

# 中华人民共和国国家标准 NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 40164-2021

# Automobiles and Trailer — Specifications and Test Methods of Brake Part 汽车和挂车 制动器用零部件技术要求及试验方法

Issued on 2021-04-30

Implemented on 2022-01-01

Jointly Issued by

State Administration for Market Regulation of the People's Republic of China & Standardization Administration of the People's Republic of China

### **CONTENTS**

Foreword	
1 Scope	1
2 Normative References	1
3 Terms and Definitions	1
4 Product Classification	2
5 Test Requirements	2
5.1 Requirements for Test Sample	2
5.1.1 Replacement brake lining, replacement brake shoe assembly, and replacement brake	
assembly	
5.1.2 Replacement brake disc and replacement brake drum	
5.2 Test Equipment	
5.3 Rotational Inertia of Bench Test	
5.3.1 Category M <sub>1</sub> vehicles	3
5.3.2 Categories M <sub>2</sub> , M <sub>3</sub> and N vehicles	
5.3.3 Category O vehicles	
5.4 Other Requirements	
6 Technical Requirements	
6.1 General	
6.2 Replacement Brake Lining, Replacement Brake Shoe Assembly, and Replacement Brake	
Assembly	
6.2.1 Brake Performance	
6.2.2 Mechanical Properties	
6.3 Replacement Brake Disc and Replacement Brake Drum	
6.3.1 Identical brake discs and brake drums	
6.3.2 Equivalent brake discs and brake drums	
6.3.3 Interchangeable brake discs and brake drums	
6.3.4 Criteria for same type	
6.3.5 Check items of brake discs and brake drums	
7 Packaging and Marking	
7.1 Replacement Brake Lining, Replacement Brake Shoe Assembly, and Replacement Brake	
Assembly	
7.2 Replacement Brake Disc and Replacement Brake Drum	10
8 Product Conformity	
Annex A (Normative) Test methods of replacement brake shoe assembly and replacement brake	
assembly for vehicles of categories M <sub>1</sub> , M <sub>2</sub> and N <sub>1</sub>	
Annex B (Normative) Test methods of replacement brake lining, replacement brake shoe assembly,	
replacement brake pad assembly for vehicles of categories M <sub>3</sub> , N <sub>2</sub> and N <sub>3</sub>	
Annex C (Normative) Bench test methods of replacement brake shoe assembly for vehicles of categories	ı <i>ı</i> ories
O <sub>1</sub> and O <sub>2</sub>	
Annex D (Normative) Test methods of replacement brake lining and replacement brake shoe asset	
for vehicles of categories O <sub>3</sub> and O <sub>4</sub>	
Annex E (Normative) Test methods of replacement brake disc and replacement brake drum for veh	
of categories M and N	
Annex F (Normative) Test methods of replacement brake disc and replacement brake drum for veh	ےے ادامہ
of category O	
Annex G (Normative) Typical structure and relevant dimensions of replacement brake disc	
replacement brake drum	
Annex H (Normative) Identification and position of replacement brake pad assembly, replacement b	∠∂ ırako
shoe assembly, and replacement brake lining	
Annex I (Informative) Additional requirements for conformity of production	34
Turion Tylinomiative, Maditional regulation to the following of production	∪+

# Automobiles and Trailer — Specifications and Test Methods of Brake Part

#### 1 SCOPE

This Standard specifies the terms and definitions, test requirements, technical requirements, test methods, packaging and marking, and product conformity, with respect to the replacement brake parts, e.g., brake lining, brake shoe assembly, brake pad assembly, brake drum and brake disc, for the automobile and trailer braking systems.

