

The 14<sup>th</sup> Public and Private Joint Forum In Asian Region  
(November 28-30, 2023)

## Country Report on

Future domestic standards and certification trends

India

# National Committees - Composition

## Central Motor Vehicle Rules – Technical

### Standing Committee :

Members: MoHI, NATRiP, Test Agencies, BIS, SIAM, TMA, ACMA, Academia & Others.

**Chairman:**

**Joint Secretary (MoRT&H)**

Safety

CMVR-TSC

Emissions

SCoE

## Standing Committee on Emissions :

Members: MoP&NG, MoHI, MoEF, NATRiP, Test Agencies, SIAM, TMA & Others.

**Chairman:**

**Joint Secretary (MoRT&H)**

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**Joint Secretary (MoRT&H)**

Members: MoHI, MoEF, DoC, DIPP, NATRiP, Test Agencies, BIS, SIAM, TMA, ACMA & Others.

**National Standing Committee on WP.29**

WP.29 related matters

WP.29

AISC

Technical Standards

**Chairman:**  
**Director, ARAI**

Members: MoRT&H, MoHI, MoSSI, NATRiP, Test Agencies, BIS, SIAM, TMA, ACMA & Others.

**Automotive Industry Standards Committee**

## **Key Safety Regulations Implemented**

# Safety Rating Program for Passenger Cars

- Bharat New Car Assessment Program in line with Global-NCAP has been implemented.
- Test protocols are released as Automotive Industry Standard AIS-197.
- Central Institute of Road Transport will be the coordinating agency for the program.
- The voluntary program will be applicable to the vehicles of category M1 with GVW less than or equal to 3500 kg.



# Fire Protection of Occupant compartment in Buses

- Mass Passenger Transport system is a key focus area.
- New requirements for mitigating fires inside passenger compartment have been implemented.
- These requirements are over and above the requirements for fire detection and suppression in engine compartments.
- New safety requirements for sleeper coaches have been implemented.
- Work on aligning Bus rollover Requirements with those mandated through UN R 66 has been initiated.
- Additionally, Electronic Stability Control Systems have been made mandatory for buses with seating capacity 22 and above.



# Revised Standards for Electric Vehicles

- AIS 038 (Rev. 2) for 4 W is aligned with UN GTR 20 (Phase 1) and AIS 156 for L category vehicles is in line with UN R 136.
- Additionally, verification of Battery Management System and charger safety for protection from overcharge, over discharge, over temperature, over current and short circuit is specified. Also, cell level testing requirements are added.
  - These requirements are over and above the requirements specified in UN GTR / UN R.
- Conformity of Production procedure for Traction Batteries are notified.



# **Key Safety Regulations proposed for Implementation**

## Advanced Steering Command Functionalities (ACSF)



A low-speed application which is activated by the system and / driver which keeps the vehicle within its lane, assists in remote control parking, reverse driving, safe halt in case of unavailability of the driver, by controlling the lateral and longitudinal movements of the vehicle for extended periods without the need for further driver input.

**Current Status : AIS 193 for ACSF in line with the latest version (Revision 4 amendment 6) of UNR 79 is approved by CMVR-TSC. Currently the standard is under process of notification.**



# Lane Departure Warning System (LDWS)



**Lane Departure Warning System (LDWS)** is a mechanism designed to warn the driver when the vehicle begins to move out of its lane (unless a turn signal is on in that direction) on freeways and arterial roads. These systems are designed to minimize accidents by addressing the main causes of collisions: driver error, distractions and drowsiness

**Current Status : AIS 188 for LDWS in line with the UNR 130 is approved by CMVR-TSC. Currently the standard is under process of notification.**

# Automated Lane Keeping Assist System (ALKS)



A system for low-speed application which is activated by the driver and which **keeps the vehicle within its lane for travelling speed of 60kph or less** by controlling the lateral and longitudinal movements of the vehicle for extended periods without the need for further driver input

**Standard is prepared in two parts.**

**Part 1 deals with Emergency Lane Keeping system (ELKS) specifically for vehicles up to level 2 of automation. The standard is proposed for implementation. Reference Standard: (EU) 2021/646**

