

Draft

AUTOMOTIVE INDUSTRY STANDARD

Procedure for Type Approval and Certification of Trailer Caravans for compliance to Central Motor Vehicles Rules

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INTRODUCTION

The Government of India felt the need for a permanent agency to expedite the publication of standards and development of test facilities in parallel when the work on the preparation of the standards is going on, as the development of improved safety critical parts can be undertaken only after the publication of the standard and commissioning of test facilities. To this end, the erstwhile Ministry of Surface Transport (MoST) has constituted a permanent Automotive Industry Standards Committee (AISC) vide order No. RT-11028/11/97-MVL dated September 15, 1997. The standards prepared by AISC will be approved by the permanent CMVR Technical Standing Committee (CTSC). After approval, the Automotive Research Association of India (ARAI), Pune, being the secretariat of the AIS Committee, would publish this standard. For better dissemination of this information ARAI may publish this standard on their Web site.

The concept of Caravan Tourism has gained immense popularity across the globe owing to the freedom and flexibility it provides, while holidaying vis-à-vis itineraries and accommodation. This would include vehicles viz. Recreational Vehicle (RV), Camper Vans, Motor Homes, trailer caravans etc. Trailer Caravans are a unique tourism product, which promotes family oriented tours even in circuits / destinations, which are not having adequate hotel accommodation. The specially built vehicles and trailers being used for the purpose of travel, leisure and accommodation would be termed as ‘Caravan’.

There is at present a growing demand for eco, adventure, wildlife and pilgrimage tourism. This involves visiting and staying in remote areas, forests, deserts and riversides. There is already shortage of accommodation at tourist destinations, especially in remote areas and in certain cases at places where a permanent construction may neither be permissible nor feasible. In such a scenario, Caravan Tourism can effectively meet the growing demand, while ensuring adherence to quality, standards and safety norms. Caravan Tourism would attract a wide range of market segments including young people, families, senior citizens and international tourists. The Caravan tourism policy is aimed to promote and facilitate and incentivize development of the sector

(To be elaborated)

As directed in 61st CMVR-TSC (17th May 2023) and 70th AISC (13th July) 2023 panel activities are initiated.

The practices followed for referring to AIS and BIS standards in this standard are given below to serve as a guidance to correct interpretation of the requirements and also to support correct formulation of future amendments and revisions to this standard

The overarching principle is that a vehicle must comply with the applicable CMV Rules on the date of its manufacture irrespective of whether this standard has been appropriately updated or not.

This standard covers CMVR requirements for type approval of Special Purpose Vehicle (SPV) - Trailer Caravan..

The AISC panel and the Automotive Industry Standards Committee (AISC) responsible for preparation of this standard are given in Annex- and Annex- *(To be included)* respectively.

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Procedure for Type Approval and Certification of Trailer Caravans for compliance to Central Motor Vehicles Rules

0.0 SCOPE

This standard lays down the type approval requirements applicable to Trailer caravans of category T1 [~~Full trailer configuration only~~] to be drawn by [four wheel drive (4x4)] vehicles of category M1 or N1 ~~having~~ **including** double cab construction.

This standard is applicable to:

- a) Trailer caravan manufactured by trailer manufacturer.
- b) Trailer caravan which are built by motor caravan or trailer caravan body builder on registered trailer which is not older than 3 years.

This standard does not cover type approval requirements for trailer caravans converted from centre axle trailers.

- 0.1 Any alteration or modification in already type approved trailer to build trailer caravan shall be carried out in accordance with sound engineering practices and in compliance with ~~Central~~ Motor Vehicles Act 1988 and Central Motor Vehicles Rule, 1989, as amended from time to time.

Provisions of this standard does not allow persons to be carried in trailer caravan while it is plying on the road. (~~Ref. Part A, 6.1(c) of Regulation (EU) 2018/858~~)

1.0 REFERENCES

IS 14272 : Automotive Vehicles - Types – Terminology

2.0 DEFINITIONS

For the purpose of this standard following definitions shall apply:

- 2.1 **Special purpose vehicle (SPV)** means a vehicle of category M, N or T having specific technical features in order to perform a function which requires special arrangements and / or equipment.
- 2.2 **Trailer caravan** means a vehicle of category T1, which is designed for road use and provides living accommodation space which contains the following equipment as a minimum:
- a) Seats and table;
 - b) Sleeping accommodation which may be converted from the seats;
 - c) Cooking facilities;
 - d) Storage facilities.

This equipment shall be rigidly fixed to the living compartment. However, the table may be designed to be easily removable.

- 2.3 **Motor vehicle or vehicle** as defined in clause 3.1 of IS 14272, as amended from time to time.

- 2.4 **Window** means an aperture in the sides of the motor caravan to let in light and air. The window need not necessarily be glazed.
- 2.5 **Door** means a sub system of a caravan body that permits boarding and alighting of passengers. Door may or may not be with panel (hinged /sliding) for closing it.
- 2.6 **Service door** means a door intended for use by passengers in the normal circumstances.
- 2.7 **Emergency door** means a door intended for use as an exit by passengers in an emergency only.
- 2.8 **T1 category** - A trailer having a maximum weight not exceeding 0.75 t.
- 2.9** *Double Cab (can also be called Extended Cab) – is basically a Regular Cab with extra room behind the front seats, provide a harmonious blend of passenger comfort and cargo-carrying capacity. With two rows of seating and additional rear legroom, these trucks offer ample space for both occupants and cargo, striking a perfect alance between utility and comfort.*

3.0 REQUIREMENTS

- 3.1 Trailer caravans shall comply with the provisions as specified in 3.0 and 4.0.
- 3.1.1 *[M1 and N1 category vehicles used to tow trailer caravan shall comply with following requirements ~~power to weight ratio requirement of [5 kW/tonne]~~*
- i) ABS provision*
 - ii) Provision for electrical connections with trailer to operate its lighting and light – signalling devices, etc.*
 - iii) Speed limiting device provision of 60 km/h as per AIS-018.*
 - iv) GVW in case of M1 or ULW in case of N1 shall exceed 1000 kg ??]*

3.2 CMVR REQUIREMENTS FOR TRAILER CARAVANS

- 3.2.1 Trailer caravan shall comply with the requirements of CMVR, as amended from time to time, for type approval as given in Table 1.
- 3.2.2 Trailer caravan which is built on already type approved trailer of category T1 shall comply the requirements of CMVR, as amended from time to time, for type approval as given in Table 1.

[3.2.3 Provisions for expandable trailer (hybrid trailer) to be inserted.]