This Standard applies to the following brake parts:

- Replacement brake shoe assembly and replacement brake pad assembly intended for use in friction brakes forming part of a braking system of vehicles of categories M, N, and O which have a type approval in accordance with GB 12676-2014 or GB 21670-2008;
- b) Replacement brake linings designed to be riveted to a brake shoe for fitment to and use on vehicles of categories M<sub>3</sub>, N<sub>2</sub>, N<sub>3</sub>, O<sub>3</sub> or O<sub>4</sub> having a type approval in accordance with GB 12676-2014:
- c) Replacement brake shoe assembly and brake pad assembly used for independent parking braking systems:
- d) Replacement brake drums and discs intended for use in friction brakes forming part of a braking system of vehicles of categories M, N and O which have a type approval in accordance with GB 12676-2014 or GB 21670-2008.

This Standard doesn't apply to the original brake drums, brake discs, brake shoe assemblies, brake pad assemblies and brake linings (fitted in the vehicle at the time of type approval), or the original replacement brake drums, brake discs, brake shoe assemblies, brake pad assemblies and brake linings, intended for the servicing of the vehicle.

#### 2 NORMATIVE REFERENCES

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

GB/T 131	Geometrical Product Specifications (GPS) - Indication of surface texture in technical Product documentation
GB/T 228.1	Metallic materials - Tensile testing - Part 1 : Method of test at room temperature
GB/T 231.1	Metallic materials - Brinell hardness test - Part 1:Test method
GB/T 5620	Road vehicles - Vocabulary and definition for braking of automotive vehicles and their trailers
GB 5763 Brake li	nings for automobiles
GB/T 7216	Metallographic test for gray cast iron
GB 12676-2014	Technical requirements and testing methods for commercial vehicle and trailer braking systems
GB 21670-2008	Technical requirements and testing methods for passenger car braking systems
GB/T 22309	Road vehicles - Brake linings - Shear test procedure for disc brake pad and drum brake shoe assemblies
GB/T 22310	Road vehicles - Brake linings - Effects of heat on dimensions and form of disc brake pads-test procedure
GB/T 22311	Road vehicles - Brake linings - Compressive strain test method
QC/T 239-2015	Specifications and bench test methods for commercial vehicle service brake
QC/T 556	Automobile Brake Temperature Measurement and Thermocouple Mounting
QC/T 564-2018	Performance requirements and test methods for passenger car service brake

#### 3 TERMS AND DEFINITIONS

For the purpose of this document, the terms and definitions given in GB/T 5620, GB 12676-2014 and GB 21670-2008, as well as the followings apply.

3.1

Parking shoe (pad) assembly

a brake shoe assembly or pad assembly belonging to a parking braking system separate and independent from the service braking system

3.2

Minimum thickness

the permissible limiting thickness of the brake disc

Note: a new brake disc should be replaced when the brake disc is worn to this thickness.

3.3

Maximum inside diameter

the permissible limiting friction surface inside diameter of the brake drum

Note: a new brake drum should be replaced when the friction surface inside diameter of the brake drum is worn to this value.



# 中国汽车标准译文库

## The following pages are left blank intentionally.

- ▶ 现成译文,到款即发。
- ▶ 下单前可任取样页验证译文质量。
- ▶ 免费提供正规普通增值税数电发票。
- ▶ 请联系手机/微信: 13306496964/Email: standardtrans@foxmail.com 获取完整译文。
- ▶ 本英文译本为纯人工专业精翻版本,保证语法术语准确率和专业度!
- ▶ 专业源于专注|ChinaAutoRegs 始终专注于汽车标准翻译领域!
- ▶ 「中国汽车标准译文库」已收录上千个现行汽车国家标准和行业标准的英文版译本,涵盖传统燃油车、新能源汽车和摩托车标准化体系!独家打造千万级汽车专业术语库和记忆库。
- ◆ The English Translation of this document (GB, GB/T, QC/T, CNCA, CQC, CAV, etc.) is readily available, and delivered immediately upon payment.
- ◆ You may request for sample pages to your preference before placing an order.
- ◆ Please contact <a href="mailto:standardtrans@foxmail.com">standardtrans@foxmail.com</a> for the complete PDF version in English.
- ♦ Almost all of Chinese automotive/automobile standards, regulations and norms in effect have been included in our well-established database, providing one-stop, up-to-date, efficient and professional solution.