
|  | 54.1.2 | Category as per AIS-034 |  |
|  | 54.1.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.1.4 | **Head lamp bulb (Dipped beam)** |  |
|  | 54.1.5 | Make |  |
|  | 54.1.6 | Category as per AIS-034 |  |
|  | 54.1.7 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.2 | **Parking Lamp bulb – Front** |  |
|  | 54.2.1 | Make |  |
|  | 54.2.2 | Category as per AIS-034 |  |
|  | 54.2.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.3 | **Parking Lamp bulb – Rear** |  |
|  | 54.3.1 | Make |  |
|  | 54.3.2 | Category as per AIS-034 |  |
|  | 54.3.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.4 | **Direction indicator lamp bulb - front** |  |
|  | 54.4.1 | Make |  |
|  | 54.4.2 | Category as per AIS-034 |  |
|  | 54.4.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.5 | **Direction indicator lamp bulb - rear** |  |
|  | 54.5.1 | Make |  |
|  | 54.5.2 | Category as per AIS-034 |  |
|  | 54.5.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.6 | **Direction indicator lamp bulb - side** |  |
|  | 54.6.1 | Make |  |
|  | 54.6.2 | Category as per AIS-034 |  |
|  | 54.6.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.7 | **Front Position Lamp bulb** |  |
|  | 54.7.1 | Make |  |
|  | 54.7.2 | Category as per AIS-034 |  |
|  | 54.7.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.8 | **Rear Position Lamp ( tail lamp )Bulb** |  |
|  | 54.8.1 | Make |  |
|  | 54.8.2 | Category as per AIS-034 |  |
|  | 54.8.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.9 | **Stop lamp bulb** |  |
|  | 54.9.1 | Make |  |
|  | 54.9.2 | Category as per AIS-034 |  |
|  | 54.9.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.10 | **Number plate lamp bulb** |  |
|  | 54.10.1 | Make |  |
|  | 54.10.2 | Category as per AIS-034 |  |
|  | 54.10.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.11 | **End out Marker bulb** |  |
|  | 54.11.1 | Make |  |
|  | 54.11.2 | Category as per AIS-034 |  |
|  | 54.11.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.12 | **Reversing lamp bulb** |  |
|  | 54.12.1 | Make |  |
|  | 54.12.2 | Category as per AIS-034 |  |
|  | 54.12.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.13 | **Stop Lamp Bulb (S3)** |  |
|  | 54.13.1 | Make |  |
|  | 54.13.2 | Category as per AIS-034 |  |
|  | 54.13.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.14 | **Front Fog Lamp Bulb** |  |
|  | 54.14.1 | Make |  |
|  | 54.14.2 | Category as per AIS-034 |  |
|  | 54.14.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.15 | **Rear Fog Lamp Bulb** |  |
|  | 54.15.1 | Make |  |
|  | 54.15.2 | Category as per AIS-034 |  |
|  | 54.15.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.16 | **Side Marker Lamp Bulb** |  |
|  | 54.16.1 | Make |  |
|  | 54.16.2 | Category as per AIS-034 |  |
|  | 54.16.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.17 | **Cornering lamp bulb (if provided)** |  |
|  | 54.17.1 | Make |  |
|  | 54.17.2 | Designation Category as per AIS-034 |  |
|  | 54.17.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.18 | **Day time Running lamp bulb (if provided)** |  |
|  | 54.18.1 | Make |  |
|  | 54.18.2 | Designation Category as per AIS-034 |  |
|  | 54.18.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | 54.19 | **Bending lamp bulb (if provided)** |  |
|  | 54.19.1 | Make |  |
|  | 54.19.2 | Designation Category as per AIS-034 |  |
|  | 54.19.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
|  | **55.0** | **Internal Lighting & Illumination** |  |
|  | 55.1 | Driver Cab lighting : |  |
|  | 55.1.1 | Type : |  |
|  | 55.1.2 | Name of producer : |  |
|  | 55.1.3 | Number : |  |
|  | 55.1.4 | Illumination intensity : |  |
|  | 55.2 | Passenger Compartment Lighting |  |
|  | 55.2.1 | Type : |  |
|  | 55.2.2 | Name of producer : |  |
|  | 55.2.3 | Number : |  |
|  | 55.2.4 | Illumination intensity : |  |
|  | **56.0** | **Other Area Lighting** |  |
|  | 56.1 | Type : |  |
|  | 56.2 | Name of producer : |  |
|  | 56.3 | Number : |  |
|  | 56.4 | Illumination intensity : |  |
|  | **57.0** | **Electrical Circuit** |  |
|  | 57.1 | Circuit Diagram (attach details): |  |
|  | **58.0** | **Electrical Cables** |  |
|  | 58.1 | Name of producer : |  |
|  | 58.2 | Conductor Cross section : |  |
|  | 58.3 | Insulation Class : |  |
|  | **59.0** | **Fuse** |  |
|  | 59.1 | Type & Make |  |
|  | 59.2 | Name of producer |  |
|  | 60.0 | Master switch for electrical |  |
|  | 60.1 | Type & Make |  |
|  | 60.2 | Name of producer |  |