- 3.3 Separate technical units
- (a) OEM couplings intended for towing a trailer whose maximum mass does not exceed 1500 kg shall not be required to be type-approved under **AIS-091(Part 1)**. A coupling is deemed OEM equipment where it is described in the owner's manual or an equivalent supporting document provided to the buyer by the vehicle manufacturer. Where such coupling is approved with the vehicle, an appropriate text shall be included in the approval certificate stating that the owner is responsible for ensuring compatibility with the coupling device fitted to the trailer.

(b) Couplings other than those referred to in point (a), as well as couplings that are retrofitted, shall be type-approved in accordance with **AIS-091(Part 1)**. ~~Installation on the vehicle~~ The ~~technical service~~ **testing agency** shall check that the installation of the coupling devices **on vehicle shall** comply with paragraph 6 of AIS-091(Part 1) **as amended from time to time**.

~~(Ref. for 3.3 : Page L 151/130 of Regulation(EU) for M1 (Also same for NI on page 151/138))~~

- 3.3.1 [Width of Trailer caravan shall not be more than pulling vehicle **or any extendable mirror provisions in case of wider trailer**. Height of trailer shall not exceed [2 m ??]].
- 3.3.2 [Ground clearance of trailer caravan shall not be smaller than that of pulling vehicle]

Table 1

CMVR requirements for Type Approval of Trailer Caravans

Sr. No	Subject	CMV Rule	Applicable standard, as amended from time to time. Guidelines For test applicability	M1	
1	Axle loading	--	The permissible load on axle of Motor Caravan shall comply provisions laid down in Central Motor Vehicle Rules, 1989	T	T
2	Registration marks	50	---	T	T
3	Overall dimension	93	---	T	T
4	Size and ply rating of tyres	95	IS: 15633 -2005 or IS: 15636 -2005 <u>Change in tyre size, speed rating, load index</u>	G	C
5	Brakes* (4)	96	IS 15986/ AIS-151 or IS:11852 -2013 <u>Change in GVW, F/R ratio, tyre size, gear ratio and final drive ratio, wheel base as applicable for pulling vehicle or trailer caravan.</u>	G	C
6	Steering gears (Turning circle diameter)*:	98	IS: 12222 -2011 <u>Change in overall length, width, front overhang, track width, steering geometry.</u>	G+N	C

Sr. No	Subject	CMV Rule	Applicable standard, as amended from time to time. Guidelines For test applicability	M1	N1	T1
7.	Steering gears (Steering efforts)*	98	IS: 11948 2010 <u>Change in tyre size, front axle weight, GVW, track width, steering geometry</u>	G	G	T
8	Forward and backward motion*	99	Reverse is mandatory for M1 and N1	G	G	N/A
9	Windscreen wiper	101	IS 15802 or IS 15804 <u>Change in windscreen wiper at component and installation level, wiper blade dimension, H point, wiper blade installation.</u>	G+ N	G+N	N/A
10	Signalling devices, direction indicators and stop lamps	102	---- <u>Test is only physical verification in case of change in signalling device at component and installation level.</u>	T	T	T
11	Position of the direction indicator	103	<u>Test is only physical verification in case of change in position of direction indicator at component and installation level.</u>	T	T	T
12	Retro-reflectors or Retro-reflective Markings (tapes)	104	AIS-057 (Rev. 1) 2005 , AIS-090 2005 <u>Test is only physical verification. in case of change in retro-reflector and tape respect to size and location</u>	T	T	T
				T	T	T

	Subject	CMV Rule	Applicable standard, as amended from time to time. Guidelines For test applicability	M1	N1	T1
13	Front and rear position lamps, stop- lamps and end-outline marker lamps for motor vehicles and their trailers*	124 (1)(20)(g)	AIS-012(Part 6)(Rev. 1)	T	T	T
14	Daytime running lamps for power- driven vehicles	124 (1)(20)(k)	AIS-012(Part 10)(Rev. 1)	T	T	N/A
15	Side-marker lamps for motor vehicles and their trailers*	124 (1)(20)(j)	AIS-012(Part 9)(Rev. 1)	T	T	T
16	Direction indicators for power-driven vehicles and their* trailers	124 (1)(20)(f)	AIS-012(Part 5)(Rev. 1)	T	T	T
17	Illumination of rear- registration plates of power-driven vehicles and their trailers*	124 (1)(20)(e)	AIS-012(Part 4)(Rev. 1)	T	T	T

Sr. No	Subject	CMV Rule	Applicable standard, as amended from time to time. Guidelines For test applicability	M1	N1	T1
18	Motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with filament lamps and/or LED modules	124 (1)(20)(a)	AIS-010(Part 1)(Rev. 1)	T	T	N/A
19	Adaptive front-lighting systems (AFS) for motor vehicles	124(1)(53)	AIS-127	T	T	N/A
20	Power-driven vehicle front fog lamps	124 (1)(20) (b) (e)	AIS-012(Part 1)(Rev. 1)	T	T	N/A
21	Towing device	124 (1)(22)	AIS-091(Part 1)	A	A	N/A
22	Rear fog lamps for power-driven vehicles and their trailers*	124 (1)(20)(c)	AIS-012(Part 2)(Rev. 1)	T	T	T
23	Reversing lights for power-driven vehicles and their trailers*	124 (1)(20) (g) (h)	AIS-012 (Part 7) (Rev. 1)	T	T	T

Sr. No	Subject	CMV Rule	Applicable standard, as amended from time to time. Guidelines For test applicability	M1	N1	T1
24	Parking lamps for power-driven vehicles	124 (1)(20) (1) (i)	AIS-012 (Part 8)(Rev.1)	T	T	N/A
25	Heating system, if provided	-----	UN R 122	T	T	T
26	Spray suppression systems	124 (1)(33)	AIS-013(Rev. 1)	N/A	T	N/A
27	Safety glazing materials and their installation on vehicles	100	IS 2553(Part 2) <i>(Rev. 1)</i>	T	T	J
28	Installation of tyres	95	AIS-051	T	T	T
29	Tyre rolling sound emissions, adhesion on wet surfaces and rolling resistance (Classes C1, C2 and C3)	95	AIS-142	T	T	T
30	Protection of occupants in the event of lateral collision	124 (1)(6)	AIS-099	T	A	---
31	Pedestrian protection	124	AIS-100	T	T	N/A

