

Second edition  
2008-02-01

---

---

## Methods of test for full-flow lubricating oil filters for internal combustion engines —

Part 9:

### Inlet and outlet anti-drain valve tests

*Méthodes d'essai des filtres à huile de lubrification à passage intégral pour moteurs à combustion interne —*

*Partie 9: Essais des clapets antiretours aval et amont*



Reference number  
ISO 4548-9:2008(E)

© ISO 2008

This is a preview of "ISO 4548-9:2008". [Click here to purchase the full version from the ANSI store.](#)

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2008

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

This is a preview of "ISO 4548-9:2008". [Click here to purchase the full version from the ANSI store.](#)

## Contents

Page

Foreword.....	iv
Introduction .....	v
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions.....	1
4 Principle .....	1
4.1 Inlet and anti-drain valve.....	1
4.2 Outlet anti-drain valve .....	1
5 Test rigs .....	1
6 Test liquid .....	2
7 Test liquid .....	2
7.1 General.....	2
7.2 Inlet anti-drain valve — Test A: Basic performance test .....	2
7.3 Inlet anti-drain valve — Test B: Basic and supplementary performance test .....	3
7.4 Outlet anti-drain valve — Test A: Basic performance test .....	4
7.5 Outlet anti-drain valve — Test B: Basic and supplementary performance test .....	5
8 Test report .....	6
Bibliography .....	10

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 4548-9 was prepared by Technical Committee ISO/TC 70, *Internal combustion engines*, Subcommittee SC 7, *Tests for lubricating oil filters*.

This second edition cancels and replaces the first edition (ISO 4548-9:1995), of which it constitutes a minor revision.

ISO 4548 consists of the following parts, under the general title *Methods of test for full-flow lubricating oil filters for internal combustion engines*:

- *Part 1: Differential pressure/flow characteristics*
- *Part 2: Element by-pass valve characteristics*
- *Part 3: Resistance to high differential pressure and to elevated temperature*
- *Part 4: Initial particle retention efficiency, life and cumulative efficiency (gravimetric method)*
- *Part 5: Cold start simulation and hydraulic pulse durability test*
- *Part 6: Static burst pressure test*
- *Part 7: Vibration fatigue test*
- *Part 9: Inlet and outlet anti-drain valve tests*
- *Part 11: Self-cleaning filters*
- *Part 12: Filtration efficiency using particle counting, and contaminant retention capacity*

This is a preview of "ISO 4548-9:2008". [Click here to purchase the full version from the ANSI store.](#)

## Introduction

The ISO 4548 series establishes standard test procedures for measuring and performance of full-flow lubricating oil filters for internal combustion engines. It has been prepared in separate parts, each part relating to a particular performance characteristic.

Together the tests provide the information necessary to assess the characteristics of a filter, but if agreed between the purchaser and the manufacturer, the tests can be conducted separately.