

Minutes of 59th Meeting of Central Motor Vehicle Rules-Technical Standing Committee (CMVR-TSC) held online on 18th February 2021 under the Chairmanship of Shri Amit Varadan, Joint Secretary (MVL)

List of participants is attached as Annexure-I.

- 1.0** Shri A. A. Badusha, ARAI, welcomed the new Chairman Shri Amit Varadan. He submitted that the Secretariat and the Committee members will continue to extend their full support to the Chairman in the new role. Shri Badusha also acknowledged the immense contribution of the immediate past Chairman Shri Priyank Bharti in the effective working of the Committee and in bringing out important regulations.

Chairman thanked the Secretariat and the Committee for extending a warm welcome. He stated that the Committee plays an important role and that it should continue to strive to bring safe vehicles on road in the country by developing relevant standards and requested the Secretariat to take up the agenda for the meeting.

2.0 Confirmation of Minutes of the previous meeting :

Secretariat informed that Minutes of 58th meeting of CMVR-TSC were circulated vide email dated 8th October 2020 and no comments were received. Committee noted the information and approved the minutes.

3.0 Progress on follow-up points of the last / earlier meetings of CMVR-TSC :

(i) Status of AIS / IS standards notified under CMVR :

Secretariat informed that in the last meeting a list of AIS standards was presented which are notified in CMVR and the plan for their conversion into IS standards was put up for consideration. Also, Secretariat had presented recommendations with respect to the procedure to be followed for the already covered subjects and new subjects. Secretariat informed that in the last meeting Chairman had requested BIS to give its feedback on the recommendations put forth by AISC secretariat. It was highlighted that as a follow up activity, BIS has marked the AIS standards, given in the list, to respective TED Sectional Committees for taking up the conversion work. Also, with respect to effective procedure for handling the conversion of AIS to IS, a small working group meeting involving BIS, AISC Secretariat and MoRTH will be held to work upon a standard operating procedure (SOP) which can be subsequently discussed and adopted in CMVR-TSC.

Committee noted the submissions on the subject. Chairman requested BIS and AISC Secretariat to expedite the work and develop the SOP at the earliest. Also, it was agreed that, till such time as this is done, the existing practice shall continue.

(ii) Radio Frequency Allocation for various Automotive Applications :

Shri K. C. Sharma, MoRTH, informed that the subject will be discussed in a small working group and the recommendations will be subsequently taken up with Department of Telecommunications. He requested Secretariat to coordinate the meeting of the working group. Committee noted the information and agreed to review the progress in the next meeting.

(iii) Crash Guards / Bull Bars :

Ms. Vijayanta Ahuja, ICAT, presented the progress on the subject. Her presentation is attached as Annexure-II. Prof. Anoop Chawla, IIT Delhi, expressed his reservations with respect to retro fitment of crash guards and bull bars. He informed that crash norms are now in place along with pedestrian safety requirements and that the vehicles are so designed to meet these requirements and the fitment of crash guards and bull bars may be detrimental. He submitted that a detailed study needs to be done on the subject. Shri Deepak Sawkar, SIAM, expressed that with the additional fitment the weight of the vehicle will increase which may affect emissions. Ms. Vijayanta Ahuja highlighted that the effect of increase in weight was considered while preparing the recommendations. Shri K. C. Sharma, MoRTH, expressed that subject is sub-judice and it would not be appropriate to take any decision on the subject at this moment. However, the comments from the stakeholders may please be sent to ICAT for review.

(iv) Definition of Hybrids - mild & strong hybrids vehicles :

Shri K. C. Sharma informed that it is proposed to include under CMVR the definitions of hybrid vehicles as covered under the FAME scheme. He highlighted that in the last meeting SIAM was requested to submit its feedback for consideration. Shri P. K. Banerjee, SIAM, submitted that definition for hybrid vehicles is already covered in standards notified under CMVR and that the provisions are adequate and status quo may be maintained. Also, based on the existing provisions in CMVR approvals have already been granted. Further, the policy with respect to providing incentives under Fame 2 scheme is clear and that it applies to only strong hybrids. Shri C. V. Raman, SIAM, highlighted that there are various CO₂ reduction technologies and that they need to be certified. However, the definition should be technology neutral. Also, the industry is not seeking any incentives for hybrid vehicles other than those specifically covered under Fame 2 scheme.

Chairman expressed that it is important to understand DHI's decisions to drop the Mild Hybrids from FAME 2 scheme and that Ministry will review the

submission made by SIAM and inputs from DHI while deciding the way forward.

(v) Analysis of vehicle fire - causes and preventive measures :

Ms. Vijayanta Ahuja, ICAT, presented the update on the subject. Her presentation is attached as Annexure-III. She gave a brief background on the subject and highlighted the various causes of vehicle fire. Based on the study of fire incidences, she presented the recommendations with respect to gas leakage alert system, fire extinguishers, provision of no leakage post-crash in case of gaseous fuel, FDAS and implementation of AIS 101 (Rear Impact) to control fire incidences. She also highlighted the initiatives taken by SIAM on the subject. She expressed the need for collecting the data of the vehicle fire incidents and proposed that a new online portal may be worked upon or SIAM's existing portal to capture vehicle recall may be used for the same. She submitted that ICAT can coordinate the work and a periodic status update can be reported in CMVR TSC. Shri P. K. Banerjee, SIAM, informed that based on the data captured by SIAM it can be inferred that the fire incidents can be linked to the upkeep of the vehicle. Each manufacturer does a detailed study of any incidence reported on their respective vehicle. Committee noted the information. Chairman expressed that there is need for collecting data. However, the mechanism may be deliberated further. He requested SIAM to review the proposal put up by ICAT and propose a way forward on the subject.

(vi) Increase of life of buses and cars from 8 years to 12 years covered under All India Permit :

Shri P. K. Banerjee, SIAM, informed that in the last meeting it was agreed that a special meeting will be called to discuss the various issues related to requirements for buses including the above subject with all stakeholders. Committee noted the information. Chairman requested Secretariat to coordinate the meeting under the convenorship of Ministry at the earliest.

(vii) Truck Cabin Safety :

Shri A. A. Badusha, ARAI, informed that in the earlier meeting it was agreed to call a special meeting to discuss the issue of compliance of truck body code requirements by both OEMs and truck body builders. He highlighted that the Truck Body Code is implemented from 1st October 2019 and that all OEMs have taken approval accordingly. However, only a few truck body builders have approached for approvals so far. Chairman requested Secretariat to convene the meeting with all stakeholders under the Chairmanship of Shri K. C. Sharma, MoRTH, to discuss the issues.

(viii) Height of 2 wheeled vehicle pillion seat :

Shri Harjeet Singh, SIAM, presented SIAM's views on the subject. His presentation is attached as Annexure-IV. He highlighted that the concerns raised with respect to the pillion seat height in some of the two wheelers is primarily based on perception. He presented SIAM's views on each of the concerns raised by the Transport Commissioner Office, Tamil Nadu, and submitted that requirements specified in CMVR are highly matured and are in line with European safety regulations. Further, there are many requirements specified in CMVR which are in addition to EU regulations e.g., Rear wheel splash restriction (Aligned with Australian regulations), Saree Guard (India Unique regulation) etc. He expressed that the concerns raised are primarily based on perception or are fundamentally enforcement issues and do not call for any change in the design of Type Approval process. Committee noted the information. Chairman expressed that the concerned state should be informed suitably.

(ix) AIS 166 - New AIS on protective devices for two wheelers :

Ms. Vijayanta Ahuja, ICAT, presented the status on the subject. She informed that the last panel Meeting was held in February 2021 and the inputs received from SIAM were discussed. It is proposed to hold the next meeting to discuss the open points and that the standard will be put up for approval in the next meeting of AISC. Committee noted the information.

4.0 New Subject for Discussion :

(i) Physical Verification by STA :

Shri A. A. Badusha, ARAI, informed that SIAM has submitted the concerns raised by its members while getting approval from State Transport Authorities during registration. It is submitted that even with the clear provisions laid down in Motor Vehicle (Amendment) Act (MVA), 2019, which states that a motor vehicle sold by an authorised dealer shall not be required to be present physically before a registering authority for the purposes of registration for the first time, if it is a fully built motor vehicle, some States still insist on physical verification. This process takes a lot of time, effort and resources for overall coordination, as each vehicle need to be physically produced to the RTO. This causes an inordinate delay in launch of new vehicles, leading to inconvenience to vehicle buyers and also impacts the tax revenue generated for the states and Centre through new vehicles sales/Registration. MoRTH had issued an advisory dated 10th February 2020 to all State Transport Departments with respect to the provisions stated in MVA. Additionally, SIAM

has requested that Chairman may like to issue directional guidelines to all RTOs to expedite new vehicle model approval solely based on valid CMVR Type Approval certificate and Form 22 issued by authorized testing agencies and manufacturers/dealers respectively.

Committee noted the information. Chairman informed that Ministry will review the issue and release appropriate guidelines to the State Transport Authorities.

(ii) CMV Rule 138 Supply of Helmets :

Shri P. K. Banerjee, SIAM, informed that in an order of Honourable Bombay High Court, Nagpur Bench dated 16th February 2020, the court referred to a communication from the Transport Commissioner, Maharashtra dated 6th February 2016 that seeks compliance of the CMVR Rule 138(4)(f). As per the communication of the Transport Department, Maharashtra, at the time of sale of 2W it is to be ensured that two helmets are provided to the purchaser. However, the above communication does not take into consideration the advisory of MoRTH soon after. As per the advisory, dated 26th May 2016, issued by MoRTH to Principal Secretaries and Transport Commissioners of all States & UTs, supply of only one protective headgear, at the time of sale of a two wheeler, is required to meet compliance as per CMV Rule 138(4)(f). Further, the supply of the same should be duly reflected in the sale invoice issued by the dealer to the purchaser. However, in the past, few states have stopped registration on the pretext of dealers not supplying 2 helmets. He requested Ministry to look into the subject and advise the State Transport Authorities suitably. Committee noted the information. Committee felt that though the rule position and the advisory state otherwise, a revised advisory cannot be issued considering the fact that the court has already issued an order in this effect. However, SIAM may like to make an appeal to the order issue.

(iii) Amendment to CMV Rule 93 with respect to 3 Deck Carrier for 2W :

Shri Harjeet Singh, SIAM, presented the status on the subject. His presentation is attached as Annexure-V. He informed that the subject was discussed in a meeting called upon by Ministry and it was pointed out that the use of triple deck in a transport vehicle rigid truck or trailer is not safe and that the rule position within CMVR too does not allow use of more than two decks. SIAM submitted that vehicles with three decks are safe and improve logistics efficiency. However, Ministry issued an advisory dated 27th February 2019 advising against the carriage of 2W in three deck combinations and loading of

vehicles over the driver's cabin. Consequently, tilt table stationary stability test was carried out successfully to ascertain the stability of the said vehicles. Further, MoRTH advised that a dynamic stability simulation study can be carried out similar to the one already carried out for 4 Wheeler carriers. Shri Singh presented the results of the study carried out by IIT Delhi and informed that 3 deck in 4.75 mts height truck/tractor trailers/ATV without canopy and 3 deck in 4.52 mts height trucks passed the dynamic stability tests and are recommended to ply on roads. Further, simulation results suggest that 3 deck truck/tractor trailer/ATV with canopy projecting out by 1.5 m of turning radius, should not be permitted as it does not meet mandatory maneuverability requirements. Shri Singh presented the international provisions on the subject and requested that the Committee may consider the recommendation of allowing 3 decks in 4.75 mts height truck/tractor trailers/ATV without canopy and 3 deck in 4.52 mts height trucks without canopy. Further, he highlighted the benefits of the proposal to the 2W manufacturers and the Government. Prof. Chawla mentioned that the study report is final and stated that the study has been done extensively and that the recommendations are given in the Final report for adoption by the Ministry. Shri K. C. Sharma, MoRTH, requested Prof. Chawla's views on the lateral loads while negotiating the turn. Prof. Chawla stated that the observed loads are well within the internationally permissible loads. Committee noted the recommendations and approved the proposal. Committee requested Secretariat to review the changes required to be made in CMVR 93 with respect to the proposals stated above. Also, SIAM was requested to submit the final report to the Ministry and to the Secretariat.