Sr. No	Subject	(1)(6)(C) CMV Rule	Applicable standard, as amended from time to time. Guidelines For test applicability	M1	N1	T1
32	Hydrogen Systems	125-M & 115- J ⊥	AIS-195 and AIS-157	T	T	N/A
33	Specific components for liquefied petroleum gases (LPG) and	115-C	AIS-025 (Ver. 3) AIS-026 (Ver. 3)	T	T	N/A
34	Protection of motor vehicles against unauthorised use	124 (1) (51) & (52)	AIS-075 and AIS-076	T	T	N/A
35	Electric safety	124(1)(26)	AIS-038(Rev.2)	T	T	N/A
36	Specific components for CNG and their installation on motor vehicles	115-B	AIS-024 (Rev. 1) Part A AIS-028 (Rev. 1) Part A	T	T	N/A
37	Lamps	105	<u>Test is only physical verification</u>	T	T	T
38	Deflection of light	106	<u>Test is only physical verification</u>	T	T	N/A
39	Use of red, white or blue light	108	<u>Test is only physical verification</u>	T	T	T

Sr. No	Subject	CMV Rule	Applicable standard, as amended from time to time. Guidelines For test applicability	M1	N1	T1
40	Parking lamp	109	<u>Test is only physical verification</u>	T	T	T
41	Prohibition of spot lights, etc	111	<u>Test is only physical verification</u>	T	T	T
42	Exhaust gases	114	<u>Test is only physical verification</u>	T	T	N/A
43	Location of exhaust pipes	113	<u>Test is only physical verification</u>	T	T	N/A
44	Emission	115	AIS-137 (Part 1) <u>Change in fuel injection equipment, change in overall gear ratio. Change in intake and exhaust system</u>	Q (for M1≤2.5T) G+Q (for M1>2.5T)	T	N/A
	Engine power		<u>Change in fuel injection equipment, intake and exhaust system.</u>	G	G	N/A
	Diesel smoke			H	H	N/A
45	Speedometer	117	IS: 11827 2008 Change in tyre size, speedo ratio, speedometer installation.	G+N	G+N	N/A
46	Horn	119	IS 1884:1993 and AIS-014:2001 IS 15796 <u>Change in horn at component and installation level.</u>	G+N	G+N	N/A

Sr. No	Subject	CMV Rule	Applicable standard, as amended from time to time. Guidelines For test applicability	M1	N1	T1
47	Silencers (Noise emitted by moving vehicles)*	120(2)	IS 3028 1998 <u>Test is only physical verification in case of change in exhaust system routing</u>	G (for M1≤2.5T) G+H (for M1>2.5T)	G (for M1≤2.5T) G+H (for M1>2.5T)	H
48	Painting of motor vehicles	121	---. <u>Test is only physical verification</u>	T	T	T
49	Vehicle Identification Number	122(1)	AIS-065 2005 <u>Test applicability: NA</u>	T	T	T
50	Automotive lamps	124 (1) (1)	AIS-034 (Part 1 or 2) (Rev. 1) Change in lamp (bulb)at component and installation level	G+N	G+N	G+N
51	Hydraulic brake hose	124 (1) (2)	IS 7079 2008 <u>Change in brake hose.</u>	G+N	G+N	N/A
52	Hydraulic brake fluid	124 (1) (3)	IS 8654 2001 <u>Change in brake fluid</u>	G+N	G+N	N/A
53	Steering impact	124 (1) (5) (e)	AIS-096 GVW is less than 1500 kg, change in steering wheel	G+N	G+N	N/A
52	Fuel Tanks : Non plastic fuel tanks	124 (1) (7)(a)	AIS-095 01 <u>Change in fuel tank (including fuel tank cap) at component and installation level.</u>	F	F	T

Sr. No	Subject	CMV Rule	Applicable standard, as amended from time to time. Guidelines For test applicability	M1	N1	T1
53	Plastic fuel tank	124 (1) (7) (b)	IS 15547 2005 <u>Change in fuel tank (including fuel tank cap) at component and installation level.</u>	F	F	T
54	Wheel rim	124 (1) (8)	IS 9436 2018 and IS 9438 2018 Change in size, material and designation.	G+N	G+N	G+N
55	Exterior projection	124 (1) (11)	AIS-120 (for M1) IS 13942 1994 <u>Change and addition in external protruding parts</u>	T+A	T	T
56	Wheel guards	124 (1) (13)	IS 13943 1994 Change in wheel guard, tyre sizes	T	N/A	N/A
57	Wheel nuts , wheel discs & hub caps	124 (1) (14)	IS 13941 1994 Change in wheel nut, disc and hub cap	G+N	G+N	G+N
58	Accelerator control system	124 (1) (15)	IS 14283 1995 <u>Change in control pedals,</u> <u>H point.</u>	G+N	G+N	N/A
59	Door locks and retention components	124 (1) (16)	IS 14225 1995 <u>Change in door lock and its child parts</u>	G+N	G+N	N/A
60	Hood latch system	124 (1) (17)	IS 14226 1995 <u>Change in hood latch, locking arrangements.</u>	G	G	N/A

Sr. No	Subject	CMV Rule	Applicable standard, as amended from time to time. Guidelines For test applicability	M1	N1	T1
61	Identification of controls, indicators and tell-tales	124 (1) (19)	AIS-071 (Part 1 & 2) 2009 <u>Change or addition in control</u>	T	T	N/A
62	Installation of lighting and light signaling devices	124 (1) (20)	AIS-008 (Rev.1) 2010 and <u>Change in geometric visibility and installation.</u>	N	N	A+P
63	Electromagnetic compatibility	124 (1) (21) <i>(ii)</i>	AIS-004 (Part 3) 2009 Change or addition of active electronics parts which may create confusion to driver or pedestrian.	T	T	T
64	Gradeability*	124 (1) (23)	AIS-003 1999 <u>Change in overall gear ratio, change in tyre size and wheel base.</u>	G+N	G+N	G+N
65	Test for fuel consumption	124 (1) (31)	Measurement on the basis of driving cycle used for emission testing as per carbon balance method or IS 11921 1993	T	N/A	N/A
66	Field of vision	124 (1) (34)	AIS-021 2004 Change in H point, addition of device in driver forward vision.	G+N	G+N	---
67	Flammability	124 (1) (37)	IS:15061 2002	N/A	N/A	T

Sr. No	Subject	CMV Rule	Applicable standard, as amended from time to time. Guidelines For test applicability	M1	N1	T1
68	Interior fittings	Rule 124 (1) (38)	IS 15223 2002 or AIS-047 2009 Change in interior, H point.	T	T	T
69	Bumper	124 (1) (41)	IS 15901 <u>Change in bumper at component level and its mounting points.</u>	G+N	N/A	N/A
70	Handholds	124 (1) (42)	AIS-046 2005 <u>For all designated seats in living accommodation two points lap belt shall be provided.</u>	N/A	T	N/A
71	The arrangement and mode of operation of foot controls	124 (1) (45)	AIS-035 2006	G	N/A	N/A
72	Defrost and/or demist system	124 (1) (46)	AIS-084 (Part1) 2008 and /or AIS-084(Part2) 2008 Change in defrost and demist devices, change in volume, addition of seating capacity.	T	N/A	N/A
73	Rear under run Protective	124(1-A)	IS 14812 2000 Change in RUPD at component level and its mounting points	N/A	N/A	T