**TABLE 28**

**TECHNICAL INFORMATION ON MODULAR HYDRAULIC TRAILERS TO BE SUBMITTED BY MANUFACTURER TO TESTING AGENCY**

|  |  |  |  |
| --- | --- | --- | --- |
| **1.0** | **Details of Trailer manufacturer** |  | |
| 1.1 | Name & address of the trailer manufacturer or importer |  | |
| 1.2 | Telephone No. |  | |
| 1.3 | Fax. No. |  | |
| 1.4 | E-mail address |  | |
| 1.5 | Contact person |  | |
| 1.6 | Address of the Plant(s)of manufacture |  | |
| **2.0** | **General details of the trailer:** |  | |
| 2.1 | Model name of the trailer |  | |
| 2.1.1 | Number of rows (max 8 rows only) |  | |
| 2.2 | Type & Brief Description of the MH trailer |  | |
| 2.3 | General arrangement drawing of MH trailer with dimensions mentioned in specs. |  | |
| 2.4 | GVW of the trailer, (kg) |  | |
| 2.4.1 | Loads, (kg) : |  | |
| 2.4.2 | Max Permissible weight of trailer, (kg) |  | |
| 2.4.3 | Un-laden weight of trailer, (kg) |  | |
| 2.4.4 | Compatible Prime mover Configurations |  | |
| 2.5 | Maximum Gross Combination Weight  ( GCW) of the tractor/puller and modular hydraulic trailer, (kg) |  | |
| 2.5.1 | Axles : (Make) |  | |
| 2.5.2 | Number of axles on each row and Description - | Row1- Row5-  Row2- Row6-  Row3- Row7-  Row4- Row8- | |
| 2.6 | Suspension - Make |  | |
| 2.6.1 | Suspension - Type and Description |  | |
| 2.6.2 | Hydraulic axle stroke |  | |
| 2.6.3 | Ride height |  | |
| 2.6.4 | Size of cylinder |  | |
| 2.6.5 | Suspension configuration-Single/Tandem/Tridem |  | |
| 3.0 | **Modular Hydraulic Trailer Dimensions, (mm)** |  | |
| 3.1 | Length of module, (mm) |  | |
| 3.2 | Length with drawbar, (mm) |  | |
| 3.3 | Distance between front bolt-ear coupling and rear bolt ear coupling, (mm) |  | |
| 3.4 | Max Height with max suspension position  (un-laden condition), (mm) |  | |
| 3.5 | Min Height with min suspension position  (un-laden condition), (mm) |  | |
| 3.6 | Max Height of front bolt-ear coupling in  un-laden condition, (mm) |  | |
| 3.7 | Max Height of rear bolt-ear coupling in un-laden condition, (mm) |  | |
| 3.8 | Width of module, (mm) |  | |
| 3.9 | Wheel Track of single axle, (mm) |  | |
| 3.9.1 | Front Body overhang, (mm) |  | |
| 3.9.2 | Rear Body overhang, (mm) |  | |
| 3.9.3 | Distance between center of two axles in one row (provide dimensional drawing), (mm) |  | |
| 4.0 | Colour of the trailer |  | |
| 4.1 | Draw bar pull make |  | |
| 4.2 | Draw bar dimensional drawing |  | |
| **5.0** | **Tyres** |  | |
| 5.1 | Tyre make |  | |
| 5.2 | Size of tyre with speed and load rating. |  | |
| 5.3 | Number of tyres on each axle |  | |
| 5.4 | Number of tyres on each row |  | |
| **5.5** | Tyre type (Radial/cross ply) |  | |
| **5.6** | Static rolling radius |  | |
| **5.7** | Dynamic rolling radius |  | |
| **5.8** | Inflation pressure – Unladen in kg/cm2 or (kPa) |  | |
| **5.8.1** | Inflation pressure –laden in kg/cm2 or kPa |  | |
| 5.9 | No. and arrangement of wheels |  | |
| 5.9.1 | 1st row |  | |
| 5.9.2 | 2nd row |  | |
| 5.9.3 | 3rd row |  | |
| 5.9.4 | 4th row |  | |
| 5.9.5 | 5th row |  | |
| 5.9.6 | 6th row |  | |
| 5.9.7 | 7th row |  | |
| 5.9.8 | 8th row |  | |
| **6.0** | **Chassis Frame** |  | |
| 6.1 | Type |  | |
| 6.2 | Drawing with dimensions |  | |
| 6.3 | Type of platform |  | |
| **7.0** | **Brakes** |  | |
| 7.1 | Type and Brief Description |  | |
| 7.2 | Service brakes |  | |
| 7.2.1 | Name of producer |  | |
| 7.2.2 | Type (Mechanical/hydraulic/air assisted/ vacuum assisted/others) |  | |
| 7.2.3 | Control system & braking wheel |  | |
| 7.2.4 | Schematic layout indicating method of split of brake system, location of valves, reservoirs etc. |  | |
| 7.3 | Anti-Lock braking system Provided (Yes/No) |  | |
| 7.4 | Schematic layout of the brake system |  | |
| 7.5 | Brake lining (or) Pad |  | |
| 7.5.1 | Nominal Dimensions, (mm) (Length x Width x thickness) | |  |
| 7.5.2 | Effective Braking area per axle (cm2) | |  |
| 7.5.3 | Others (in case of other arrangement, give axle wise data) | |  |
| 7.5.4 | Material | |  |
| 7.5.5 | Make and Designation | |  |
| 7.5.6 | Whether asbestos or asbestos-free? | |  |
| 7.6 | Brake drum or disc | |  |
| 7.6.1 | Effective diameter, (mm) | |  |
| 7.7 | Nominal air pressure (P2 as per IS 11852-2001) | |  |
| 7.7.1 | Cut in air pressure | |  |
| 7.7.2 | Cut out air pressure | |  |
| 7.7.3 | Type of vacuum pump or air compressor | |  |
| 7.7.4 | Type of pressure regulator | |  |
| 7.7.5 | No. of tanks | |  |
| 7.7.6 | Tank Capacity, lit. | |  |
| 7.7.6.1 | Tank 1 | |  |
| 7.7.6.2 | Tank 2 | |  |
| 7.7.6.3 | Tank 3 | |  |
| 7.7.6.4 | Tank 4 | |  |
| 7.8 | Brake Chamber | |  |
| 7.8.1 | Make and type | |  |
| 7.8.2 | Size, (mm) | |  |
| 7.8.3 | Internal diameter, (mm) | |  |
| 7.8.4 | Stroke, (mm) | |  |
| 7.9 | Slack adjuster –Automatic | |  |
| 7.9.1 | Make | |  |
| 7.9.2 | Lever length in (mm) | |  |
| 7.10 | Load sensing valve | |  |
| 7.10.1 | Make | |  |
| 7.10.2 | Model No. | |  |
| 7.10.3 | Set pressure, un-laden in kg/cm2 | |  |
| 8.0 | **Axle Steering system** | |  |
| 8.1 | Steering system make | |  |
| 8.2 | Steering system type and description | |  |
| 8.3 | Maximum steering angle in degrees in all heights of a single axle | |  |
| 9.0 | Draw bar eye | |  |
| 9.1 | Size | |  |
| 9.2 | Drawings with dimensions | |  |
| 9.3 | Compliance to IS :12807 (Yes/ No) | |  |
| 10.0 | Towing devices, if any | |  |
| 10.1 | Type | |  |
| 10.2 | Name of manufacturer | |  |
| 10.3 | Capacity | |  |
| 11.0 | Coupling devices, if any | |  |
| 11.1 | Name of the manufacturer | |  |
| 11.2 | Identification mark | |  |
| 12.0 | Type of coupling device for electrical connections | |  |
| 12.1 | Type of coupling device for brake connections | |  |
| **13.0** | **Safety Critical Components** | |  |
| 13.1 | Wheel rim | |  |
| 13.1.1 | Size | |  |
| 13.1.2 | Name of manufacturer | |  |
| 13.1.3 | Identification mark | |  |
| 13.1.5 | Number of mounting bolts | |  |
| 13.1.6 | Material (Steel/Aluminum alloy etc.) | |  |
| 14.10 | Reflector : | |  |
| 14.10.1 | Rear reflector | |  |
| 14.10.1.1 | Make | |  |
| 14.10.1.2 | Type | |  |
| 14.10.1.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 14.10.1.4 | Number and colour of Lens | |  |
| 14.10.1.5 | Reflective Surface Area | |  |
| 14.10.1.6 | Shape(Square/Rectangular/Circular/Elliptical/Other) | |  |
| 14.10.2 | Side reflectors | |  |
| 14.10.2.1 | Make | |  |
| 14.10.2.2 | Type | |  |
| 14.10.2.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 14.10.2.4 | Number and colour of Lens | |  |
| 14.10.2.5 | Reflective Surface Area | |  |
| 14.10.2.6 | Shape(Square/Rectangular/Circular/Elliptical/Other) | |  |
| 14.11 | Reflective tape : | |  |
| 14.11.1 | Rear | |  |
| 14.11.1.1 | Make | |  |
| 14.11.1.2 | Type | |  |
| 14.11.1.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 14.11.1.3 | Width in (mm) | |  |
| **15.0** | **T-sign (as per IS 9942)** | |  |
| 15.1 | Make | |  |
| 15.2 | Identification mark | |  |
| **16.0** | **Rear Marking plate (as per AIS-089)** | |  |
| 16.1 | Make | |  |
| 16.2 | Identification mark | |  |
| **17.0** | **Electrical items** | |  |
| 17.1 | Rear Fog Lamp : | |  |
| 17.1.1 | Make | |  |
| 17.1.2 | Type of lens (Glass / Plastic) | |  |
| 17.1.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 17.1.4 | Number and Colour of Lens | |  |
| 17.2 | Registration Plate lamp : | |  |
| 17.2.1 | Make | |  |
| 17.2.2 | Type of lens (Glass / Plastic) | |  |
| 17.2.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 17.2.4 | Number and colour of Lens | |  |
| 17.3 | Rear Position Lamp | |  |
| 17.3.1 | Make | |  |
| 17.3.2 | Type of lens (Glass / Plastic) | |  |
| 17.3.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 17.3.4 | Number and colour of Lens | |  |
| 17.4 | Rear Parking Lamp | |  |
| 17.4.1 | Make | |  |
| 17.4.2 | Type of lens (Glass / Plastic) | |  |
| 17.4.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 17.4.4 | Number and colour of Lens | |  |
| 17.5 | Stop lamp (S1 / S2) | |  |
| 17.5.1 | Make | |  |
| 17.5.2 | Type of lens (Glass / Plastic) | |  |
| 17.5.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 17.5.4 | Number and colour of Lens | |  |
| 17.6 | Reversing lamp : | |  |
| 17.6.1 | Make | |  |
| 17.6.2 | Type of lens (Glass / Plastic) | |  |
| 17.6.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 17.6.4 | Number and colour of Lens | |  |
| 17.7 | Direction indicator Lamp : | |  |
| 17.7.1 | Rear | |  |
| 17.7.1.1 | Make | |  |
| 17.7.1.2 | Type of lens (Glass / Plastic) | |  |
| 17.7.1.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 17.7.1.4 | Number and colour of Lens | |  |
| 17.7.2 | Side | |  |
| 17.7.2.1 | Make | |  |
| 17.7.2.2 | Type of lens (Glass / Plastic) | |  |
| 17.7.2.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 17.7.2.4 | Number and colour of Lens | |  |
| 17.8.3 | Type of flasher | |  |
| 17.9 | Hazard warning signal : | |  |
| 17.9.1 | Rear | |  |
| 17.9.1.1 | Make | |  |
| 17.9.1.2 | Type of lens (Glass / Plastic) | |  |
| 17.9.1.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 17.9.1.4 | Number and colour of Lens | |  |
| 17.9.2 | Side | |  |
| 17.9.2.1 | Make | |  |
| 17.9.2.2 | Type of lens (Glass / Plastic) | |  |
| 17.9.2.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 17.9.2.4 | Number and colour of Lens | |  |
| 17.10 | Side Marker lamps | |  |
| 17.10.1 | Make | |  |
| 17.10.2 | Identification: TAC No. / BIS License No. / E- Marking | |  |
| 17.10.3 | Number and Colour of Lens | |  |
| 18.0 | Any other details , please specify | |  |
| 19.0 | Automotive bulbs : | |  |
| 19.1 | Parking Lamp bulb – Rear | |  |
| 19.1.1 | Make | |  |
| 19.1.2 | Designation as per AIS-034 | |  |
| 19.1.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 19.2 | Direction indicator lamp bulb -rear | |  |
| 19.2.1 | Make | |  |
| 19.2.2 | Designation as per AIS-034 | |  |
| 19.2.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 19.3 | Direction indicator lamp bulb -side | |  |
| 19.3.1 | Make | |  |
| 19.3.2 | Designation as per AIS-034 | |  |
| 19.3.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 19.4 | Rear Position Lamp ( tail lamp )Bulb | |  |
| 19.4.1 | Make | |  |
| 19.4.2 | Designation as per AIS-034 | |  |
| 19.4.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 19.5 | Stop lamp bulb | |  |
| 19.5.1 | Make | |  |
| 19.5.2 | Designation as per AIS-034 | |  |
| 19.5.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 19.6 | Number plate lamp bulb | |  |
| 19.6.1 | Make | |  |
| 19.6.2 | Designation as per AIS-034 | |  |
| 19.6.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 19.7 | End out Marker bulb | |  |
| 19.7.1 | Make | |  |
| 19.7.2 | Designation as per AIS-034 | |  |
| 19.7.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 19.8 | Reversing lamp bulb | |  |
| 19.8.1 | Make | |  |
| 19.8.2 | Designation as per AIS-034 | |  |
| 19.8.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 19.9 | Stop Lamp Bulb (S3) | |  |
| 19.9.1 | Make | |  |
| 19.9.2 | Designation as per AIS-034 | |  |
| 19.9.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 19.10 | Rear Fog Lamp Bulb | |  |
| 19.10.1 | Make | |  |
| 19.10.2 | Designation as per AIS-034 | |  |
| 19.10.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |
| 19.11 | Side Marker Lamp Bulb | |  |
| 19.11.1 | Make | |  |
| 19.11.2 | Designation as per AIS-034 | |  |
| 19.11.3 | Identification: TAC No./BIS Licence No./E-Marking | |  |

**Table 28 A**

**DETAILS OF LOCATION OF MODULAR HYDRAULIC TRAILER IDENTIFICATION NUMBER AND CODE FOR MONTH AND YEAR OF MANUFACTURE**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of the Trailer Manufacturer & Address : | | |  | |
| Name of the basic model : | | |  | |
| Name of Variants, if any : | | |  | |
| Place of embossing or etching the trailer identification number details by drawing or pictures may be provided if necessary | | |  | |
| Position of the code for month of production in the Modular Hydraulic Trailer Identification Number | | |  | |
| Position of the code for year of production in the Modular Hydraulic Trailer Identification Number | | |  | |
| Height of the Modular Hydraulic Trailer Identification Number – Min. 7 (mm) | | |  | |
| Month | Code used | Year | | Code used |
| January | A | 2016 | | 16 |
| February | B | 2017 | | 17 |
| March | C | 2018 | | 18 |
| April | D | 2019 | | 19 |
| May | E | 2020 | | 20 |
| June | F | 2021 | | 21 |
| July | G | 2022 | | 22 |
| August | H | 2023 | | 23 |
| September | J | 2024 | | 24 |
| October | K | 2025 | | 25 |
| November | L | 2026 | | 26 |
| December | M | 2027 | | 27 |
|  | codes are examples manufacturer can use own letters |  | | codes are examples manufacturer can use own letters |

Below plate on trailer chassis needs to be permanently fixed.

