

AMENDMENT NO. 10 (02/2019)
TO
AIS-063:2005 Requirements for School Buses

1. **Page 4/8, after Clause No. 3.8.1.**

Addition of New Clause No. 3.9

“3.9 Fire Detection and Alarm System (FDAS) / Fire Detection and Suppression System (FDSS):

3.9.1 All School Buses shall be fitted with FDAS with effect from 1st April 2019 meeting the requirements of AIS-135:2016, as amended from time to time.

3.9.2 All School Buses shall be fitted with FDSS with effect from 1st April 2020 meeting the requirements of AIS-135:2016, as amended from time to time.”

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THE AUTOMOTIVE RESEARCH ASSOCIATION OF INDIA
P. B. NO. 832, PUNE 411 004

ON BEHALF OF
AUTOMOTIVE INDUSTRY STANDARDS COMMITTEE
UNDER

CENTRAL MOTOR VEHICLES RULES - TECHNICAL STANDING COMMITTEE
SET-UP BY

MINISTRY OF ROAD TRANSPORT & HIGHWAYS
(DEPARTMENT OF ROAD TRANSPORT & HIGHWAYS)
GOVERNMENT OF INDIA

6th February 2019

AUTOMOTIVE INDUSTRY STANDARD

Requirements for School Buses

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CENTRAL MOTOR VEHICLE RULES - TECHNICAL STANDING COMMITTEE

SET-UP BY

MINISTRY OF SHIPPING, ROAD TRANSPORT & HIGHWAYS
(DEPARTMENT OF ROAD TRANSPORT & HIGHWAYS)
GOVERNMENT OF INDIA

March 2018

Status Chart of the Standard to be used by the purchaser for updating the record

Sr. No.	Corr-igenda	Amend-ment	Revision	Date	Remark	Misc.

General Remarks:

INTRODUCTION

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

The need was felt to specially address the requirements pertaining to school buses, giving importance to the safety of school children.

This standard lays down the specific requirements for school buses and would be a necessary adjunct to the “Code of Practice for Bus Body Design and Approval – AIS-052 (Rev. 1).”

The compositions of Automotive Industry Standards Committee (AISC) for Vehicles with GVW of more than 3.5 tonnes and Permanent Automotive Industry Standards Committee responsible for preparation of this amalgamation of standard are given in Annexure I and II respectively.

Requirements for School Buses

1.0 SCOPE

This standard lays down special requirements for school buses over and above the requirements laid for buses in “AIS-052 Code of Practice for Bus Body Design and Approval”. The standard shall apply to buses with a seating capacity of 13 passengers and above excluding driver meant for transporting school children to and from school. These additional requirements are being laid down for the following reasons.

- (i) To maximize safety and minimize severity of injuries.
- (ii) To take care of specific needs related to school going children.

2.0 DEFINITIONS:

For the purposes of this standard the following definitions shall apply.

- 2.1 **‘Stop signal arm’** is a device that can be extended outward from the side of school bus, to provide a signal to other motorists not to pass the bus because it has stopped to load or discharge passengers.
- 2.2 **‘Speed governor’** is a device used to limit the speed of a school bus.
- 2.3 **‘Retracting step’** is a step used for entry into bus, but when not in use can be retracted inward and upward to enable normal operation of the bus.
- 2.4 **‘School bus insignia’** is the symbol to be imprinted on the bus. This is used internationally as a symbol for child safety (Refer Figure 1).

3.0 REQUIREMENTS:

3.1 Identification:

- 3.1.1 All school buses shall have an external colour of ‘Golden Yellow’. For school identification, a band of 150mm \pm 10 mm wide of ‘Golden Brown’ colour shall be provided on both longitudinal sides of the bus below the window level.

3.1.2 Insignia Location

The ‘school bus insignia’ shall be either of square or circular in shape with dimension of 350 x 350 mm or 350 mm diameter and a back drop of golden yellow colour with the symbol in black colour. The template drawn to 1:2 scale is shown in Figure 1. This shall be provided on the outer surface of the bus in a visible location on the front and the rear.

In case, if it is not possible to accommodate insignia of size 350 x 350 mm or 350 mm diameter, size can be reduced to 200 x 200 mm or 200 mm diameter.

