

ICS 43.150
CCS Y 14

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**LIGHT INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

QB/T 2182-2023

Replacing QB/T 2182-1995

Cycles - Air pumps

自行车 打气筒

(English Translation)

Issued on: April 21, 2023

Implemented on: November 1, 2023

**Issued by: Ministry of Industry and Information Technology of the
People's Republic of China**

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Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020 Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents.

This document replaces QB/T 2182-1995 Bicycle accessory pumps. Compared with QB/T 2182-1995, apart from structural adjustments and editorial changes, the main technical changes are as follows:

- a) the product classification has been changed (see 4.1; 3.1 and 3.2 of the 1995 edition), and the model designation method has been changed (see 4.2; 3.3 of the 1995 edition);
- b) the marking of main dimensions and the mounting dimensions have been deleted (see 3.4 and 3.5 of the 1995 edition), and general rules have been added (see Clause 5);
- c) the requirements and test method for drop impact strength have been added (see 6.1.1 and 7.1);
- d) the requirements and test methods for the assembly strength of cylinder cap and cylinder, cylinder and base, and piston rod and handle have been changed (see 6.1.2 and 7.1.2; 4.4 and 5.4 of the 1995 edition);
- e) the requirements and test method for static load strength have been added (see 6.1.3 and 7.1.3);
- f) the requirements and test method for the bending strength of the piston rod have been added (6.1.4 and 7.1.4);
- g) the requirements and test method for the working pressure of the safety valve or

pressure regulating valve have been added (see 6.2 and 7.2);

h) the requirements and test method for pressure resistance have been added (see 6.3 and 7.3);

i) the requirements and test method for durability have been added (see 6.4 and 7.4);

j) the requirements and test method for non-return performance (sealing) have been added (see 6.5 and 7.5);

k) the requirements and test method for stability have been added (see 6.6 and 7.6);

l) the requirements and test methods for surface coating have been changed (see 6.7 and 7.7; 4.5, 4.6, 5.5 and 5.6 of the 1995 edition);

m) the requirements and test method for appearance have been changed (see 6.8 and 7.8; 4.7 of the 1995 edition);

n) the requirements and test method for marking have been added (see 6.9 and 7.9), and requirements for the instructions for use have been added (see 6.10);

o) the test conditions have been changed (see 7.10; Clause 5 of the 1995 edition);

p) the working air pressure of the pump has been deleted (see 4.1 and 5.1 of the 1995 edition);

q) the requirements and test method for the bending strength of the pull tube have been deleted (see 4.3 and 5.3 of the 1995 edition);

r) the rules for factory inspection and type inspection have been changed (see 8.2 and 8.4; Clause 6 of the 1995 edition);

s) the rules for periodic inspection have been added (see 8.3);

t) packaging, transportation and storage have been changed (see Clause 9; Clause 7 of the 1995 edition).

This document was proposed by China National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Bicycles of Standardization Administration of China (SAC/TC 155).

Drafting organizations of this document: Tianjin Ruilong Fengde Bicycle Trading Co., Ltd., Kunshan Shiquan Plastic and Hardware Products Co., Ltd., Hebei Ounai Machinery Mould Co., Ltd., Yongkang Zhufeng Pump Co., Ltd., Mingzhen Industrial Holding Group Co., Ltd., Tianneng Battery Group Co., Ltd., Fuyu Electronic Technology (Suzhou) Co., Ltd., Tianjin Aisaik Vehicle Co., Ltd., Shanghai Xiedian Technology Service Co., Ltd., Kunshan Customs Comprehensive Technical Service Center, Taizhou Institute of Quality and Technical Supervision and Inspection, National Bicycle Standardization Center.

The previous editions of this document and of the documents it replaces are as follows:

- first issued in 1995 as QB/T 2182-1995;
- this is the first revision.

1 Scope

This document specifies the product model designation method and requirements for bicycle air pumps (hereinafter referred to as "pumps"), describes the corresponding test methods, specifies the content of inspection rules, packaging, transportation and storage, and gives a product classification to facilitate technical specification.

This document is applicable to the design, production, inspection and sale of pumps that inflate the pneumatic tyres of bicycles by human power.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. For dated references, only the edition corresponding to that date applies to this document. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 191 Packaging - Pictorial marking for handling of goods

GB/T 2828.1 Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

GB/T 2829 Sampling procedures and tables for periodic inspection by attributes (apply to inspection of process stability)

GB/T 12742 Technical specifications of bicycle test equipment and instruments

QB/T 1217 Technical specifications of electroplating for bicycles

QB/T 1218 Technical specifications of paint coating for bicycles

QB/T 1896 Technical specifications of powder coating for bicycles

QB/T 2184 Bicycles - Technical specifications of anodic oxidation for aluminium alloy parts

3.1 pressure regulating valve

Device that regulates the discharge pressure.

3.2 safety valve

Device that, for the purpose of safety protection, can discharge air automatically when the pressure reaches or exceeds the design value.

3.3 non-return valve

Device that automatically prevents the backflow of the medium by the action of the medium itself.

3.4 body

Assembly of the components of the pump other than the air hose.

4.1 Product classification

4.1.1

Floor pumps

The basic form and component names of the floor pump (without air reservoir) are shown in Figure 1: 1 - handle; 2 - cylinder cap; 3 - cylinder body; 4 - air hose; 5 - pump head; 6 - non-return valve; 7 - base; 8 - pressure gauge; 9 - piston rod.

The basic form and component names of the floor pump (with air reservoir) are shown in Figure 2: 1 - handle; 2 - piston rod; 3 - cylinder cap; 4 - cylinder body; 5 - piston; 6 - floor stand; 7 - base; 8 - non-return valve; 9 - air reservoir; 10 - safety valve/pressure regulating valve; 11 - air hose; 12 - pump head.

The forms of the pump head of floor pumps are shown in Figure 3: a) Dunlop (English) type; b) Schrader (American) type, threaded; c) Schrader (American) type, lever; d) Dunlop-Schrader universal type; e) standard adapter (Schrader); f) Dunlop adapter; g) Presta (French) adapter.

4.1.2

Hand pumps

The basic form and component names of the hand pump with hose are shown in Figure 4 (1 - handle; 2 - piston rod; 3 - cylinder cap; 4 - cylinder body; 5 - piston; 6 - non-return valve; 7 - air hose; 8 - pump head), and its pump heads in Figure 5: a) Dunlop pump head (thread CTV5-24); b) Schrader pump head (thread CTV8-32, with check valve); c) Presta pump head (5V2).

The basic form and component names of the hand pump without hose are shown in Figure 6: 1 - pump head; 2 - clamping lever; 3 - piston; 4 - piston rod; 5 - cylinder body; 6 - cylinder cap; 7 - handle.

4.1.3

Foot pumps

The basic forms and component names of foot pumps are shown in Figure 7 (horizontal foot pump: 1 - pump head; 2 - air hose; 3 - pressure gauge; 4 - non-return valve; 5 - upper