(iv) AIS-140 and VLTD VAHAN Registration :

Shri A. A. Badusha, ARAI, informed that SIAM has raised the concern with respect to difficulties faced by the vehicle manufacturers in States like Kerala, Himachal Pradesh and others due to non-uniform and AIS-140 non-compliant implementation of Vehicle Location Tracking Devices (VLTD) and had submitted a request for linking of only OEM authorised VLT suppliers on VAHAN. To this effect, MoRTH released the draft SOP on VLT registration and activation in VAHAN prepared for New and Old vehicles. The SOP specifies the operational procedure, pre-requisites, and other details for compliance as per AIS-140 Standard for Vehicle Location Tracking registration and activation in VAHAN / State Registration Application. As part of the scheme, MoRTH intends to support States/ UTs in implementation of the Vehicle Tracking Platform as per AIS-140 specifications under Nirbhaya Framework. Shri Badusha requested SIAM to elaborate on the point further. Shri P. K. Banerjee, SIAM, informed

that based on SIAM's submission to Ministry, NIC was requested to provide access to OEMs to VAHAN portal so that a similar check and approval mechanism as that used for HSRP can be employed. However, there has not been any progress on the subject.

Committee noted the submission. Chairman informed that a detailed SOP is under formulation and will be released shortly which will address the issues.

Additionally, Shri Balraj Bhanot submitted that in absence of State monitoring mechanism in place to support the VTS devices fitted in vehicle, there will be issues with respect to registration of vehicles. Further, there is no clarity on fitment of VTS and its linking with NIC for in use vehicles. Also, presently there are no standards defined for evaluating the monitoring systems and equipment. He opined that the scheme may be launched in only those states, to start with, where the monitoring mechanism is in place.

Committee noted the observations. Chairman expressed that the submissions will be reviewed by Ministry.

5.0 Report from AISC

(a) Standards and amendments for deliberations / adoption :

Secretariat presented the details of the following standards for consideration for adoption by the Committee. The presentation is attached as **Annexure-VI**.

- i. AIS-009 (Rev.2): Automotive Vehicles - Installation Requirements of Lighting and Light- signaling Devices for L Category Vehicles, their Trailers and Semi-Trailers
- ii. AIS-010 (Rev.2) (Part 1): Provisions concerning the Approval of Headlamps emitting an Asymmetrical Passing Beam or a Driving Beam or both and equipped with Filament Lamps and/or LED Modules
- iii. AIS-010 (Rev.2) (Part 2): Provisions of motor vehicle headlamps emitting a symmetrical passing beam or a driving beam or both and equipped with filament, gas-discharge light sources or LED Modules
- iv. AIS-010 (Rev.2) (Part 3): Provisions concerning the Approval of Front Position Lamps, Rear Position Lamps, Stop Lamps, Direction Indicators, Rear- Registration Plate Illuminating Devices and Reversing Lamp for Vehicles of Category L and their Trailers and Semi-trailers
- v. AIS-057 (Rev. 2): Performance Requirements for Retro-Reflecting Devices for Motor Vehicles and their Trailers

Shri K. C. Sharma, MoRTH, expressed that for the Light and Light signalling devices standards, listed in item (i) to (v) above, the alignment of the proposed standards is done with 2015 or 2016 version of

reference UN regulations. Considering the fact that the standards will take further time for implementation the gap between national Standards and UN Regulations will still be more than 6 to 7 years. Therefore, it is not recommended to adopt the proposed standard and that the panel should work further to align the standards with the current UN Regulations. Shri Feroz Khan, panel Convener for Light and Light Signalling devices AIS standards, expressed that significant work has been done already by the panel to bring the alignment of AIS standards upto 2015/2016 level of UN regulations and proposed that the standards may be adopted and that the panel will continue to work for further alignment. Secretariat informed that there are other light and light signalling devices standards which too are under the process of revision and that it has been decided to align those standards with reference UN Regulations upto 31st December 2018. It was informed that in the year 2019, the UN Regulations on light and light signalling devices have undergone an administrative change and that numerous standards were combined into only three new regulations which have come into force from May 2020. Hence, with the alignment of national standards with UN Regulations upto 31st December 2018, the national standards would be technically aligned with UN Regulations and that further simplification of standards in line with new UN Regulations, which is a time consuming process, will be taken up subsequently. Chairman expressed that technical panel may explore the feasibility of aligning with the latest series of UN Regulations.

Committee noted the details. The technical panels were requested to align the standards with at least 31st December 2018 version of UN Regulations and to explore the feasibility of aligning with latest series of UN Regulations. Timelines are to be laid down for this.

vi. AIS-164: Constructional and Functional Requirements for Insulated Vehicles

Shri A. A. Badusha, Convener AIS 164, presented the progress on the standard AIS 164 for Refrigerated Vans. He informed that the draft standard based on international reference of ATP agreement, 2020 was prepared and deliberated by the panel consisting of members from test agencies, SIAM and reefer van manufacturers. The standard covers different types of refrigerated vehicles and procedure for measuring and checking the insulating capacity and the efficiency of the cooling or heating appliances of Special Purpose Vehicle for the carriage of

perishable foodstuff. It is proposed to have unique marking for such vehicles for easy identification. He submitted that the deliberations of the panel are complete and proposed that the standard may be adopted by the Committee. Also, it is proposed that the standard be implemented with a lead time of one year.

Committee noted the details and adopted the proposed standard. Secretariat was requested to submit the finalized copy of the standard for hosting on MoRTH website and to submit the proposed notification for the consideration of the Committee.

vii. AIS-168: Specific Requirements for A6 and A7 Category Electric Power Train Agricultural Tractors

Secretariat presented the progress on AIS 168 on Electric Agricultural Tractors. It was informed that AIS-168 is formulated based on Regulation (EU) No 167/2013: Base Regulation for Agricultural Tractors, Regulation (EU) 2015/208: Supplementing regulation to above (Requirements on the safety of electrical systems) and Regulation (EU) No 3/2014: Vehicle functional safety requirements for the approval of two- or three-wheel vehicles and quadricycle. The standard covers requirements with respect to electrical safety, Water effect tests, Tractor Motor Power Test, REESS Safety and EMC. The standard was approved in the 65th meeting of AISC held on 12th January 2021. Also, a draft notification G.S.R 100 (E) dated 5th February 2021 has been issued by the Ministry to implement the proposed standard. The finalized draft standard was hosted on MoRTH's website to seek comments and that no comments were received during the stipulated time. Shri R. P. Vasudevan, TMA, stated that comments on the proposed standard have been submitted to the Secretariat recently for review. Secretariat informed that the comments received from TMA were reviewed by the Convener and it is felt that currently there is no change required in the standard based on the comments. However, if need, be the same could be considered as an amendment in future. Shri Chimote, CFMTTI, submitted that CFMTTI had submitted its points on the standard which were discussed in the meeting and were agreed upon to include in the standard. However, the finalized draft does not reflect the respective changes. Secretariat informed that the same will be discussed with Panel Convener and if the comments were accepted the same will be included appropriately. Shri K. C. Sharma, MoRTH, expressed that Ministry did not receive any comments while the standard was hosted on MoRTH website. He proposed that the standard should be adopted and that comments, if any, can be discussed by the panel.

Committee noted the details and adopted the proposed standard. Panel was requested to review comments received from CFMTTI and TMA. Secretariat was requested to take up the standard for publication.

viii. AIS-169: Guidelines on Provisions for Adapted Vehicles of categories M1, N1 and M2:

Secretariat presented the progress on AIS 169 for Guidelines on Provisions for Adapted Vehicles of categories M1, N1 and M2. It was informed that the panel deliberations are complete and as per the terms of reference of the panel the work has finished by January 2021. The panel deliberations were held at length and panel comprised members from Test agencies, experienced RTO personnel, Doctors dealing with physical disability and rehabilitation, actual adapted vehicle users, Retro-fitters and vehicle as well as component manufacturers. The scope of the standard covers M1, N1 and M2 categories vehicles. The reference for the standard was drawn from an earlier procedure prepared under AISC, MORTH Advisories, EU Regulation 2007/46, EU Regulation 2018/858, ISO 10542-1: 2012 and UN Regulation 107. The standard is divided in following four parts covering various types of alterations required in the vehicle to assist mobility of specially abled people. The standard was approved in the 65th meeting of AISC held on 12th January 2021. Further, Secretariat presented the proposed draft notification for consideration of the Committee. Additionally, Secretariat presented the future work plan for the panel for developing requirements to cover two and three wheeled adapted vehicles.

Committee noted the details and adopted the proposed standard. Secretariat was requested to submit the finalized copy of the standard for hosting on MoRTH website and to submit the proposed notification for the consideration of the Ministry. Also, panel was requested to work on extending the scope of the standard to cover two and three wheeled adapted vehicles.

ix. AIS-171: Safety and Procedural Requirements for Type Approval of Pure Ethanol, Flex- Fuel and Ethanol Gasoline Blend Vehicles

Secretariat presented the proposal for adoption of AIS-171 on Safety and Procedural Requirements for Type Approval of Pure Ethanol, Flex-Fuel and Ethanol Gasoline Blend Vehicles. It was informed that based on the directions received from Ministry, the standard is formulated to address the safety requirements. Panel comprising members from ARAI, SIAM, ACMA, IOCL, ICAT, IAC, Praj and MORTH had detailed deliberations and

the draft AIS 171 standard was prepared and circulated to the panel members for comments. The comments received from ACMA were suitably incorporated. The finalized draft thus prepared was submitted to MoRTH for hosting on MoRTH's website. Comments received from SIAM were reviewed and modifications have been done suitably. The standard was approved in the 65th meeting of AISC held on 12th January 2021. Further, it was highlighted that IS 17021: 2018 is available which gives specifications of E 20 as an Automotive Fuel. Also, Draft Notification GSR 757 (E) for notifying E-20 as an automotive fuel dated 11th December 2020 has been published by MoRTH. Shri P. K. Banerjee, SIAM, expressed that introduction of a new automobile fuel requires lot of development work and that, to start with, the reference fuel specification must be established first. Also, he highlighted the concerns with respect to quality of E10 blended fuels. He brought to the notice of the Committee a circular issued by Oil companies wherein it is mentioned that if the phase separation happens for the E10 blend fuel than it will not be the responsibility of the oil company. This leads to confidence issues within the consumers for use of such fuels. He submitted that oil companies too should take responsibility for the quality of fuel supplied and that the consumer should not be burdened. He requested the Chair to review the concerns before taking the subject forward. Dr. Reji Mathai, Director ARAI, recommended that the fuel quality issues can be discussed in SCOE and since there are no specific views on safety aspects which are covered in AIS 171 the Committee may adopt the proposed standard. Committee noted the details and it was principally agreed to adopt the proposed standard. With respect to SIAM's concerns with respect to fuel quality and reference fuel specifications it was agreed to discuss the subject during the forthcoming meeting of SCOE. Secretariat was requested to take up the standard for publication and amendments, if any, may be processed later.

Secretariat proposed the adoption of the following amendments:

- i. Amd 9 to AIS-007 (Rev.5) (Information on Technical Specifications to be submitted by the Vehicle Manufacturer)

Amendment is proposed to replace Table 20 (CNG Kit Components) in line with Annexure I of AIS-024 (Rev. 1) (Part A, B, and C) and few editorial corrections in amendment 8 to AIS-007 (Rev. 5).

- ii. Amd 2 to AIS-017 (Procedure for Type Approval and Certification of Vehicles for Compliance to Central Motor Vehicles Rules.)

Amendment is proposed to withdraw Amendment 1.

- iii. Amd 5 to AIS-023 (Automotive Vehicles - Seats, their Anchorages and Head Restraints for Passenger Vehicles of Categories L7, M2, M3 and Goods Vehicles of Category N - Specifications)

Amendment is proposed to add simulation method as an alternate method for approval of seats.

- iv. Amd 1 to AIS-028 (Rev.1) (Part A), (Part B) and (Part C) (Code of Practice for use of Gaseous Fuels in Internal Combustion Engine)

Amendment is proposed to retain the content of compliance plate and Label as the earlier version of AIS-028 standard.

