

ICS 29.220.20
CCS K 84



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 23638-2025

Replacing GB/T 23638-2009

Lead-acid batteries for motorcycles

摩托车用铅酸蓄电池

(English Translation)

Issued on: August 1, 2025

Implemented on: February 1, 2026

**Issued by: State Administration for Market Regulation, Standardization
Administration of China**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 23638-2009 "Lead-acid batteries for motorcycles". Compared with GB/T 23638-2009, except for the structural adjustment in addition to the editorial changes, the main technical changes are as follows.

- Changed the scope of application (see Chapter 1, Chapter 1 of the 2009 edition);
- Changed "Terms and Definitions, Symbols" (see Chapter 3, Chapter 2 of the 2009 edition);
- Changed the model compilation, overall dimensions, product classification, battery terminal polarity position and battery vent position (see Section 4 Chapter 3 of the 2009 edition);
- Changed the technical requirements of "battery structure" and "terminal polarity", "air tightness" and "exhaust valve action" (see 5.1, 5.4~ 5.6, 2009 version 4.1, 4.4~4.6);
- Deleted the technical requirements of "sealed reaction efficiency" (see 4.9 of the 2009 edition);
- Changed the technical requirements of "low temperature starting capability" (see 5.9, 4.10 of the 2009 edition);
- Changed the technical requirements for "charge retention capability" (see 5.11, 4.12 of the 2009 edition);
- Changed the technical requirements for "Cycling durability" (see 5.12, 4.13 of the 2009 edition);
- Changed the technical requirements of "vibration resistance" (see 5.14, 4.15 of the 2009 edition);
- Deleted the technical requirements of "dry-type charged performance", "dry-type charged battery storage period" and "battery pretreatment before test" Type charged part (see 4.16, 4.17.1, 5.2.1 of the 2009 edition);
- Added the technical requirements for "battery storage performance" (see 5.15);
- Added "water loss" technical requirements (see 5.16);
- Added "Quality Measurement" (see 6.1.8);
- Changed the test method of "Battery charging method and test battery electrolyte" (see 6.2, 5.2 of the 2009 edition);

- Changed the description of "exhaust valve action" (see 6.7, 5.6 of the 2009 edition);
- Deleted the "Sealing Reaction Efficiency" test method (see 5.9 of the 2009 edition);
- Changed the "low temperature starting capability" test method (see 6.10, 5.10 of the 2009 edition);
- Changed the "charge retention capacity" test method (see 6.12, 5.12 of the 2009 edition);
- Changed the "Cyclic durability" test method (see 6.13, 5.13 of the 2009 edition);
- Changed the test method for "electrolyte retention capacity" (see 6.14, 5.14 of the 2009 edition);
- Changed the test method for "Vibration resistance" (see 6.15, 5.15 of the 2009 edition);
- Added the "battery storage performance" test method (see 6.16);
- Added the "water loss" test method (see 6.17);
- Changed the factory inspection and periodic inspection, type inspection items and full test procedures (see 7.2.1, 7.3, 2009 edition 6.2.1, 6.3).

This document is modified to adopt IEC 60095-7:2019 "Starting lead-acid batteries Part 7: General requirements and tests for motorcycle batteries method".

Compared with IEC 60095-7:2019, this document has many structural adjustments. The structural number changes between the two documents are compared at a glance.

See Appendix A for the table.

This document has many technical differences compared to IEC 60095-7:2019.

A single vertical line (|) indicates these differences. A table of these technical differences and their causes is given in Appendix B.

The following editorial changes have been made to this document.

- To coordinate with the existing standard, the name of the standard is changed to "Lead-acid batteries for motorcycles";
- Added Appendix C (informative) "Comparison table of product model compilation and common Japanese battery models".

1 Scope

This document provides the model compilation, dimensions, product classification, technical requirements, inspection rules and packaging of lead-acid batteries for motorcycles.

Packaging, transportation and storage, and the corresponding test methods are described.

This document applies to lead-acid batteries (hereinafter referred to as batteries) used for starting, ignition, lighting and power supply on motorcycles.

Other powersports vehicles are covered in this document, including snowmobiles, jet skis, and all-terrain motorcycles.

This document is not applicable to batteries for other purposes, such as backup power supplies, batteries for electric assisted vehicles, etc.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 2900.41-2008 Electrical terminology. Primary cells and secondary batteries [IEC 60050-482:2004, IDT]

3.1 Terms and Definitions

The terms and definitions defined in GB/T 2900.41-2008 and the following apply to this document.

3.1.1

[Single cell] cell

A power source that directly converts chemical energy into electrical energy is a basic functional unit consisting of electrodes, electrolytes, containers, terminals, and separators.

Note: The voltage of a single lead-acid battery is 2V. A battery with a nominal voltage of 6V is formed by connecting three single batteries with a nominal voltage of 2V in series.

A battery with a nominal voltage of 12V is composed of single batteries with a nominal voltage of 2V connected in series.

3.1.2

Valve-regulated lead-acid battery; VRLA battery A sealed battery with a valve that allows gas to escape when the internal pressure of the battery exceeds a predetermined value.

Note: This battery cannot be refilled with electrolyte.

3.1.3