Sr. No	Subject	CMV Rule	Applicable standard, as amended from time to time. Guidelines For test applicability	M1	N1	T1
74	Type Approval and Conformity of Production	124 (4)	AIS-037 2004 .	T	T	T
75	Safety-belts assembly	125(1A)	IS 15139 2002 Change in seat belt	T	T	N/A
76	Safety-belt anchorages	125(1A)	IS 15140 2003 Change in seat belt anchorage points.	T	T	N/A
77	Rear view mirror specification and installation*	125 (2)	AIS-001(Part 1) (Rev. 1) 2010 and AIS-002(Part 1) (Rev. 1)* 2010 Change in mirror at component level and its mounting points.	T	T	N/A
78	Seats, seat anchorages and Head restraints (For M1)	125(5)	IS 15546 2005 Change in seat at component level and mounting location Change in head restraint at component level, head restraint adjustment points.	G+D	N/A	N/A
79	Seats, seat anchorages and Head restraints (For other than M1)	125(6)	AIS-023 2005 Change in seat at component level and mounting location Change in head restraint at component level, head restraint adjustment points.	N/A	T	N/A

Sr. No	Subject	CMV Rule	Applicable standard, as amended from time to time. Guidelines For test applicability	M1	N1	T1
80	Warning Triangles And Spare Wheel	138 (4) (C)	AIS-022 2001 Change in warning triangle at component level.	G+N	G+N	N/A
81	Electronic Stability Control*	96(10)	AIS-133	T	T	N/A

Meaning of letters:

- N/A: This requirement is not applicable to this vehicle.
- A: Exemption permitted where special purposes make it impossible to fully comply with the desired requirements/ performance. The manufacturer shall demonstrate this to the satisfaction of the testing agency that the vehicle cannot meet the requirements. The exemptions granted are to be described on the vehicle type- approval certificate and the certificate of conformity.
- C: Test is applicable for limited part of designated seating area which comes in head impact zone when vehicle is travelling on the road
- D: Application limited to seat designated for normal use when the vehicle is travelling on the road. Seats which are not designated for use when the vehicle is travelling on the road shall be clearly identified to the users either by means of pictogram or a sign with an appropriate text.
- F: Modification to the routing and length of the refueling duct and re positioning of the *approved* tank inboard is permissible.
- G: Requirements for the corresponding category of the base vehicle, based on the maximum mass,(complete/incomplete vehicle of either M or N according to the respective category of base vehicle

- H: Modification of exhaust system length after last silencer not exceeding 2 m is permissible without any further test.
- L: Application limited to the seats designated for normal use when the vehicle is travelling on the road. At least anchorages for lap belts are required in the all rear seating position of caravan area. Seats which are designated for use when the vehicle is travelling on the road shall clearly identify to the users either by means of pictogram or a sign with an appropriate text.
- M: Application limited to seats designated for normal use when the vehicle is travelling on the road. At least lap belts are required in all rear seating positions. Seats which are not designated for the use when vehicle is travelling on the road shall be clearly identified to users either by means of pictogram or a sign with an appropriate text.
- N: During successive stage of vehicle completion, test shall be applicable in case of change (addition or deletion) from earlier approved test specific technical parameters and safety critical components.
- P Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected.
- Q: Modification of exhaust system length after last silencer not exceeding 2m is permissible without any further test. CMVR approval issued to the most representative base vehicle remains valid irrespective of change in the reference weight.
- T: No exemption except those specified in the CMVR and /or applicable standard
- J For all window glazing other than driver's cab glazing (windshield and side glasses), the material may be either of safety glass or rigid plastic glazing.
- * Testing shall be done in combination

3.4 Fire extinguishers

- 3.4.1 The motor vehicle drawing trailer caravan shall be equipped with one fire extinguisher and shall be located near to the driver's seat.
- 3.4.2 Minimum two fire extinguishers of 2 kg each, totaling to 4kg to be Provided. Fire extinguishers shall comply with IS: 13849 or IS: 2171 as amended from time to time, as may be applicable.
- 3.4.3 Halogenated hydrocarbon type of extinguisher shall not be used as extinguishing agent.
- 3.5.4 The Fire extinguishers shall be secured against tampering and shall be kept in lockers or behind breakable glass. The location shall be marked clearly.

3.5 Electrical wiring

- 3.5.1 All electrical wiring in trailer caravan shall be properly installed, taped, clipped or contained in a loom along its length
- 3.5.2 Electrical wiring shall conform to IS: 2465-1984 as amended from time to time
- 3.5.3 Living accommodation shall not be occupied during travel mode of trailer caravan.

4.0 GUIDELINES FOR REQUIREMENTS IN LIVING ACCOMMODATION

Requirements for the equipment are in the living accommodation space which is provided as per clause 2.2.

4.1 Seats and Table

- a) Are required to be an integral part of the living accommodation area, and mounted independently of other items.
- b) The table shall be capable of being mounted directly to the vehicle floor and/or side wall.

- c) The table mounting arrangement shall be secured as a permanent feature, (bolted, riveted, screwed or welded), although the table may be detachable or folding type.
- d) Permanently secured seating shall be available for use at the table.
- e) The seats shall be secured directly to the vehicle floor and/or side wall.
- f) The seats shall be secured as a permanent feature (bolted, riveted, screwed or welded).

4.2 Sleeping Accommodation

- a) Shall be an integral part of the living accommodation area.
- b) Either beds or a bed converted from seats (to form a mattress base)
- c) Secured as a permanent feature, with base structures bolted, riveted, screwed or welded to the vehicle floor and/or side wall,

4.3 Cooking Facilities

- a) Cooking area can be inside or outside the vehicle as per design and layout of living area.
- b) Cooking facility provided inside the vehicle should be secured to the vehicle floor and/or side wall as a permanent feature (bolted, riveted, screwed, or welded).

4.4 Storage Facilities

- a) Storage facilities may be provided by a cupboard or locker or by drawer systems.
- b) The facility shall be an integral part of the vehicle living accommodation
- c) The storage facility shall be a permanent feature (bolted, riveted, screwed or welded).
- d) Storage area for cooking vessels and food items to be done separately.

4.5 Some or all of the following facilities may be provided in motor caravan:

4.5.1 Wash area

- a) Toilet fitting: Toilets may be of permanently fixed or portable type.
- b) Bath fitting / shower: Fixtures may be of permanent or portable type.
- c) Wash basin may be provided inside or outside the vehicle, depending on layout design.