In case of any wrong punching, the procedure for making the correction as indicated in AIS-065 shall be followed.

|  |  |
| --- | --- |
| **NAME OF THE MODULAR HYDRAULIC TRAILER MANUFACTURER**  **Trailer Identification Number**  **Model Name**  **No of rows in module**  **Type Approval Number:** | |
|  |  |
|  |  |
|  |  |
| **Date of Manufacturing Month and Year** | **Max permissible weight of module** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**MODULAR HYDRAULIC TRAILER IDENTIFICATION NUMBER**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| Mfr Name | | | Trailer Abbreviation | | | Axles | | No. of rows in module | Overall Length | Month | Year | | Serial Number | | | |
| **EXAMPLE** | | | | | | | | | | | | | | | |  |
| **T** | **D** | **L** | **M** | **H** | **T** | **0** | **5** | **8** | **F** | **K** | **0** | **8** | **1** | **2** | **3** | **4** |

**Manufacturers Name**:

It is a three letter code, which can be assigned to respective trailer manufacturer and registered to BIS through ISO. (Or) the respective trailer manufacturer may assign as per his own choice.

**For Overall Length** (in mm):

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Overall Length of module (mm)** | **Code** |
|  | Upto 3000 | A |
| 2) | 3000 -4500 | B |
| 3) | 4500-6000 | C |
| 4) | 6000-7500 | D |
| 5) | 7500-9000 | E |
| 6) | 9000-10500 | F |
| 7) | 10500-12000 | G |
| 8) | 12000-13500 | H |
| 9) | 13500-15000 | J |
| 10) | 15000-16500 | K |
| 11) | 16500-18000 | L |
| 12) | 18000-19000 | M |

**For Month** : A – January ; B – February ; C- March; D - April ; E- May ; F - June ; G – July ; H - August; J – September ; K – October ; L – November ; M – December.

**ABBREVIATIONS :**

|  |  |  |
| --- | --- | --- |
| 2.1 | Modular Hydraulic Trailer | MHT |

|  |  |  |
| --- | --- | --- |
| **Table 29**  **TECHNICAL INFORMATION TO BE SUBMITTED BY THE**  **ROAD AMBULANCE MANUFACTURER**  (These are additional to the specifications submitted for CMVR compliance as per AIS-007(its revisions/ amendments) | | |
| 1.0 | Name of model : |  |
| 1.1 | Category of Ambulance A/B/C/D |  |
| 1.2 | Name of variants, if any: |  |
| 1.3 | Type and General commercial description (s) : |  |
| **2.0** | **Vehicle Chassis Characteristics** |  |
| 2.1 | Chassis types approved for Body installation : |  |
| 2.2 | Chassis (overall drawing) : |  |
| 2.3 | Valid CMVR certificate for the base Vehicle  ( If available ) |  |
| 2.4 | Category of Base vehicle : |  |
| **3.0** | **Body :** |  |
| 3.1 | Dimension drawing and photograph of the  vehicle with representative body : |  |
| 3.1 | Patient Handling Equipment |  |
| 3.1.1 | Main Stretcher / Undercarriage |  |
| 3.1.1.1 | Make |  |
| 3.1.1.2 | Model |  |
| 3.1.1.3 | Type |  |
| 3.1.1.4 | ID/Part Number |  |
| 3.1.1.5 | Dimensions of Stretcher |  |
| 3.1.1.6 | Loading Angle |  |
| 3.1.1.7 | Loading Height |  |
| 3.1.1.8 | Stretcher loading capacity |  |
| 3.2 | Recognition of Ambulance |  |
| 3.2.1 | Engineering drawing indicating arrangement for  the external visibility for recognition and emblems. |  |
| **4.0** | **Vehicle Dimensions** |  |
| 4.1 | Clearance |  |
| 4.2 | Minimum Ground Clearance : |  |
| **5.0** | **Driver Partition :** |  |
| 5.1 | Dimension of partition with respect to rear  edge of driver seat : (rear most position of driver seat) |  |
| **6.0** | **External Projections (Compliance**  **established to IS:13943 -1994** |  |
| **7.0** | **Siren-** |  |
| 7.1 | Make : |  |
| 7.2 | Model : |  |
| 7.3 | ID / Part Number : |  |
| **8.0** | **Internal Lighting and Illumination** |  |
| 8.1 | Driver Cab lighting : |  |
| 8.1.1 | Type : |  |
| 8.1.2 | Name of Manufacturer : |  |
| 8.1.3 | Number : |  |
| 8.1.4 | Illumination intensity ( Lux) : |  |
| 8 .2 | Patient Compartment Lighting : |  |
| 8.2.1 | Type : |  |
| 8.2.2 | Name of Manufacturer : |  |
| 8.2.3 | Number : |  |
| 8.2.4 | Illumination intensity ( Lux) : |  |
| 8.3 | Other Area Lighting : |  |
| 8.3.1 | Type : |  |
| 8.3.2 | Name of Manufacturer : |  |
| 8.3.3 | Number : |  |
| 8.3.4 | Illumination intensity ( Lux) : |  |
| **9.0** | **Electrical Circuit:** |  |
| 9.1 | Circuit Diagram (attach details): |  |
| 9.2 | Number of battery(ies) provided other than the  vehicle battery : |  |
| 9.3 | Details of Alternator : |  |

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| **Table 29 A**  **TECHNICAL INFORMATION TO BE SUBMITTED BY THE ROAD AMBULANCE BODY BUILDER** | | |
| **1.0** | **Details of Ambulance manufacturer** |  |
| 1.1 | Name and Address : |  |
| 1.2 | Telephone No : |  |
| 1.3 | Fax. No. : |  |
| 1.4 | E mail address : |  |
| 1.5 | Contact person : |  |
| 1.6 | Name of model : |  |
| 1.7 | Category of Ambulance A/B/C/D |  |
| 1.8 | Name of variants, if any: |  |
| 1.9 | Type and General commercial description (s) : |  |
| 1.10 | Plant/(s)of manufacture : |  |
| **2.0** | **Vehicle Chassis Characteristics** |  |
| 2.1 | Chassis types approved for Body installation : |  |
| 2.2 | Type of Control (normal control/Full forward control etc.) : |  |
| 2.3 | Number of Axles and wheels : |  |
| 2.4 | Chassis (overall drawing) : |  |
| 2.5 | Valid CMVR certificate for the base Vehicle  ( If available ) |  |
| 2.6 | Frame Type : |  |
| 2.7 | Cross sectional view : |  |
| 2.8 | Position and arrangement of engine: |  |
| 2.9 | Category of Base vehicle : |  |
| **3.0** | **Body :** |  |
| 3.1 | Dimension drawing and photograph of the vehicle with representative body : |  |
| 3.2 | Range of vehicle dimension (overall): |  |
| 3.3 | Dimension drawing of the body depicting chassis connecting members : |  |
| 3.4 | Material used for construction : |  |
| 3.4.1 | Structural Material : |  |
| 3.4.2 | Size of sections : |  |
| 3.5 | Method of construction : |  |
|  | (Brief construction method) |  |
| 3.6 | Patient Handling Equipment |  |
| 3.6.1 | Main Stretcher / Undercarriage |  |
| 3.6.1.1 | Make |  |
| 3.6.1.2 | Model |  |
| 3.6.1.3 | Type |  |
| 3.6.1.4 | ID/Part Number |  |
| 3.6.1.5 | Dimensions of Stretcher |  |
| 3.6.1.6 | Loading Angle |  |
| 3.6.1.7 | Loading Height |  |
| 3.6.1.8 | Stretcher loading capacity |  |
| 3.12 | Recognition of Ambulance |  |
| 3.12.1 | Engineering drawing indicating arrangement for the external visibility for recognition and emblems. |  |
| **4.0** | **Vehicle Dimensions and weights** |  |
| 4.1 | Dimension (in mm) (Specify drawing reference) : |  |
| 4.1.1 | Length (mm) : |  |
| 4.1.2 | Width (mm) : |  |
| 4.1.3 | Height (Unladen) (mm) : |  |
| 4.1.4 | Wheel base (mm) : |  |
| 4.1.5 | Wheel track (mm) : |  |
| 4.1.5.1 | Front : |  |
| 4.1.5.2 | Rear : |  |
| 4.1.6 | Body overhang (mm) : |  |
| 4.1.6.1 | Front end : |  |
| 4.1.6.2 | Rear end : |  |
| 4.2 | Clearance |  |
| 4.3 | Minimum ground clearance : |  |
| 4.4 | Road clearance from floor : |  |
| 4.5 | Approach angle : |  |
| 4.6 | Departure Angle : |  |
| 4.7 | Ramp-over Angle : |  |
| 4.8 | Weights |  |
| 4.8.1 | Vehicle kerb weight (kg) : |  |
| 4.8.1.1 | Front axle : |  |
| 4.8.1.2 | Rear axle : |  |
| 4.8.1.3 | Total : |  |
| 4.8.2 | Gross vehicle weight (kg) : |  |
| 4.8.3 | Maximum permissible axle weights (kg) |  |
| 4.8.3.1 | Front axle: |  |
| 4.8.3.2 | Rear axle: |  |
| 4.9 | Tyres |  |
| 4.9.1 | **Tyre type (Radial/cross ply) (with Tube / Tube less), size designation including ply rating, speed rating, Load rating or Load index. Use symbols as per IS 15633 / IS 15636 as may be applicable.** |  |

