**Amendment No. 5 26th February 2018**

**To**

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

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

1. **Page 26/227, In table with title “Information Relating Solely to L7 Category Vehicles”**

|  |  |  |
| --- | --- | --- |
| 18.0 | Vehicle Location Tracking System (VTS) Details (if OE fitted) |  |
| 18.1 | Make: |  |
| 18.2 | Model Number |  |
| 18.3 | Part Number |  |
| 18.4 | Hardware Version |  |
| 18.5 | Software Version |  |
| 18.6 | Antenna External and or Internal for GPS/GSM/WLAN etc. details. |  |
| 19.0 | Emergency Button |  |
| 19.1 | No. of Emergency Buttons |  |
| 19.2 | Make |  |
| 19.3 | Part Number |  |
| 20.0 | Installation layout Drawing of VLT and Buttons(Attach drawing showing location of VLT and Emergency Buttons in vehicle) |  |
| 21.0 | Installation Instructions (if any for dealer or System integrator) |  |

1. **Page 100/227, Table 5**:

Add following rows at the end of table:

|  |  |
| --- | --- |
| **D 20.0** | **TECHNICAL SPECIFICATION – ADDITIONAL INFORMATION FOR M1 AND N1 CATEGORY OF VEHICLES**  |
| D 20.1 | Tyre dimensions |
| D 20.1.1 | Temporary-use spare wheel/tyre dimensions: |
| D 20.1.2 | Vehicle meets the technical requirements of AIS 110: Yes/No |
| D 20.2 | Brake Assist System (Fitted : Yes/No) |
| D 20.2.1 | Category of Brake Assist System A / B |
| D 20.2.1.1 | For category A systems, define the force threshold at which the ratio between pedal force and brake pressure increases |
| D 20.2.1.2 | For category B systems, define the brake pedal speed which must be achieved in order to activate the Brake Assist System (e.g. pedal stroke speed (mm/s) during a given time interval) |
| D 20.3 | Adequate documentation according to annex G (Complex electronics vehicle control systems) provided in respect of the following system(s): ........... Yes / No / Not applicable |
| D 20.3.1 | List of complex functions covered: |
| D 20.3.2 | Manufacturer’s documents contain information showing the interaction of complex braking functions with other vehicle systems and/or how the system directly controls output variables. |
| D 20.3.3 | Manufacturer’s documents explain the functionality and safety concept of the system and describe how the operational status may be checked. |
| D 20.3.4 | A list of input and output variables, including their working range, is provided. |
| D 20.3.5 | Documentation includes an inventory of components, outlines the function of each unit, its interconnection/interaction with other systems and defines signal flow priorities. |
| D 20.3.6 | Each unit of the system is clearly identified in a manner which defines clearly the hardware and software version as appropriate. |
| D 20.3.7 | Safety concept statement verifies that the system will not prejudice the safe operation of the braking system under non-fault conditions. |
| D 20.3.8 | System architecture, design methods and tools identified. |
| D 20.3.9 | Information regarding design provisions in case of failure is provided including any error messages, warning signals, partial performance conditions, back-up modes and/or removal of high-level functions. |
| D 20.3.10 | Additional material and analysis (FMEA, FTA) of fault conditions made available for inspection and maintained by the manufacturer. |
| D 20.3.11 | Document reference and date of inspection: |
| D 20.3.12 | Vehicle complies with all other performance requirements of IS 15986 : 2015 and meets manufacturer’s specifications under non-fault conditions. |
| D 20.3.13 | Under fault conditions, vehicle response corresponds to that described in the manufacturer’s documents / failure analysis and safety concept is verified. |
|  | (see annex 4 of this report for test data) |
| D 20.4 | Electronic Stability Control system as per AIS:133 (Fitted : Yes/No) |
| D 20.4.1 | If yes, details of ESC |
| D 20.4.2 | ESC System Technical Documentation. To ensure a vehicle is equipped with an ESC system that meets the definition of "ESC System" in paragraph 2.0, the vehicle manufacturer shall make available to the test agency, upon request, the documentation specified below. |
| D 20.4.3 | System diagram identifying all ESC system hardware. |
| D 20.4.4 | A brief written explanation sufficient to describe the ESC system basic operational characteristics. |
| D 20.4.4.1 | Logic diagram |
| D 20.4.4.2 | Understeer information. |
| D 20.4.4.3 | Static Stability Factor |
| D 20.4.4.4 | Make and Country of manufacturer(if imported) |
| D 20.4.5 | Software Id / version |
| D 20.4.6 | Hardware Id |
