भारतीय मानक
Indian Standard

IS 16712 : 2018

स्वचालित वाहन — दो पहिए वाहनों के लिए स्प्रे सप्प्रेसन प्रणाली

Automotive Vehicles — Spray Suppression Systems for Two Wheeled Motor Vehicles

ICS 40.140

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Automotive Body, Chassis, Accessories, Garage Equipment, Springs and Suspension Systems Sectional Committee, TED 6

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards,after the draft finalized by the Automotive Body, Chassis, Accessories, Garage Equipment, Springs and Suspension Systems Sectional Committee had been approved by the Transport Engineering Division Council.

The Spray suppression system is intended to reduce the water spray and/or mud thrown upward and rear ward by rear tyre of a vehicle inmotion.

In the preparation of this standard considerable assistance has been derived from AIS 103 : 2009 Spray-suppression systems for two wheeled Motor Vehicles and Vehicle Standard (Australian Design Rule 42/04 – General Safety Requirements) 2005.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

AUTOMOTIVE VEHICLES — SPRAY SUPPRESSION SYSTEMS FOR TWO WHEELED MOTOR VEHICLES

1 SCOPE

1.1 This standard applies to two wheeled motor vehicles of L2 category as defined in IS 14272 except those fitted with thermic engine of capacity more than 200 cm^3.

1.2 This standard specifies the dimensional requirements of rear spray-suppression systems. These vehicles shall be constructed and/or fitted with spray-suppression system in such a way as to comply with the requirement soft his standard.

2 REFERENCES

The following Indian Standards contain provisions, which through reference in this text constitute provisions of this standard. At the time of publication the editions indicated were valid. All standards are subject to revision and parties to agreements based on the standard are encouraged to investigate the possibility or applying the most recent editions of the standards indicated below:

IS No.	*Title*
14272 : 2011	Automotive Vehicles — Types — Terminology
11422 : 2001	Terms and definitions of weights of two wheeled motorvehicles.

3 DEFINITIONS

For the purposes of this standard, the following definitions shall apply:

3.1 Spray-Suppression System — A system intended to reduce the water spray and/or mud thrown upward and rear ward by rear tyre of a vehicle in motion.The spray-suppression system shall typically comprise of a mudguard, if required, with a mud flap or any other vehicle part(s).

3.2 Mudguard — A rigid or semi-rigid component intended to suppress the water, mud etc. thrown upwards and rearwards by rear tyres of vehicle in motion which causes discomfort to pillion rider, pedestrians or rider of following vehicles. Mudguard shall be rigidly fixed to frame or other parts of the vehicle.

3.3 Mud flap — A rigid or semi rigid part, which may additionally be fitted as an extension of the mudguard.

3.4 Type of Spray-Suppression System — A system, which does not differ in respect of angle θ (*see* **5.1.1**).

4 GENERAL REQUIREMENTS

4.1 The rear wheel of the vehicle and the wheel of a side car, if fitted, shall be fitted with spray-suppression system of width not less than the "tyre overall width" of the rear tyre as declared in Annex A. This requirement applies up to 45° of wheel coverage angle (angle "θ" in Fig. 1). The width of spray-suppression system shall not be less than half of tyre overall width at 60º of wheel coverage angle ("θ" in Fig. 1).

5 SPECIFIC REQUIREMENTS

5.1 The spray-suppression system provided for the rear wheel and wheel of any side-car if fitted, shall extend not less than wheel coverage angle θ subtended between transverse planes (planes perpendicular to the longitudinal median plane of the vehicle) one vertical plane passing through axis of rear wheel and the other passing through that axis and lowermost point of the spray-suppression system when the vehicle is stationary on a horizontal surface without stand (*see* Fig. 1). The vehicle shall be in kerb weight condition as specified in IS 11422, added with a weight of 68 kg uniformly placed on riders seat area. The tyres shall be inflated as recommended by the vehicle manufacturer for the specified load condition.

5.1.1 The rear wheel coverage angle θ shall be at least 60° (*see* Fig. 1)

5.2 During the type approval, the test agency shall carry out verification /check of the documents submitted to establish the compliance.