- v. Amd 3 to AIS-071 (Part 1) (Automotive Vehicles - Identification of Controls, Tell-Tales and Indicators)

AIS 160 specifies visual display, control and tell-tale requirements for CEVs which are as per ISO IS/ISO: 6011:2003 and IS/ISO: 10968:2004 for CEVs covered in IS/ISO 6165:2012 and as per AIS 071 (Part 1) for CEVs other than those covered in IS/ISO 6165:2012. The amendment is proposed to bring clarity on the same.

- vi. Amd 3 to AIS-075 (Approval of Vehicles with regards to their protection against unauthorized use-four wheeled vehicles)

Amendment is proposed to add provisions to extend the approvals granted as per AIS-075 (Part 1), which is primarily meant for M1 and N1 category vehicles, to the vehicles covered in the scope of 075 (Part 2) i.e. to M2, M3, N2 and N3 category of vehicles.

- vii. Amd 4 to AIS-110 (Automotive Vehicles -Temporary-Use Spare Wheel/ Tyres and Run Flat Tyres)

Amendment is proposed to specify design speed of 80 km/hr for temporary spare unit, fitted on vehicles of category L7, for types 1, 2, and 3; to add clarity with respect to use of Max Speed Warning symbol for Quadricycle since maximum speed of such vehicles is 70 km/h.; to add provision for L7 category vehicles, an instruction to drive with caution and at no more than the permitted maximum speed which may

be specified by vehicle manufacturer. And to add provision to allow Testing of Category L7 with maximum speed less than 55 km/hr at 90 percent of maximum speed as per current IS standard for brakes and addition of formulae for stopping distance for such vehicles.

- viii. Amd 1 to AIS-124 (Procedure for Type Approval and Certification of Motor Caravans for compliance to Central Motor Vehicles Rules)

Amendment is proposed to modify in the scope of the standard the seating capacity to 12 excluding driver in place of 13 excluding driver and to correct version of reference standards for Fire extinguishers.

- ix. Amd 4 to AIS-125 (Part 1) (Constructional and Functional Requirements for Road Ambulances)

Amendment is proposed to allow provision to fit an attendee seat near the head of stretcher, in case of multi stretcher ambulance.

- x. Amd 5 to AIS-145 (Additional Safety features for Category M & N Vehicles)

Amendment is proposed to mandate airbags for the front passenger.

- xi. Amd 6 to AIS 153 (Additional Requirements for Bus Construction)

Amendment is proposed to add provisions for exemption from vibration and harshness test for buses with air suspension, if same body is tested and approved with mechanical suspension.

Secretariat informed that the above amendments were deliberated and approved in 65th meeting of AISC. Committee noted the details and adopted the proposed amendments.

(b) Report on Running Subjects :

Secretariat presented the progress on the following subjects which are under discussion in AISC. The presentation is attached as [Annexure-VII](#).

i. Motor Vehicle Parts Compliance Requirements :

Ms. Seema Babal, ACMA, gave an update on the subject. She informed that earlier it was proposed to have a centralized database of the approved components. The centralized database in the form of the web portal was discussed with ARAI wherein it was agreed to collect data

from all test agencies and that the same could be used to verify the authenticity of the component. However, due to the pandemic, the funding for the said portal could not be realized which was under discussion with DHI. Also, recently few Quality Control Orders (QCO) and Compulsory Registration Orders (CRO) have been issued for automotive components by various Ministries. These orders cover approval as well as enforcement mechanism. Further, ACMA has discussed the subject with SIAM and use of CROs is being explored to address the subject. In view of the same it was discussed that the portal is required to be backed up by an enforcement mechanism to make it effective. Ms. Babal submitted that based on the discussions between SIAM and ACMA a proposal on CROs will be presented to the Committee. Shri K. C. Sharma, MoRTH, expressed that few QCOs have already been issued and more components are expected to be covered under the scheme. It would be advisable to monitor the effectiveness of these orders first and that at this stage there may not be need to create a parallel portal.

ii. Development of noise standard for battery operated vehicles :

It was informed that a technical panel has been formed to develop a new standard on the subject in line with UN R 138 and UN GTR which is under formulation.

iii. AIS-162 Advanced Emergency Braking Systems (AEBS) and Frontal Collision Warning System :

It was informed that a new standard on FCWS is under finalization. Also, the panel is working on the new standard for AEBS and that the work on both the standard is expected to be completed shortly.

iv. Super Single Tyre :

It was informed that as advised in the last meeting the panel is working on evaluating the effect of high axle loads on the pavements. BIS has been requested to sponsor the study.

v. Creation of new vehicle category L2e-P in line with EU 168/2013 :

It was informed that a technical panel has been formulated to review the requirements. The panel will work on a new standard and recommend the required changes in CMVR for including the new vehicle category.

vi. Request for permission for modification and to attach additional trailer to the truck :

Shri A. A. Badusha, Convener AIS 113, informed that definition of Road Train is already defined under CMVR. Also, CMV Rule 93 already covers the overall dimensions of the Road-train vide GSR 414(E) dated 26th June, 2020. Further, SO 3467 (E) dated 16th July 2018 covers Maximum Safe Axle Weight Provisions for semi-articulated trailers and truck-trailers. The panel has reviewed the provisions in AIS 113, that can be made applicable to road-trains, viz., definition of truck trailers, ABS brakes as per IS 11852, Tyres as per IS 15636, etc. Shri Badusha highlighted the work completed by the panel and the points for further discussion. He informed that a working group is formed to verify the braking performance, which will provide inputs to the panel. Further two more panel meetings would be held to complete the activity.

vii. Amd to AIS-145: Additional Safety features :

Secretariat informed that based on the decisions taken in the 58th meeting of CMVR-TSC, panel deliberated upon the amendment with respect to airbag for front passenger seat. The amendment was finalized by the panel and was approved in the 65th meeting of AISC held on 12th January 2021. It is agreed to publish the amendment upon release of final notification.

viii. Fire Safety in Passenger Compartment of Buses :

It was informed that a proposal from DRDO was received on suppression of fire propagation inside the passenger's compartment in addition to existing requirement of fire suppression in engine compartment. DRDO made a presentation on the Low Pressure Water Mist System which will assist in safe evacuation of passengers in event of fire in passenger compartment. AISC has requested the AIS 135 panel (FDAS and FDSS), to take up the subject for discussion in the panel and the feasibility of developing a standard.

ix. Brakes and Other New Regulations :

Secretariat informed that AISC has taken up the work for preparing the roadmap for safety regulations to be introduced in the future. The work will involve alignment of existing standards with latest UN Regulations and development of new safety regulations.

Committee noted the details. Chairman directed that the activities should be completed in a time bound manner. Also, for subjects such as developing new standard for noise for battery operated vehicles and exploring feasibility of developing standard for fire mitigation in passenger compartment of buses, the activities may be expedited considering the importance of the subject.

6.0 Finalized Draft AIS (hosted on MoRTH Website) :

Secretariat informed that the finalized draft of the following standards was hosted on MoRTH website to seek comments from public at large. These standards were adopted in the earlier meeting of CMVR-TSC. Secretariat requested the Committee to allow publishing of the standards.

- i. AIS-088 (Rev. 1): Performance Requirements of Rear Marking Plates (Rear Warning Triangles) for Automotive Vehicles, Agricultural Tractors their Trailers and Semi-Trailers
- ii. AIS-163: Procedure for Type Approval of Special Purpose Vehicles (SPV's) for Compliance to Central Motor Vehicles Rules
- iii. AIS-167: Constructional and Functional Requirements for Special Purpose Vehicle-Two Wheeled First Responder-Fire
- iv. AIS-168: Specific Requirements for A6 and A7 Category Electric Power Train Agricultural Tractors
- v. AIS-170: Remote Sensing Devices for on-road Emissions Monitoring - Product Specifications and Programme Guidelines
- vi. AIS-171: Safety and Procedural Requirements for Type Approval of pure ethanol, flex- fuel & ethanol gasoline blend vehicles

Committee noted the information and it was agreed to publish the standards.

7.0 Report from BIS :

Secretariat informed that in the last meeting a list of IS standards which have been published by BIS were reviewed and referred to AISC to propose a way forward for implementation. The standards were reviewed in the 65th meeting of AISC and it was agreed to take proposal for their implementation from the respective TED Committees. Further, BIS has submitted a new list of standards for consideration of the Committee in this meeting. Committee noted the information and AISC was requested to propose the implementation plan. Shri Balraj Bhanot, expressed that AIS 140 on VTS devices has been converted to IS 16833 and that it is yet to be notified. Secretariat informed that both AISC and CMVR-TSC have already recommended the same for notification and that the notification for the same is in progress.

Shri R. R. Singh, Head TED BIS, informed that as per the directions received from

Secretary MoRTH, the ISO standards with respect to Hydrogen Fuel Cell Vehicles which are referred in AIS 157 were taken up for adoption as IS standards and that the same will be published shortly.

8.0 Review of Notifications :

Secretariat informed that various safety regulations were adopted in the earlier meeting of CMVR-TSC viz., Whole Vehicle Safety SOP, AIS 142 on Tyre rolling resistance, rolling sound and wet grip, Revised pass by noise standard for 2 and 3 wheelers, Revised standards for electric vehicles, i.e. AIS 038 (Part 2) and AIS 156 etc. Committee may like to review the progress. Shri K. C. Sharma, MoRTH, informed that the work is in progress.

With respect to notification to implement AIS 142, Committee reviewed the status of availability of test facilities with different test agencies. The following submissions were made by different test agencies:

- i. ICAT: Test facilities for both Wet grip and rolling resistance is ready
- ii. GARC: Test Facility is ready (tie up with IRMRA)
- iii. NATRAX: Test Facility is ready
- iv. IRMRA: Rolling resistance facility is ready and in use and for wet grip traction trailer is expected by July, 2021.
- v. ARAI: Rolling resistance facility is ready. Wet grip facility will be ready in three months.

Chairman expressed that considering the readiness of the test agencies the standard can be taken up for implementation. Shri T. C Kamath, ATMA, informed that the Tyre Industry has received communication only from ICAT to send tyres for testing and that the tyres will be reaching ICAT shortly for conducting the tests. He highlighted that whereas ARAI and ICAT are self-sufficient test facilities, which receive tyres and on evaluation give the test reports, the other centres are asking for supply of a vehicle along with the tyres for doing the test, which is not feasible for the tyre industry. Shri K. C. Sharma, MoRTH, requested ATMA / ITTAC to take up the subject with different test agencies. The purpose of initiating the discussion in CMVR-TSC was to take review of the availability of test facilities with different test agencies.

9.0 Any Other Point :

Dr. Piyush Jain, Director MoRTH, informed that the draft report required to be issued by test agency should not be issued on the letter head of the test agency and that it should be issued with water mark as "Draft". Further all the test agencies may prepare detailed SOP for the issue of Draft and Final Report to prevent any possible fraud or misuse. This may be vetted by the Governing body.

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131.	Shri Sachin Telore	-
132.	Shri Anand	-

133.	Shri Thankavelu Vimalananthan	-
134.	Shri Vijay Shetty	-
135.	Shri Deepak	-
136.	Rohit SA Transport	-

* The attendance list is prepared based on the login details entered by the participants.

Vehicle fitted with Crash Guard / Bull bar

59th CMVR-TSC

18th February, 2021

Crash Guard/Bull Bar

➤ Background

- On 7th December, 2017 Morth issued an order "No. RT- 1 1021 I 38120 1 7-,UVL" directing all Transport Commissioners of all the States to ban the fitment of crash guards/Bull bar.
- During 52nd CMVR-TSC it was decided to formulate a small working Panel under Convenership of Shri Dinesh Tyagi, Director ICAT, to further explore the subject
- The panel, included SIAM, ACMA, Test agencies & members of the bull bar association, held discussion on several occasions
- After due deliberations ICAT submitted its final recommendations to CMVR-TSC
- One of the members of bullbar association approached ICAT for testing based on ICAT recommendations.

Recommendation @ 57th CMVR TSC

Final Recommendations

2W

- ① As discussed in 56th CMVR TSC – Draft Amendment to AIS 147 – Amd 1 was circulated.
② AMD NO. 1 AIS-147 :2018 is published

Crash Test /
Deflection test added
in Panel discussion in
June 2020

3W

Panel recommends - No such external fitments.