4.5.2 Water storage facilities

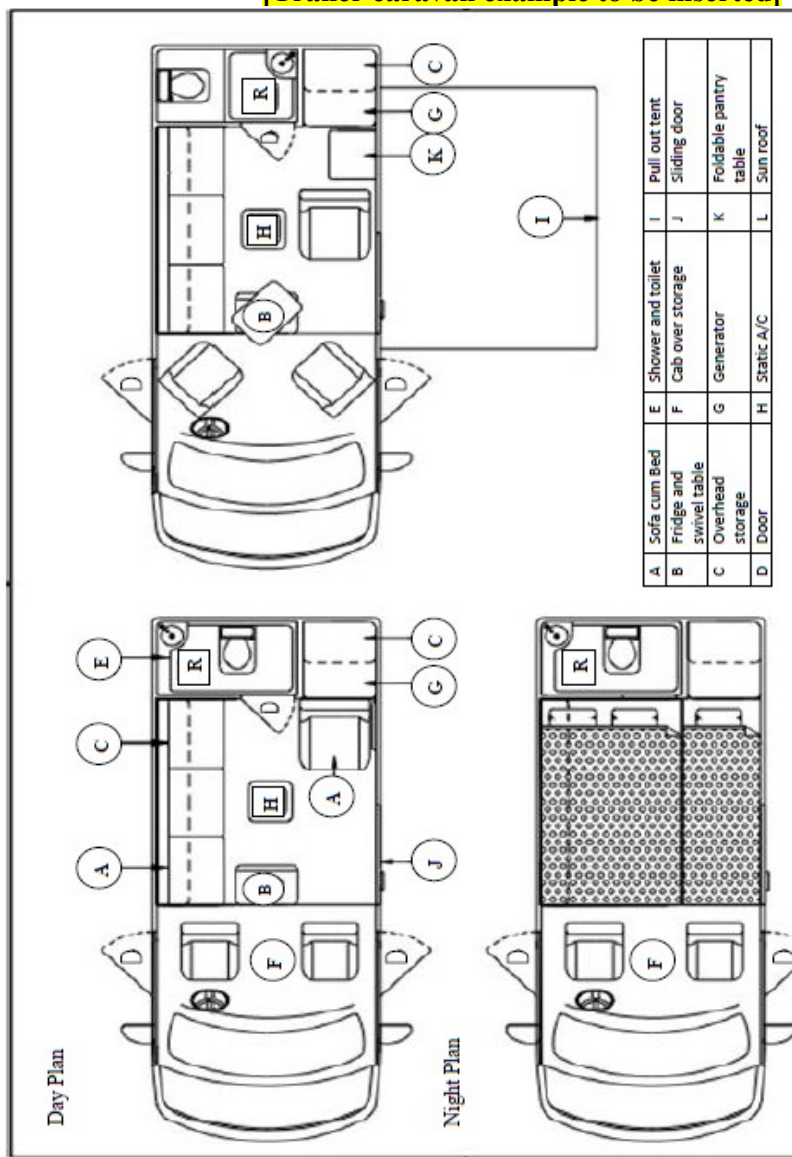
- a) Fresh water tank can be provided inside or outside the vehicle in a place/location for easy maintenance.
- b) Separate gray water tank storage to be provided. (Used water from shower/ wash basin).
- c) Separate black water storage to be provided in case of fixed toilets and flexible drainage pipe to be attached while draining them in the prescribed area.
- d) Water pump may be provided for fresh water near cooking area.

4.5.3 Electricals

- a) The living area electrical requirements have to be fulfilled by using a generator or battery back-up of minimum 24 hrs.
- b) All electrical appliances to have a safety fuse systems in place.
- c) There shall be a provision made for direct 230V input system in the vehicle connecting to the battery backup system powering the living areas electrical system/appliances.

4.6 MOTOR CARAVAN FLOOR PLANS WITH INTERNAL ARRANGEMENT (AN ILLUSTRATIVE EXAMPLE)

[Trailer caravan example to be inserted]



5.0 TECHNICAL INFORMATION TO BE SUBMITTED BY TRAILER CARAVAN MANUFACTURER

- 5.1 The motor vehicles and trailer caravan manufacturer shall submit the necessary technical details to the test agencies as per Annex 1 and 2 of this standard.
- 5.1.1 Trailer caravan body builder who builds trailer caravan on earlier type approved vehicle, shall submit relevant details of technical changes carried on the earlier type approved trailer to the testing agencies.
- 5.2 The trailer caravan manufacturer shall submit the details of trailer caravan identification number as per Annex- 3. It shall be punched at the readily accessible position on a part which is normally not likely to be replaced during use.
- 5.3 Trailer caravan body builder shall submit trailer certificate number along with date of already type approved trailer on which trailer caravan is built to the testing agency.
- 5.4 Trailer caravan body builder who builds trailer caravan on earlier type approved trailer, may submit photocopies of type approval certificate and brief technical specifications of the said trailer.

6.0 EXTENSION OF TYPE APPROVAL

- 6.1 Every modification pertaining to the information declared in accordance with para 5.0 shall be intimated by the trailer caravan manufacturer to the Testing Agency.
- 6.2 If the changes are in parameters not related to the provisions, no further action need be taken.

If the changes are in parameters related to the provisions, the Testing Agency shall then consider, whether,

- a) The model with the changed specifications still complies with provisions or
- b) Any further verification is required to establish compliance.

For considering whether any further verification is required or not, guidelines given in respective standards shall be used.

- 6.3 In case of 6.2 (b), verification for only those parameters which are affected by the modifications needs to be carried out.
- 6.4 In case of fulfillment of criterion of para 6.2 (a) or after results of further verification as per para of 6.2 (b) are successful, the approval of compliance shall be extended for the changes carried out.

7.0 CONFORMITY OF PRODUCTION (CoP)

- 7.1 Whole Vehicle CoP procedures, as and when formulated and notified for caravan trailers shall be applicable.
- 7.2 Trailer caravan approved under this standard shall be so manufactured as to conform to the type approved specifications.

8.0 GUIDELINES FOR REGISTRATION OF MOTOR CARAVANS

- 8.1 Trailer caravan built on earlier type approved vehicle (Incomplete vehicle).

For registration purpose of such trailer caravan procedure as per CMVR Rule 47 sub clause “g” shall be followed.

- 8.2 Trailer caravan built on already registered vehicle (Completely built vehicle).

For registration purpose of trailer caravan which is built on already registered vehicle, the vehicle owner shall apply to the concerned registering authority within 14 days of undertaking the alteration as required under Section 52 of Motor Vehicle Act 1988, for endorsement of particular alteration in registration certificate mentioning place and date of alteration and alteration certificate number. This shall also be ensured by the motor caravan body builder.

- 8.3 Guidelines for type approval and registration of motor caravan are given in Annex-4.