| D 20.4.7 | Brief description of failure warning tell–tale |
| D 20.4.8 | Control function (Directional / Roll / Directional and Roll) |
| D 20.4.9 | Steering Angle Sensor |
| D 20.4.9.1 | Make and Country of manufacturer(if imported) |
| D 20.4.9.2 | Identification No. / Part No. |
| D 20.4.9.3 | Brief description and features |
| D 20.4.10 | Yaw Rate Sensor |
| D 20.4.10.1 | Make and Country of manufacturer(if imported) |
| D 20.4.10.2 | Identification No. / Part No. |
| D 20.4.10.3 | Brief description and features |
| D 20.5 | Additional Component details, if any |
| D 20.5.1 | Component 1 |
| D 20.5.1.1 | Make and Country of manufacturer(if imported) |
| D 20.5.1.2 | Identification No. / Part No. |
| D 20.5.2 | Component 2 |
| D 20.5.2.1 | Make and Country of manufacturer(if imported) |
| D 20.5.2.2 | Identification No. / Part No. |
| D 20.5.3 | Component 3 |
| D 20.5.3.1 | Make and Country of manufacturer(if imported) |
| D 20.5.3.2 | Identification No. / Part No. |
| **D 21.0** | **TECHNICAL SPECIFICATION – ADDITIONAL INFORMATION FOR OTHER THAN M1 CATEGORY OF VEHICLES** |
| D 21.1 | Motor Vehicle stability function information document |
| D 21.1.1 | System |
| D 21.1.2 | System variants  |
| D 21.1.3 | System options |
| D 21.1.3.1 | Control function (directional/roll-over/both) including an explanation of the basic function and/or philosophy of the control |
| D 21.1.4 | System configurations (where appropriate) |
| D 21.1.5 | System identification including software level identifier |
| D 21.2 | Applications: |
| D 21.2.1 | List of motor vehicles by description and configuration that are covered by the information document |
| D 21.2.2 | Schematic diagrams of the respective configurations installed on the motor vehicles defined in item 2.1. above with consideration given to the following: |
| D 21.2.2.1 | Lift axles |
| D 21.2.2.2 | Steering axles |
| D 21.2.2.3 | Anti-lock braking configurations |
| D 21.2.3 | Scope of application with respect to suspension: |
| D 21.2.3.1 | Air |
| D 21.2.3.2 | Mechanical |
| D 21.2.3.3 | Rubber |
| D 21.2.3.4 | Mixed |
| D 21.2.3.4 | Anti-roll bar |
| D 21.2.4 | Additional information (if applicable) to the application of the directional control and roll-over control functions, for example: |
| D 21.2.4.1 | Wheelbase, track, centre of gravity height |
| D 21.2.4.2 | Wheel type (single or twin) and tyre type (e.g. structure, category of use, size) |
| D 21.2.4.3 | Gearbox type (e.g. manual, automated manual, semi-automatic, automatic) |
| D 21.2.4.4 | Drive train options (e.g. retarder) |
| D 21.2.4.5 | Differential type/differential lock(s) (e.g. standard or self-locking, automatic or driver selected) |
| D 21.2.4.1 | Management of the engine or any other source(s) of motive power e.g.Torque Management, control of fuel supply etc. |
| D 21.3 | Component description: |
| D 21.3.1 | Sensor(s) External to the Controller |
| D 21.3.1.1 | Function |
| D 21.3.1.2 | Limitations on the location of the sensors |
| D 21.3.1.3 | Identification (e.g. part numbers) |
| D 21.3.2 | Controller(s) |
| D 21.3.2.1 | General description and function |
| D 21.3.2.2 | Functionality of internal sensors (if applicable) |
| D 21.3.2.3 | Hardware identification (e.g. part numbers) |
| D 21.3.3.4 | Software identification  |
| D 21.3.3.5 | Limitations on the location of the controller(s) |
| D 21.3.3.6 | Additional features |
| D 21.3.3 | Modulators |
| D 21.3.3.1 | General description and function |
| D 21.3.3.2 | Hardware identification (e.g. part numbers) |
| D 21.3.3.3 | Software identification (if applicable) |
| D 21.3.3.4 | Limitations |
| D 21.3.4 | Electrical Equipment |
| D 21.3.4.1 | Circuit diagrams |
| D 21.3.4.2 | Powering methods |
| D 21.3.5 | Pneumatic circuits |
| D 21.3.6 | Safety aspects of the electronic system in accordance with Annex S of IS 11852 |
| D 21.3.6.1 | List of complex functions covered: |
| D 21.3.6.2 | Manufacturer’s documents contain information showing the interaction of complex braking functions with other vehicle systems and/or how the system directly controls output variables. |
| D 21.3.6.3 | Manufacturer’s documents explain the functionality and safety concept of the system and describe how the operational status may be checked. |
| D 21.3.6.4 | A list of input and output variables, including their working range, is provided. |
| D 21.3.6.5 | Documentation includes an inventory of components, outlines the function of each unit, its interconnection/interaction with other systems and defines signal flow priorities. |