4W

M1

- ① **Physical verification** : Obstruction to visibility of registration plate and external lighting and signalling devices.
② Comply to AIS-120: 2014:External Projection ; AIS:100- Pedestrian safety; AIS:098- offset Frontal Collision ;AIS:145-Air bag deployment

N,M2,M3

Physical verification : Obstruction to visibility of registration plate and external lighting and signalling devices.
comply to the requirements of IS: 13942: 1994 -external projection

Crash / Bull bar: Background

Recommendation from Committee

A. Static Test

Sl.no	Standard	TEST
1.	AIS-008(Rev1) : 2010	Physical verification in order to verify any Obstruction of Lights
2.	CMV Rule 50	Obstruction to visibility of registration plate
3.	AIS-120: 2014	External Projection
4.	CMV Rule 93 and vehicle weightment	Vehicle dimensions and weightment

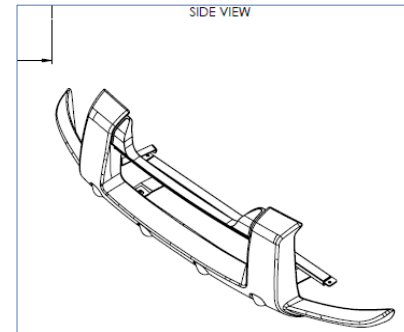
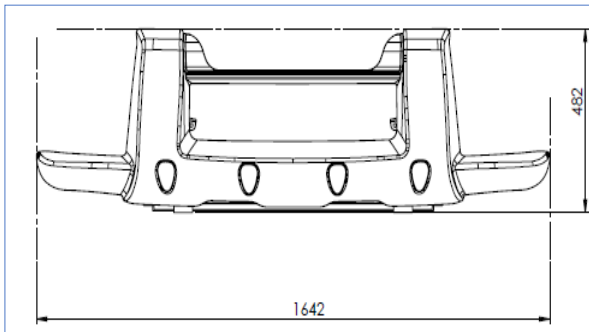
B. Dynamic Test

Sl.no	Standard	TEST
1.	AIS:098-2008	Offset Frontal Collision test
2.	AIS-100: 2010	Pedestrian safety
3.	AIS-145: 2017	Air bag deployment

Vehicle Specifications



Category	M1
Vehicle un laden weight (kg) as per RC	1262
Weight of Crash / Bull bar	9+0.4 Kgs kg (front) , 5 kg (rear)
Material of Crash / Bull Bar	ABS & MS Clamp



Results of Development Test



Sr. No.	Test Name	Test Objective	Status	Test Result
Phase 1: Static and non-Destructive test				
01	AIS-008(Rev1) : 2010	Physical verification in order to verify any Obstruction of Lights	●	No obstruction to any light was observed
02	CMV Rule 50	Obstruction to visibility of registration plate	●	No obstruction to any visibility of registration plate was observed
03	AIS-120: 2014	External Projection	●	Complies to AIS 120
04	CMV Rule 93	Vehicle dimensions and weightment	●	Changes highlighted in subsequent slide
Phase 2: Crash test				
05	AIS-100: 2010	Pedestrian protection evaluation (Head form & Leg form Impact)	●	Compliance with the requirements
06	AIS:098-2008	Offset Frontal Collision test	●	Compliance with the requirements
07	AIS-145: 2017	Air bag deployment	●	Compliance with the requirements

Vehicle Fitments



Particulars	Front Bull bar	Rear Bull Bar	Side Step	Roof carrier
Fitments	Yes	Yes	Yes	Yes
Dimension change with respect to base	Length : 125 mm	Length : 70 mm	width : 70 mm	height : 60 mm

Vehicle dimension

Vehicle categories	Maximum width (mm)	Maximum length (mm)	Maximum height (mm)
MI : Limit as per CMVR	2600	12000	4000
M1 : tested vehicle	1815	4600	1750

Summary



- ✓ ICAT tested a vehicle fitted with crash guard on request of one of the retrofitter , the fitment meets the recommended requirements.

Request way forward



Thank You


Analysis of Vehicle Fire - Causes and Preventive Measures

59th CMVR-TSC










18th February, 2021

Fire in Vehicles

- During 55th Meeting held on 6th February, 2019 issue regarding “Evaluation of recent incidents of Fire in vehicles and suitable remedial measures” was discussed.
- ICAT was requested to submit a draft proposal on the issue.
- During 56th CMVR-TSC meeting held on 22nd August, 2019 SIAM informed that they conducted a study in year 2014 and it was concluded that major source of fire was due to use aftermarket accessories which are not approved by OEM.
- SIAM also submitted the details regarding the various initiatives taken by its member companies to spread awareness on the subject.
- Last CMVR-TSC committee acknowledged the importance of this issue and decided to include it as permanent agenda.




Causes of Car Fire

fuel system leak		Poor Maintenance	
Short circuit		Retrofitted / high voltage head light bulb	
Electrical System Failures		Non-genuine Horns	
Overheating Engines		Non approved electric accessories	
Car Crashes			

Source: SIAM study and open source

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Fire in Vehicles

ICAT presentation Brief

➤ “Evaluation of recent incidents of Fire in vehicles and suitable remedial measures” was discussed during 55th CMVR-TSC meeting

➤ **Possible reasons were highlighted:**

- Fuel leakages,
- overheating,
- short circuits,
- Retrofitment,
- Aftermarket fitment,
- Poor Maintenance

➤ **Recommendations made:**

- Education and awareness program by OEM/Dealer
- FDAS & FDSS introduction
- checks at I&M center / Service Center
- Safety Standard such as Flammability / Fuse test
- reports to have validity period, say 5 years.

SIAM Study-Summary

➤ **Possible Main Causes:**

- Non genuine Accessories
- Tampering of electrical component
- Fuel leakage
- Short circuit
- Electrical equipment failure
- Retrofitment of unauthorized CNG/LPG kit

➤ **Following were proposed for OEM's on a voluntary basis:**

- Education and awareness program by OEM/Dealer
- Display Do's & Don't at the dealership
- Format introduction at OEM workshop to inform customers about non-genuine parts fitted
- Greater emphasis on safety during sales, service etc.

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ICAT Recommendations



<u>Recommendation</u>	<u>Action points</u>	<u>Test Specification</u>
Gas leakage alert system	<ul style="list-style-type: none"> •Amd to AIS028 for inclusion of provision for gas leakage alert system 	<ul style="list-style-type: none"> ➤NG Gas detector •In case of NG gas leakage either in the engine or passenger compartment or in boot space •Vehicle shall be able to alert the driver by means of audible warning •Frequency of audible warning shall be atleast 1cycle/2 min
Fire extinguisher	<ul style="list-style-type: none"> •Amd to CMV Rule 138 for inclusion of provision of fire extinguisher 	In CMV Rule 138 after clause (2)(f) the following shall be inserted (g) "Fire extinguisher of atleast 2 kg as prescribed by manufacturer"
Provision of no leakage post crash in case of gaseous fuel	<ul style="list-style-type: none"> •Amd to crash standards i.e. AIS 96 to 99 	<ul style="list-style-type: none"> ➤Addition of general requirement: "In the case of a vehicle having provision of being propelled on gaseous fuel, tests to be conducted on gaseous mode and no gaseous fuel shall be detected in the engine or passenger compartment or in boot space after collision"
FDAS	<ul style="list-style-type: none"> •Amd to AIS-135 : 2016 for inclusion of M1 category in scope of AIS 133 for FDAS 	<ul style="list-style-type: none"> ➤Applicability of Fire Detection and Alarm Systems (FDAS) to M1 category vehicles
AIS 101	<ul style="list-style-type: none"> •Notify AIS 101 	<ul style="list-style-type: none"> ➤Notify AIS 101 in CMV Rule 124 Table

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5

SIAM Awareness Program



Initiatives

Customer Education
Dealer Education
Owners Manual
Communication of non-genuine part fitments

RENAULT INDIA PRIVATE LIMITED

A welcome kit is provided to every customer highlighting importance of using genuine accessories

Notification to customer at time of service & repair through "service advisor" phone app

Skoda Auto Volkswagen India Private Limited

Notification to customer in case non-genuine part fitted on vehicle noticed during repair

Customer education advantages of following:
(a)Using genuine parts & periodic maintenance
(b)Getting repair job done at authorized workshops

Dealer coaching on using interactive bay, customer education, technical knowhow

Hyundai Motor India Limited

GDMS (Global Dealer Management system) 1 vehicle Record
(a)Vehicle Non genuine fitment /modifications entry provision in DMS during repair order opening
(b)Dealer observation get printed in customer invoice for customer awareness purpose

Awareness material display in Touch screen Kiosk in workshops

Do and Don'ts mentioned In product owners manual

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6

Way forward



- ✓ Issue of Fire in vehicle has been in discussion for a long time.
- ✓ As its is a sensitive matter related to safety of vehicle passengers.
- ✓ In view of unavailability of comprehensive study/data related to vehicle fire incidents
- ✓ ICAT proposes formulation of online platform at MoRTH website for reporting of fire incidents
- ✓ ICAT shall coordinate in formulation of platform and further analysis. Periodic status update can be reported in CMVR TSC

Way forward



➤ Proposal

- ✓ Creation of online reporting link of Fire Incidents on MoRTH website.

➤ Objective

- ✓ To be reported by Manufacturer(s) / body builder(s) weekly
- ✓ Data collection of fire incidents
- ✓ Analysis of the data in collaboration with SIAM / OEMs / body builders / retrofitters / other stakeholders for further investigation , recommendation and action taken improvements with regard to vehicle safety.

Proposed Template for Reporting



Date of Incident	Casualty, if any	Location of incident	Vehicle Category	Make	Registration no.	Fuel	Servicing Details	Availability of	Retrofitment, if any
	Wounded	City and State	L1/L2/M1/M2			Petrol/ Diesel / NG /...	Last Service details	Fire Extinguisher, FDAS/FASS etc	
		Selection based on drop down	Selection option			Selection option	Date and Service station details	Selection option	Conversion, change in wiring Harness, Audio setup etc

Brief description of Incident

Action taken by the Driver / passengers / on lookers, if any

Any other information you wish to add

Access to vehicle for investigation

Analysis of investigation (to be uploaded)



➤ It is proposed to initiate as a part of Road safety Mission

SIAM submission on Height of 2 wheeled vehicle pillion seat

CMVR-TSC – Agenda 2 (viii)

SN	Concerns as per Letter	SIAM Comments	SIAM Response
1.	Major cause of road accidents is over speeding because motorcycles are designed in such a way to ride at higher speed	<p><u>Technically incorrect and perception-based</u></p> <ul style="list-style-type: none"> Vehicles are designed by considering safety standards established globally and covered in Indian CMVR* Rules. <p>The traffic rules need to be enforced seriously.</p>	<ul style="list-style-type: none"> Vehicle are designed as per CMVR* rules and Type Approved for compliances to the same. Primarily an enforcement Issue because the accidents due to over speeding are result of rider's action / thinking.
2	Recently, High Power bikes are provided with Antilock Braking System which intended to reduce the fatalities. But this results to a disadvantage that the bike provided with ABS makes the rider to drive the vehicle at very high speed which results in crash.	<p><u>Technically incorrect and perception-based</u></p> <ul style="list-style-type: none"> ABS Regulations are introduced on high power vehicles following global & CMVR Rules. 	<ul style="list-style-type: none"> Vehicle are designed as per CMVR rules and Type Approved for compliance to the same. Primarily an enforcement Issue Rider Education is important so that riders follow the traffic rule for maximum vehicle speeds (speed limit) on the public roads.

