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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 18274-2017

Replacing GB/T 18274-2000

Technical specifications for motor vehicle brake system

汽车制动系统修理竣工技术规范

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Foreword

This Standard was drafted as per the rules specified in GB/T 1.1-2009. This Standard replaced GB/T 18274-2000 Technical Specifications for Motor Vehicle Drum Brake Being Overhauled, GB/T 18275.1-2000 Specifications for Automobile Braking Transmission Device Being Overhauled - Air Braking, GB/T 18275.2-2000 Specifications for Automobile Braking Transmission Device Being Overhauled - Hydraulic Braking, and GB/T 18343-2001 Specification for Automobile Disk Brakes Being Overhauled; this Standard has the major technical changes as follows besides the editorial modifications.

--- Add the technical requirements for brake's parking brake devices (see 4.6);

--- Add the requirements for warranty period of brake maintenance (see 6.2). This Standard was proposed by Ministry of Transport of the PRC. This Standard shall be under the

jurisdiction of National Technical Committee for Standardization of Automobile Maintenance (SAC/TC 247). Drafting organizations of this Standard. Research Institute of Highway of Ministry of Transport, Hangzhou Changyun Transport Group Co., Ltd., and Zhejiang Institute of Communication. Chief drafting staffs of this Standard. Liu Jiannong, Jin Baizheng, Zhu Guojun, Zhao Jinxiang, Zhan Yuanwu, and Zhang Mingjian. The historical editions replaced by this Standard are as follows:

--- GB/T 18274-2000;

--- GB/T 18275.1-2000;

--- GB/T 18275.2-2000;

--- GB/T 18343-2001. Technical Specifications for Motor Vehicle Brake System

1 Scope

GB/T 18274-2017 is the Chinese national standard on technical specifications for motor vehicle brake system, 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 43.040.40, CCS T24. 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 technical requirements and test rules for the completion of disk brake, drum brake, air braking transmission device, hydraulic braking transmission device and parking brake device being overhauled. This Standard is applicable to the overhaul of brakes and brake transmission devices for automobiles and trailers; the overhaul of brakes for other types of vehicles can refer to.

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 5624 Motor Vehicle Maintenance and Repair Terms

GB 5763 Brake Linings for Automobiles

GB 7258 Safety Specifications for Motor Vehicles Operating on Roads

3 Terms and Definitions

The following terms and definitions and those ones stipulated in GB/T 5624 are applicable to this document.

4.1 Basic requirements

4.1.1 Diagnose the failure of the brake system before repair, find out and determine the cause and location of the failure; meanwhile make a record.

4.1.2 The brake shall be dismantled according to the following requirements.

4.1.3 The following operations shall be performed after the brake is dissembled.

4.2.1 Brake caliper

4.2.1.1 The brake caliper cylinder shall be free of rust or damage; otherwise it shall be replaced.

4.2.2 Brake disc

4.2.2.1 The brake disc shall be free of cracks; its working surface shall be free of rust spots or shrinkage holes or the like defects.

4.2.2.2 The total thickness of vehicle bake disc shall meet the original technical requirements of the manufacturer; if there is no specified value, it shall be no less than the standard thickness of 2.0mm; the maximum amount of radical runout shall be 0.15mm; the depth of scratch groove shall be no greater than 0.38mm.

4.2.3 Brake friction block

4.2.3.1 There shall be free of cracks or burns; the wear shall be uniform.

4.2.3.2 After wearing, the thickness of the brake friction block of vehicle shall meet the original technical requirements of the manufacturer; if there is no specified thickness value, and the value is less than 1.5mm, then it shall be replaced.

4.2.4 Maintenance data

4.2.4.1 The maintenance reference data of the common brake disc and brake friction block of the vehicles can see Table A.1.

4.2.4.2 The maintenance reference data of the common brake disc and brake friction block of the large passenger car can see Table A.2.

4.3.1 Brake drum

4.3.1.1 The brake drum shall be replaced timely in the following cases.

4.3.1.2 When the brake drum is being machined, the left and right brake drums on the same axis shall be cut to the same size by the same method to ensure the use of the brake drum have the same braking performance on the both wheels. Multiple shallow cutting methods shall be used for cutting. The main axis speed is 150r/min when cutting; when taking the rough cutting, the transverse feed per revolution is 0.15mm~0.20mm; when taking the fine cutting, the transverse feed per revolution is no greater than 0.05mm.

4.3.2 Brake shoes and brake base plate

4.3.2.1 After the brake drum is disassembled, inspect each brake shoes, brake shoe return springs, compression spring and support pins, and the like components.

4.3.2.7 Clean the brake shoe and remove the burr; the mating clearance between the brake shoe pin hole and support pin shall meet the original technical requirements of the manufacturer; if there is no specified clearance value, it shall be no greater than 0.30mm.

4.3.2.8 If the brake base plate has distortion, cracks, or grooves, it shall be replaced. Tighten the fixing bolts of the brake base plate and the support pin fixed by the bolts as per the specified torque. The brake baes plate has no rust or other surface defects.

4.3.2.9 When the free length and elasticity of the brake shoe return sprint and compression spring change, exceeds the original technical requirements of the manufacturer, or when there is twisting, bending, or hook damaging, it shall be replaced.

4.3.3 Brake clearance After the brake is installed, adjust the brake clearance; the wheel shall be rotate freely without any drag. The clearance between the brake shoe lining and brake drum shall meet the original technical requirements of the manufacturer; if there is no specification, the clearance shall be 0.20mm~0.40mm.

4.4.1 Air compressor

4.4.5 Oil-water separator The pressure on inlet and outlet of the oil-water separator shall be equal. The air pressure of the safety valve shall be adjusted according to the original technical requirements of the manufacturer; and work soundly. The filter core shall be cleaned and worked reliably; all valves and gaskets shall not have cracks or aging phenomena.

4.4.8 Brake pedal The clearance between the brake pedal bushing and the pedal shaft shall be no greater than 0.3mm. Under the normal assembly and use conditions, the brake pedal assembly shall ensure the flexible and light brake operation. The free stroke of the brake pedal shall meet the original technical requirements of the manufacturer.