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Replacing GB/T 12536-1990

Coast down test method of motor vehicles

汽车滑行试验方法

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Foreword

This Standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard replaces GB/T 12536-1990 "Motor vehicles - Coast down - Test method". Compared with GB/T 12536-1990, the main technical changes in this Standard are as follows:

- added the terms and definitions;
- added the "road requirements", "environmental requirements", "measurement parameters and their units, accuracy", "vehicle conditions" in the test conditions;
- refined the test methods and added the test requirements for automatic motor vehicles;
- modified "Data correction method" in Clause 5 of GB/T 12536-1990 as Annex B in this Standard;
- added part of the test record content in Annex A.

This Standard was proposed by Ministry of Industry and Information Technology of the People's Republic of China.

This Standard shall be under the jurisdiction of National Technical Committee on Automobiles of Standardization Administration of China (SAC/TC 114).

The drafting organizations of this Standard: China Automotive Technology and Research Center, Guangzhou Automobile Group Co., Ltd. Automotive Engineering Research Institute, Shanghai Motor Vehicle Testing Center, Anhui Jianghuai Automobile Co., Ltd., China Automotive Engineering Research Institute Co., Ltd., China National Heavy Duty Truck Group Jinan Power Co., Ltd., Hainan Tropical Auto Testing Co., Ltd., Xiangyang Da'an Automobile Testing Center, Shanghai Automotive Group Co., Ltd., Pan Asia Automotive Technology Center Co., Ltd., SAIC-GM-Wuling Automobile Co., Ltd., Dongfeng Motor Co., Ltd. Dongfeng Nissan Passenger Vehicle Co., Ltd., FAW Toyota Technology Development Co., Ltd., Guangzhou Automobile Toyota Motor Co., Ltd., Beiqi Foton Motor Co., Ltd., Zhengzhou Yutong Bus Co., Ltd., Brilliance Automotive Group Holdings Limited, Dongfeng Peugeot Citroen Automobile Co., Ltd., FAW-VW Automotive Co., Ltd., Daimler Greater China Investment Co., Ltd., BMW (China) Service Co., Ltd., Toyota Motor R&D Center (China) Co., Ltd. Beijing Branch.

Main drafters of this Standard: Gao Yue, Wang Xueping, Liu Guibin, Liang Rongliang, Zhang Jin, Su Qingrui, Li Yugang, Wei Xiaohua, Shi Jianhua, Wang

Coast down test method of motor vehicles

1 Scope

This Standard specifies the test conditions and test methods of coast down tests for various types of motor vehicles.

This Standard is applicable to various types of motor vehicles.

2 Normative references

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

GB/T 12428, *Laden mass calculating method for buses*

GB/T 12534, *Motor vehicles - General rules of road test method*

GB/T 15089, *Classification of power-driven vehicles and trailers*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 coast down

when the vehicle runs in a straight line, the transmission is disengaged from the power mechanism, and it advances on inertia

4 Test conditions

4.1 Road requirements

4.1.1 General requirements

The test pavement shall be hard, straight, clean, dry and long enough asphalt or concrete pavement.

4.1.2 Longitudinal slope

4.4.2.1 M₁ vehicles and N₁ vehicles with a maximum total design mass of less than 2t

4.4.2.1.1 When the vehicle's 50% maximum allowable load mass is less than or equal to 180 kg, the test mass is the entire vehicle trim mass plus 180 kg. When the vehicle's 50% maximum allowable loading mass is greater than 180 kg, the vehicle's test mass is the vehicle's total mass plus 50% of the maximum allowable loading mass.

4.4.2.1.2 The load shall be distributed as uniform as possible.

4.4.2.2 M₂, M₃ vehicles and N vehicles with maximum design total mass not less than 2t

4.4.2.2.1 Except for special regulations, it applies to 65% of the load mass of M₂ and M₃ urban passenger vehicles; other vehicles are fully loaded.

4.4.2.2.2 The load of M₂ and M₃ vehicles is uniformly distributed according to GB/T 12428. The load of N vehicles is uniformly distributed according to GB/T 12543.

4.4.3 Vehicle preparation

4.4.3.1 If there are no special requirements, the vehicle shall be clean and the windows and ventilation device in the passenger compartment shall be closed and turned off.

4.4.3.2 if the lighting device may affect the test results when it is turned on, it shall be turned off.

4.4.3.3 Tire cold inflation pressure shall meet the requirements of the technical conditions of the vehicle.

4.4.3.4 Prior to the start of the test, the vehicle shall be brought into normal operating temperature in a suitable manner.

4.4.3.5 For test vehicles with energy recovery devices, ensure that the energy recovery device does not produce or stop the vehicle from sliding when the transmission gear is in the N gear.

5 Test methods

5.1 Markers are set up on both sides of a sufficiently long test pavement as a coast down section.

5.2 The test vehicle shall stop accelerating before entering the coast down section. Maintain stable driving conditions.