|  |  |  |
| --- | --- | --- |
| 4.9.1.1 | Front wheel |  |
| 4.9.1.2 | Rear wheel |  |
| 4.9.1.3 | Spare wheel (Other than temporary use spare wheel) |  |
| 4.9.1.4 | Other (for articulated/combination vehicles) |  |
| 4.9.1.5 | Dynamic rolling radius, (mm), as per IS 15633 / IS 15636 |  |
| 4.9.2 | No. and arrangement of wheels : |  |
| 4.9.2.1 | Front : |  |
| 4.9.2.2 | Rear : |  |
| 4.9.2.3 | Other : |  |
| 4.9.3 | Inflation pressure – Un laden : |  |
| 4.9.3.1 | Front : |  |
| 4.9.3.2 | Rear : |  |
| 4.9.3.3 | Other |  |
| 4.9.4 | Inflation pressure –Laden : |  |
| 4.9.4.1 | Front : |  |
| 4.9.4.2 | Rear : |  |
| 4.9.4.3 | Other : |  |
| **5.0** | **Body Panels** |  |
| 5.1 | Outer Panels : |  |
| 5.1.1 | Material : |  |
| 5.1.2 | Thickness : |  |
| 5.2 | Inner Panels : |  |
| 5.2.1 | Material : |  |
| 5.2.2 | Thickness : |  |
| 5.3 | Roof Panels : |  |
| 5.3.1 | Material : |  |
| 5.3.2 | Thickness : |  |
| 5.4 | Floor Panels : |  |
| 5.4.1 | Material : |  |
| 5.4.2 | Thickness : |  |
| 5.4.3 | Type of anti-slip coating : |  |
| **6.0** | **Service Doors** |  |
| 6.1 | No. of Service Doors : |  |
| 6.2 | Position of Service Doors : |  |
| 6.3 | Dimension of Service Door : |  |
| 6.3.1 | Front Height : |
| 6.3.2 | Width : |
| 6.3.3 | Rear Height : |
| 6.3.4 | Width : |
| 6.3.5 | Middle Height : |  |
| 6.3.6 | Width : |  |
| **7.0** | **Window** |  |
| 7.1 | Type of window |  |
| 7.3 | Area (H x W in sq. m) : |  |
| **8.0** | **Seat anchorage layout drawing**  **(with anchorage cross section and hardware used details)** |  |
| **9.0** | **Driver Partition :** |  |
| 9.1 | Dimension of partition with respect to rear edge of driver seat : (rear most position of driver seat) |  |
| **10.0** | **External Projections (Compliance established to IS:13943 -1994 ------ Yes / No)** |  |
| **11.0** | **Door locks and hinges** |  |
| 11.1 | **Door lock / latch** |  |
| 11.1.1 | **Front** |  |
| 11.1.1.1 | Make |  |
| 11.1.1.2 | Identification No. / Part No. |  |
| 11.1.2 | **Rear** |  |
| 11.1.2.1 | Make |  |
| 11.1.2.2 | Identification No. / Part No. |  |
| 11.2 | **Door hinge** |  |
| 11.2.1 | **Front** |  |
| 11.2.1.1 | Make |  |
| 11.2.1.2 | Identification No. / Part No. |  |
| 11.2.2 | **Rear** |  |
| 11.2.2.1 | Make |  |
| 11.2.2.2 | Identification No. / Part No. |  |
| 11.3 | **Safety glass** |  |
| 11.3.1 | **Front wind shield (laminated)** |  |
| 11.3.1.1 | Make |  |
| 11.3.1.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 11.3.1.3 | Type (flat/curved, clear/tinted) |  |
| 11.3.1.4 | Thickness (mm) |  |
| 11.3.1.5 | No. of pieces |  |
| 11.3.1.6 | Radius of curvature (if curved) |  |
| 11.3.1.7 | Method of fixing (for approval of Demisting / Defrosting system) |  |
| 11.3.2 | **Side Windows (Left & Right)** |  |
| 11.3.2.1 | Make |  |
| 11.3.2.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 11.3.2.3 | Type(flat/curved, clear/tinted, toughened/laminated) |  |
| 11.3.2.4 | Thickness (mm) |  |
| 11.3.3 | **Rear Window** |  |
| 11.3.3.1 | Make |  |
| 11.3.3.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 11.3.3.3 | Type(flat/curved, clear/tinted, toughened/laminated) |  |
| 11.3.3.4 | Thickness (mm) |  |
| 11.3.3.5 | Radius of curvature (if curved) |  |
| 11.3.4 | Wind Screen Wiper |  |
| 11.3.4.1 | Type (Manual/power) |  |
| 11.3.4.2 | No. of wipers |  |
| 11.3.5 | Wiper motor : |  |
| 11.3.5.1 | Make: |  |
| 11.3.5.2 | Type and identification : |  |
| 11.3.5.3 | Rated voltage : |  |
| 11.3.5.4 | Frequency of wiping : |  |
| 11.3.6 | Wiper arm : |  |
| 11.3.6.1 | Length : |  |
| 11.3.6.2 | Make : |  |
| 11.3.6.3 | Identification Mark: |  |
| 11.3.7 | Wiper blade : |  |
| 11.3.7 .1 | Length : |  |
| 11.3.7 .2 | Make : |  |
| 11.3.7 .3 | Identification Mark: |  |
| 11.3.8 | Rubber material : |  |
| 11.3.8.1 | Type of fixing (As per IS:7827) |  |
| 11.3.9 | Wind Screen Washer |  |
| 11.3.9.1 | Make : |  |
| 11.3.10 | Type : |  |
| 11.3.10.1 | Number of nozzles : |  |
| 11.3.10.2 | Spray Area : |  |
| 11.3.10.3 | Identification Number: |  |
| **12.0** | **Equipment for occupant's safety** |  |
| 12.1 | Driver Seat belt : |  |
| 12.1.1 | Make : |  |
| 12.1.2 | Type : |  |
| 12.1.3 | Number : |  |
| 12.1.4 | Identification Number: |  |
| 12.2 | Driver Seat belt anchorage : |  |
| 12.2.1 | Make : |  |
| 12.2.2 | Type : |  |
| 12.2.3 | Number : |  |
| 12.3 | Head restraint : |  |
| 12.3.1 | Make : |  |
| 12.3.2 | Type : |  |
| 12.4 | Seat : |  |
| 12.4.1 | Number of Patients and attendant seats |  |
| 12.4.2 | Position |  |
| 12.4.3 | Make : |  |
| 12.4.4 | Type : |  |
| 12.4.5 | Frame structure Material : |  |
| 12.4.6 | Section size: |  |
| 12.4.7 | Pad material: |  |
| 12.4.8 | Upholstery : |  |
| 12.4.9 | Identification Number: |  |
| **13.0** | **Bumper** |  |
| 13.1 | Front Size: |  |
| 13.2 | Rear Size: |  |
| 13.3 | Clearance between bumper and body: |  |
| **14.0** | **Fire Extinguisher :** |  |
| 14.1 | Number : |  |
| 14.2 | Type : |  |
| 14.3 | Capacity : |  |
| 14.5 | Make : |  |
| **15.0** | **Towing devices :** |  |
| 15.1 | Type : |  |
| 15.2 | Make : |  |
| 15.3 | Capacity : |  |
| 15.4 | Identification Number / Part No |  |
| **16.0** | **Automotive bulbs ( To be filled , if different from the valid CMVR Compliance certificate )** |  |
| 16.1 | Head lamp bulb (main and dip) |  |
| 16.1.1 | Make |  |
| 16.1.2 | Category as per AIS-034 |  |
| 16.1.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.2 | Parking Lamp bulb – Front : |  |
| 16.2.1 | Make |  |
| 16.2.2 | Category as per AIS-034 |  |
| 16.2.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.3 | Parking Lamp bulb – Rear : |  |
| 16.3.1 | Make |  |
| 16.3.2 | Category as per AIS-034 |  |
| 16.3.2 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.4 | Direction indicator lamp bulb - front : |  |
| 16.4.1 | Make |  |
| 16.4.2 | Category as per AIS-034 |  |
| 16.4.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.5 | Direction indicator lamp bulb – rear : |  |
| 16.5.1 | Make |  |
| 16.5.2 | Category as per AIS-034 |  |
| 16.5.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.6 | Direction indicator lamp bulb – side : |  |
| 16.6.1 | Make |  |
| 16.6.2 | Category as per AIS-034 |  |
| 16.6.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.7 | Front Position Lamp bulb : |  |
| 16.7.1 | Make |  |
| 16.7.2 | Category as per AIS-034 |  |
| 16.7.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.8 | Rear Position Lamp ( tail lamp )Bulb : |  |
| 16.8.1 | Make |  |
| 16.8.2 | Category as per AIS-034 |  |
| 16.8.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.9 | Stop lamp bulb : |  |
| 16.9.1 | Make |  |
| 16.9.2 | Category as per AIS-034 |  |
| 16.9.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.10 | Number plate lamp bulb : |  |
| 16.10.1 | Make |  |
| 16.10.2 | Category as per AIS-034 |  |
|  | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.11 | End out Marker bulb : |  |
| 16.11.1 | Make |  |
| 16.11.2 | Category as per AIS-034 |  |
| 16.11.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.12 | Reversing lamp bulb : |  |
| 16.12.1 | Make |  |
| 16.12.2 | Category as per AIS-034 |  |
| 16.12.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.13 | Stop Lamp Bulb (S3) : |  |
| 16.13.1 | Make |  |
| 16.13.2 | Category as per AIS-034 |  |
| 16.13.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.14 | Front Fog Lamp Bulb: |  |
| 16.14.1 | Make |  |
| 16.14.2 | Category as per AIS-034 |  |
| 16.14.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.15 | Rear Fog Lamp Bulb : |  |
| 16.15.1 | Make |  |
| 16.15.2 | Category as per AIS-034 |  |
| 16.15.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| 16.16 | Side Marker Lamp Bulb : |  |
| 16.16.1 | Make |  |
| 16.16.2 | Category as per AIS-034 |  |
| 16.16.3 | Identification: TAC No./BIS License No./E-Marking/ |  |
| **17.0** | **Head Lamp ( To be filled if different from the valid CMVR Compliance certificate)** |  |
| 17.1 | Make |  |
| 17.2 | Type of Lens (Glass/Plastic) |  |
| 17.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 17.4 | Number and colour of lens |  |
| **18.0** | **Tail lamp ( To be filled if different from the valid CMVR Compliance certificate)** |  |
| 18.1 | Make |  |
| 18.2 | Type of Lens (Glass/Plastic) |  |
| 18.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 18.4 | Number and colour of lens |  |
| **19.0** | **Parking lamp ( To be filled if different from the valid CMVR Compliance certificate)** |  |
| 19.1 | Front : |  |
| 19.1.1 | Make |  |
| 19.1.2 | Type of Lens (Glass/Plastic) |  |
| 19.1.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 19.1.4 | Number and colour of lens |  |
| 19.2 | Rear : |  |
| 19.2.1 | Make |  |
| 19.2.2 | Type of Lens (Glass/Plastic) |  |
| 19.2.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 19.2.4 | Number and colour of lens |  |
| **20.0** | **Stop lamp ( To be filled if different from the valid CMVR Compliance certificate)** |  |
| 20.1 | Make |  |
| 20.2 | Type of Lens (Glass/Plastic) |  |
| 20.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 20.4 | Number and colour of lens |  |
| **21.0** | **Reversing lamp ( To be filled if different from the valid CMVR Compliance certificate)** |  |
| 21.1 | Make |  |
| 21.2 | Type of Lens (Glass/Plastic) |  |
| 21.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 21.4 | Number and colour of lens |  |
| **22.0** | **Direction indicator lamp ( To be filled if different from the valid CMVR Compliance certificate)** |  |
| 22.1 | Front : |  |
| 22.1.1 | Make |  |
| 22.1.2 | Type of Lens (Glass/Plastic) |  |
| 22.1.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 22.1.4 | Number and colour of lens |  |
| 22.2 | Rear : |  |
| 22.2.1 | Make |  |
| 22.2.2 | Type of Lens (Glass/Plastic) |  |
| 22.2.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 22.2.4 | Number and colour of lens |  |
| 22.3 | Side : |  |
| 22.3.1 | Make |  |
| 22.3.2 | Type of Lens (Glass/Plastic) |  |
| 22.3.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 22.3.4 | Number and colour of lens |  |
| 22.3.5 | Type of flasher : |  |
| **23.0** | **Number Plate Lamp ( To be filled if different from the valid CMVR Compliance certificate)** |  |
| 23.1 | Make |  |
| 23.2 | Type of Lens (Glass/Plastic) |  |
| 23.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 23.4 | Number and colour of lens |  |
| **24.0** | **Warning Lamp ( To be filled if different from the valid CMVR Compliance certificate)** |  |
| 24.1 | Make |  |
| 24.2 | Type of Lens (Glass/Plastic) |  |
| 24.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 24.4 | Number and colour of lens |  |
| **25.0** | **Siren- Compliance to IS 1884 – Yes / No)** |  |
| 25.1 | Make : |  |
| 25.2 | Model : |  |
| 25.3 | ID / Part Number : |  |
| **26.0** | **Reflector ( To be filled if different from the valid CMVR Compliance certificate)** |  |
| 26.1 | Rear : |  |
| 26.2 | Make: |  |
| 26.3 | Type and Identification : |  |
| 26.4 | Number and colour : |  |
| 26.5 | Area (cm2): |  |
| 26.6 | Side : |  |
| 26.7 | Make : |  |
| 26.8 | Type and Identification : |  |
| 26.9 | Number and colour : |  |
| 26.10 | Area (cm2) : |  |
| **27.0** | **Top light ( To be filled if different from the valid CMVR Compliance certificate)** |  |
| 27.1 | Make : |  |
| 27.2 | Type and Identification : |  |
| 27.3 | Number and colour : |  |
| **28.0** | **Internal Lighting and Illumination** |  |
| 28.1 | Driver Cab lighting : |  |
| 28.1.1 | Type : |  |
| 28.1.2 | Make : |  |
| 28.1.3 | Number : |  |
| 28.1.4 | Illumination intensity ( Lux) : |  |
| 28 .2 | Patient Compartment Lighting : |  |
| 28.2.1 | Type : |  |
| 28.2.2 | Make : |  |
| 28.2.3 | Number : |  |
| 28.2.4 | Illumination intensity ( Lux) : |  |
| 28.3 | Other Area Lighting : |  |
| 28.3.1 | Type : |  |
| 28.3.2 | Make : |  |
| 28.3.3 | Number : |  |
| 28.3.4 | Illumination intensity ( Lux) : |  |
| **29.0** | **Electrical Circuit :** |  |
| 29.1 | Circuit Diagram (attach details): |  |
| 29.2 | Number of battery(ies) provided other than the vehicle battery : |  |
| 29.3 | Details of Alternator : |  |
| **30.0** | **Electrical Cables :** |  |
| 30.1 | Make : |  |
| 30.2 | Conductor Cross section : |  |
| 30.3 | Insulation Class : |  |
| **31.0** | **Fuse :** |  |
| 31.1 | Type: |  |
| 31.2 | Make : |  |
| **32.0** | **Master switch for electrical :** |  |
| 32.1 | Type: |  |
| 32.2 | Make : |  |
| **33.0** | **Flammability Test as per IS 15061: 2002 (as applicable ) :** |  |
| **34.0** | Instrument Panel (Dash Board) |  |
| **35.0** | Make |  |
| 35.1 | Identification No. / Part No. |  |
| 35.2 | Drawing showing the mounting details, overall size and all control switches with dimensions |  |
| 35.3 | Additional details for interior fitting tests to be given (if test is already conducted, this information need not be submitted). |  |
| 35.4 | Instrument Panel Variants with photographs (With / without Airbag, Music system, AC) |  |
| 35.5 | Material used for instrument Panel |  |
| 35.6 | Drawings |  |
| 35.7 | Instrument Panel mounting (With hardware details) |  |
| 35.8 | ‘H’ point co-ordinates for each seating position |  |
| 35.9 | Cross sectional drawings for each projection more than 3.2 |  |
| 35.10 | Cross sectional Drawing of Gear shift lever |  |
| 35.11 | Drawing of Grab handle with cross section |  |
| 35.12 | Drawing of Sun visor with details of metal wire used |  |
| 35.13 | Drawing of lamp assembly mounted at roof |  |
| 36.0 | Air Conditioning and Heating Performance Tests(Clause 4.5.4) Compliance Established  –Yes / No |  |
| 37.0 | Acceleration Test (Clause 4.2.1 and IS:11851-2002) Compliance Established – Yes / No |  |
| 38.0 | Water Proofing Test (IS:11865-1995) – Compliance Established –Yes / No |  |
| 39.0 | Dust Ingress Test (IS:11739-1997) Compliance Established –Yes / No |  |
| 40.0 | **Reflective tape (AIS-090)** |  |
| 40.1 | Make |  |
| 40.2 | Width of tape(s) in mm |  |
| 40.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 40.4 | Dimensional Drawing indicating installation details of reflective Tapes at front, Rear & side of the vehicle / load body / container / Tanker etc., as per AIS-090 |  |