CMVR-TSC – Agenda 2 (viii)

SN	Concerns as per Letter	SIAM Comments	SIAM Response
3	Two wheelers ridden as race bikes in public roads are vulnerable to accidents	<p>Technically Correct</p> <ul style="list-style-type: none"> 2W design and regulations never encourage such practices Riders should be encouraged to wear helmets and follow safety protocols. 	Primarily an enforcement Issue
4	Unlike 4W, 2Ws don't have doors, air bags or any other safety equipment during collision to protect them from other Vehicle/ Median	<p><u>Statement of Fact</u></p> <ul style="list-style-type: none"> Based on vehicle structure and India uses conditions certain safety items like helmet, saree guard & AHO etc. has been considered in CMVR 	No Comments

CMVR-TSC – Agenda 2 (viii)

SN	Concerns as per Letter	SIAM Comments	SIAM Response
5	Handlebars of these bikes are so designed and positioned at same height/below with that of saddle (Drop Handlebars) to feel the rider that he is on racing track	Perception-based <ul style="list-style-type: none"> Pillion seat and footrest location is decided by duly considering safety comfort of riders. 	<ul style="list-style-type: none"> Vehicle are designed as per CMVR rules and Type Approved for compliance to the same. Primarily an enforcement Issue Rider should operate any motorcycle as per the traffic rules with his/her moral responsibility.
6	Pillion rider seat is positioned in such a way that it is highly elevated than driver's seat without any grip for pillion rider	Incorrect <ul style="list-style-type: none"> Pillion rider seat height is part of overall 2W dim and comply with CMVR No-93 All 2Ws are provided with Pillion grip as per CMVR no.123 	<ul style="list-style-type: none"> Vehicle are designed as per CMVR rules and Type Approved for compliance to the same.

CMVR-TSC – Agenda 2 (viii)

SN	Concerns as per Letter	SIAM Comments	SIAM Response
7	Aged person, women and children are unable to sit comfortably	<ul style="list-style-type: none"> There are customers who buy such Vehicle, knowing these facts Variety of designs are available as per customer choice, requirements and comfort level. <p>It is customer requirement and genre specific choice.</p>	<ul style="list-style-type: none"> Vehicle are designed as per CMVR rules and Type Approved for compliances to the same.
8	During sudden braking, as there is no grip provision for pillion rider as well as the seat is in an elevated position, whole weight of the pillion rider forces upon rider, which results in imbalance his position and whereby causing accident	<ul style="list-style-type: none"> Pillion grip is provided as per CMVR no. 123. Pillion weight forces rider during sudden braking is technically correct, however, it is almost same situation in all 2Ws in case pillion rider does not hold the grip. 	<ul style="list-style-type: none"> Vehicle are designed as per CMVR rules and Type Approved for compliance to the same.

CMVR-TSC – Agenda 2 (viii)

SN	Concerns as per Letter	SIAM Comments	SIAM Response
9	Preferably higher Horsepower MC can be provided with single seat	<ul style="list-style-type: none"> Not acceptable as all Indian 2W are complying Indian regulations. <p>No such restriction available internationally.</p>	<ul style="list-style-type: none"> Vehicle are designed as per *CMVR rules and Type Approved for compliance to the same.

- In general, SIAM would like to submit that Indian CMVR are highly matured regulations in line with European safety regulations.
- There are many Indian CMVR regulations which are in addition to EU regulations e.g., Rear wheel splash restriction (Aligned with Australian regulations) Saree Guard (India Unique regulation) etc.
- Hence, all Indian 2Ws are as safe as any International 2Ws, in fact have many additional safety features.
- Most important fact is that all Indian 2Ws compliance with CMVR is tested and approved through very stringent Type Approval Process.
- **To summarize, all the points in the referenced letter are either based on perception or are fundamentally enforcement issues and do not call for any change in the design of Type Approval Process.**

01/13

Report on 3 Deck Two Wheeler Carriers

Historical Background & Test Results

SIAM's Proposal to MoRTH

01.02.2021

Historical Background Snapshot

02/13

Indian 2 Wheelers Road Transportation have 3 different load combinations:

1. 2 Deck Rigid Trucks
2. 3 Deck Rigid Trucks
3. 3 Deck Truck/Tractor Trailer/ATV

99%
dependency
on Road
Transportation



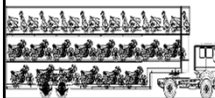
1. 2 Deck Rigid Trucks

- Height : 4.52 Mtrs
- 20 Units (Upper Deck)
- 20 units (Lower Deck)
- Total 40 Units



2. 3 Deck Rigid Trucks

- Height: 4.52 Mtrs
- 20 Units (Upper Deck)
- 20 Units (Middle Deck)
- 20 units (Lower Deck)
- Total : 60 Units



3. 3Deck Trailer

- Height 4.75 Mtrs
- 36 Units (Upper Deck)
- 32 Units (Middle Deck)
- 20 units (Lower Deck)
- Total 88 ~96 Units

Action Points by MoRTH on 3 Deck 2 W carrier Truck/Tractor Trailer/ATV

- ❑ Meeting convened by MoRTH in 18th Feb 2019 with Two-wheeler OEMs/selected transporters/SIAM/ICAT/ARAI
- ❑ It was pointed out during the meeting that use of triple deck Truck and Truck/Tractor Trailers/ATV are **unstable** and can have **safety** issue
- ❑ SIAM and OEMs held that these Trucks and Truck/Tractor Trailers/ATV are safe and improve logistics efficiency.
- ❑ Based on discussion the Chairman of meeting (Jt. Secy MoRTH) concluded that a maximum of 2 decks be allowed.
- ❑ SIAM requested to give some more time for sharing the other aspect for supporting for loading of 3 decks in Truck/Tractor Trailers/ATV, as it is internationally accepted practice.
- ❑ On 26th Feb SIAM and OEM members met with Jt Secy, MoRTH to clarify that SIAM will institute Dynamic stability simulation testing with IITD and till that time to allow use of fleet , which goes well with GOI agenda to improve logistic with International practices :
 1. Reduce Logistics cost .
 2. Reduce congestion on road.
 3. Reduce Carbon foot prints.
- ❑ However an advisory was issued by MoRTH on 27th Feb 2019 with following conclusions
 - There is no provision for any load to be carried over the driver's cabin. This is the practice of loading the vehicles or part thereof over such structures over the driver cabins must stop immediately, and
 - There is no provision of Triple or more Decks for the transportation of 2 wheelers in the two-wheeler carrier trucks and trailers. A maximum of two decks within the overall dimensions prescribed are allowed.

Historical Background Snapshot

Scenario post MoRTH advisory

03/13

- Tilt table Stationary Stability Test (Quick Testing) was physically carried out on 11.04.19 for 3 deck truck/tractor trailer/ATV (4.75 mts) and 3 deck trucks (4.52 mts) at ICAT Manesar with full pay load on 28th May 19
- Both vehicles surpassed stability standard mandated for dangerous goods at an angle of 23 degree from the horizontal as per AIS 093 section 7 (working stability of vehicles meant for carriage of dangerous goods)
- **MoRTH advised that further testing on dynamic stability simulation should be carried out by IIT Delhi as IITD has already done similar exercise for 4 Wheelers**

Excerpts (Copy Paste) from the minutes of 57th CMVR TSC dated 13th Feb 2020 (Under the chairmanship of JS MoRTH)

Shri P. K. Banerjee, SIAM, informed that SIAM has initiated a study along with Prof. Anoop Chawla, IIT Delhi with respect to height of trailers and number of decks inside the trailer used for carriage of vehicles and the findings will be shared with the Committee based on which committee may discuss and decide appropriately. Committee noted the information, and it was agreed to finalize the notification in the present form as was released as draft notification except the amendment in the dimensions of E cart /E rickshaw. The actions identified with respect to E Rickshaw and **SIAM study will be reviewed later and if needed the notified rules may be amended later.**

Historical Background Snapshot

04/13

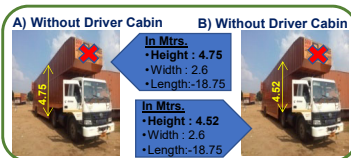
Action Points by SIAM

1. SIAM along with OEMs held a Meeting with JS MoRTH
2. MoRTH- JS **advised SIAM** to organize to **conduct Dynamic Stability study by IIT Delhi**, as done in case of 4 Wheeler Carriers.
3. **July 2019** Work Order was given to IIT Delhi by SIAM for Dynamic stability test and it was planned to do in following 3 Phases

Phase-1

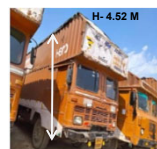
- A.** Three deck truck/tractor trailer/ATV combination (height 4.75m) **without any canopy.**
- B.** If 'A' above is found to be unsafe, then the three deck truck/ tractor trailer/ATV combination (height 4.52m) **without canopy.**
- C.** Either A or B (whichever is found safe) **with canopy.**

The 1st phase testing will cover either A+B or A+C



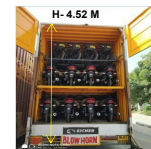
Phase-2

D. Double deck rigid truck combination : 4.52 meter height with loading of 2 wheelers above the driver cabin.



Phase-3

E. Triple deck rigid truck combination (height 4.52m) without any canopy.



Aug. 2019 : IIT- Delhi initiated all the above tests under the Leadership of Dr. Anoop Chawla/ Prof. S. Banerjee.

Test Carried :

- Phase 1 : Scenario : A & C
- Phase 3 : Scenario E

International Practice

05/13

2 Wheeler Transportation in Indonesia



2 Wheeler Transportation in Vietnam



4 Wheeler Transportation in UK & Europe



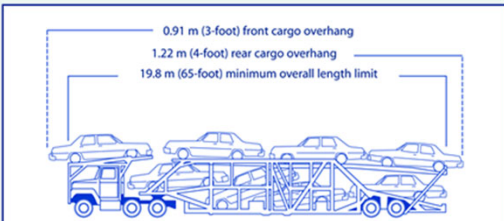
4 Wheeler Transportation in UK & Europe



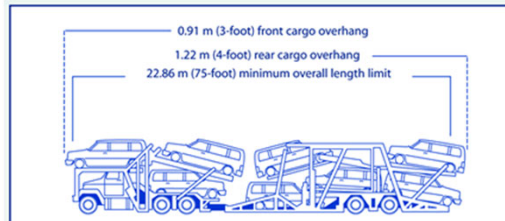
International Practice - USA

06/13

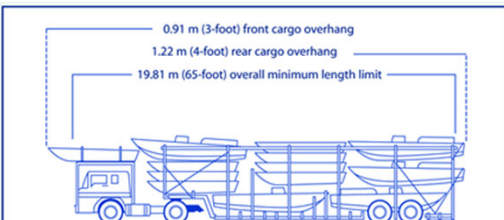
Regulated by : Federal Size Regulations for Commercial Motor Vehicles. U.S. Department of Transportation, Federal Highway Administration



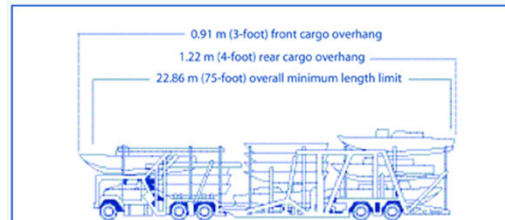
Conventional Automobile Transporter Combination



Stinger-Steered Auto Transporter Combination



Conventional Boat Transporter Combination



Stinger-Steered Boat Transporter

Source : https://ops.fhwa.dot.gov/Freight/publications/size_regs_final_rpt/index.htm

Code of Federal Regulations (CFR) define the statutory provisions for Federal length and width requirements for certain commercial motor vehicles and where these vehicles may operate.

India – Present Scenario : 2 Wheeler Transportation

07/13

- During the usage of 3 decks on Truck as well as Truck/Tractor Trailer/ATV.....
 - No incidents of truck/tractor trailer/ATV capsizing / overturning
 - No indication of inherent instability of truck/tractor trailer/ATV.
 - 14 accidents incidents reported. Mostly pertaining to frontal or rear end collision. (HMCL & HMSI Accident data record)

40 Units capacity Truck



88~96 Units capacity Trailer



IIT- Delhi Study Result : Phase 1- Scenario “A”

08/13

□ 3 deck truck/tractor trailer/ATV combination (height 4.75mtr., without any canopy) test was started in Aug'19 and completed by March'20 and IITD recommendations read:

- The dynamic behavior of the ATV (Articulated Trailer Veh) during the IRC turning maneuver remains within safe limits when the ATVs are used for carrying 2 wheelers in a 3-deck scenario as described above.
- It is therefore recommended that the same size ATVs may be allowed for two-wheeler transportation with 3 decks as for other applications like car carriers studied in the past, as long as they carry a total payload within the limits specified under MoRTH notification number S.O.3467(E).