- 3.2 **Emergency Exits:**
- 3.2.1 **Position and Number of Emergency Exits:** All school buses other than mini & midi, shall have an emergency exit on the opposite side of the service door. In addition, there shall be an emergency exit on the rear side of the bus. However, in case of mini & midi school buses, there shall be a minimum of one emergency exit and same shall be situated either on the opposite side of the service door or at the rear side of the bus. The lower edge of the emergency door shall be at the level of the bus floor and top edge shall be at the level of window upper edge.
- 3.2.2 **Passenger Safety:** Whenever the bus passenger door or emergency Exit/door opens, the driver of the bus must get the indication of the same through a buzzer. The emergency doors shall be kept closed in the normal condition.
- 3.3 **Vehicle Entry:** The lowest footstep height shall not be more than 300 mm from the ground and the vehicle may be provided with folding or retracting steps and if provided, the driver of the bus shall get the indication of the same through a flashing light or buzzer or suitable means while attempting to start the vehicle without folding or retracting the steps.”
- 3.4 **Seat Design:**
- 3.4.1 **Interior Protection:**
- 3.4.1.1 All parts in Head Room (Free height over seating position) shall have a radius of not less than 2.5 mm. In addition, buses shall meet the requirements of interior fittings as specified in AIS-047 as amended from time to time.
- 3.4.1.2 All parts in gangway up to height of 1200 mm from bus floor shall have a radius not less than 25mm. Alternatively its shore hardness shall not be more than 20 Shore A hardness.
- 3.4.2 **Storage Racks:**
- 3.4.2.1 Storage racks of 300 mm minimum depth to be provided beneath all passenger seats, except the seats mounted above any tyre humps and last row of seat.
- 3.4.3 **Seat Layout:** All seats should be forward facing except in the case of seats facing the passenger step well, which should not face the door. Alternatively a partition which prevents the child from falling into the step well shall be provided. However, this requirement of partition shall not be applicable to buses in which passenger step well does not exist.
- 3.4.4 **Seat Dimensions:** Every seating position for school children shall be at least 265 mm in width and 350 mm in depth.

- 3.4.5 For calculation of Seating Capacity of school bus with respect to the specified Gross Vehicle Weight (GVW) in kg, following formula shall be used;

$$GVW = A + (B \times 50^*)$$

Where,

A = Vehicle weight in the kerb weight condition (as defined in IS 9211: 2003) + 150**(kg)

In the case of electric vehicles, the weight of traction batteries is to be subtracted from the kerb weight.

B = Number of seating positions for school children excluding the driver and attendant.

* Weight per school child including his / her luggage (school bag, tiffin bag, etc.)

** Weight of driver and attendant including their luggage (75kg per person)”

- 3.4.6 Loads for seat strength & seat anchorage tests: Seats for school bus shall comply with strength tests as per clause No.5 and seat anchorage tests as per clause No. 7 of AIS-023:2005 with applicable loads as per Annexure II of AIS-023: 2005 as amended from time to time.

3.5 **Stopping Signals:**

Whenever the passenger door opens, the following 2 signals shall operate.

- 3.5.1 The stop signal arm should project out of the co-driver side with a minimum projection of 150 mm with the ‘ STOP ‘ sign of minimum letter height of 40 mm to be installed.

- 3.5.2 The hazard warning shall operate automatically.

3.6 **Speed Governor:**

A speed governor complying with the requirements of Rule 118 of CMV(A)R 1989, which prevents driver from speeding beyond the speed limits set by the latest Central Government Notification shall be provided.

- 3.7 The requirements of destination board mentioned in Chapter 2 AIS-052 (Rev.1) at clause no. 2.2.15 is optional for school buses.

- 3.8 The requirements of service doors shall be as per clause no. 3.4.4 of Chapter 3 of AIS- 052 (Rev.1), however all types of school buses shall be provided with Manually Operated Service Doors(s) or Power Operated (Pneumatic/Hydraulic/Electric) Service Door(s).

- 3.8.1 Handrails and Handholds provided for service doors shall be such that they include a grasping/ gripping point available to a child standing on the ground and adjacent to the service door or any of the successive door steps. Such point shall be situated, vertically, between 400 to 1000 mm (instead of 800 ~ 1000 mm as specified in clause 2.2.9.11.2 of AIS-052 (Rev.1) above the ground or from the surface of each step.
- 4.0 The technical specification for School Bus requirements related parameters to be submitted by Bus Manufacturers / Bus Body Builders as per AIS-063 shall be as per Annexure-A.