| D 21.3.6.6 | Each unit of the system is clearly identified in a manner which defines clearly the hardware and software version as appropriate. |
| D 21.3.6.7 | Safety concept statement verifies that the system will not prejudice the safe operation of the braking system under non-fault conditions. |
| D 21.3.6.8 | System architecture, design methods and tools identified. |
| D 21.3.6.9 | Information regarding design provisions in case of failure is provided including any error messages, warning signals, partial performance conditions, back-up modes and/or removal of high-level functions. |
| D 21.3.6.10 | Additional material and analysis (FMEA, FTA) of fault conditions made available for inspection and maintained by the manufacturer. |
| D 21.3.6.11 | Document reference and date of inspection: |
| D 21.3.6.12 | Vehicle complies with all other performance requirements of IS 15986:2015 and meets manufacturer’s specifications under non-fault conditions. |
| D 21.3.6.13 | Under fault conditions, vehicle response corresponds to that described in the manufacturer’s documents / failure analysis and safety concept is verified. |
|  | (see annex 4 of this report for test data) |
| D 21.3.7 | Electro-magnetic compatibility  |
| D 21.3.7.1 | Documentation demonstrating compliance with AIS-004(Part 3). |
| **D 22.0** | **TECHNICAL SPECIFICATION – ADDITIONAL INFORMATION (For other than M1 and N1)** |
| D 22.1 | Name of manufacturer |
| D 22.2 | System name |
| D 22.3 | System variations  |
| D 22.4 | Control function (directional/roll-over/both) including an explanation of the basic function and/or philosophy of the control |
| D 22.5 | System configurations (where appropriate) |
| D 22.6 | System identification |
| D 22.7 | Additional information (if applicable) to the application of the directional control and/or the roll-over control function(s)  |
| D 22.8 | Component description |
| D 22.9 | Sensors external to the controller(a) Function;(b) Limitations on the location of the sensors;(c) Identification, e.g. part numbers. |
| D 22.10 | Controller(s)(a) General description and function;(b) Identification e.g. part numbers;(c) Limitations on the location of the controller(s);(d) Additional features. |
| D 22.11 | Modulators(a) General description and function;(b) Identification;(c) Limitations. |
| D 22.12 | Electrical equipment(a) Circuit diagrams;(b) Powering methods. |
| D 22.13 | Pneumatic circuitsSystem schematics including anti-lock braking configurations associated with the trailer types defined in paragraph 6.2.1. of this annex. |
| D 22.14 | Safety aspects of the electronic system in accordance with Annex S of IS 11852  |
| D 22.14.1 | List of complex functions covered: |
| D 22.14.2 | Manufacturer’s documents contain information showing the interaction of complex braking functions with other vehicle systems and/or how the system directly controls output variables. |
| D 22.14.3 | Manufacturer’s documents explain the functionality and safety concept of the system and describe how the operational status may be checked. |
| D 22.14.4 | A list of input and output variables, including their working range, is provided. |
| D 22.14.5 | Documentation includes an inventory of components, outlines the function of each unit, its interconnection/interaction with other systems and defines signal flow priorities. |
| D 22.14.6 | Each unit of the system is clearly identified in a manner which defines clearly the hardware and software version as appropriate. |
| D 22.14.7 | Safety concept statement verifies that the system will not prejudice the safe operation of the braking system under non-fault conditions. |
| D 22.14.8 | System architecture, design methods and tools identified. |
| D 22.14.9 | Information regarding design provisions in case of failure is provided including any error messages, warning signals, partial performance conditions, back-up modes and/or removal of high-level functions. |
| D 22.14.10 | Additional material and analysis (FMEA, FTA) of fault conditions made available for inspection and maintained by the manufacturer. |
| D 22.14.11 | Document reference and date of inspection: |
| D 22.14.12 | Vehicle complies with all other performance requirements of IS 15986 : 2015 and meets manufacturer’s specifications under non-fault conditions. |
| D 22.14.13 | Under fault conditions, vehicle response corresponds to that described in the manufacturer’s documents / failure analysis and safety concept is verified.  |
| D 22.15 | Electro-magnetic compatibility |
| D 22.16 | Documentation demonstrating compliance with AIS-004(Part 3). |