Result : Test Passed

3 Deck Trailer for 2 Wheeler loading



Height : 4.75 Mtrs



Height : 4.75 Mtrs

2 Deck Trailer for 4 Wheeler loading (For Ref only)



Height : 4.75 Mtrs



Height : 4.75 Mtrs

IIT- Delhi Study Result : Phase 1 - Scenario "C"

09/13

□ Trial of **3 Deck Truck/Tractor Trailer/ATV** with 4.75 Mtr height **with canopy of 1.5 mtr** was completed in Dec'20 and report was submitted with the following recommendations:

- "The **ATV (with canopy)** has **failed** the maneuverability condition as the **canopy outer edge goes out of the permitted turning radius by around 1.5m**. While the lateral tyre force is also an important limiting condition, since maneuverability condition was not met, the vehicle **does not meet the statutory requirements.**"
- It is therefore concluded that for the **ATV with canopy** the maneuverability requirements **are not within safe limits**, and the vehicle can not be recommended / permitted for running on the roads.



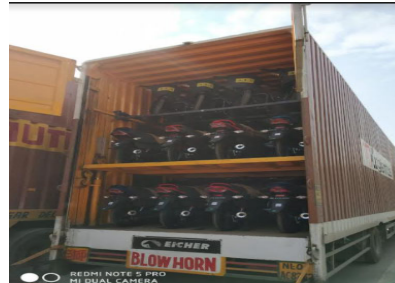
Result : Failed in Test

IIT- Delhi Study Result : Phase 3 - Scenario "E"

10/13

□ Testing of **3 Deck Truck** with height 4.52 mts was completed and the recommendations read

- The dynamic lateral loads on the truck tires during the IRC turning maneuver remain within safe limits when the trucks are used for carrying 2 wheelers in a 3-deck scenario as described above, as long as the static axle loads are within permissible limits.
- It is therefore recommended that the same size trucks may be allowed for two wheeler transportation with 3 decks as for other applications, as long as they carry a total payload within the limits specified under MoRTH notification number S.O.3467).



3 Deck Truck for 2 Wheeler loading

2 Deck Truck for 2 Wheeler loading



Result : Test Passed

Summary of IITD simulation stability testing

11/13

Test Passed

- ✓ 3 deck 4.75 mts truck/tractor trailers/ATV without canopy has met the requirements and IITD has recommended their use these should be allowed to ply.
- ✓ 3 deck trucks of Height 4.52 mts. without canopy has also passed dynamic stability tests and IITD has recommended their use these too should be allowed to ply.

Test Failed

3 deck truck/tractor trailer/ATV **with canopy** has **failed** in maneuverability test, SIAM submission is that below configuration is not recommended:

- ✗ 3 deck truck/tractor trailer/ATV with canopy projecting out by 1.5m of turning radius , should not be permitted as it does not meet mandatory maneuverability requirements.

SIAM's Submission to MoRTH

12/13

SIAM's request to amend the advisory ref RT-10036/07/2019-MVL dt 27.02.19 and CMVR rules suitably :

To be allowed:

- A) 3-Deck Truck/Tractor Trailer/ATV combination (height 4.75 mtrs.) without Canopy
- C) 3 Deck Truck (height 4.52 mts) without Canopy

Benefits

13/13

SIAM's heart felt thanks to MoRTH for giving opportunity to conduct the Dynamic stability study of 3 Deck Truck/Tractor Trailers/ATV (4.75 mtrs. Height) & 3 Deck Trucks (4.52 mtrs. Height) through IIT-Delhi, which enabled to meet the following benefits :

2 Wheelers Manufactures

1. Capacity Increase * :
 - 2 Deck Truck V/s. 3 Deck Truck : by 50%
 - 2 Deck Trailer V/s. 3 Deck Trailer : by 47%
2. Resulting substantial freight optimization by * :
 - 2 Deck Truck V/s. 3 Deck Truck : by **15%**
 - 2 Deck Trailer V/s. 3 Deck Trailer : by **22%**

**Capacity increase & freight reduction may vary company to company depending on envelop dimensions of 2 wheelers.*

Govt. of India

1. Safety not compromised.
2. Contributing to Freight Optimization upto : **22%**
3. Contributing to de-congesting on the roads by : **27%**
4. Contribution to environment : **27%**

Thank You

Agenda 4.0 Report from AISC

(a) Standards and amendments for deliberations / adoption

CMVR-TSC – Agenda 4 (a) (standards)

AIS-009 (Rev.2): Automotive Vehicles - Installation Requirements of Lighting and Light-signalling Devices for L Category Vehicles, their Trailers and Semi-Trailers.

- Draft AIS-009 (Rev.2) is aligned with UN R 53 - Sup. 18 of ECE R 53 series of amendment 01 cleared in the WP29 session held in March 2016
- Revision 2 of AIS-009 contains following additional provisions:
 - Annexure E is added to give explanation about "THE HORIZONTAL INCLINATION", "THE BANK ANGLE" AND THE ANGLE "Δ".
 - Addition of definition and requirements of principal passing beam, interdependent lamp, lamps marked with 'D', Horizontal inclination, Horizontal inclination adjustment system (HIAS), Bank angle, HIAS, HIAS signal generator, HIAS test angle, Bend Lighting, H plane, Sequential activation, Emergency stop signal.
 - Word "illuminating surface" is replaced by "apparent surface."
 - Addition of provision to prohibit Stop lamps and direction indicator to be reciprocally incorporated
 - Requirements for Daytime Running Lamp (DRL) / Automatic Headlamp On (AHO) are newly added.
- **Committee may deliberate and adopt the proposed standard.**

AIS-010 (Rev.2) (Part 1): Provisions concerning the Approval of Headlamps emitting an Asymmetrical Passing Beam or a Driving Beam or both and equipped with Filament Lamps and/or LED Modules.

- Draft AIS-010 (Rev. 2)(Part 1) is aligned with UN R 112 - Sup. 1 to 01 series of amendment (Date of entry into force : 8th October 2015).
- Revision 2 of AIS-010 (Rev.2) (Part 1) contains following additional provisions
 - Introduction of the spherical coordinate measuring system and test point locations
 - Addition of provisions to exempt marking for nonreplaceable LED module
 - Word “Illumination” is replaced by “luminous intensity”
 - Optional Provision is added to provide means of controlling the voltage at the terminals of the device, within the limits as defined in AIS 008 (Rev.1). Such device shall be disconnected while doing type approval as per this AIS.
 - Deletion of provision which allows, the values obtained by the LED module(s) shall be multiplied by a factor of 0.7 prior to check for compliance.
 - Addition of requirement to age replaceable light sources before doing test for stability of photometric performance.
 - Addition Test voltages 6.3 V, 13.2 V or 28.0 V as applicable in place of only 12 V in AIS-010 (Rev. 1)(Part 1)
- **Committee may deliberate and adopt the proposed standard.**

AIS-010 (Rev.2)(Part 2): Provisions of motor vehicle headlamps emitting a symmetrical passing beam or a driving beam or both and equipped with filament, gas-discharge light sources or LED Modules.

- Draft AIS-010 (Rev. 2)(Part 2) is aligned with UN R 113 - Sup. 05 to 01 series of amendment (Date of entry into force : 8th October 2015)
- Revision 2 of AIS-010 (Rev.2) (Part 2) contains following additional provisions
 - Introduction of the spherical coordinate measuring system and test point locations
 - Addition of Requirements for LED module
 - Addition of Definition of additional lighting unit
 - Addition Test voltages 6.3 V, 13.2 V or 28.0 V as applicable in place of only 12 V in AIS-010 (Rev. 1)(Part 2)
 - Test of resistance to light source radiations is added
- **Committee may deliberate and adopt the proposed standard.**

AIS-010 (Rev.2) (Part 3): Provisions concerning the Approval of Front Position Lamps, Rear Position Lamps, Stop Lamps, Direction Indicators, Rear- Registration Plate Illuminating Devices and Reversing Lamp for Vehicles of Category L and their Trailers and Semi-trailers.

- Draft AIS-010 (Rev. 2)(Part 2) is aligned with UN R 50 - Sup. 18 to original series of amendment (Date of entry into force : 8th October 2015)
- Revision 2 of AIS-010 (Rev.2) (Part 2) contains following additional provisions
 - Introduction of the spherical coordinate measuring system and test point locations
 - Introduction of Sequential activation of light sources
 - Addition of LED as light source
 - Addition of Maximum luminous intensity in cd for all lamps referred in AIS-010 (Rev.1) (Part 3)
 - Modified Provision which allows *the angle of 10° below the horizontal may be reduced to 5°, in the case where a device is intended to be installed with its H plane at a mounting height less than 750 mm above the ground,*
 - Modified Test procedure for photometry and colorimetry

AIS-057 (Rev. 2): Performance Requirements for Retro-Reflecting Devices for Motor Vehicles and their Trailers.

- Draft AIS-057 (Rev. 2) is aligned with UN R 3 - Sup. 16 to 02 series of amendment (Date of entry into force : 8th October 2015)
 - Definition for Colour of the reflected light of the device is added
 - Provision to prohibit the shape of the light emitting surfaces shall not be easily confused with a triangle at normal observation distances is added
 - Deletion of Annexure J on Stability In Time of the Optical Properties of Retro-reflecting Devices
 - Deletion of Annexure L on Colour Fastness

AIS-164: Constructional and Functional Requirements for Insulated Vehicles.

- Ministry desired to formulate a separate AIS on Vehicles for the carriage of perishable foodstuff by considering the importance and urgency posed by Ministry of Agriculture.
- Based on this, subject was discussed in 56th meeting of CMVR TSC and 63rd meeting of AISC where in it was decided to formulate an AIS on Vehicles for the carriage of perishable foodstuff (Insulated Vehicles). A panel under Mr. A. A. Badusha was formulated.
- Accordingly ARAI have carried out some background work to prepare a draft standard based on international reference of ATP agreement, 2020. This standard will be applicable for N category of vehicle. Every original manufacturer or second stage manufacturer of such vehicles shall meet all the requirements laid down in CMVR for that respective category. Accordingly, different test applicability matrix for chassis level approval and fully built vehicle level approval would be addressed in the standard.
- Two panel meetings were held on 14th August 2020 and 25th November 2020 respectively where all necessary details were deliberated with the participation from various stake holders, OEMs, Test Agencies and Reefer van manufacturers namely, M/s Suraksha, M/s. Carrier M/s. Transicold, M/s Subzero etc.,
- Based on the agreement Draft D3 of the standard was prepared and circulated to all panel members vide mail dated 24th December 2020.

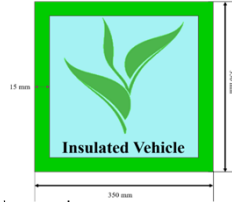
AIS-164: Constructional and Functional Requirements for Insulated Vehicles.

Various types of Insulated Vehicles	
Insulated Equipment	Equipment of which the body is built with rigid insulating walls, doors, floor and roof, by which heat exchanges between the inside and outside of the body can be so limited
Refrigerated Equipment	Insulated equipment which, using a source of cold (natural ice, with or without the addition of salt; eutectic plates; dry ice, with or without sublimation control; liquefied gases, with or without evaporation control, etc.) other than a mechanical or "absorption" unit, is capable, with a mean outside temperature of + 30 °C, of lowering the temperature inside the empty body to, and thereafter maintaining it.
Mechanically Refrigerated Equipment	Insulated equipment either fitted with its own refrigerating appliance, or served jointly with other units of transport equipment by such an appliance (fitted with either a mechanical compressor, or an "absorption" device, etc.). The appliance shall be capable, with a mean outside temperature of + 30 °C, of lowering the temperature T_i inside the empty body to, and thereafter maintaining it continuously
Heated Equipment	Insulated equipment, which is capable of raising the inside temperature of the empty body to, and thereafter maintaining it for not less than 12 hours without renewal of supply at, a practically constant value of not less than + 12 °C when the mean outside temperature.
Mechanically refrigerated and heated equipment	Insulated equipment either fitted with its own refrigerating appliance, or served jointly with other units of transport equipment by such an appliance (fitted with either a mechanical compressor, or an 'absorption' device, etc.), and heating (fitted with electric heaters, etc.) or refrigerating-heating units capable both of lowering the temperature T_i inside the empty body and thereafter maintaining it continuously, and of raising the temperature and thereafter maintaining it for not less than 12 hours without renewal of supply at a practically constant value.

