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**Hydraulic fluid power — Filter elements —  
Verification of material compatibility with  
fluids**

*Transmissions hydrauliques — Éléments filtrants — Vérification de la  
compatibilité des matériaux avec les fluides*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 2943 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 6, *Contamination control and hydraulic fluids*.

This second edition cancels and replaces the first edition (ISO 2943:1987), which has been technically revised. It now includes provisions for verifying material compatibility at low temperatures and a method for reporting test data.

Annex A forms an integral part of this International Standard.

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## Introduction

In hydraulic fluid power systems, power is transmitted and controlled through a liquid under pressure within an enclosed circuit. Filters maintain fluid cleanliness by removing insoluble contaminants.

The filter element is the porous device which performs the actual process of filtration.

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# Hydraulic fluid power — Filter elements — Verification of material compatibility with fluids

## 1 Scope

This International Standard specifies a method of verifying the compatibility of materials comprising a hydraulic fluid power filter element with a designated fluid, by verifying the ability of the filter element to maintain its collapse burst rating after being subjected to the designated system fluid at a high and/or low temperature.

The filter element mounting seal is not included as part of the element.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2941:1974, *Hydraulic fluid power — Filter elements — Verification of collapse/burst resistance*.

ISO 2942:1994, *Hydraulic fluid power — Filter elements — Verification of fabrication integrity and determination of the first bubble point*.

ISO 5598:1985, *Fluid power systems and components — Vocabulary*.

## 3 Definitions

For the purposes of this International Standard, the definitions given in ISO 5598 apply.

## 4 Equipment

**4.1 Temperature bath or oven and cold chamber**, capable of maintaining the fluid temperature to within 5 °C.

**4.2 Vessel suitable for containing the fluid and test elements**, closed but vented with adequate safety considerations.

**4.3 Test fluid**, appropriate to the system.

**4.4 Temperature instrumentation**, accurate to within 1 °C.

## 5 Procedure

**5.1** Subject the filter element to the fabrication integrity test in accordance with ISO 2942.