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Towing Devices for Light-Duty Vehicle

轻型汽车牵引装置

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Foreword

The Clauses 4 and 5 in this Standard are mandatory, while the rest are recommended.

This Standard was drafted as per the rules specified in GB/T 1.1-2009.

This Standard was proposed by Ministry of Industry and Information Technology.

This Standard shall be under the jurisdiction of National Technical Committee for Standardization of Automobile (SAC/TC 114).

Drafting organizations of this Standard: China Automotive Technology & Research Center; Lingyun Industrial Co., Ltd.; SAIC-GM-Automobile Co., Ltd.; Pan Asia Technical Automotive Center Co., Ltd.; Anhui Jianghuai Automobile Co., Ltd.; China Automotive Engineering Research Institute Co., Ltd.; Volkswagen (China) Investment Co., Ltd.; Toyota Motor Engineering & Manufacturing (China) Co., Ltd.; Daimler Northeast Asia Ltd.; and BMW China Service Ltd.

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Towing Devices for Light-Duty Vehicle

1 Scope

This Standard specifies the technical requirements and test methods of the towing devices for light-duty vehicle.

This Standard is applicable to the Type-M and Type-N_1 vehicles with the maximum allowable total mass of no greater than 3500kg.

2 Normative References

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this document.

GB/T 3730.2 Road Vehicle – Masses - Vocabulary and Codes

GB/T 15089 Classification of Power-Driven Vehicles and Trailers

3 Terms and Definitions

For the purposes of this document, the terms and definitions given in GB/T 15089 and GB/T 3730.2 and the following apply.

3.1 Towing device

The components fixed or mounted on the vehicle, connected by means of tow rope, towline or tow bar, so that realize the towing or being towed of the vehicle.

3.2 Towing device anchorage

The component on the vehicle that is connected to the towing device.

4 Technical Requirements

4.1 General requirements

g – gravity acceleration, 9.8m/s^2.

4.2.2 Each towing device installed on the vehicle, after finishing the test specified in Clause 5, shall meet the following requirements:

a) The towing device and its anchorage shall not fail, break or deform to affect the normal use;

b) Other components installed near the towing device (such as luminaires, signaling devices, brake system, steering system, etc.) shall not be damaged in a way that influence their normal operation.

5 Test Methods

5.1 Test conditions

5.1.1 The test shall be carried out on the same vehicle using the same towing device; the vehicle under test shall be in the kerb mass state, and fixed on a horizontal surface.

5.1.2 It is allowed to be carried out on a body or chassis that is completely equivalent to the actual vehicle; The fixing method shall ensure not influence the strength of the towing device; the force condition of the towing device shall be consistent with the entire vehicle.

5.2 Static load test

5.2.1 Separately apply the static load F of the horizontal tension and horizontal compression to the towing device; the direction of static load F is parallel to the longitudinal centerline of the vehicle.

5.2.2 The horizontal line penetrating the working area center point of the towing device, and paralleling to the longitudinal vertical surface of the vehicle shall separately exert the tension and compression static load F (see Figure 2) to the towing device along the vertical direction ±5°, and the horizontal direction ±25°. Select any angle to perform the tension and compression tests.

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