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

GB/T 12536-2017

Replacing GB/T 12536-1990

Coastdown 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

GB/T 12536-2017 is the Chinese national standard on coastdown test method of motor vehicles, in the field of road vehicles engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 14 October 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 May 2018. Classification: ICS 43.020, CCS T41. 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 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

4.1 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.