**Table 30**

**TECHNICAL INFORMATION TO BE SUBMITTED BY MOTOR CARAVANS MANUFACTURER / BODY BUILDER**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1.0** | **Details of Motor Caravan manufacturer** | | |  |
| 1.1 | Name & Address : | | |  |
| 1.2 | Telephone No : | | |  |
| 1.3 | Fax. No. : | | |  |
| 1.4 | E mail address : | | |  |
| 1.5 | Contact person : | | |  |
| 1.6 | **Name of model :** | | |  |
| 1.7 | **Name of variants, if any:** | | |  |
| 1.8 | Type and General commercial | | |  |
|  | description (s) : | | |  |
| 1.8 | Plant/(s)of manufacture : | | |  |
| 1.8.1 | Name and address of engine manufacturing plant In case of imported vehicles, above details shall be supplied for importer also. | | |  |
| 1.9 | Importer’s Name and address | | |
| 1.9.1 | Telephone No. | | |
| 1.9.2 | Fax. No. | | |
| 1.9.3 | E mail address | | |
| 1.9.4 | Contact person | | |
| 1.10 | Details of the base CMVR  Compliance Certificate issued for the Chassis (Certificate Number and date)  (Applicable for body builders) | | |  |
| 1.11 | Vehicle type: | | |  |
| 1.12 | Type of vehicle (Rigid / others) | | |
| 1.13 | Drive (4x2 or 4x4 or 6x2 or 6x4 or others) | | |
| 1.14 | Vehicle Performance: | | |  |
| 1.14.1 | Max. recommended gradeability (Stand-start) – in degrees | | |
| 1.14.2 | Max. design speed (km/h) | | |
| **2 .0** | **Vehicle Chassis Characteristics** | | |  |
| 2.1 | Chassis types approved for Body installation | | |  |
| 2.2 | Type of Control (normal control/Full forward control etc.): | | |  |
| 2.3 | Number of Axles and wheels : | | |  |
| 2.4 | Chassis (overall drawing) : | | |  |
| 2.5 | **Frame Type :** | | |  |
| 2.6 | Cross sectional view : | | |  |
| 2.7 | Position and arrangement of engine: | | |  |
| 2.8 | **Dimension (in mm) (Specify drawing reference) :** | | |  |
| 2.8.1 | Length (mm) : | | |  |
| 2.8.2 | Width (mm) : | | |  |
| 2.8.3 | Height (Unladen) (mm) : | | |  |
| 2.8.4 | Wheel base (mm) : | | |  |
| 2.8.5 | Wheel track (mm) : | | |  |
|  | Front : | | |  |
|  | Rear : | | |  |
| 2.8.6 | Body overhang (mm) : | | |  |
|  | Front end : | | |  |
|  | Rear end : | | |  |
| 2.9 | Category of vehicle as per AIS-053: | | |  |
| 2.9.1 | Base vehicle | | |  |
| 2.9.2 | Completed vehicle | | |  |
| **3.0** | **Body :** | | |  |
| 3.1 | **Type of Body :** | | |  |
| 3.2 | Dimension drawing and photograph of the vehicle with representative body : | | |  |
| 3.3 | Passenger capacity : | | |  |
| 3.3.1 | Maximum (Including driver) : | | |  |
| 3.3.2 | Number of designated seats | | |  |
| 3.3.3 | Number of non designated seats | | |  |
| 3.3.4 | Seat layout | | |  |
| **4.0** | **Clearance** | | |  |
| 4.1 | Minimum Ground clearance : | | |  |
| 4.2 | Approach angle : | | |  |
| 4.3 | Departure Angle : | | |  |
| 4.4 | Ramp-over Angle : | | |  |
| **5.0** | **Weights** | | |  |
| 5.1 | Vehicle kerb weight (kg) : | | |  |
| 5.1.1 | Front axle : | | |  |
| 5.1.2 | Rear axle : | | |  |
| 5.1.3 | Total : | | |  |
| 5.2 | Gross vehicle weight (kg) : | | |  |
| 5.3 | Maximum permissible axle weights (kg) | | |  |
| 5.3.1 | Front axle: | | |  |
| 5.3.1 | Rear axle: | | |  |
| 5.4 | Reference mass (kg) : | | |  |
| **6.0** | **Tyres** | | |  |
| 6.1 | No. and arrangement of wheels : | | |  |
| 6.1.1 | Front : | | |  |
| 6.1.2 | Rear : | | |  |
| 6.1.3 | Other : | | |  |
| 6.2 | Tyre type (Radial/cross ply) (with Tube / Tube less), size designation including ply rating, speed rating, Load rating or Load index.Use symbols as per IS 15633 / IS 15636 as may be applicable. | | |  |
| 6.2.1 | Front wheel | | |
| 6.2.2 | Rear wheel | | |
| 6.2.3 | Spare wheel | | |
| 6.3 | Dynamic rolling radius, (mm) | | |
| 6.4 | **Inflation pressure – Unladen :** | | |  |
| 6.4.1 | Front : (kg/cm2) or (kPa) | | |  |
| 6.4.2 | Rear : (kg/cm2) or (kPa) | | |  |
| 6.4.3 | Other: (kg/cm2) or (kPa) | | |  |
| 6.5 | **Inflation pressure –Laden :** | | |  |
| 6.5.1 | Front : (kg/cm2) or (kPa) | | |  |
| 6.5.2 | Rear : (kg/cm2) or (kPa) | | |  |
| 6.5.3 | Other : (kg/cm2) or kPa | | |  |
| **7.0** | **Body Panels** | | |  |
| 7.1 | **Outer Panels :** | | |  |
| 7.1.1 | Material : | | |  |
| 7.1.2 | Thickness : | | |  |
| 7.2 | Inner Panels : | | |  |
| 7.2.1 | Material : | | |  |
| 7.2.2 | Thickness : | | |  |
| 7.3 | Roof Panels : | | |  |
| 7.3.1 | Material : | | |  |
| 7.3.2 | Thickness : | | |  |
| 7.4 | Floor Panels : | | |  |
| 7.4.1 | Material : | | |  |
| 7.4.2 | Thickness : | | |  |
| 7.4.3 | Type of anti-slip coating : | | |  |
| **8.0** | **Service Doors** | | |  |
| 8.1 | No. of Service Doors : | | |  |
| 8.2 | Position of Service Doors : | | |  |
| 8.3 | **Dimension of Service Door :** | | |  |
|  | **- Front** | | Height :  Width : |  |
|  | -Rear | | Height :  Width : |  |
|  | -Middle | | Height :  Width : |  |
| **9.0** | **Emergency Exit** | | |  |
| 9.1 | No. of Emergency Doors : | | |  |
| 9.2 | Position of Emergency Doors : | | |  |
| 9. 3 | **Dimension of Emergency Door :** | | |  |
|  | - Ist | Height :  Width : | |  |
|  | - IInd | Height :  Width : | |  |
| **10.0** | **Window** | | |  |
| 10.1 | **Window (other than Emergency exit)** | | |  |