**Part 2 is for ALKS for level 3 and above. The standard in line with UN R 157 is under formulation.**

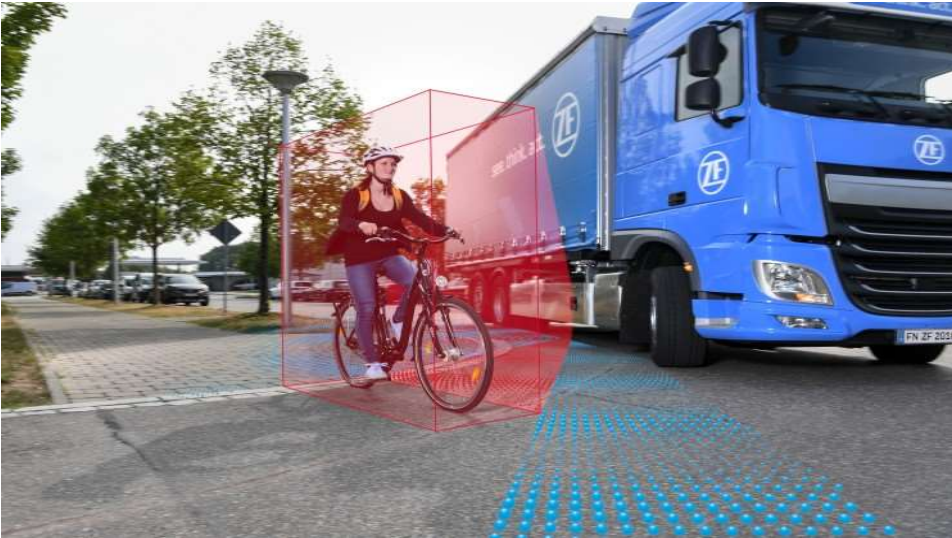
# Advanced Emergency Braking System (AEBS)



The advanced emergency braking (AEB) detects critical proximity to a vehicle in front, warns the driver, and provides assistance with braking. If the AEB system detects critical proximity to a stationary or moving vehicle ahead, it prepares the braking system for the possibility of an emergency stop.

**Current status: AIS 162 for AEBS for heavy vehicles is approved by CMVR-TSC and is under process of notification. Draft AIS 185 for Light vehicles is due for approval by CMVR-TSC. Reference Standard: UN R 131 and UN R 152.**

# Blind Spot Information System (BSIS)



Blind-spot monitoring uses a set of sensors mounted on the side mirrors or rear bumper to detect vehicles in the adjacent lanes. If the sensors detect something, they'll alert you via an audible and/or visual warning. Some vehicles even use a camera as the main part of the system or to complement the sensors.

**Current status: AIS 186 on Blind Spot Information System is approved by CMVR-TSC and is currently under process of notification.**

**Reference Standard: UN R 151**

# Moving Off Information System (MOIS)



A system used to detect and inform the driver of the presence of pedestrians and cyclists in the close-proximity forward blind-spot of the vehicle and, if deemed necessary based on manufacturer strategy, warn the driver of a potential collision.

**Current status: AIS 187 on Moving off Information System is approved by CMVR-TSC and is currently under process of notification**  
**Reference Standard: UN R 159.**

# Driver Drowsiness and Attention Warning System (DDAWS)

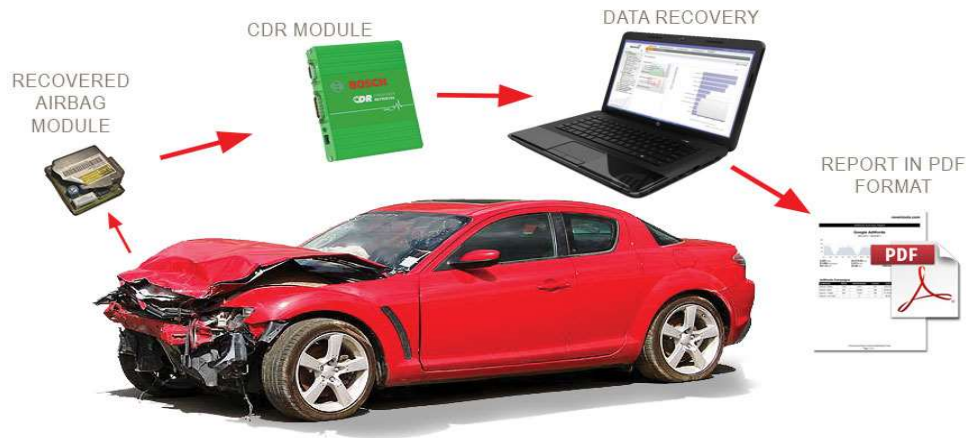


A system used to detect and monitor behavior and fatigue levels of the driver. These systems are emerging to make the vehicles more intelligent for avoiding accidents on roads. To begin with the technology is applicable for M and N category of vehicles, with a maximum design speed of above 70 km/h.

**Current status: AIS 184 on DDAWS is approved by CMVR-TSC and is currently under process of notification**

**Reference Standard: (EU) 2019/2144**

# Event Data Recorder (EDR)



An event data recorder (EDR), similar to an accident data recorder (ADR) sometimes referred to informally as an automotive black box is a device installed in some automobiles to record information related to traffic collisions.