ANNEX – 1 (See clause 5.1)

**TECHNICAL INFORMATION TO BE SUBMITTED BY VEHICLE
MANUFACTURER / BODY BUILDER**

1.0	Details of vehicle 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.	
1.9.3	E mail address	
1.9.4	Contact person	
1.10	Details of the base CMVR Compliance Certificate issued to the Chassis (Certificate Number and date)	
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:	
1.15	Max. recommended gradeability (Stand- start) – in degrees	
1.16	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 IS 14272:	
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	
3.4	Number of Service doors :	
3.5	Number of emergency exits :	
4.0	Clearance	
4.1	Minimum road clearance :	
4.2	Approach angle :	
4.3	Departure Angle :	
4.4	Ramp-over Angle :	
5.0	Weights	
5.1	Vehicle kerb weight kg :	
	Front axle :	
	Rear axle :	
	Total :	
5.2	Gross vehicle weight kg :	
5.3	Maximum permissible axle weights kg	

	Front axle:	
	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 :	
6.4.2	Rear :	
6.4.3	Other	
6.5	Inflation pressure –Laden :	
6.5.1	Front :	
6.5.2	Rear :	
6.5.3	Other :	
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 :	

10.0	Window	
10.1	Window details	
10.1.1	Dimension of Window along with the detailed drawing showing the dimensions	
11.0	Steps/floor board, if provided	
11.1	Height of 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	Name of Manufacturer :	
14.1.2	Identification mark :	
15.2	Door hinge :	
15.2.1	Name of Manufacturer :	
15.2.2	Identification mark :	
16.0	Safety glass	
16.1	Front wind shield (laminated) :	
16.1.1	Make	
16.1.2	Identification :	
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	
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	
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	Name of Manufacturer :	
17.1.2	Type :	
17.1.3	Dimension & radius of curvature :	
17.1.4	Identification Mark:	
17.2	Right :	
17.2.1	Name of Manufacturer :	
17.2.2	Type :	
17.2.3	Dimension & radius of curvature :	
17.2.4	Identification Mark:	
17.3	Inside :	

17.3.1	Name of Manufacturer :	
17.3.2	Type :	
17.3.3	Dimension & radius of curvature :	
17.3.4	Identification Mark:	
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 :	
18.4	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	Driver Seat belt anchorage :	
20.2.1	Name of Manufacturer :	
20.2.2	Type :	
20.2.3	Number :	
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 and Country of origin (if imported)	
23.1.2	Designation as per AIS-034 (Part 1 or 2)	
23.2	Parking Lamp bulb – Front	
23.2.1	Make and Country of origin (if imported)	
23.2.2	Designation as per AIS-034 (Part 1 or 2)	
23.3	Parking Lamp bulb - Rear	
23.3.1	Make and Country of origin (if imported)	
23.3.2	Designation as per AIS-034 (Part 1 or 2)	
23.4	Direction indicator lamp bulb -	
	front	
23.4.1	Make and Country of origin (if imported)	
23.4.2	Designation as per AIS-034 (Part 1 or 2)	
23.5	Direction indicator lamp bulb – rear	
23.5.1	Make and Country of origin (if imported)	
23.5.2	Designation as per AIS-034 (Part 1 or 2)	
23.6	Direction indicator lamp bulb – side	
23.6.1	Make and Country of origin (if imported)	
23.6.2	Designation as per AIS-034 (Part 1 or 2)	

23.7	Front Position Lamp bulb	
23.7.1	Make and Country of origin (if imported)	
23.7.2	Designation as per AIS-034 (Part 1 or 2)	
23.8	Rear Position Lamp (tail lamp)Bulb	
23.8.1	Make and Country of origin (if imported)	
23.8.2	Designation as per AIS-034 (Part 1 or 2)	
23.9	Stop lamp bulb	
23.9.1	Make and Country of origin (if imported)	
23.9.2	Designation as per AIS-034 (Part 1 or 2)	
23.10	Number plate lamp bulb	
23.10.1	Make and Country of origin (if imported)	
23.10.2	Designation as per AIS-034 (Part 1 or 2)	
23.12	Reversing lamp bulb	
23.12.1	Make and Country of origin (if imported)	
23.12.2	Designation as per AIS-034 (Part 1 or 2)	
23.13	Stop Lamp Bulb (S3)	
23.13.1	Make and Country of origin (if imported)	
23.13.2	Designation as per AIS-034 (Part 1 or 2)	
23.14	Front Fog Lamp Bulb	
23.14.1	Make and Country of origin(if imported)	
23.14.2	Designation as per AIS-034 (Part 1 or 2)	
23.15	Rear Fog Lamp Bulb	
23.15.1	Make and Country of origin (if imported)	
23.15.2	Designation as per AIS-034 (Part 1 or 2)	
23.16	Side Marker Lamp Bulb	
23.16.1	Make and Country of origin (if imported)	
23.16.2	Designation as per AIS-034 (Part 1 or 2)	
24.0	Head Lamp	
24.1	Name of Manufacturer :	
24.2	Type and Identification :	
24.3	Number and colour :	
25.0	Tail lamp	
25.1	Name of Manufacturer :	
25.2	Type and Identification :	
25.3	Number and colour :	
26.0	Parking lamp	
26.1	Front :	
26.1.1	Name of Manufacturer :	
26.1.2	Type and Identification :	
26.1.3	Number and color :	

26.2	Rear :	
26.2.1	Name of Manufacturer :	
26.2.2	Type and Identification :	
26.2.3	Number and colour	
27.0	Stop lamp	
27.1	Name of Manufacturer :	
27.2	Type and Identification :	
27.3	Number and colour :	
28.0	Reversing lamp	
28.1	Name of Manufacturer :	
28.2	Type and Identification :	
28.3	Number and colour :	
29.0	Direction indicator lamp	
29.1	Front :	
29.1.1	Name of Manufacturer :	
29.1.2	Type and Identification :	
29.1.3	Number and colour :	
29.2	Rear :	
29.2.1	Name of Manufacturer :	
29.2.2	Type and Identification :	
29.2.3	Number and colour :	
29.3	Side :	
29.3.1	Name of Manufacturer :	
29.3.2	Type and Identification :	
29.3.3	Number and colour :	
29.4	Type of flasher :	
30.0	Number Plate Lamp	
30.1	Name of Manufacturer :	
30.2	Type and Identification :	
30.3	Number and colour :	
31.0	Emergency signaling equipment	
31.1	Front :	
31.1.1	Name of Manufacturer :	
31.1.2	Type and Identification :	
31.1.3	Number and colour :	
31.2	Rear :	
31.2.1	Name of Manufacturer :	
31.2.2	Type and Identification :	
31.2.3	Number and colour :	
31.3	Side :	

