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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 23919-2025

Replacing GB/T 23919-2009

Tri-wheel vehicles - Shock absorbers

三轮汽车 减振器

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 23919-2009 "Shock Absorbers for Three-Wheeled Vehicles and Low-Speed Trucks". Compared with GB/T 23919-2009, except for... Aside from structural adjustments and editorial changes, the main technical changes are as follows:

---The applicable product range has been changed (see Chapter 1, Chapter 1 of the.2009 edition);

---The structure and dimensions of the shock absorber were changed (see Chapter 4, Chapter 4 of the.2009 edition);

---The requirement for chrome plating on shock absorbers has been removed (see

5.4 in the.2009 edition);

---The cleanliness requirements for shock absorbers have been changed (see 5.6,

5.7 in the.2009 version);

---Changes were made to the load-bearing capacity, spring stiffness, and damping force requirements of the front shock absorber assembly, as well as the rated recovery resistance and rated displacement of the telescopic shock absorber. Specific compression resistance requirements (see 5.9,

5.11 in the.2009 edition);

---A cleanliness test method has been added (see 6.2);

---A test method for the effect of ambient temperature on resistance has been added (see 6.4.6);

---The test methods for the vertical bending stiffness and vertical bending strength reserve coefficient of the front shock absorber have been modified (see 6.8.3,.2009 version). 6.2.3). Please note that some content in this document may involve patents. The issuing

organization of this document assumes no responsibility for identifying patents. This document was proposed by the China Machinery Industry Federation. This document is under the jurisdiction of the National Technical Committee on Standardization of Low-Speed Vehicles (SAC/TC234). This document was drafted by: Mingzhen Industrial Holding Group Co., Ltd., Shandong Wuzheng Group Co., Ltd., and Shandong Shifeng (Group) Co., Ltd. The company, China Academy of Agricultural Mechanization Sciences Group Co., Ltd., Zhejiang Juyuan Electronics Co., Ltd., Shandong Shuangli Vehicle Co., Ltd., Jiangsu Universities, Weichai Lovol Smart Agriculture Technology Co., Ltd., Ningguo Xinma Vehicle Co., Ltd. of Anhui Province, Beijing Industrial Vocational College Xuzhou XCMG Automobile Manufacturing Co., Ltd., Henan Ruizhi Machinery Technology Co., Ltd., Zhejiang Yazhixing Auto Parts Co., Ltd., Zhejiang Lvjiayi Intelligent Suspension Co., Ltd., Zhejiang Provincial Agricultural Machinery Industry Association, Zhejiang Fangyuan Testing Group Co., Ltd., Guanxian Taixin Machinery Manufacturing Co., Ltd. Manufacturing Co., Ltd., Shanghai University of Engineering Science, Hangzhou Vocational and Technical College. The main drafters of this document are. Zhang Hengjing, Jiang Wenjuan, Lü Shusheng, Lin Lianhua, Liu Dongwei, Wang Haiting, Chen Kunshan, Zhang Qi, and Gong Zengmin. Zhu Xundong, Wan Jiwu, Liu Haitao, Xu Haigang, Du Enwei, Liu Gongxing, Wang Hui, Wang Xichao, Yang Ge, Wang Yafei, Chen Hao, Shi Yunbin, Zhang Qingyi Cui Chong, Wu Junjie, Wu Hongqin, Chen Chao, Ying Youfu, Chen Qingchun, Li Lubin, Chang Guangmin. This document was first published in.2009, and this is its first revision.
Three-wheeled vehicle shock absorber

1 Scope

GB/T 23919-2025 is the Chinese national standard covering the damper on a three-wheeler - its damping characteristic and its consistency, the durability through the cycles a rough rural road imposes, the sealing and the corrosion resistance. It replaces GB/T 23919-2009. It was issued on 2 December 2025 and has been in force since 1 July 2026, replacing GB/T 23919-2009. The document is under the responsibility of the China Machinery Industry Federation. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the structural dimensions, technical requirements, inspection rules, marking, packaging, transportation, and storage of shock absorbers for three-wheeled vehicles, and describes related aspects. The corresponding test method. This document applies to the design, manufacture, and inspection of shock absorbers for three-wheeled vehicles (including front shock absorbers and their assemblies, and telescopic shock absorbers).

2 Compression springs

GB/T 2828.1 Sampling Procedures for Inspection by Attributes - Part

1.Sampling Schemes Retrieved by Acceptable Quality Limit (AQL) for Lot-by-Lot Inspection

GB/T 16947 Standard for Fatigue Testing of Helical Springs

JB/T 5673-2015 General Technical Requirements for Painting Agricultural and Forestry Tractors and Implements

JB/T 13513 Bench Test Method for Low-Speed Vehicle Telescopic Shock Absorbers

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Indicator Card The relationship curve between the damper resistance P and the piston displacement S.

3.2 Speed characteristics. dampingforce-velocitycurve The relationship between the damper resistance P and the piston speed v.

3.3 Durability The relationship between the damper resistance P and the number of cycles n.

3.4 Front Shock Absorber Assembly Located between the three-wheeled vehicle frame and the front wheel, it mitigates and dampens impacts and vibrations caused by the ground, while also bearing and transmitting the forces acting on the vehicle. The device (component) that generates various forces and torques between the wheels and the frame.

3.5 front vehicle damper The part of the front shock absorber assembly after removing the buffer spring.