|  |  |  |
| --- | --- | --- |
| 10.1.1 | Dimension of Window aperture along with the detailed drawing showing the dimensions |  |
| 10.1.2 | Height of upper edge of window aperture from gangway floor (mm) |  |
| 10.1.3 | Type of window |  |
| 10.2 | **Emergency Windows** |  |
| 10.2.1 | No. of Emergency Windows : |  |
| 10.2.2 | Position of Emergency Windows : |  |
| 10.2.3 | Area (HxW in sq. m) : |  |
| **11.0** | **Steps** |  |
| 11.1 | Height of Ist Step : |  |
| 11.2 | Height of Other Steps : |  |
| 11.3 | Depth of steps : |  |
| **12.0** | **Floor :** |  |
| 12.1 | Floor Height from the ground (unladen): |  |
| 12.2 | Slope of floor : |  |
| **13.0** | **Seats** |  |
| 13.1 | Driver/Co-driver or Front Passenger |  |
|  | Seat |  |
| 13.1.1 | Make |  |
| 13.1.2 | Type |  |
| 13.1.3 | Identification Number |  |
| 13.1.4 | Seat Drawing no. |  |
| 13.2 | **Passenger Seats :** |  |
| 13.2.1 | Make |  |
| 13.2.2 | Type |  |
| 13.2.3 | Identification Number (S) |  |
| 13.2.4 | Seat Drawing no. |  |
| 13.2.5 | **Seat Layout(S) :** |  |
|  | Enclose the Layout Drawings |  |
| 13.2.6 | Seat width : |  |
| 13.2.7 | Width of available space for one seating position : |  |
| 13.2.8 | Height of backrest : |  |
| 13.2.9 | Width of Armrest : |  |
| 13.2.10 | Depth of Seat cushion (base) : |  |
| 13.2.11 | Seat Pitch : |  |
| 13.2.12 | Seat base height : |  |
| 13.2.13 | Torso angle : |  |
| 13.2.14 | Seat base thickness : |  |
| 13.2.15 | Seat back thickness : |  |
| 13.2.16 | Clearance space for seated passengers facing partition : |  |
| 13.2.17 | Free Height over seating position : |  |
| 13.2.18 | Seat anchorage layout drawing (with anchorage cross section and hardware used details) |  |
| **14.0** | **Door locks and hinges** |  |
| 14.1 | **Door lock :** |  |
| 14.1.1 | Make: |  |
| 14.1.2 | Identification /Part No: |  |
| **15.2** | **Door hinge :** |  |
| 15.2.1 | Make: |  |
| 15.2.2 | Identification /Part No: |  |
| **16.0** | **Safety glass** |  |
| 16.1 | Front wind shield (laminated) : |  |
| 16.1.1 | Make |  |
| 16.1.2 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 16.1.3 | Type (flat/curved, clear/tinted) : |  |
| 16.1.4 | Thickness (mm) : |  |
| 16.1.5 | No. of pieces : |  |
| 16.1.6 | Radius of curvature (If curved) : |  |
| 16.2 | **Side Windows:** |  |
| 16.2.1 | Make |  |
| 16.2.2 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 16.2.3 | Type (flat/curved, clear/tinted, toughened) : |  |
| 16.2.4 | Thickness (mm) : |  |
| 16.2.5 | Radius of curvature (If curved) : |  |
| 16.3 | **Rear Window:** |  |
| 16.3.1 | Make |  |
| 16.3.2 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 16.3.3 | Type (flat/curved, clear/tinted, toughened) : |  |
| 16.3.4 | Thickness (mm) : |  |
| 16.3.5 | Radius of curvature (If curved) : |  |
| **17.0** | **Rear view mirror** |  |
| 17.1 | Left : |  |
| 17.1.1 | Make : |  |
| 17.1.2 | Type : |  |
| 17.1.3 | Area and Radius of Curvature of the mirror glass reflecting surface |  |
| 17.1.4 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 17.2 | Right : |  |
| 17.2.1 | Make |  |
| 17.2.2 | Type : |  |
| 17.2.3 | Area and Radius of Curvature of the mirror glass reflecting surface |  |
| 17.2.4 | Identification Mark: |  |
| 17.3 | Inside : |  |
| 17.3.1 | Make : |  |
| 17.3.2 | Type : |  |
| 17.3.3 | Area and Radius of Curvature of the mirror glass reflecting surface |  |
| 17.3.4 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 17.4 | Sketch showing mounting arrangement of mirrors |  |
| **18.0** | **Wiping system** |  |
| 18.1 | Type : |  |
| 18.2 | No. of wipers : |  |
| 18.3 | Wiper motor : |  |
| 18.3.1 | Name of Manufacturer : |  |
| 18.3.2 | Type and identification : |  |
| 18.3.3 | Rated voltage : |  |
| 18.3.4 | Frequency of wiping : |  |
| 18.3.4.1 | Number of sweep frequencies |  |
| 18.3.4.1.1 | Highest sweep frequency (cycle/min) |  |
| 18.3.4.1.2 | Lowest sweep frequency (cycle/min). |  |
| 18.4 | **Wiper arm :** |  |
| 18.4.1 | Length : |  |
| 18.4.2 | Name of Manufacturer : |  |
| 18.4.3 | Identification Mark: |  |
| 18.5 | **Wiper blade :** |  |
| 18.5.1 | Length : |  |
| 18.5.2 | Name of Manufacturer : |  |
| 18.5.3 | Identification Mark: |  |
| 18.6 | **Rubber material :** |  |
| 18.6.1 | Type of fixing (As per IS:7827) : |  |
| 18.6.2 | Drawing indicating the seat back  angle, seat travel, H point, Rake  angle ,F dimension And steering  wheel position as per AIS-011 |  |
|  |
|  |
|  |
| **19.0** | **Wind Screen Washer** |  |
| 19.1 | Name of Manufacture: : |  |
| 19.2 | Type : |  |
| 19.3 | Number of nozzles : |  |
| 19.4 | Spray Area : |  |
| 19.5 | Identification Number: |  |
| **20.0** | **Equipment for occupant's safety** |  |
| 20.1 | Driver Seat belt : |  |
| 20.1.1 | Name of Manufacture: : |  |
| 20.1.2 | Type : |  |
| 20.1.3 | Number : |  |
| 20.1.4 | Identification Number: |  |
| 20.2 | **Information on safety belt / restraint system :** |  |
| 20.2.1 | **Safety belt** |  |
| 20.2.1.1 | Make of seat belt |  |
| 20.2.1.2 | Type and configuration |  |
| 20.2.1.3 | Identification No. / Part No. |  |
| 20.2.2 | **Restraint system** |  |
| 20.2.2.1 | Make |  |
| 20.2.2.2 | Type and configuration |  |
| 20.2.2.3 | Identification No. / Part No. |  |
| 20.2.2.4 | Drawings of the relevant parts of the vehicle structure and any seat anchorage reinforcements |  |
| 20.2.2.5 | Drawings of the seat, showing its structure, adjustment system and fixing components, with an indication of the materials used. |  |
| 20.2.2.6 | Drawing or photograph of the restraint system as installed. |  |
| 20.2.2.7 | Drawing showing the installation of belts on the vehicle. |  |
| 20.2.3 | **Safety belts and / or other restraint systems :** |  |
| 20.2.3.1 | Number and position of safety belts and restraint systems and seats on which they can be used   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Row of Seat** | **Location\*** | **Type of seat belt** | **Variant**  **(if applicable)** | **Belt adjustment device for height**  **(indicate Yes/No/optional)** | | First row of seats | L |  |  |  | | C |  |  |  | | R |  |  |  | | Second row of seats | L |  |  |  | | C |  |  |  | | R |  |  |  | | The table may be extended as necessary for vehicles with more than two rows of seats there are more than three seats across the width of the vehicle.  \*(L = left-hand side, R= right-hand side, C = centre) | | | | | |  | | | | | | |
| 20.3 | **Head restraint :** |  |
| 20.3.1 | Name of Manufacturer : |  |
| 20.3.2 | Type : |  |
| 20.4 | **Passenger Seat :** |  |
| 20.4.1 | Name of Manufacturer : |  |
| 20.4.2 | Type : |  |
| 20.4.3 | Frame structure Material : |  |
| 20.4.4 | Section size: |  |
| **21.0** | **Fire Extinguisher** |  |
| 21.1 | Number : |  |
| 21.2 | Type : |  |
| 21.3 | Capacity : |  |
| 21.4 | Name of Manufacture: : |  |
| **22.0** | **First Aid Equipment** |  |
| 22.1 | Number : |  |
| 22.2 | Contents : |  |
| **23.0** | **Automotive bulbs :** |  |
| 23.1 | **Head lamp bulb (main and dip)** |  |
| 23.1.1 | Make |  |
| 23.1.2 | Category as per AIS-034 |  |
| 23.1.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.2 | **Parking Lamp bulb – Front** |  |
| 23.2.1 | Make |  |
| 23.2.2 | Category as per AIS-034 |  |
| 23.2.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.3 | **Parking Lamp bulb - Rear** |  |
| 23.3.1 | Make |  |
| 23.3.2 | Category as per AIS-034 |  |
| 23.3.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.4 | **Direction indicator lamp bulb -** |  |
|  | **front** |  |
| 23.4.1 | Make |  |
| 23.4.2 | Category as per AIS-034 |  |
| 23.4.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.5 | **Direction indicator lamp bulb – rear** |  |
| 23.5.1 | Make |  |
| 23.5.2 | Category as per AIS-034 |  |
| 23.5.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.6 | **Direction indicator lamp bulb – side** |  |
| 23.6.1 | Make |  |
| 23.6.2 | Category as per AIS-034 |  |
| 23.6.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.7 | **Front Position Lamp bulb** |  |
| 23.7.1 | Make |  |
| 23.7.2 | Category as per AIS-034 |  |
| 23.7.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.8 | **Rear Position Lamp ( tail lamp )Bulb** |  |
| 23.8.1 | Make |  |
| 23.8.2 | Category as per AIS-034 |  |
| 23.8.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.9 | **Stop lamp bulb** |  |
| 23.9.1 | Make |  |
| 23.9.2 | Category as per AIS-034 |  |
| 23.9.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.10 | **Number plate lamp bulb** |  |
| 23.10.1 | Make |  |
| 23.10.2 | Category as per AIS-034 |  |
| 23.10.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.11 | **End out Marker bulb** |  |
| 23.11.1 | Make |  |
| 23.11.2 | Category as per AIS-034 |  |
| 23.11.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.12 | **Reversing lamp bulb** |  |
| 23.12.1 | Make |  |
| 23.12.2 | Category as per AIS-034 |  |
| 23. | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.13 | **Stop Lamp Bulb (S3)** |  |
| 23.13.1 | Make |  |
| 23.13.2 | Category as per AIS-034 |  |
| 23.13.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.14 | **Front Fog Lamp Bulb** |  |
| 23.14.1 | Make |  |
| 23.14.2 | Category as per AIS-034 |  |
| 23.14.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.15 | **Rear Fog Lamp Bulb** |  |
| 23.15.1 | Make |  |
| 23.15.2 | Category as per AIS-034 |  |
| 23.15.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.16 | **Side Marker Lamp Bulb** |  |
| 23.16.1 | Make |  |
| 23.16.2 | Category as per AIS-034 |  |
| 23.16.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 23.17 | **Cornering lamp bulb (if provided)** |  |
| 23.17.1 | Make |  |
| 23.17.2 | Category as per AIS-034 |  |
| 23.17.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 23.18 | **Day time Running lamp bulb (if provided)** |  |
| 23.18.1 | Make |  |
| 23.18.2 | Category as per AIS-034 |  |
| 23.18.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 23.19 | **Bending lamp bulb (if provided)** |  |
| 23.19.1 | Make |  |
| 23.19.2 | Category as per AIS-034 |  |
| 23.19.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| **24.0** | **Head Lamp** |  |
| 24.1 | Make |  |
| 24.2 | Type of Lens (Glass/Plastic) |  |
| 24.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 24.4 | Number and colour of lens |  |
| **25.0** | **Tail lamp** |  |
| 25.1 | Make |  |
| 25.2 | Type of Lens (Glass/Plastic) |  |
| 25.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 25.4 | Number and colour of lens |  |
| **26.0** | **Parking lamp** |  |
| 26.1 | **Front :** |  |
| 26.1.1 | Make |  |
| 26.1.2 | Type of Lens (Glass/Plastic) |  |
| 26.1.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 26.1.4 | Number and colour of lens |  |
| 26.2 | **Rear :** |  |
| 26.2.1 | Make |  |
| 26.2.2 | Type of Lens (Glass/Plastic) |  |
| 26.2.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 26.2.4 | Number and colour of lens |  |
| **27.0** | **Stop lamp** |  |
| 27.1 | Make |  |
| 27.2 | Type of Lens (Glass/Plastic) |  |
| 27.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 27.4 | Number and colour of lens |  |
| **28.0** | **Reversing lamp** |  |
| 28.1 | Make |  |
| 28.2 | Type of Lens (Glass/Plastic) |  |
| 28.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 28.4 | Number and colour of lens |  |
| **29.0** | **Direction indicator lamp** |  |
| 29.1 | **Front :** |  |
| 29.1.1 | Make |  |
| 29.1.2 | Type of Lens (Glass/Plastic) |  |
| 29.1.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 29.1.4 | Number and colour of lens |  |
| 29.2 | **Rear :** |  |
| 29.2.1 | Make |  |
| 29.2.2 | Type of Lens (Glass/Plastic) |  |
| 29.2.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 29.2.4 | Number and colour of lens |  |
| 29.3 | **Side :** |  |
| 29.3.1 | Make |  |
| 29.3.2 | Type of Lens (Glass/Plastic) |  |
| 29.3.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 29.3.4 | Number and colour of lens |  |
| 29.4 | **Type of flasher :** |  |
| **30.0** | **Number Plate Lamp** |  |
| 30.1 | Make |  |
| 30.2 | Type of Lens (Glass/Plastic) |  |
| 30.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 30.4 | Number and colour of lens |  |
| **31.0** | **Emergency signaling equipment** |  |
| 31.1 | **Front :** |  |
| 31.1.1 | Make |  |
| 31.1.2 | Type of Lens (Glass/Plastic) |  |
| 31.1.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 31.1.4 | Number and colour of lens |  |
| 31.2 | **Rear :** |  |
| 31.2.1 | Make |  |
| 31.2.2 | Type of Lens (Glass/Plastic) |  |
| 31.2.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 31.2.4 | Number and colour of lens |  |
| 31.3 | **Side :** |  |
| 31.3.1 | Make |  |
| 31.3.2 | Type of Lens (Glass/Plastic) |  |
| 31.3.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 31.3.4 | Number and colour of lens |  |
| 31.4 | **Head Lamp cleaning device provided (Yes / No) ( For Headlamps having intensity more than 2000 lumen)** |  |
| 31.4.1 | Cleaner Type as per AIS-083 |  |
| 31.4.1.1 | Make |  |
| 31.4.1.2 | A list, specifying the parts which constitute the headlamp cleaner and drawings thereof, (e.g. pumps, nozzles, valves, motors and wipers); |  |
| 31.4.1.3 | A brief technical description indicating the length of the cleaning period, the consumption of cleaning fluid during the cleaning period and the minimum capacity of the container provided; |  |
| 31.4.1.4 | Capacity class of the fluid container: 25/50 |  |
| 31.4.1.5 | Drawings showing the installation to a vehicle |  |
| 31.4.1.6 | Drawings showing the relative attachment between the headlamp(s) and the wiper(s), nozzle(s), or corresponding parts, |  |
| 31.4.1.7 | Drawings showing the cleaning principle employed |  |
| 31.4.1.8 | where appropriate, the part of the illuminating surface of the headlamp relevant to the cleaner shall also be shown |  |
| 31.5 | **Bend Lighting , provided (Yes / No)** |  |
| 31.6 | Cornering Lamp (if provided) |  |
| 31.6.1 | Make |  |
| 31.6.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 31.6.3 | Type of lens (Glass / Plastic) |  |
| 31.6.4 | Number and Colour of Lens |  |
| 31.7 | **Day Time Running Lamp (if provided)** |  |
| 31.7.1 | Make |  |
| 31.7.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 31.7.3 | Type of lens (Glass / Plastic) |  |
| 31.7.4 | Number and Colour of Lens |  |
| 31.8 | **Front Fog Lamp** |  |
| 31.8.1 | Make |  |
| 31.8.2 | Type of lens (Glass / Plastic) |  |
| 31.8.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 31.8.4 | Number and Colour of Lens |  |
| 31.9 | **Rear Fog Lamp** |  |
| 31.9.1 | Make |  |
| 31.9.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 31.9.3 | Number and Colour of Lens |  |
| 31.10 | **Side Marker lamps** |  |
| 31.10.1 | Make |  |
| 31.10.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 31.10.3 | Number and Colour of Lens |  |
| 31.11 | **Front Position Lamp** |  |
| 31.11.1 | Make |  |
| 31.11.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 31.11.3 | Number and Colour of Lens |  |
| 31.12 | **Rear Position Lamp** |  |
| 31.12.1 | Make |  |

