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QC

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

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**Bowl type expansion plug
(English Translation)**

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1 Scope

This document specifies the general requirements, materials, welding, surface treatment, angle and width requirements, diameter requirements, knurling requirements, static strength performance, inspection rules, marking, packaging, transportation and storage of the direction handles for motorcycles and mopeds, and describes test methods.

This document is applicable to the direction handles for motorcycles and mopeds (hereinafter referred to as the "direction handles").

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 699 Quality carbon structure steels

GB/T 708 Dimension, shape, weight and tolerance for cold-rolled steel strip and sheet

GB/T 985.1 Recommended joint preparation for gas welding, manual metal arc welding, gas- shield arc welding and beam welding

GB/T 1766 Paints and varnishes - Rating schemes of degradation of coats

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

GB/T 3190 Chemical composition of wrought aluminium and aluminium alloys

GB/T 4437.1 Aluminium and aluminium alloy extruded tubes - Part 1. Seamless tubes

GB/T 5213 Cold rolled low carbon steel sheet and strip

GB/T 5359.1 Term for motorcycles and mopeds - Part 1. Types of vehicles

GB/T 5359.3 Term for motorcycles and mopeds - Part 3. Dimensions of vehicle with two and three wheels

GB/T 6403.3 Knurl

GB/T 6461-2002 Methods for corrosion testing of metallic and other inorganic coatings on metallic substrates - Rating of test specimens and manufactured articles subjected to corrosion tests

GB/T 6543 Single and double corrugated boxes for transport packages

GB/T 8013.3 Anodic oxide coatings and organic polymer coatings on aluminium and its alloys

- Part 3. Organic polymer coatings

GB/T 8162 Seamless steel tubes for structural purposes

GB/T 9797 Metallic and other inorganic coatings - Electrodeposited coatings of nickel, nickel plus chromium, copper plus nickel and of copper plus nickel plus chromium

GB/T 9799 Metallic and other inorganic coatings - Electroplated coatings of zinc with supplementary treatments on iron or steel

GB/T 10125 Corrosion tests in artificial atmospheres - Salt spray tests

GB/T 11253 Cold-rolled sheet and strip of carbon structural steels

GB/T 12967.3 Test methods for anodic oxidation coatings and organic polymer coatings on aluminium and aluminium alloys - Part 3. Salt spray test

GB/T 12967.6 Test methods for anodic oxidation coatings and organic polymer coatings on aluminium and aluminium alloys - Part 6. Determination of color and appearance

GB/T 13793 Steel pipes with a longitudinal electric (resistance) weld

GB/T 15367 Motorcycles and mopeds' part and component - Designations for vehicle with two and three wheels

3 Terms and Definitions

The terms and definitions defined in GB/T 15367 and the following ones are applicable to this document.

3.1 Straight Direction Central Plane of Vehicle

The straight direction central plane of a motorcycle with two wheels (L1, L3) refers to the Y plane that coincides with the central plane of the rear wheel of the vehicle.

The straight direction central plane of a right three-wheeled motorcycle (L2, L5) refers to the Y plane passing through the midpoint of line segment AB. The intersection points of the intersection line between the vertical plane of the central axis of the wheels at both ends and the central plane of the two wheels and the wheel support plane are points A and B, as shown in Figure 1.

NOTE: The straight direction central plane of a right three-wheeled motorcycle is also called the longitudinal symmetry plane or the datum Y plane of a right three-wheeled motorcycle.

3.6 Steering Handle Tube

The pipe fitting that the driver grips, which has sufficient strength to control the vehicle's direction, as shown at point A in Figure 3 -- Schematic Diagrams of Direction Handles.

3.7 Steering Handle Pipe Connection Seat

The part connected to the steering handle tube and mounted on the front fork assembly or upper triple clamp, as shown at point B in Figure 3 -- Schematic Diagrams of Direction Handles.

3.8 Threaded Sleeve

The part plug-welded to the inner sides of both ends of the steering handle tube and designed to accommodate the balance weight, as shown at point C in Figure 3 -- Schematic Diagrams of Direction Handles.

3.9 Steering Lever Mounting Seat

The part welded together with the steering handle tube and mounted on the steering mechanism, as shown at point D in Figure 3 -- Schematic Diagrams of Direction Handles. The structure of the steering lever mounting seat is quite diverse, and the specific shape is not required; it can be defined according to the design structure.

4 Direction Handle Types

The types and structures of direction handles are shown in Table 1.

5.1 Basic Requirements

5.1.1

The direction handle shall be manufactured according to the drawings and technical documents approved through the prescribed procedures and shall comply with the provisions of this document.

5.1.2

The centers of symmetry at both ends of the direction handle shall be located in the straight direction central plane of vehicle, with a maximum offset of no more than 2 mm. This can be measured separately for the direction handle; the measurement method is detailed in 6.6.2.

NOTE: The value measured separately for the direction handle is the offset of the direction handle from the straight direction central plane of vehicle.

5.1.3

The height difference between the left and right ends of the direction handle shall not exceed 3 mm. The measurement method is detailed in 6.6.2.

5.1.4 The surface treatment of direction handles generally uses chrome plating, baked enamel

coating, galvanizing, etc.; aluminum alloys are generally treated with anodizing, etc.

5.2 Appearance Quality of Direction Handles

5.2.1

The surface coating of direction handles shall be bright and uniform in color, free from defects such as scorching, blistering, peeling, exposed base material, obvious burrs, mottling, scratches, corrosion, etc.

5.2.2

The surface color shall be bright and consistent, the film layer shall be dense, and the paint film thickness shall be uniform. There shall be no areas without a film layer, and no defects such as contamination, looseness, dust accumulation, burns, or excessive corrosion and rust, etc.

5.3.1 Split-type Direction Handle

The split-type steering handle tube is generally made of Q195 or Q235 steel pipes with a longitudinal electric (resistance) weld or #20 seamless steel pipes, which shall comply with the provisions of GB/T 13793 or GB/T 8162; the steering handle pipe connection seat is generally made of #20 or #35 forged steel parts, which shall comply with the provisions of GB/T 699; or made of 6061A aluminum alloy, which shall comply with the provisions of