- **AIS-164: Constructional and Functional Requirements for Insulated Vehicles.**

- **The AIS will also encompass:**

- Different types of categories of such vehicles which shall be used to decide extension of type approval.
 - Method and Procedure for measuring and checking the insulating capacity and the efficiency of the cooling or heating appliances of Special Purpose Vehicle for the carriage of perishable foodstuff.
 - Following Distinguishing marks / Colour codes to be affixed to such vehicle.



- Criteria for selection of such vehicles and temperature conditions to be observed for the carriage of quick (deep) frozen, frozen and chilled food stuff.
 - This standard is put up to CMVR TSC for adoption.
 - Considering the readiness of all concerned stake holders, lead time of One year is proposed to be considered for implementation of this standard.

- # **AIS- 168: Specific Requirements for A6 and A7 Category Electric Power Train Agricultural Tractors.**

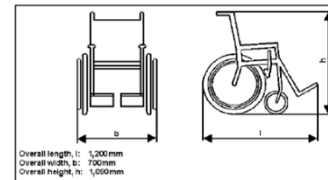
- In 62nd meeting of AISC held on 11th April 2019, Panel was formed to formulate standard for electric Agricultural Tractors.
- No UN Regulation is available on this subject.
- Hence as per advice from AISC, assistance is taken from EU Directives / Regulations.
- Panel Composition: Test Agencies: ARAI, ICAT, GARC, CIRT, VRDE, IIP, NATRIP, CFMMTI – Budni; Tractor Manufacturers: Mahindra, Escorts, John Deere, TAFE, SDF Group; TMA
- Draft AIS-168 is formulated based on:
 - Regulation (EU) No 167/2013 : Base Regulation for Agricultural Tractors
 - Regulation (EU) 2015/208 : Supplementing regulation to above (Requirements on the safety of electrical systems)
 - Regulation (EU) No 3/2014 : Vehicle functional safety requirements for the approval of two- or three-wheel vehicles and quadricycles

AIS- 168: Specific Requirements for A6 and A7 Category Electric Power Train Agricultural Tractors.

- The contents of the proposed standard are as follows:
 - Electrical Safety requirements based on 2/3 Wheler EU Regulation No 03/2014
 - Water effects tests based on AIS 038 Rev 1 standard
 - Tractor Motor Power Test as per AIS 041 Rev 1 standard
 - REESS Safety as per AIS 156 standard (New standard for L-Category)
 - EMC as per AIS 004 Part 3
- The standard was approved in the 65th meeting of AISC held on 12th January 2021.
- The draft notification G.S.R 100 (E) dated 5th February 2021 has been issued by the Ministry.
- **Committee is requested to adopt the proposed standard.**

AIS-169: Guidelines on Provisions for Adapted Vehicles of categories M1, N1 and M2.

- Scope: Adapted Vehicles of categories M1, N1 and M2 as approved in 58th CMVR-TSC (3rd Sept 2020, Minutes paragraph 5 (b)(v)).
- The terms of reference (TOR) of the panel were submitted in the 57th meeting of CMVR-TSC (13th February 2020, Minutes paragraph 3(viii)).
- Panel comprised members from Test agencies, experienced RTO personnel, Doctors dealing with physical disability and rehabilitation, actual adapted vehicle users, Retro-fitters and vehicle as well as component manufacturers.
- As per TOR panel has completed the discussions by January 2021 and the standard is also approved in 65th meeting of AISC (12th January 2021).



AIS-169: Guidelines on Provisions for Adapted Vehicles of categories M1, N1 and M2.

- Draft AIS-169 is prepared taking references from earlier procedure prepared under AISC, MORTH Advisories, EU Regulation 2007/46, EU Regulation 2018/858, ISO 10542-1: 2012 and UN Regulation 107.
- **Standard is divided in following four Parts A to D:**
 1. **Part A** : Adaptation when minor modifications are carried out by introducing secondary control(s) and/or allowable minor modifications so as driver with limb disability, dwarfism, spinal cord disability certified by medical practitioner can drive adapted vehicles of categories M1 and N1.
 2. **Part B** : Wheel chair accommodation provisions for passenger with reduced mobility in M1 and M2 vehicles.
 3. **Part C** : M1 adaptation involving re-verification or re-testing of type approved provisions for differently abled driver and passengers with reduced mobility .
 4. **Part D** : Informative part on vehicle adaptation: recent legal provisions (list of notifications); retro-fitment facilities (list of authorized workshops or retro-fitters) in India; information on steps to be followed for vehicle adaptation; good engineering practices to be followed while vehicle adaptation and website for applying physical disability.
- As per adaptation needs, approvals can be accorded for independent parts A to C or any combination of parts A to C.
- **Committee is requested to adopt the proposed standard.**

Notifications for adoption: AIS-169 Guidelines on Provisions for Adapted Vehicles of categories M1, N1 & M2

- Two wheeler adapted as per MORTH resolution No. RT- 11012/12/01-MVL dated 23rd July 2008 are treated as invalid carriage (Adapted Vehicles). Also CMV rules has the terminology of three wheeled invalid carriage (Adapted Vehicles).
- Considering above CMVR has exempted few requirements e.g. windscreen wiping, steering effort, reverse gear and speedometer for invalid carriage, however for 4 wheeled “Adapted Vehicles” as per AIS-169, these are not exempted.
- With inception of Motor Vehicle (Amendment) Act 2019, terminology of “Invalid Carriage” will be replaced by terminology “Adapted Vehicles”. Hence there is need to bring clarity under CMVR about it.
- **Approval of 4 wheeled “Adapted Vehicles” as per AIS-169 is proposed under new Rule 125-K with a lead time of one year.**
- Few of the provisions which exists in the form of advisory are now covered under proposed notification e.g. issuance of license as per type of disability, so that person with specific disability can drive vehicles adapted for the type of disability.
- For retro-fitter workshop authorization, it is proposed to add test agency along with State Government as approval authority.
- AIS-169 also covers provisions for 4 wheeled transport vehicles, hence **additionally an amendment is proposed to SO 1248 (E) facilitating economic self-reliance of “Person with disability”.**
- **Committee is requested to adopt proposed draft notifications.**

Future work: Provisions for two and three wheeled Adapted Vehicles

- Presently for two wheeler adaptation MORTH resolution No. RT- 11012/12/01-MVL dated 23rd July 2008 is followed.
- Two wheeler adaptation discussions were also held in CMVR-TSC in its 56th meeting held on 22nd August, 2019.
- CMV rules has the terminology of three wheeled invalid carriage, however standard for its approval is not available.
- Classification under “Transport” category as per MORTH notification SO 1248(E) dated 5th Nov. 2004 uses terminology of two wheeler with side car for goods carriage, however standard for its approval is not available also above two wheeler resolution does not allow side car for goods carriage.
- Above resolution does not cover type of disability regarding spinal cord injury and disc order, however these are now covered under “Person with Disability Act 2016” and needs to be considered.
- Many innovative ideas are evolving for two wheeler adaptations
- To boost up mobility of “Person with Disability” and make the person self-sufficient as part of the Government initiative, which is put forth in the form of the Motor Vehicles (Amendment) Act 2019.
- AISC can take up subject based on directions of CMVR-TSC.
- **Committee is requested to permit allow conversion and elaboration of above resolution to address above aspects as AIS.**

AIS-171: Safety and Procedural Requirements for Type Approval of Pure Ethanol, Flex-Fuel and Ethanol Gasoline Blend Vehicles

- BIS Standard IS 17021: 2018 is available specifying specifications of E 20 as an Automotive Fuel.
- Draft Notification GSR 757 (E) for notifying E-20 as an automotive fuel dated 11th December 2020 published by MoRTH. Comments have been sought.
- Directions were received from Ministry to formulate a AIS standard to address the safety requirements.
- Panel conducted two meetings for discussion on the draft standard which was attended by members from ARAI, SIAM, ACMA, IOCL, ICAT, IAC, Praj and MORTH.
- Draft AIS 171 standard for Safety of Ethanol Vehicles was prepared and circulated to the Panel members. Comments received from ACMA were incorporated.
- The finalized draft was submitted to MoRTH standard and was now hosted on MoRTH Website for comments. Comments received from SIAM were reviewed a the revised finalized draft is circulated to the members for review.
- **The standard was approved in the 65th meeting of AISC held on 12th January 2021.**
- **Committee is requested to adopt the proposed standard.**

CMVR-TSC – Agenda 4 (a) (amendments)
Amendments for adoption

- Following Amendments to AIS standards are proposed for adoption:

Sr. No.	Amd. Nos.	Title of AIS standard	Nature of amendment
1.	Amd 9 to AIS-007 (Rev.5)	Information on Technical Specifications to be submitted by the Vehicle Manufacturer	To replace Table 20 (CNG Kit Components) in line with Annexure I of AIS-024 (Rev. 1) (Part A, B, and C) and few editorial corrections in amendment 8 to AIS-007 (Rev. 5).
2.	Amd 2 to AIS-017	Procedure for Type Approval and Certification of Vehicles for Compliance to Central Motor Vehicles Rules.	To withdraw Amendment 1
3.	Amd 5 to AIS-023	Automotive Vehicles - Seats, their Anchorages and Head Restraints for Passenger Vehicles of Categories L7, M2, M3 and Goods Vehicles of Category N - Specifications	To add simulation method as an alternate method for approval of seats

CMVR-TSC – Agenda 4 (a) (amendments)
Amendments for adoption

Sr. No.	Amd. Nos.	Title of AIS standard	Nature of amendment
4.	Amd 1 to AIS-028 (Rev.1) (Part A), (Part B) and (Part C)	Code of Practice for use of Gaseous Fuels in Internal Combustion Engine	To retain the content of compliance plate and Label as the earlier version of AIS-028 standard
5.	Amd 3 to AIS-071 (Part 1)	Automotive Vehicles - Identification of Controls, Tell-Tales and Indicators	AIS 160 specifies visual display, control and tell-tale requirements for CEVs which are as per ISO IS/ISO: 6011:2003 and IS/ISO: 10968:2004 for CEVs covered in IS/ISO 6165:2012 and as per AIS 071 (Part 1) for CEVs other than those covered in IS/ISO 6165:2012. The amendment is proposed to bring clarity on the same.
6.	Amd 3 to AIS-075	Approval of Vehicles with regards to their protection against unauthorised use-four wheeled vehicles)	To add provisions to extend the approvals granted as per AIS-075 (Part 1), which is primarily meant for M1 and N1 category vehicles, to the vehicles covered in the scope of 075 (Part 2) i.e. to M2, M3, N2 and N3 category of vehicles.

ARAI® Progress through Research		CMVR-TSC – Agenda 4 (a) (amendments)	
# Amendments for adoption			
Sr. No.	Amd. Nos.	Title of AIS standard	Nature of amendment
7.	Amd 4 to AIS-110	Automotive Vehicles -Temporary-Use Spare Wheel/ Tyres and Run Flat Tyres.	<ul style="list-style-type: none"> a. To specify design speed of 80 km/hr for temporary spare unit, fitted on vehicles of category L7, for types 1, 2, and 3. b. To add clarity with respect to use of Max Speed Warning symbol for Quadricycle since maximum speed of such vehicles is 70 km/h. c. To add provision for L7 category vehicles, an instruction to drive with caution and at no more than the permitted maximum speed which may be specified by vehicle manufacturer. d. Provision to allow Testing of Category L7 with maximum speed less than 55 km/hr at 90 percent of maximum speed as per current IS standard for brakes and addition of formulae for stopping distance for such vehicles.

ARAI® Progress through Research		CMVR-TSC – Agenda 4 (a) (amendments)	
# Amendments for adoption			
Sr. No.	Amd. Nos.	Title of AIS standard	Nature of amendment
8.	Amd 1 to AIS-124	Procedure for Type Approval and Certification of Motor Caravans for compliance to Central Motor Vehicles Rules	<p>To modify in the scope of the standard the seating capacity to 12 excluding driver in place of 13 excluding driver.</p> <p>To correct version of reference standards for Fire extinguishers.</p>
9.	Amd 4 to AIS-125 (Part 1)	Constructional and Functional Requirements for Road Ambulances	To allow provision to fit an attendee seat near the head of stretcher, in case of multi stretcher ambulance.
10.	Amd 5 to AIS-145	Additional Safety features for Category M & N Vehicles	To mandate airbags for the front passenger
11.	Amd 6 to AIS 153	Additional Requirements for Bus Construction	To add provisions for exemption from vibration and harshness test for buses with air suspension, if same body is tested and approved with mechanical suspension.