|  |  |  |
| --- | --- | --- |
| 31.12.2 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 31.12.3 | Number and Colour of Lens |  |
| **32.0** | **Reflector** |  |
| 32.1 | **Rear :** |  |
| 32.1.1 | Make |  |
| 32.1.2 | Type |  |
| 32.1.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 32.1.4 | Number and colour of Lens |  |
| 32.1.5 | Reflective Surface Area |  |
| 32.1.6 | Shape (Square/Rectangular/Circular/Elliptical/Other) |  |
| 32.2 | **Side :** |  |
| 32.2.1 | Make |  |
| 32.2.2 | Type |  |
| 32.2.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 32.2.4 | Number and colour of Lens |  |
| 32.2.5 | Reflective Surface Area |  |
| 32.2.6 | Shape (Square/Rectangular/Circular/Elliptical/Other) |  |
| **33.0** | End Outline Marker Bulb |  |
| 33.1 | Make |  |
| 33.2 | Type of Lens (Glass/Plastic) |  |
| 33.3 | Identification: TAC No./BIS Licence No./E-Marking |  |
| 33.4 | Number and colour of lens |  |
| **34.0** | **Internal Lighting & Illumination** |  |
| 34.1 | **Driver Cab lighting :** |  |
| 34.1.1 | Type : |  |
| 34.1.2 | Name of Manufacturer : |  |
| 34.1.3 | Number : |  |
| 34.1.4 | illumination intensity : |  |
| 34 .2 | **Passenger Compartment Lighting** |  |
| 34.2.1 | Type : |  |
| 34.2.2 | Name of Manufacturer : |  |
| 34.2.3 | Number : |  |
| 34.2.4 | Illumination intensity : |  |
| 34.3 | **Other Area Lighting** |  |
| 34.3.1 | Type : |  |
| 34.3.2 | Name of Manufacturer : |  |
| 34.3.3 | Number : |  |
| 34.3.4 | Illumination intensity : |  |
| **35.0** | **Electrical Circuit** |  |
| 35.1 | Circuit Diagram (attach details): |  |
| **36.0** | **Electrical Cables** |  |
| 36.1 | Name of Manufacturer : |  |
| 36.2 | Conductor Cross section : |  |
| 36.3 | Insulation Class : |  |
| **37.0** | **Fuse** |  |
| 37.1 | Type & Make : |  |
| 37.2 | Name of Manufacturer : |  |
| **38.0** | **Master switch for electrical :** |  |
| 38.1 | Type & Make : |  |
| 38.2 | Name of Manufacturer : |  |
| **39.0** | **Seat** |  |
| 39.1 | **Seat and its accessories** |  |
| 39.1.1 | Name of Manufacturer : |  |
| 39.1.2 | Material Grade |  |
| 39.1.3 | Material Type |  |
| 39.1.4 | Component Part No. and Batch No. |  |
| 39.1.5 | Identification Code |  |
| 39.1.6 | Drawing No. |  |
| 39.2 | **Interior lining of the roof** |  |
| 39.2.1 | Name of Manufacturer : |  |
| 39.2.2 | Material Grade |  |
| 39.2.3 | Material Type |  |
| 39.2.4 | Component Part No. and Batch No. |  |
| 39.2.5 | Identification Code |  |
| 39.2.6 | Drawing No. |  |
| 39.3 | **Interior lining of side walls** |  |
| 39.3.1 | Name of Manufacturer : |  |
| 39.3.2 | Material Grade |  |
| 39.3.3 | Material Type |  |
| 39.3.4 | Component Part No. and Batch No. |  |
| 39.3.5 | Identification Code |  |
| 39.3.6 | Drawing No. |  |
| 39.4 | **Interior lining of rear walls** |  |
| 39.4.1 | Name of Manufacturer : |  |
| 39.4.2 | Material Grade |  |
| 39.4.3 | Material Type |  |
| 39.4.4 | Component Part No. and Batch No. |  |
| 39.4.5 | Identification Code |  |
| 39.4.6 | Drawing No. |  |
| 39.5 | **Separation walls** |  |
| 39.5.1 | Name of Manufacturer : |  |
| 39.5.2 | Material Grade |  |
| 39.5.3 | Material Type |  |
| 39.5.4 | Component Part No. and Batch No. |  |
| 39.5.5 | Identification Code |  |
| 39.5.6 | Drawing No. |  |
| 39.6 | **Floor** |  |
| 39.6.1 | Name of Manufacturer : |  |
| 39.6.2 | Material Grade |  |
| 39.6.3 | Material Type |  |
| 39.6.4 | Component Part No. and Batch No. |  |
| 39.6.5 | Identification Code |  |
| 39.6.6 | Drawing No. |  |
| 39.7 | **Luggage racks** |  |
| 39.7.1 | Name of Manufacturer : |  |
| 39.7.2 | Material Grade |  |
| 39.7.3 | Material Type |  |
| 39.7.4 | Component Part No. and Batch No. |  |
| 39.7.5 | Identification Code |  |
| 39.7.6 | Drawing No. |  |
| 39.8 | **Heating and ventilation pipe** |  |
| 39.8.1 | Name of Manufacturer : |  |
| 39.8.2 | Material Grade |  |
| 39.8.3 | Material Type |  |
| 39.8.4 | Component Part No. and Batch No. |  |
| 39.8.5 | Identification Code |  |
| 39.8.6 | Drawing No. |  |
| 39.9 | **Luminaries.** |  |
| 39.9.1 | Name of Manufacturer : |  |
| 39.9.2 | Material Grade |  |
| 39.9.3 | Material Type |  |
| 39.9.4 | Component Part No. and Batch No. |  |
| 39.9.5 | Identification Code |  |
| 39.9.6 | Drawing No. |  |
| **40.0** | **Interior Fittings as per AIS-047, as applicable** |  |
| 40.1 | Instrument Panel (Dash Board) |  |
| 40.2 | Make |  |
| 40.3 | Identification No. / Part No. |  |
| 40.4 | Material |  |
| 40.5 | Drawing showing the mounting details, over all size and all control switches with dimensions |  |
| 40.6 | Additional details for interior fitting tests to be given (if test is already conducted, this information need not be submitted). |  |
| 40.6.1 | Instrument Panel Variants with photographs (With / without Airbag, Music system, AC ) |  |
| 40.6.2 | Material used for instrument Panel |  |
| 40.6.3 | Drawings |  |
| 40.6.3.1 | Instrument Panel mounting (With hardware details) |  |
| 40.6.3.2 | ‘H’ point co-ordinates for each seating position |  |
| 40.6.3.3 | Cross sectional drawings for each projection more than 3.2 |  |
| 40.6.3.4 | Cross sectional Drawing of Gear shift lever |  |
| 40.6.3.5 | Drawing of Grab handle with cross section |  |
| 40.6.3.6 | Drawing of Sunvisor with details of metal wire used |  |
| 40.6.3.7 | Drawing of lamp assembly mounted at roof |  |
| 40.6.4 | **Name of manufacturer of the Interior fitting components** |  |
| 40.6.4.1 | Instrument Panel |  |
| 40.6.4.2 | Sun Visor |  |
| 40.6.4.3 | Roof Light |  |
| 40.6.4.4 | Grab Handle |  |
| 40.6.4.5 | Gear Lever |  |
| 40.6.4.6 | Hand Brake Lever |  |
| 40.6.4.7 | Seats (Need not be specified if done already) |  |
| 40.6.4.8 | Seat Belts (Need not be specified if done already) |  |
| 40.6.4.9 | Music System (if provided) |  |
| 40.6.4.10 | Cigarette lighter (if provided) |  |
| **41.0** | **Battery** |  |
| 41.1 | Type & number |  |
| 41.2 | Voltage & Capacity (Ah) |  |
| **42.0** | **Any other additional information the Motor Caravan manufacturer / body builder would like to declare** |  |