1. **Page 110/227,Table 6**

Substitute new clause E24.0, E25.0, E26.0, E27.0 and renumber subsequent clause:

|  |  |
| --- | --- |
| **E 24.0** | **Vehicle Location Tracking System (VTS) DETAILS** |
|   E 24.1 | Make: |   |
|   E 24.2 | Model No |   |
|   E 24.3 | Part No |   |
|   E 24.4 | Hardware Version |  |
|   E 24.5 | Software Version |  |
|   E 24.6 | Antenna External and or Internal for GPS/GSM/WLAN etc. details. |  |
| **E 25.0** | **Emergency Button** |
| E 25.1 | No of Emergency Buttons |  |
| E 25.2 | Make  |  |
| E 25.3 | Part Number/ID |  |
| **E 26.0** | **Installation layout Drawing of VLT and Buttons** | **Attach drawing showing location of VLT and Emergency Buttons  in vehicle** |
| **E 27.0** | **Installation Instructions (if any for dealer or System integrator)** |

1. **Page 226/227, Table 29**

Substitute following table for existing table:

|  |
| --- |
| **Table 29** **TECHNICAL INFORMATION TO BE SUBMITTED BY THE ROAD AMBULANCE MANUFACTURER** |
| **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 | Type of Control (normal control/Full forward control etc.) : |  |
| 2.2 | Number of Axles and wheels : |  |
| 2.3 | Chassis (overall drawing) : |  |
| 2.4 | Valid CMVR certificate for the base Vehicle( If available ) |  |
| 2.5 | Position and arrangement of engine: |  |
| 2.6 | Category of Base vehicle : |  |
| **3.0** | **Body :** |  |
| 3.1 | Range of vehicle dimension (overall): |  |
| 3.2 | Patient Handling Equipment |  |
| 3.2.1 | Main Stretcher / Undercarriage |  |
| 3.2.1.1 | Make |  |
| 3.2.1.2 | Model |  |
| 3.2.1.3 | Type |  |
| 3.2.1.4 | ID/Part Number |  |
| 3.2.1.5 | Dimensions of Stretcher |  |
| 3.2.1.6 | Loading Angle |  |
| 3.2.1.7 | Loading Height |  |
| 3.2.1.8 | Stretcher loading capacity |  |
| 3.3 | Recognition of Ambulance |  |
| 3.3.1 | 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: |  |
| 5.0 | **Tyres** |  |
| 5.1 | **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.** |  |
| 5.1.1 | Front wheel |  |
| 5.1.2 | Rear wheel |  |
| 5.1.3 | Spare wheel (Other than temporary use spare wheel) |  |
| 5.1.4 | Other (for articulated/combination vehicles) |  |
| 5.1.5 | Dynamic rolling radius, (mm), as per IS 15633 / IS 15636 |  |
| 5.2 | No. and arrangement of wheels : |  |
| 5.2.1 | Front : |  |
| 5.2.2 | Rear : |  |
| 5.2.3 | Other : |  |
| 5.3 | Inflation pressure – Un laden : |  |
| 5.3.1 | Front : |  |
| 5.3.2 | Rear : |  |
| 5.3.3 | Other |  |
| 5.4 | Inflation pressure –Laden : |  |
| 5.4.1 | Front : |  |
| 5.4.2 | Rear : |  |
| 5.4.3 | Other : |  |
| **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** | **Seat :** |  |
| 11.1 | Number of Patients and attendant seats |  |
| 11.1.1 | Position |  |
| 11.1.2 | Make : |  |
| 11.1.3 | Type : |  |
| 11.1.4 | Identification Number: |  |
| **12.0** | **Fire Extinguisher :** |  |
| 12.1 | Number : |  |
| 12.2 | Type : |  |
| 12.3 | Capacity : |  |
| 12.4 | Make : |  |
| **13.0** | **Warning Lamp ( To be filled if different from the valid CMVR Compliance certificate)** |  |
| 13.1 | Make |  |
| 13.2 | Type of Lens (Glass/Plastic) |  |
| 13.3 | Identification: TAC No. / BIS License No. / E- Marking |  |
| 13.4 | Number and colour of lens |  |
