

ICS 23.100.60

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

GB/T 14041.3-2010

Replacing GB/T 14041.3-1993

**Hydraulic fluid power -- Filter elements -- Part 3: Verification of
collapse/burst pressure rating**

液压滤芯 第3部分：抗压溃（破裂）特性检验方法

(English Translation)

Issued on: January 14, 2011

Implemented on: October 1, 2011

Issued by: Standardization Administration of China

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Foreword

GB/T 14041 "Hydraulic filters" is divided into the following four parts.

- Part 1. Determine the structural integrity and verify the initial bubble point;
- Part 2. Material compatibility with fluids test methods;
- Part 3. Compressive (rupture) characteristic test methods;
- Part 4. Method for end load test.

This section GB/T 14041 Part 3.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This Part replaces GB/T 14041.3-1993 "hydraulic filter resistance to cracking test methods", compared with the GB/T 14041.3-1993, the main technical changes are as follows.

- Changed the name of the standard;
- Increase pollutants addition method;
- Increasing the viscosity of oil detection and test requirements;
- More explicit provisions test equipment;
- Flow test is not required for the nominal flow rate.

This section uses the translation method identical with ISO 2941:2009 "Hydraulic filter Compressive (rupture) Characteristics of verification" (In English).

This part of ISO 2941:2009 the same technical content.

Consistency correspondence between this part of international documents and normative references of our files are as follows.

--- GB/T 786.1-2009 fluid power systems and components - Graphic symbols and circuit diagram - Part 1. General purpose for several According graphics symbols (ISO 1219-1:2006, IDT);

Determine the structural integrity and verify the initial bubble point. --- GB/T 14041.1-2007 hydraulic filters - Part 1 (ISO 2942:2004, IDT);

--- GB/T 14041.2-2007 hydraulic filters - Part 2. Material compatibility with fluids test methods (ISO 2943:1998, IDT);

--- GB/T 17446-1998 fluid power systems and components term (idtISO 5598. 1985).

For ease of use, this section made the following editorial changes.

--- Consistent with the existing standard series, the standard name will be changed to "hydraulic filters - Part 3. Compressive (rupture) characteristic test side law";

--- Remove Table 1 drop unit bar, leaving only the Pa and kPa;

--- Use footnotes in the form of Table 1 "flow injection" and "injection system volume," explained.

This part is proposed by China Machinery Industry Federation.

This part of the National Standardization Technical Committee of hydraulic and pneumatic (SAC/TC3) centralized.

This section drafted by. China Shipbuilding Industry Corporation seventh Research Institute of Jiujiang - seven divisions, Xinxiang City-Philippines Filter Co., Dawn Hydraulic Company, Guangzhou Mechanical Engineering Research Institute.

Introduction

In the hydraulic drive system, the power is through a closed loop pressurized liquid to pass and control.

Filter by filtering insoluble particulate pollutants to control the degree of contamination of the liquid. From the actual filter is a porous filtration element.

The ability to filter oil pollution maintain specified levels of performance and not only its structural integrity, but also on its resist depends on unsteady Conditions (such as cold or sudden relief) capabilities. Compressive filter (rupture) feature can be used to evaluate its resist these adverse conditions Movies Sound capabilities.

Hydraulic filter

Part 3. Compressive (rupture) characteristic test methods

1 Scope

This section GB/T 14041 specifies the test method for hydraulic filter Compressive (rupture) feature to determine the filter element in the normal stream Fixed (specified flow) ability to withstand under specified pressure drop. By continuously injected into the system so that the filter pressure drop test dust rising, straight to filter appears crushed (burst) or not crushed (burst) and reaches a predetermined maximum voltage drop so far.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

ISO 1219-1 Fluid power systems and components - Graphic symbols and circuit diagram - Part 1. for general use and data processing should be Graphic symbols
(Fluidpowersystemsandcomponents-Graphicsymbolsandcircuitdiagrams-Part 1 used.

Graphicsymbolsforconventionaluseanddata-processingapplications) ISO 2942 Hydraulic fluid power filter and verify the structural integrity of the initial bubble point determination (Hydraulicfluidpower-Filterelements-Verificationoffabricationintegrityanddeterminationofthefirstbubblepoint) ISO 2943 Hydraulic filter material compatibility with fluid test (Hydraulicfluidpower-Filterelements-Verificationofmaterialcompatibilitywithfluids) ISO 5598 Fluid power systems and components glossary (Fluidpowersystemsandcomponents-Vocabulary) ISO 12103-1 Road vehicles - powder filter performance test - Part 1. Arizona test dust (Roadvehicles-Testdustforfilterreevaluation-Part 1. Arizonatestdust)

3 Terms and Definitions

Terms and definitions established in ISO 5598 are applicable to this document.

4 graphic symbols and system of FIG.

This section of the graphical symbol of compliance with ISO 1219-1.

5.1 Test circuit

Figure 1 shows in Chapter 6 conducted Compressive (rupture) of a typical characteristic test circuit.