**Table 30 A**

**DETAILS OF LOCATION OF MOTOR CARAVAN IDENTIFICATION NUMBER AND CODE FOR MONTH AND YEAR OF MANUFACTURE**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of the Motor Caravan Manufacturer & Address : | | |  | |
| Name of the basic model : | | |  | |
| Name of variants, if any : | | |  | |
| Place of embossing or etching the motor caravan identification number  (Supporting details by drawing or pictures may be provided if necessary ) | | |  | |
| Position of the code for month of production in the motor caravan identification number | | |  | |
| Position of the code for year of production in the motor caravan identification number | | |  | |
| Height of the motor caravan identification number - Min. 7 (mm) | | |  | |
| Illustrative example | | |  | |
| **Code for month and year of production** | | | | | |
| **Code for month of production:** | | | **Code for year of production:** | | |
| **Month** | | **Code** | **Year** | | **Code** |
| January | |  |  | |  |
| February | |  |  | |  |
| March | |  |  | |  |
| April | |  |  | |  |
| May | |  |  | |  |
| June | |  |  | |  |
| July | |  |  | |  |
| August | |  |  | |  |
| September | |  |  | |  |
| October | |  |  | |  |
| November | |  |  | |  |
| December | |  |  | |  |

Example:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Subject | Manufacture digit | | | Year | | Month | Serial no of vehicle | | |
| example | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Remark | Can be WMI letter if available | | | As per declaration above table | | As per declaration above table | As per manufacture production vehicle per year | | |

**Note:**

1. Wherever possible number shall be marked on a single line. The use of the letters I, O and Q and dashes, asterisks and other special signs, is not permitted.
2. The minimum height of the letters and numerals shall 7 mm for characters marked.
3. It is advised caravan manufacturer may take reference of AIS-065 while deciding motor caravan identification number.

1. Vehicles can be fuelled with both petrol and a gaseous fuel but if the petrol system is fitted for emergency purposes or starting only and the petrol tank cannot contain more than 5 litres of petrol, they will be regarded for the test as vehicles which can only run a gaseous fuel. [↑](#footnote-ref-1)
2. Determined in accordance with the requirements of AIS 102 [↑](#footnote-ref-2)