| **14.0** | **Siren- Compliance to AIS-125, Annexure I, Para 6.3– Yes / No)** |  |
| 14.1 | Make : |  |
| 14.2 | Model : |  |
| 14.3 | ID / Part Number : |  |
| **15.0** | **Reflector ( To be filled if different from the valid CMVR Compliance certificate)** |  |
| 15.1 | Rear : |  |
| 15.2 | Make: |  |
| 15.3 | Type and Identification : |  |
| 15.4 | Number and colour : |  |
| 15.5 | Area (cm2): |  |
| 15.6 | Side : |  |
| 15.7 | Make : |  |
| 15.8 | Type and Identification : |  |
| 15.9 | Number and colour : |  |
| 15.10 | Area (cm2) : |  |
| **16.0** | **Top light ( To be filled if different from the valid CMVR Compliance certificate)** |  |
| 16.1 | Make : |  |
| 16.2 | Type and Identification : |  |
| 16.3 | Number and colour : |  |
| **17.0** | **Internal Lighting and Illumination** |  |
| 17.1 | Driver Cab lighting : |  |
| 17.1.1 | Type : |  |
| 17.1.2 | Make : |  |
| 17.1.3 | Number : |  |
| 17.1.4 | Illumination intensity ( Lux) : |  |
| 17.2 | Patient Compartment Lighting : |  |
| 17.2.1 | Type : |  |
| 17.2.2 | Make : |  |
| 17.2.3 | Number : |  |
| 17.2.4 | Illumination intensity ( Lux) : |  |
| 17.3 | Other Area Lighting : |  |
| 17.3.1 | Type : |  |
| 17.3.2 | Make : |  |
| 17.3.3 | Number : |  |
| 17.3.4 | Illumination intensity ( Lux) : |  |
| **18.0** | **Electrical Circuit :** |  |
| 18.1 | Circuit Diagram (attach details): |  |
| 18.2 | Number of battery(ies) provided other than the vehicle battery : |  |
| 18.3 | Details of Alternator : |  |
| **19.0** | **Flammability Test as per IS 15061: 2002 (as applicable ) :** |  |
| **20.0** | **Instrument Panel (Dash Board)** |  |
| 20.1 | Make |  |
| 20.2 | Identification No. / Part No. |  |
| 20.3 | Drawing showing the mounting details, overall size and all control switches with dimensions |  |
| 20.4 | Additional details for interior fitting tests to be given (if test is already conducted, this information need not be submitted). |  |
| 20.5 | Instrument Panel Variants with photographs (With / without Airbag, Music system, AC) |  |
| 20.6 | Material used for instrument Panel |  |
| 20.7 | Drawings |  |
| 20.8 | Instrument Panel mounting (With hardware details) |  |
| 20.9 | ‘H’ point co-ordinates for each seating position |  |
| 20.10 | Cross sectional drawings for each projection more than 3.2 |  |
| 20.11 | Cross sectional Drawing of Gear shift lever |  |
| 20.12 | Drawing of Grab handle with cross section |  |
| 20.13 | Drawing of Sun visor with details of metal wire used |  |
| 20.14 | Drawing of lamp assembly mounted at roof  |  |
| **21.0** | **Air Conditioning and Heating Performance Tests(Clause 4.5.4) Compliance Established****–Yes / No** |  |
| **22.0** | **Acceleration Test (Clause 4.2.1 and IS:11851-2002) Compliance Established – Yes / No** |  |
| **23.0** | **Water Proofing Test (IS:11865-1995) – Compliance Established –Yes / No** |  |
| **24.0** | **Dust Ingress Test (IS:11739-1997) Compliance Established –Yes / No** |  |

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ON BEHALF OF

AUTOMOTIVE INDUSTRY STANDARDS COMMITTEE

UNDER

CENTRAL MOTOR VEHICLE RULES - TECHNICAL STANDING COMMITTEE

SET-UP BY

MINISTRY OF ROAD TRANSPORT & HIGHWAYS

(DEPARTMENT OF ROAD TRANSPORT & HIGHWAYS)

GOVERNMENT OF INDIA

26th February 2018