6 IF COMPLIANCE IS TO BE ESTABLISHED FOR STATUTORY PURPOSE

6.1 Type Approval

6.1.1 The manufacturer shall submit the details as specified in Annex A.

6.1.2 The type approval for spray suppression system of a model/variants submitted for approval in pursuance of this standard shall be granted without any further

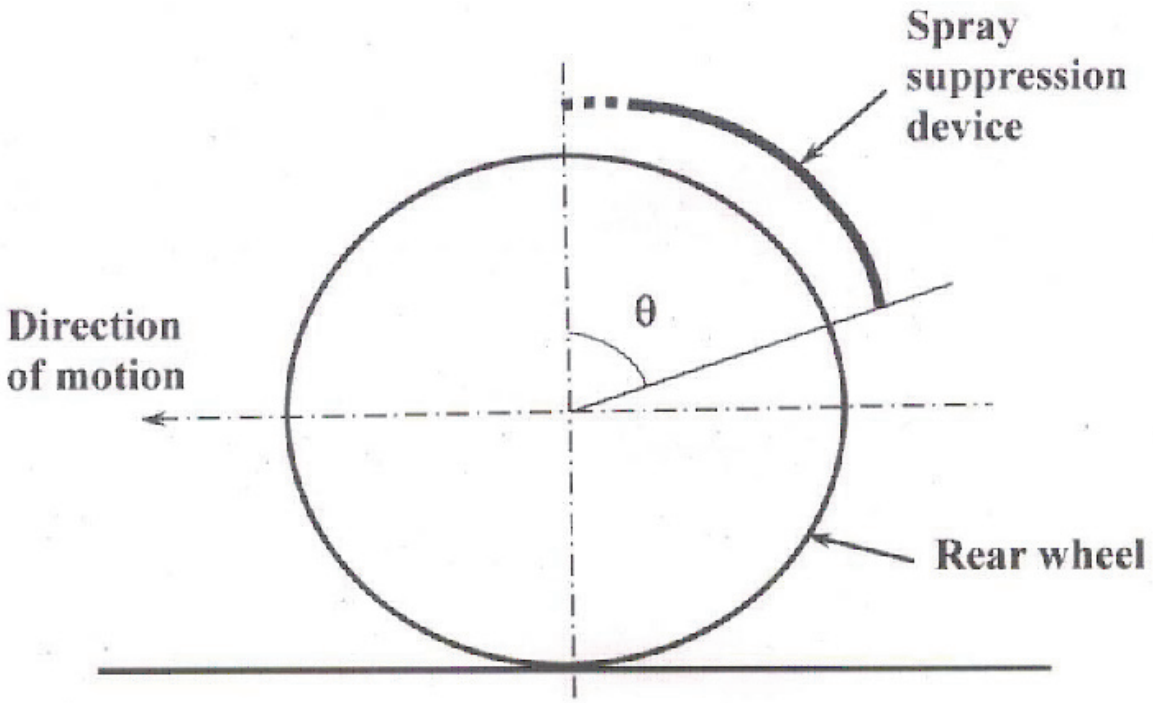

FIG. 1 SCHEMATIC DIAGRAM OF TYPICAL ANGLE "θ" OF SPRAY-SUPPRESSION SYSTEM

verification if it is already type approved as per the requirements of corresponding notified statutory provision.

6.2 Modification in the Type of Spray Suppression System and Extension of Approval

6.2.1 Any functional modification in technical requirements declared in accordance with Annex A shall be intimated to the test agency.

6.2.2 Testing agency may then consider, whether;

6.2.2.1 The component with modification complies with specified requirements; or

6.2.2.2 Any further verification is required.

6.2.3 In case of **6.2.2.2** checks for those parameters, which are affected by the modifications, only need to be carried out.

6.2.4 In the event of **6.2.2.1** or in the case of **6.2.2.2,** after successful compliance to requirements, the certificate of compliance shall be validated for the modified version.

6.2.5 For deciding whether any further verification is required, guidelines given in Annex B shall be followed.

ANNEX A

(*Clause* **6.1.1**)

TECHNICAL SPECIFICATION OF TWO WHEELED MOTOR VEHICLE / VARIANTS

Sl No.	*Parameter*
1	Name and address of the vehicle manufacturer
2	Vehicle model and its variant (s)
3	Engine capacity (cm^3)
4	Vehicle category (as per IS 14272)
5	Tyre Overall Width (maximum of variants and tyre makes)
6	Diagram showing general arrangement of spray-suppression system, Angle θ (*see* Fig.1 in **5.1.1**) and relevant dimensions.

ANNEX B

(*Clause* **6.2.5**)

CRITERIA FOR EXTENSION OF APPROVAL

Sl No.	*Parameter/Criteria*	*Whether verification required*
1	Reduction of engine capacity from beyond 200cm^3 to less than and equal to 200cm^3	Yes
	Increase of engine capacity from less than and equal to 200 cm^3 to more than 200 cm^3	No
2	Increase in angle θ beyond the values specified by manufacturer in7.1.1.	No
3	Increase in Tyre Overall Width	Yes
4	Decrease in Tyre Overall Width	No
5	Decrease in width of Spray suppression system	Yes
6	Increase in width of Spray suppression system	No

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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