

ICS 43.040.60

CCS T26



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 34659-2017

**Requirements and test methods relating to the
spray-suppression systems of motor vehicles and their trailers**

汽车和挂车防飞溅系统性能要求和测量方法

Issued on: November 1, 2017

Implemented on: January 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

Table of Contents

1	Scope
2	Normative references
3	Terms and Definitions
4	Technical requirements for spray-suppression devices
5	Requirements for vehicles
5.2	Axles / Axles
5.4	Spray-suppression system
6	Particular requirements for spray-suppression systems
6.1.1	Mud guard
6.1.2	Outer valance
6.1.2.2	For multiple axles, the requirements of
6.1.3	Rain flap
6.2.2	Outer valance
6.3.1	Mud guard
6.3.2	Outer valance
6.3.3	Rain flap
6.3.3.2	The spray-suppression devices conforming to
7	Measuring Methods

Foreword

All technical content of this Standard is compulsory. This Standard was drafted in accordance with the rules given in GB/T 1.1-2009. Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The issuer of this document shall not be held responsible for identifying any or all such patent rights. This Standard was proposed by and shall be under the jurisdiction of the Ministry of Industry and Information Technology of the People's Republic of China The drafting organizations of this Standard. Dongfeng Motor Corporation, National Passenger Car Quality Supervision and Inspection Center, China FAW Group Corporation R&D Center, China Quality Certification Center, Hubei Qixing Autobody Co., Ltd. The main drafters of this Standard. Hou Cuihua, Zhang Shangjiao, Ma Wei, Yu Boying, Liu Liya, Sun Lei, Qu Yanping, Wang Sheng, Peng Liying, Zhang Ming, Guo Maolin, Zhou Yanling. Requirements and test methods relating to the spray- suppression systems of motor vehicles and their trailers

1 Scope

GB 34659-2017 is the Chinese national standard on requirements and test methods relating to the spray-suppression systems of motor vehicles and their trailers, in the field of road vehicles engineering. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 1 November 2017 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 January 2018. Classification: ICS 43.040.60, CCS T26. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This Standard specifies the performance requirements and test methods of the spray-suppression systems of motor vehicles and their trailers. This Standard applies to.

a) the spray-suppression systems which are installed on the vehicles of categories N and O;

b) the complete vehicles of categories N and O on which the spray-suppression systems defined in

3.1 are installed;

c) the wheels which is covered by driver's cab for the vehicle chassis having a driver's cab;

d) the vehicles of category N1, and the vehicles of category N2 whose designed permissible maximum laden mass is not greater than 7 500 kg. The requirements of this Standard may be deemed to have been met if they are installed with the wheel guards specified in GB 7063. This Standard does not apply to the vehicles of category G which are defined in GB/T 15089. The installation of the spray-suppression devices defined in

3.2 of this Standard is voluntary for the following vehicles; and if these vehicles are installed with the spray- suppression devices, then the requirements of this Standard shall be met.

a) the categories N1, O1, O2 vehicles of which the permissible maximum laden mass is not greater than 7 500 kg;

b) for the vehicle chassis having a driver's cab, the wheels which are not covered by driver's cab;

c) the chassis having no driver's cab;

d) the vehicles on which it is impossible to install the spray-suppression devices under normal service conditions.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition dated applies to this document. For undated references, the latest edition of the referenced documents (including all amendments) applies to This Standard.

GB/T 3730.1, Motor vehicles and trailers - Types - Terms and definitions

GB 7063, The wheel guards of motor vehicles

3 Terms and Definitions

For the purposes of this document, the following terms and definitions and those defined in GB/T 3730.1 and GB/T 15089 apply.

3.1 spray-suppression system A system which is used to reduce water sprayed from tires during vehicle operation. A spray-suppression system usually comprises mud guard, outer valance and rain flap.

3.2 spray-suppression device It is a part of spray-suppression system which includes the following two parts.

3.3 mud guard A rigid or semi-rigid component which is used to collect water thrown up by operating tires and guide to the ground. Mud guard can be integrated to vehicle body or other parts of vehicles in whole or in part, e.g. the lower part of goods platform.

3.4 outer valance A component constituting mud guard or vehicle body, which is located in the vertical plane parallel to the vertical plane of vehicles.

3.5 rain flaps A flexible component which is installed vertically in the rear part of wheels, the lower part of chassis or goods platform, or on mud guard.

3.6 steered wheels Wheels which are driven by the steering system of vehicles.

4 Technical requirements for spray-suppression devices

4.1 Technical requirements for the energy absorbing type of spray- suppression devices

4.1.1 Conduct test as specified in A.4.2 and A.4.3; and calculate the average percentage of water collection using the method specified in A.4.4, which shall not be less than 70%.

4.1.3 If the vertical position of sample influences the test result, the process described in A.4.1 ~ A.4.4 shall be repeated at the position of the maximum and minimum percentages of water collection. The test results shall still be as specified in

4.1.1 and 4.1.2.

4.2 Technical requirements for the air/water separation type of spray-suppression devices

4.2.1 The average percentage of water collection shall not be less than 85%, which is calculated as specified in B.4.3 of Annex B.

4.2.2 If the difference between the maximum-minimum percentage of water collection in a single test in a round of tests, and the average percentage, exceeds 5%, the test shall be repeated as required in Annex B.

4.2.3 When the vertical position of the devices influences the test result, the steps described in B.4.1 and B.4.4 shall be repeated at the positions of the maximum and minimum percentages;

5 Requirements for vehicles

5.1 Vehicle status In order to test whether vehicles conform to this Standard, they shall be in the following status.

5.2 Axles / Axles

5.2.1 Retractable axle / axle If vehicles are installed with one or several retractable axles, the spray-suppression systems shall cover all wheels when the axles descend or rise AND the wheels are in contact with the ground.

5.3 Position of outer valance Except the projection of tires which is in contact with the ground, the distance "c" between the vertical plane tangent to the outer tire wall and the inner edge of outer valance shall not exceed 100 mm (see Figure C.1).

6 Particular requirements for spray-suppression systems

6.1 Requirements for the energy-absorbing type of spray-suppression systems which are installed on the axles of steered or self-steered or non-steered wheels

6.1.1 Mud guard

6.1.1.1 Mud guards shall cover the areas closely adjacent to the upper, front and rear side of tires in the following ways.

6.1.1.2 The front surface of the rear of mud guards shall be installed with a spray-suppression device which conforms to 4.1. The device shall cover the inner side of mud guards; its height is determined by a straight line through wheel center; and the included angle between the straight line and the horizontal line is not less than 30° (see Figure C.4).

6.1.2 Outer valance

6.1.2.1 For single axles, start measurement from wheel center, the lower edge of outer