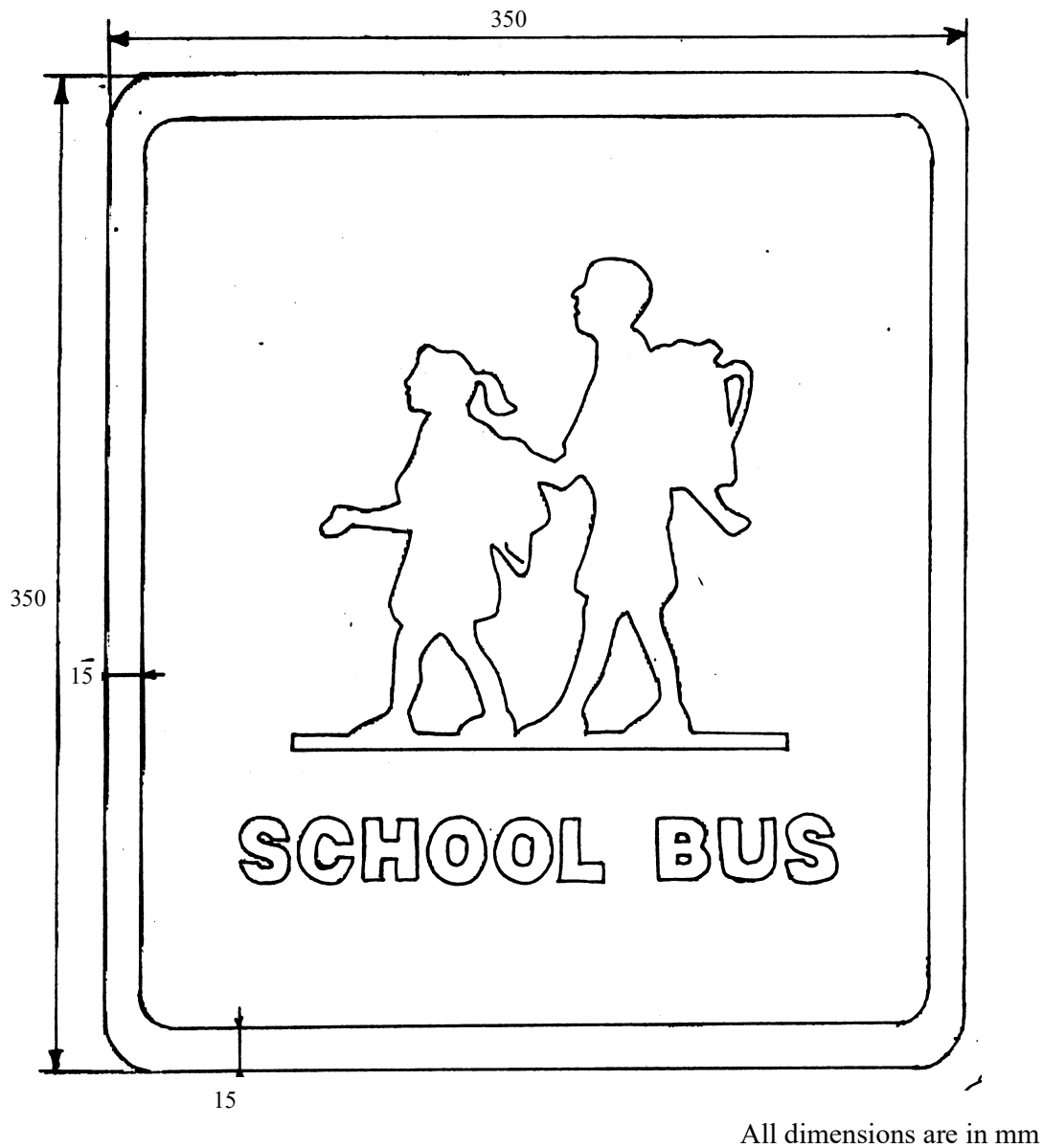


Figure 1 – School Bus Insignia
(See Para 3.1.2)

Annexure: A

(See clause 4.0)

**TECHNICAL SPECIFICATION OF SCHOOL BUS
REQUIREMENTS RELATED PARAMETERS TO BE
SUBMITTED) BY BUS MANUFACTURER OR BUS BODY
BUILDER AS PER AIS-063:2005**

Sr. No.	Parameters	To be submitted by manufacturer /Bus Body Builder
1.0	School Bus colour	
1.1	Width of Golden brown band & its Height from Ground Level (mm)	
2.0	School Bus Insignia	
2.1	Dimension	
2.2	Location at Front & at Rear	
3.0	Emergency Exits	
3.1	No. of Emergency Exits	
3.2	Emergency Exit type (Window/Door)	
3.3	Position of Emergency Exit	
3.4	Dimension of Emergency Exit (mm)	
4.0	Vehicle Entry Steps	
4.1	Height of First/Lowest Footstep From Ground Level (mm)	
4.2	Height of other steps (if any) from Ground Level (mm)	
4.3	Depth of step (mm)	
4.4	Folding or Retracting steps(Provided/Not Provided)	
4.4.1	if provided, its indication through a Buzzer/Flashing light to the driver	
5.0	Service Doors	
5.1	Whether operated manually or power operated	
5.2	If power operated whether operated Pneumatically/Hydraulically/Electrically.	
6.0	Interior Protection	
6.1	List out parts if any in the gangway lies upto a height of 1200mm from bus floor, its radius or Shore hardness	

