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**NATIONAL STANDARD OF THE
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GB 26149-2017

Replacing GB/T 26149-2010

**Performance requirements and test methods of tire pressure
monitoring system for passenger cars**

乘用车轮胎气压监测系统的性能要求和试验方法

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Foreword

Articles 4, 5, 6, 7 and 8 of this Standard are compulsory; and the rest are voluntary. This Standard was drafted in accordance with the rules given in GB/T 1.1-2009. This Standard replaces GB/T 26149-2010, TPM Sensor Module Based Tire Pressure Monitoring Systems for Motor Vehicles. Compared with GB/T 26149-2010, major changes of this Standard are as follows: -- the nature of the standard is changed from the former voluntary national standard into the compulsory national standard; -- the application scope is changed (GB/T 26149-2010 applies to the TPM module based tire pressure monitoring systems for vehicles

and this Standard applies to vehicles of category M1); -- the classification of tire pressure monitoring systems is added; -- the functions and performance requirements are changed (GB/T 26149-2010 specifies the functions and of the TPM based tire pressure monitoring system and the performance requirements of relevant functions); -- the test methods are modified corresponding to the changes of functions and performance requirements; -- the requirements for the pressure monitoring system of the mandatory installation tires of vehicles of category M1. This Standard was proposed by the Ministry of Industry and Information Technology of the People's Republic of China. This Standard shall be under the jurisdiction of the National Technical Committee of Auto Standardization (SAC/TC 114). The drafting organizations of this Standard. China Automotive Technology and Research Centre, Great Wall Motor Co., Ltd., Chery Motor Co., Ltd., SAIC-Volkswagen Motor Co., Ltd., Guangzhou Automobile Group Co., Ltd. Automotive Engineering Institute, Pan Asia Technical Automotive Center Co., Ltd., Dongfeng Motor Corporation Technology Centre, SAIC-GM-Wuling Automotive Co., Ltd., Shanghai Baolong Automotive Corporation, Suzhou Sate Auto Electronic Co., Ltd., Beijing Sincode Science and Technology Co., Ltd., Steelmate Co., Ltd., Shanghai Hangsheng Industry Co., Ltd., Hamaton Automotive Technology Co., Ltd., Shanghai Topsytem Electronic Technology Co., Ltd., Shanghai Aero-care Technology Co., Ltd., Beijing Research and Design Institute of Rubber Industry, Triangle Tire Co., Ltd., MESNAC Co., Ltd. The main drafters of this Standard. Wang Zhao, Chen Ping, Deng Xianghong, Liu Di, Yuan Lin, Li Wei, Zheng Yong, Bai Yunfei, Wu Yinhu, Zang Hongtao, Chen Fei, Li Qin, Zhu Guozhang, Han Lingtao, Zhang Chengshun, Zhang Zhongjun, Guan Chaomin, Xu Lihong, Tian Zhaoju, Fang Hanjie, Xie Xiaojing, Liu Qi, Dong Lanfei. The previous edition of the standard replaced by this Standard is as follows: -- GB/T 26149-2010. Performance Requirements and Test Methods of Tire Pressure Monitoring System for Passenger Cars

1 Application Scope

GB 26149-2017 is the Chinese national standard on performance requirements and test methods of tire pressure monitoring system for passenger cars, 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 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 January 2018. Classification: ICS 43.040.10, CCS T35. 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 tire pressure monitoring system of passenger cars. This Standard applies to the vehicles of category M1.

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 12534, Motor Vehicles - General Rules of Road Test Method ECE R10, Uniform Provisions Concerning the Approval of Vehicles with Regard to Electromagnetic Compatibility

3 Terms and Definitions

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

3.1 tire pressure monitoring system; TPMS A system which is installed on the vehicle, monitors the tire pressure in some way and gives an alarm in case of any under-inflation of one or several tires.

3.2 recommended cold tire pressure; Prec The tire pressure value at the environmental temperature which is recommended by the vehicle manufacturer for the tires in different positions in accordance with the intended working conditions (such as load and vehicle speed), and causes no pressure accumulation because of use.

3.3 under inflation The tire pressure which is less than or equal to 75% of the recommended tire pressure (Prec) of the vehicle.

4 Classification

If the vehicle is equipped with one of the following two categories of TPMS, then it is deemed that the vehicle is equipped with the tire pressure monitoring system as defined by this Standard.

5 Functional and Performance Requirements

5.1 Electromagnetic compatibility The TPMS installed on the vehicle shall meet all the electrical/electronic requirements of ECE R10.

5.2 Signalling devices

5.2.1 The signs of tire pressure abnormality and failure alarm signalling devices shall meet one of following criteria.

5.2.2 The vehicle equipped with the TPMS of category I, shall be provided with the tire pressure abnormality alarm signalling device as specified in

5.2.1 a) and

5.2.1 b); and in case of any under-inflation of tires, it shall give optical alarm signals to the driver

5.2.3 The vehicle equipped with the TPMS of category II, shall at least be provided with the tire pressure abnormality alarm signalling device as specified in

5.2.1 a), which gives optical alarm signals to the driver in case of any under-inflation of tires. Words or acoustic methods may be used to assist the alarm signals.

5.2.4 The vehicle equipped with the TPMS shall be provided with the failure alarm signalling device; and in case of any failure of the TPMS, the signalling device as specified in

5.2.1 gives optical alarm signals to the driver. Words or acoustic methods may be used to assist the alarm signals.

5.2.5 If the tire under-inflation alarm and the failure alarm share one signalling device, then the methods for the expression of tire under-inflation alarm and failure alarm shall be significantly different, and shall be explained clearly in the user's manual of the vehicle.

5.2.6 The signalling device described in 5.2.2 ~

5.2.4 shall meet the following requirements. lighting conditions.

5.3.2 TPMS of category II

5.3.2.1 When the under-inflation alarm test for a single tire is conducted as specified in

c) in 7.2.2, the TPMS of category II shall light on the tire pressure abnormality alarm signalling device within 10 min; and the TPMS of category II equipped with the alarm signalling device as specified in

5.2.1 b), shall also indicate the specific position of the under-inflated tire.

5.5.1 Conduct failure alarm test as specified in

c) of 7.4, the TPMS shall light on the failure alarm signalling device within 10 min.

6 Test Conditions

6.1 Pavement and environment During the test, the pavement and environment shall be as specified in GB/T 12534.

6.2 Instruments The maximum tolerance for the pressure measurement device in the test shall be ± 3 kPa; all air pressure measurement data in the test shall be measured using one pressure measurement device.