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

GB/T 5771-2025

Replacing GB/T 5771-2010

Delivery valve of diesel fuel injection pump - Specifications

柴油机喷油泵出油阀偶件 技术条件

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document supersedes GB/T 5771-2010 "Technical Conditions for Diesel Engine Injection Pump Delivery Valve Assembly" and is consistent with GB/T 5771-2010. Aside from structural adjustments and editorial changes, the main technical changes are as follows:

- a) Added terms and definitions (see Chapter 3);
- b) Geometric tolerances for the oil outlet valve assembly shown in Figures 1-5 have been added, replacing the form and position tolerances in Table 1 of the 2010 edition (see 4.6, 2010 edition). 3.7);
- c) The description of the radial clearance of the equal-volume outlet valve assembly has been changed (see 4.10, 3.11 in the 2010 edition);
- d) The service life requirement has been removed (see 3.14 in the 2010 version);
- e) The service life assessment requirement has been removed (see 4.10 in the 2010 version);
- f) The opening pressure requirement for the equal pressure outlet valve has been increased (see 4.11);
- g) Increased cleanliness requirements (see 4.12);
- h) Requirements for the testing of cold and heat treatment components of the oil outlet valve assembly have been added (see 5.2);
- i) The surface roughness testing method for the oil outlet valve and oil outlet valve seat has been changed (see 5.5.1,

1 Scope

GB/T 5771-2025 is the Chinese national standard covering the delivery valve and its seat as a lapped pair - the clearance measured in a fraction of a micrometre, the retraction volume that stops the injector dribbling after the end of injection, the sealing test, and the wear resistance. Issued on 31 October 2025, it has been in force since 1 February 2026, replacing GB/T 5771-2010.

This document specifies the technical requirements, inspection rules, marking, packaging,

transportation, and storage of the fuel injection pump delivery valve assembly for small and medium power diesel engines. The corresponding experimental methods are described. This document applies to the design and manufacture of fuel injection pump delivery valve assemblies for small and medium power diesel engines.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 1031 Product Geometric Specification (GPS) - Surface Roughness Parameters and Their Values Using the Surface Structure Profile Method

GB/T 1958 Product Geometric Specification (GPS) - Geometric Tolerance Inspection and Verification

GB/T 2828.1 Sampling Procedures for Inspection by Attributes - Part

1. Sampling Schemes Retrieved by Acceptable Quality Limit (AQL) for Lot-by-Lot Inspection

GB/T 2829 Periodic inspection sampling procedures and tables (applicable to the inspection of process stability)

GB/T 8029 Diesel Engine Injection Pump Calibration Oil

GB/T 10610 Product Geometric Specification (GPS) - Rules and methods for evaluating surface texture using the surface texture profile method

GB/T 10826.1 Vocabulary of Fuel Injection Devices Part

3 Terms and Definitions

The terms and definitions defined in GB/T 10826.1 and the following terms and definitions apply to this document.

3.1 An oil outlet valve assembly with equal-volume unloading function, installed at the outlet of the pump oil chamber.

3.2 An oil outlet valve assembly with equal pressure unloading function, installed at the outlet of the pump oil chamber.

4 Technical Requirements

4.1 Manufacturing The diesel engine fuel injection pump delivery valve assembly (hereinafter referred to as "delivery valve assembly") shall be manufactured in accordance

with the product drawings and technical documents approved through the prescribed procedures.

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