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

GB/T 17486-2026

Replacing GB/T 17486-2006

**Hydraulic fluid power - Filters - Test method of differential
pressure versus flow characteristics**

液压传动 过滤器 压差流量特性的试验方法

(English Translation)

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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 replaces GB/T 17486-2006 "Evaluation of Pressure Drop and Flow Characteristics of Hydraulic Filters" and is consistent with GB/T 17486-2006.

Aside from structural adjustments and editorial changes, the main technical changes are as follows.

---The scope has been changed, and filter categories have been added (see Chapter 1);

---Added terminology and definition for electrostatic conductivity (see 3.4);

---A description of the filter's operating characteristics has been added (see Chapter 5);

---Two test procedures for spin-on filters have been added (see 9.6 and 9.7).

This document is equivalent to ISO 3968:2017 "Evaluation of pressure drop and flow characteristics of hydraulic transmission filters".

The following minimal editorial changes have been made to this document.

---To align with existing standards, the standard title has been changed to "Test Method for Differential Pressure Flow Characteristics of Hydraulic Transmission Filters";

---Add a specification to Appendix A (see Chapter 10).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Machinery Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Hydraulics and Pneumatics (SAC/TC3).

Introduction

In hydraulic systems, power is transmitted and controlled via pressurized fluid in a closed circuit. Filters remove insoluble contaminants.

Dyes are used to keep the liquid clean.

Hydraulic filters typically consist of a housing and a filter element. The housing acts as a pressure vessel, guiding the liquid flow through the filter element, which then removes contaminants from the liquid.

Filter out the middle.

During operation, the liquid flowing through the filter experiences resistance due to motion and viscosity. To overcome this resistance and maintain...

A pressure difference will occur during flow. Filter pressure difference refers to the total pressure difference detected between the filter inlet and outlet, which is equal to the pressure difference generated by the housing and filter element.

The sum of pressure differences.

Factors affecting the differential pressure of a clean filter include liquid viscosity, density, flow rate, filter media type, filter element structure, and housing design.

Don't use this kind of pressure difference.

Hydraulic transmission filter Test methods for differential pressure flow characteristics

1 Scope

This document establishes a procedure for evaluating the relationship between differential pressure and flow rate in hydraulic filters, which can serve as a basis for agreement between filter manufacturers and users.

The basis for this.

This document also describes the measurement methods for pressure differentials generated by filter assemblies, spin-on filters, and bypass valves at different flow rates and viscosities.

Method. The main types of subject filters include.

---Type 1. Spin-on filters without filter elements, including filter elements with and without bypass valves;

---Type 2. Spin-on filters with filter elements, including filter elements with and without bypass valves;

---Type 3. Filter assembly, usually a replaceable cartridge type, including housing (filter head and cylinder) and filter element.

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.

tion)

Note: GB/T 3141-1994 Industrial liquid lubricants - ISO viscosity classification (ISO 3448:1992, eqv)

Note. GB/T 1884-2000 Crude oil and liquid petroleum products - Laboratory determination of density (densitometer method) (ISO 3675:1998, eqv) Note. GB/T 17489-2022 Particulate contamination analysis of hydraulic transmission systems - Extraction of liquid samples from working system pipelines (ISO 4021:1992, MOD) Note. GB/T 17446-2024 Vocabulary of Fluid Transmission Systems and Components (ISO 5598:2020, MOD) lubricating oil-Dimensions) Note. GB/T 28954-2012 Connection dimensions for spin-on oil filters for automotive engines (ISO 6415:2005, MOD)

3 Terms and Definitions

The terms and definitions defined in ISO 5598 and the following terms and definitions apply to this document.