**Agenda 4.0 Report from AISC
(b) Report on Running Subjects**



Motor Vehicle Parts Compliance Requirements
Status report for CMVR-TSC Meeting
18th February 2021

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Background

The Aftermarket in India is currently unregulated for both parts and services.

To bring a control in movement of substandard parts and Counterfeit components in aftermarket, on advice of MoRTH, ACMA commissioned a study through PwC in the past, to suggest enforcement guidelines for introduction of Standards to Aftermarket.

Recommendations from Study:

- Creation of a Centralised Portal under the MoRTH, to control aftermarket as also interlink all key stakeholders - testing agencies, dealers and wholesalers, surveillance agencies etc. through the Portal.
- It was recommended as MoRTH has no enforcement wing (as in Inspectors etc. for market surveillance, which is ultimately required for enforcement)

Background of deliberations

- Multiple Panel Meetings under AISC held to discuss and deliberate on Portal
- Panel Members proposed to have the Homologation Portal, be implemented in 3 phases:
 1. Pilot phase to begin with a few components from AIS-037 (any 5 components) to analyse the functioning of Portal. For the pilot run, Notification be issued for these 5 components.
 2. Phase-I to cover all components under AIS-037
 3. Phase-II be extended to cover more components
- ARAI was requested to prepare the Portal. Quotation with complete Costing and time required received from ARAI
- ACMA submitted the proposal seeking funding support from DHI.
- After approval from DHI, ARAI to start portal formulation. Estimated Time - 6 months

Update on AISC Meeting



Update on the recent AISC Meeting held on 12 January 2021

Due to inception of Pandemic as also change in leadership at DHI, there was no discussion on funding, required for PORTAL

Also, In light of Multiple Quality Control Orders (QCO) such as on Safety Glass, Draft order on Wheel Rims, Draft order on Replacement Brake Linings have been issued by Ministries - DPIIT and DHI; and CRO on Electricals items by MEITY, advice was sought from the AISC Forum on the necessity of creation of Portal, when QCO and CRO could easily bring-in the desired control.

It was recommended that in place of multiple QCO and CRO's, if MoRTH considers a scheme similar to CRO for the Automotive Industry.

SIAM also suggested that a Compulsory Registration Order (CRO) could be better than both QCO's as also the Portal.

Seek directions from CMVR- TSC



Considering the advantages of CRO and QCO i.e. potential to cover entire market including aftermarket and Imports + Surveillance Mechanism, we seek directions from CMVR- TSC to advice way forward.

- To Re-visit the scope and need of the Portal, in light of QCOs & CRO's which offers requisites to control aftermarket
- Analyse introduction of new Scheme similar to Compulsory Registration Order (CRO) for Auto Components, as a possible solution to control aftermarket. An update on same can be given in next CMVR-TSC Meeting



Thank You

ACMA

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ARAI
Progress through Research**CMVR-TSC – Agenda 4 (b) (ii)****# Development of noise standard for battery operated vehicles**

- The subject was initiated in the 58th meeting of CMVR-TSC.
- Formulation of new AIS on basis of UN R 138 was decided.
- International Regulations:
 - UN R 138 – Quiet Road Transport Vehicles (QRTV) and
 - UN GTR under formulation.
- UN R 138: This regulation applies to electrified vehicles of categories M & N which can be propelled in the normal mode, in reverse or at least one forward drive gear, without an internal combustion engine operating in respect to their audibility.
- UN R 138 is inforce from July 2019.

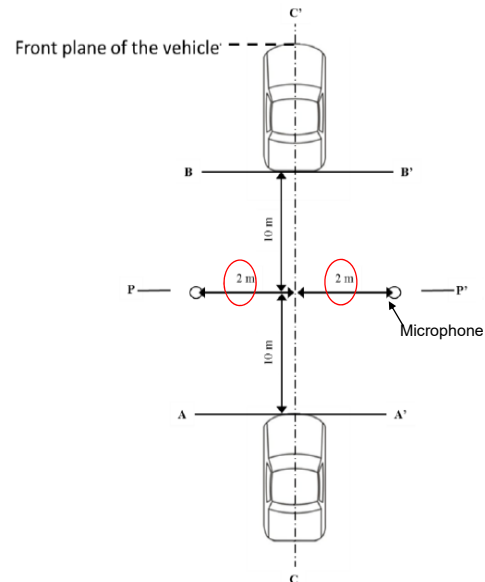
Test Procedure & Minimum Sound Level Requirements

Test procedures for vehicle sound level :

- The microphones shall be located at 2 m distance from center line and 1.2 m above the ground level.
- Constant speed test conditions:
 - a) Forward motion: 10 & 20 km/h
 - b) Reversing test in motion: 6 km/h

Minimum Sound Level Requirements in dB(A)

Forward motion, 10 km/h	Forward motion, 20 km/h	Reverse motion, 6 km/h
50	56	47



Advanced Emergency Braking Systems (AEBS) and Frontal Collision Warning System.

AIS-162 – Type Approval of Motor Vehicles of categories M2, M3, N2 and N3 with regard to the Advanced Emergency Braking Systems (AEBS)

AIS xxx – Forward vehicle collision warning systems — Performance requirements and test procedures

- Fourth panel meeting convened on 15th September 2020.
- The comments and decisions made during fourth panel meeting on AIS 162 and proposed standard for forward collision warning system circulated to panel members for further study.
- Panel members have studied the standards and comments are submitted for further deliberation.
- Fifth panel meeting is planned in the beginning of February 2021 to finalize AIS-162 and to shape up the forward collision warning standard.

Super Single Tyre – Status Updates

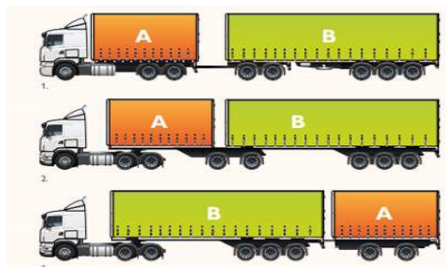
- Based on the deliberations in the panel meetings following two tyre sizes (Super Single Tyres) are ratified by the ITTAC for inclusion in ITTAC Manual.
 - 425/65 R22.5
 - 445/65 R22.5
- Communication to BIS has been sent by ITTAC for consideration / inclusion of above tyre sizes in BIS Standards (IS 15636:2012)
- In the last meeting of CMVR-TSC it was expressed that it is necessary to evaluate the impact of Super Single tyres and associated loads on the pavements. The decisions on the subject can only be taken once detailed study is available on the same by CRRRI.
- Due to COVID 19 pandemic and budgetary constraints, the experiments for evaluation of Super Single Tyre impact on road surfaces and pavements is progressing at slower pace.
- BIS has been requested to sponsor the study.

Creation of new vehicle category L2e-P in line with EU 168/2013.

- The subject was initially discussed in 57th CMVR-TSC held in February 2020.
- Further this subject was deliberated in 65th AISC, wherein a technical panel has been constituted to deliberate on the subject further.
- **The status will be reviewed in next AISC / CMVR-TSC.**

Request for permission for modification and to attach additional trailer to the truck.

- Definition of Road Train under CMVR : Road Train is already defined under CMVR, which means a motor vehicle wherein traction can be provided by motor vehicle or tractor connected to a combination of trailers and semitrailers
- CMV Rule 93 already covers the overall dimensions of the Road-train vide GSR 414(E) dated 26th June, 2020.
- SO 3467 (E) dated 16th July 2018 covers Max. Safe Axle Weight Provisions for semi-articulated trailers and truck-trailers.
- In the last meeting of CMVR-TSC AISC panel on Automotive Trailers was directed to review the technical requirements for approval of road trains and propose necessary amendments to AIS-113.
- Provisions in CMVR/ AIS-113 that can be made applicable to road-trains
 - Definition of Truck Trailers
 - ABS brakes as per IS 11852;
 - Tyres as per IS 15636;
 - Wheel rims;
 - Lighting and Light-signaling devices;
 - Mechanical Couplings; etc.
 - Seven pin connector; etc.
 - Registration options as individual trailers or combination as a single vehicle



Sr.	Actions completed	Work under Progress
1.	Preparation of draft amendment to AIS-113 for covering specific provisions for road-train and bringing clarity on requirements for converter dolly and tractor/truck.	<u>Converter dolly ABS braking systems</u> : Weight wise linkage with T2 and T3 trailer braking requirement as per IS 11852: 2013 and additional requirements for Vehicle Stability
2.	<u>Two panel meetings were held</u> : 2 nd December 2020 and 6 th January 2021	<u>Max. Speed of the Road-trains</u> : 80 km/h confirmation during small group study on converter dolly ABS braking requirements.
3.	<u>Minimum power to weight ratio</u> : 2.2 kW/t in line with EEC Directive 97/27	Air tank capacity
4.	Registration aspects for converter dolly	Max. GCW Limits for any increment
5.	Comments received from stakeholders have been deliberated and resolved	Lead time for implementation

- Small working group is formed to verify the braking performance, which will provide inputs to the panel.
- Further two more panel meetings would be held to complete the activity and report in the next meeting of CMVR-TSC.

Amd to AIS-145: Additional Safety features.

- In the 58th meeting of CMVR-TSC, it was decided to mandate the airbags for the co-passenger, given the past discussions and the recommendation of the Supreme Court Committee on Road Safety.
- The Ministry also issued a draft notification GSR 797(E) dated 28th December 2020 in this regard.
- The amendment was discussed in the panel meeting and was subsequently approved in the 65th meeting of AISC held on 12th January 2021.
- It was agreed to publish the amendment upon release of final notification.
- **Committee is requested to adopt the proposed amendment.**

Fire Safety in Passenger Compartment of Buses.

- Proposal from DRDO was received on suppression of fire propagation inside the passenger's compartment in addition to existing requirement of fire suppression in engine compartment.
- DRDO made a presentation on the Low Pressure Water Mist System which will assist in safe evacuation of passengers in event of fire in passenger compartment.
- Following points were considered during study of this system:
 - a) Optimization of system parameters using fire experiments (more than 50 experiments were conducted)
 - b) Pre-burn time: 60 secs (max)
 - c) Validation of results using Pyrosim software
 - d) Additional simulated external fires for system performance evaluation
 - e) Evacuation time study
- It was informed that the water mist system provides larger evacuation window to the passenger through excellent thermal management and smoke reduction irrespective of place of origin of fire.
- AISC has requested the AIS 135 panel (FDAS and FDSS), to take up the subject for discussion in the panel and explore the feasibility of developing a standard.
- Panel meeting will be conducted in 2nd week of March 2021.
- **Committee may note.**

CMVR-TSC – Agenda 4 (b) (ix)
Brakes and Other New Regulations

Regulation	National Standard	Reference UN Regulation	Implemented from	Remarks
Brake L2	IS 14664:2010	UN GTR 3	In force	-
Brake L5	IS 14664:2010	UN GTR 3	In force	-
Brake M1 / N1	IS 15986:2015 or AIS 151	Inline with UN R 13H Rev. 3 (UN R 13H Rev. 4 available – No Technical Change)	1 st April 2021 (New) 1 st April 2022 (Existing)	-
ESC M1 / N1	AIS 133	Inline with UN GTR 8	1 st April 2021 (New) 1 st April 2022 (Existing)	In CMVR - on if fitted basis for M1 and N1 category.
BAS M1 / N1	AIS 152	Inline with UN R 139	1 st April 2021 (New) 1 st April 2022 (Existing)	In CMVR - on if fitted basis for M1 and N1 category.
Brake M2 & M3	IS 11852: 2013		1 st April 2021 (New) 1 st April 2022 (Existing)	Endurance Braking 1 st April 2022 EVSC 1 st April 2023 (AIS 150)
Brake N2 & N3	IS 11852: 2013		1 st April 2021 (New) 1 st April 2022 (Existing)	
ABS	11852:2013, IS 15986:2015, AIS 150 AIS 151	UN R 13, UN R 13H	In force	Presently N1 & N2 other than those used for dangerous goods are not required to fit ABS
AEBS		UN R 131, UN R 152	-	Under formulation for Heavy Commercial Vehicles
LDWS	-	UN R 130	-	Subject not Initiated
ALKS	-	UN R 157	-	Subject not Initiated