31.3.1	Name of Manufacturer :	
31.3.2	Type and Identification :	
31.3.3	Number and colour	
32.0	Reflector	
32.1	Rear :	
32.1.1	Name of Manufacturer :	
32.1.2	Type and Identification :	
32.1.3	Number and colour :	
32.1.4	Area :	
32.2	Side :	
32.2.1	Name of Manufacturer :	
32.2.2	Type and Identification :	
32.2.3	Number and colour :	
32.2.4	Area :	
33.0	Top light	
33.1	Name of Manufacturer: :	
33.2	Type and Identification :	
33.3	Number and colour :	
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.	
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	

ANNEX – 2 (See clause 5.1)

**TECHNICAL INFORMATION TO BE SUBMITTED BY TRAILER
CARAVAN MANUFACTURER / BODY BUILDER**

1.0	Details of Trailer Caravanmanufacturer	
1.1	Name & Address :	
1.2	Telephone No :	
1.3	E mail address :	
1.4	Contact person :	
1.5	Name of model :	
1.6	Name of variants, if any:	
1.7	Type and General commercial description (s) :	
1.8	Plant/(s)of manufacture :	
1.9	Details of the base CMVR Compliance Certificate issued to the Chassis (Certificate Number and date)	
2.0	Trailer Chassis Characteristics	
2.1	Chassis types	
2.2	Chassis types approved for Body installation	
2.3	Number of Axles and wheels :	
2.4	Chassis (overall drawing) :	
2.5	Frame Type :	
2.6	Cross sectional view :	
2.7	Dimension (in mm) (Specify drawing reference) :	
2.7.1	Length mm :	
2.7.2	Width mm :	
2.7.3	Height (Unladen) mm :	
2.7.4	Wheel base mm :	
2.7.5	Wheel track mm :	
	Front :	
	Rear :	
2.7.6	Body overhang mm :	
	Front end :	
	Rear end :	
2.8	Category of vehicle as per IS 14272:	
2.8.1	Base trailer	
2.8.2	Completed trailer	

3.0	Body :	
3.1	Type of Body :	
3.2	Dimension drawing and photograph of the trailer with representative body :	
3.3	Number of Service doors :	
3.4	Number of emergency exits :	
4.0	Clearance	
4.1	Minimum road clearance :	
4.2	Departure Angle :	
4.3	Ramp-over Angle :	
5.0	Weights	
5.1	Trailer kerb weight kg :	
	Front axle :	
	Rear axle :	
	Total :	
5.2	Gross vehicle weight of trailer kg :	
5.3	Maximum permissible axle weights kg	
	Front axle:	
	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 :	
6.4.2	Rear :	
6.4.3	Other	
6.5	Inflation pressure –Laden :	

6.5.1	Front :		
6.5.2	Rear :		
6.5.3	Other :		
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	
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 :	
14.0	Door locks and hinges	
14.1	Door lock :	
14.1.1	Name of Manufacturer :	
14.1.2	Identification mark :	
15.2	Door hinge :	
15.2.1	Name of Manufacturer :	
15.2.2	Identification mark :	
16.0	Safety glass	
16.1	Front wind shield (laminated) :	
16.1.1	Make	
16.1.2	Identification :	
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	
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	
16.3.3	Type (flat/curved, clear/tinted, toughened) :	
16.3.4	Thickness mm :	
16.3.5	Radius of curvature (If curved) :	
17.0	Fire Extinguisher	
17.1	Number :	
17.2	Type :	

17.3	Capacity :	
17.4	Name of Manufacture: :	
18.0	First Aid Equipment	
18.1	Number :	
18.2	Contents :	
19.0	Automotive bulbs :	
19.2	Parking Lamp bulb – Front	
19.2.1	Make and Country of origin (if imported)	
19.2.2	Designation as per AIS-034 (Part 1 or 2)	
19.3	Parking Lamp bulb - Rear	
19.3.1	Make and Country of origin (if imported)	
19.3.2	Designation as per AIS-034 (Part 1 or 2)	
19.4	Direction indicator lamp bulb - front	
19.4.1	Make and Country of origin (if imported)	
19.4.2	Designation as per AIS-034 (Part 1 or 2)	
19.5	Direction indicator lamp bulb – rear	
19.5.1	Make and Country of origin (if imported)	
19.5.2	Designation as per AIS-034 (Part 1 or 2)	
19.6	Direction indicator lamp bulb – side	
19.6.1	Make and Country of origin (if imported)	
19.6.2	Designation as per AIS-034 (Part 1 or 2)	
19.7	Rear Position Lamp (tail lamp)Bulb	
19.7.1	Make and Country of origin (if imported)	
19.7.2	Designation as per AIS-034 (Part 1 or 2)	
19.8	Stop lamp bulb	
19.8.1	Make and Country of origin (if imported)	
19.8.2	Designation as per AIS-034 (Part 1 or 2)	
19.9	Number plate lamp bulb	
19.9.1	Make and Country of origin (if imported)	
19.9.2	Designation as per AIS-034 (Part 1 or 2)	
19.10	Stop Lamp Bulb (S3)	
19.10.1	Make and Country of origin (if imported)	
19.10.2	Designation as per AIS-034 (Part 1 or 2)	
19.11	Rear Fog Lamp Bulb	
19.11.1	Make and Country of origin (if imported)	
19.11.2	Designation as per AIS-034 (Part 1 or 2)	
19.12	Side Marker Lamp Bulb	
19.12.1	Make and Country of origin (if imported)	
19.12.2	Designation as per AIS-034 (Part 1 or 2)	
19.13	Tail lamp	

19.13.1	Name of Manufacturer :	
19.13.2	Type and Identification :	
19.13.3	Number and colour :	
20.0	Parking lamp	
20.1	Front :	
20.1.1	Name of Manufacturer :	
20.1.2	Type and Identification :	
20.1.3	Number and color :	
20.2	Rear :	
20.2.1	Name of Manufacturer :	
20.2.2	Type and Identification :	
20.2.3	Number and colour	
21.0	Stop lamp	
21.1	Name of Manufacturer :	
21.2	Type and Identification :	
21.3	Number and colour :	
22.0	Reversing lamp	
22.1	Name of Manufacturer :	
22.2	Type and Identification :	
22.3	Number and colour :	
23.0	Direction indicator lamp	
23.1	Front :	
23.1.1	Name of Manufacturer :	
23.1.2	Type and Identification :	
23.1.3	Number and colour :	
23.2	Rear :	
23.2.1	Name of Manufacturer :	
23.2.2	Type and Identification :	
23.2.3	Number and colour :	
23.3	Side :	
23.3.1	Name of Manufacturer :	
23.3.2	Type and Identification :	
23.3.3	Number and colour :	
23.4	Type of flasher :	
24.0	Number Plate Lamp	
24.1	Name of Manufacturer :	
24.2	Type and Identification :	
24.3	Number and colour :	
25.0	Emergency signaling equipment	
25.1	Front :	