**Current Status : Technical work by the panel is completed and finalized draft AIS 192 for EDR is to be put up for approval in the next meeting of CMVT-TSC.**

**Reference Standard: UN R 160.**

# Cyber Security Management System (CSMS) & Software Update Management Systems (SUMS)



Recently, Cyber Security for non-computers, such as transportation, utility, home appliance and others has become a serious social concern.

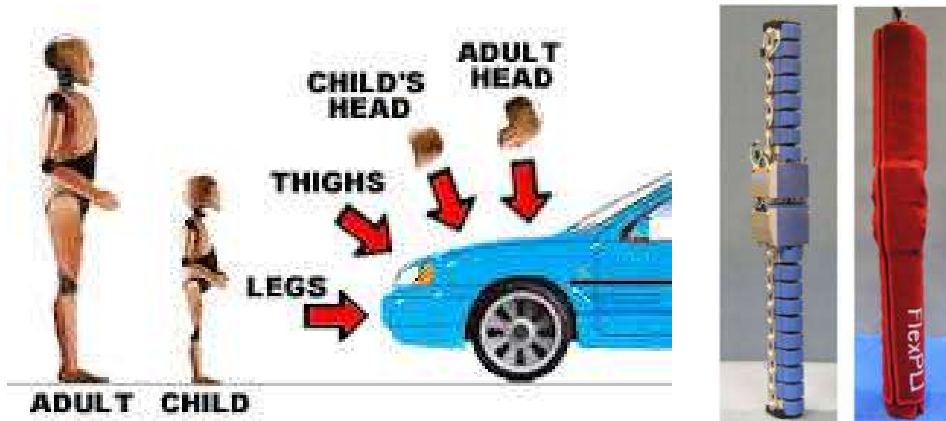
Intelligent modern vehicles have more Electronic Controller Units (ECU's) and more software code than ever, which comes with huge cyber risks – especially with the increased connectivity between vehicle, smart-phones & other in – vehicle electronics

**Current status: AIS 189 for CSMS and AIS 190 for SUMS are approved by CMVR-TSC and are currently under process of notification**

**Reference Standard: UN R 155 and UN R 156.**



# AIS 100 (Rev.1) Pedestrian Safety



- Scope extended to
  - all M1 category vehicles (earlier it was limited to  $M1 \leq 2500$  kg)
  - M2 category vehicles with GVW up to 4500 kg.
  - N1 derived from the said M1 and M2 vehicles. The front part of the vehicle which affects pedestrian safety remains same.
- Replaced TRL (Transport Research Laboratory) impactor with FlexPLI impactor.
- Existing models approved with TRL will be allowed to continue extensions with TRL impactor, and testing agencies will continue to maintain TRL test tool for another four years after implementation of revised standard.

**Current status: AIS 100 (Rev. 1) is approved by CMVR-TSC and is currently under process of notification.**  
**Reference Standard: UN R 127 and UN GTR 9 Amendment 2.**

# AIS 101 (Rev.1) Protection of Fuel Systems in Rear Impact



- AIS-101 is revised incorporating electric vehicles requirements from UN R 153.
- In revised standard mandatory impact speed is retained in line with AIS-101 (i.e. 35-38 km/h) and optionally it is allowed to conduct testing in line with latest UN R 153 (i.e. Impact test speed  $50.0 \pm 2.0$  km/h).

**Current status : AIS 101 (Rev. 1) is approved by CMVR-TSC and is currently under process of notification.**

**Reference Standard: UN R 34 and UN R 153.**

## Other Crash Standards

AIS – 098 (Rev. 1) on Offset Frontal Collision and AIS – 099 (Rev. 1) on Side Impact provisions are revised to align with UN Regulations.

The scope of the standards is enhanced to cover M1 category vehicles up to 3.5 t as that in UN Regulation.

**Reference Standard: UN R 94 and UN R 95.**

AIS – 201 is formulated to address full frontal collision requirements with focus on restraint systems.

**Reference Standard: UN R 137.**

**Current status : AIS standards are finalized and will be put up for approval in next meeting of CMVR-TSC.**

## Other Automotive Industry Standards (AIS) proposed for implementation

Sr. No.	Standard Topic	Reference Regulation
1.	Requirements for Approval of Quiet Road Transport Vehicles (QRTV) with regard to their reduced audibility	UN R 138
2.	Revised Braking System (for M2, M3, N2 and N3 category vehicles)	UN R 13
3.	ISOFIX Anchorage systems	UN R 145
4.	AIS-001 (Part 1) (Rev. 2) : Devices for Indirect Vision – Specification	UN R 46
5.	AIS-002 (Part 1) (Rev. 2) Devices for Indirect Vision – Installation	UN R 46
6.	AIS-035 (Rev. 1) : Automotive Vehicles - The Arrangement of Foot Controls of Vehicles	UN R 35

**Thank You for your attention !**