Sr. No.	Parameters	To be submitted by manufacturer /Bus Body Builder
7.0	Storage Racks	
7.1	Location	
7.2	Depth (mm)	
8.0	Seats	
8.1	Seating layout (2x1, 2x2, 3x2 and any other)	
8.2	Seat Dimension (per child) (Width x Depth) mm	
8.3	Type of partition which prevents the child from falling into the step well	
9.0	Stop Signal Sign	
9.1	Min. letter height of sign (mm)	
9.2	Min. Projection (mm)	
10.0	Passenger Safety	
10.1	Provision of flashing light and buzzer or suitable means in case of door/Emergency door is open	
11.0	Provision of Speed limiting facility as per rule 118 of CMVR	

Manufacturer :	Document No :	Test Agency :	Cert No :
Signature		Signature	
		Name	
Name	Sheet No	Designation	
Designation	Date	Date of Issue	

ANNEXURE I

(See Introduction)

Composition of AISC for Vehicles with GVW of more than 3.5 Tonnes *

Director, Central Institute of Road Transport (CIRT)	Chairman
Representative from Automotive Research Association of India (ARAI)	Member
Representative from the Dept. of Heavy Industry, Ministry of Heavy Industry & Public Enterprises (DHI, MoHI & PE)	Member
Representative from Ministry of Road Transport & Highways (MoRTH)	Member
Representative from Ministry of Petroleum & Natural Gas (MoPNG)	Member
Representative from Ministry of Environment, Forest & Climate Change & (MoEF & CC)	Member
Representative from Bureau of Indian Standards (BIS)	Member
Representative from National Automotive Testing, Research and Infrastructure project (NATRiP)	Member
Representative from Vehicle Research & Development Establishment (VRDE)	Member
Representative from International Centre of Automotive Technology (ICAT)	Member
Representative from Indian Institute of Petroleum (IIP)	Member
3 Representatives from Society of Indian Automobile Manufacturers (SIAM)	Members
2 Representatives Automotive Component Manufacturers Association (ACMA)	Members
2 Representatives from State Transport Department on rotation on bi annual basis	Members
Representative from Association of State Road Transport Undertakings (ASRTU)	Member
Representative from Indian Construction Equipment Manufacturers Association (ICEMA)	Member
Representative from Tractors Manufacturers Association (TMA)	Member
3 Representatives from Association/Organisations of Bus Body Builders, Truck Body Builders and Trailer Builders	Members
2 Representatives from Associations/ Organisations of Fleet Operators of Buses and Trucks, respectively	Members
Representative from Central Institute of Road Transport (CIRT)	Member Secretary

ANNEXURE II

(See Introduction)

AISC COMPOSITION***Automotive Industry Standards Committee**

Chairperson	
Mrs. Rashmi Urdhwareshe	Director The Automotive Research Association of India, Pune
Members	Representing
Shri Priyank Bharti	Ministry of Road Transport and Highways (Dept. of Road Transport and Highways), New Delhi
Representative from	Ministry of Heavy Industries and Public Enterprises (Department of Heavy Industry), New Delhi
Shri S. M. Ahuja	Office of the Development Commissioner, MSME, Ministry of Micro, Small and Medium Enterprises, New Delhi
Shri Shrikant R. Marathe	Former Chairman, AISC
Shri R.R. Singh	Bureau of Indian Standards, New Delhi
Director	Central Institute of Road Transport, Pune
Director	Global Automotive Research Centre
Director	International Centre for Automotive Technology, Manesar
Director	Indian Institute of Petroleum, Dehra Dun
Director	Indian Rubber Manufacturers Research Association
Director	Vehicles Research and Development Establishment, Ahmednagar
Representatives from	Society of Indian Automobile Manufacturers
Shri T. R. Kesavan	Tractor Manufacturers Association, New Delhi
Shri Uday Harite	Automotive Components Manufacturers Association of India, New Delhi

Member Secretary

Shri Vikram Tandon

Dy. General Manager

The Automotive Research Association of India, Pune

* At the time of approval of this Automotive Industry Standard (AIS)