25.1.1	Name of Manufacturer :	
25.1.2	Type and Identification :	
25.1.3	Number and colour :	
25.2	Rear :	
25.2.1	Name of Manufacturer :	
25.2.2	Type and Identification :	
25.2.3	Number and colour :	
25.3	Side :	
25.3.1	Name of Manufacturer :	
25.3.2	Type and Identification :	
25.3.3	Number and colour	
26.0	Reflector	
26.1	Rear :	
26.1.1	Name of Manufacturer :	
26.1.2	Type and Identification :	
26.1.3	Number and colour :	
26.1.4	Area :	
26.2	Side :	
26.2.1	Name of Manufacturer :	
26.2.2	Type and Identification :	
26.2.3	Number and colour :	
26.2.4	Area :	
27.0	Internal Lighting & Illumination	
27.2	Passenger Compartment Lighting	
27.2.1	Type :	
27.2.2	Name of Manufacturer :	
27.2.3	Number :	
27.2.4	Illumination intensity :	
27.3	Other Area Lighting	
27.3.1	Type :	
27.3.2	Name of Manufacturer :	
27.3.3	Number :	
27.3.4	Illumination intensity :	
28.0	Electrical Circuit	
28.1	Circuit Diagram (attach details):	
29.0	Electrical Cables	
29.1	Name of Manufacturer :	
29.2	Conductor Cross section :	
29.3	Insulation Class :	
30.0	Fuse	

30.1	Type & Make :	
30.2	Name of Manufacturer :	
31.0	Master switch for electrical :	
31.1	Type & Make :	
31.2	Name of Manufacturer :	
32.0	Seat	
32.1	Seat and its accessories	
32.1.1	Name of Manufacturer :	
32.1.2	Material Grade	
32.1.3	Material Type	
32.1.4	Component Part No. and Batch No.	
32.1.5	Identification Code	
32.1.6	Drawing No.	
32.2	Interior lining of the roof	
32.2.1	Name of Manufacturer :	
32.2.2	Material Grade	
32.2.3	Material Type	
32.2.4	Component Part No. and Batch No.	
32.2.5	Identification Code	
32.2.6	Drawing No.	
32.3	Interior lining of side walls	
32.3.1	Name of Manufacturer :	
32.3.2	Material Grade	
32.3.3	Material Type	
32.3.4	Component Part No. and Batch No.	
32.3.5	Identification Code	
32.3.6	Drawing No.	
32.4	Interior lining of rear walls	
32.4.1	Name of Manufacturer :	
32.4.2	Material Grade	
32.4.3	Material Type	
32.4.4	Component Part No. and Batch No.	
32.4.5	Identification Code	
32.4.6	Drawing No.	
32.5	Separation walls	
32.5.1	Name of Manufacturer :	
32.5.2	Material Grade	
32.5.3	Material Type	
32.5.4	Component Part No. and Batch No.	
32.5.5	Identification Code	

32.5.6	Drawing No.	
32.6	Floor	
32.6.1	Name of Manufacturer :	
32.6.2	Material Grade	
32.6.3	Material Type	
32.6.4	Component Part No. and Batch No.	
32.6.5	Identification Code	
32.6.6	Drawing No.	
32.7	Luggage racks	
32.7.1	Name of Manufacturer :	
32.7.2	Material Grade	
32.7.3	Material Type	
32.7.4	Component Part No. and Batch No.	
32.7.5	Identification Code	
32.7.6	Drawing No.	
32.8	Heating and ventilation pipe	
32.8.1	Name of Manufacturer :	
32.8.2	Material Grade	
32.8.3	Material Type	
32.8.4	Component Part No. and Batch No.	
32.8.5	Identification Code	
32.8.6	Drawing No.	
32.9	Luminaries.	
32.9.1	Name of Manufacturer :	
32.9.2	Material Grade	
32.9.3	Material Type	
32.9.4	Component Part No. and Batch No.	
32.9.5	Identification Code	
32.9.6	Drawing No.	
33.0	Interior Fittings as per AIS-047, as applicable	
33.1	Instrument Panel (Dash Board)	
33.2	Make	
33.3	Identification No. / Part No.	
33.4	Material	
33.5	Drawing showing the mounting details, over all size and all control switches with dimensions	
33.6	Additional details for interior fitting tests to be given (if test is already conducted, this information need not be submitted).	

33.6.1	Instrument Panel Variants with photographs (With / without Airbag, Music system, AC)	
33.6.2	Material used for instrument Panel	
33.6.3	Drawings	
33.6.3.1	Instrument Panel mounting (With hardware details)	
33.6.3.2	'H' point co-ordinates for each seating position	
33.6.3.3	Cross sectional drawings for each projection more than 3.2	
33.6.3.4	Cross sectional Drawing of Gear shift lever	
33.6.3.5	Drawing of Grab handle with cross section	
33.6.3.6	Drawing of Sunvisor with details of metal wire used	
33.6.3.7	Drawing of lamp assembly mounted at roof	
33.6.4	Name of manufacturer of the Interior fitting components	
33.6.4.1	Instrument Panel	
33.6.4.2	Sun Visor	
33.6.4.3	Roof Light	
33.6.4.4	Grab Handle	
33.6.4.5	Gear Lever	
33.6.4.6	Hand Brake Lever	
33.6.4.7	Seats (Need not be specified if done already)	
33.6.4.8	Seat Belts (Need not be specified if done already)	
33.6.4.9	Music System (if provided)	
33.6.4.10	Cigarette lighter (if provided)	
34.0	Battery	
34.1	Type & number	
34.2	Voltage & Capacity (Ah)	
35.0	Any other additional information the Motor Caravan manufacturer / body builder would like to declare	

ANNEX-3
(See 5.2)

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

Name of the Trailer Caravan Manufacturer & Address :	
Name of the basic model :	
Name of variants, if any :	
Place of embossing or etching the trailer caravan identification number (Supporting details by drawing or pictures may be provided if necessary)	
Position of the code for month of production in the trailer caravan identification number	
Position of the code for year of production in the trailer caravan identification number	
Height of the trailer 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. Optionally, it is advised to refer AIS-065 for deciding identification number. In case of any wrong punching, the procedure for making the correction as indicated in AIS-065 shall be followed.

ANNEX- 4
(See 8.3)

Guidelines for Type Approval and Registration of Trailer Caravan

Type approval and Registration for Trailer Caravans

