
**Inlet air cleaning equipment for
internal combustion engines and
compressors — Performance testing**

*Séparateurs aérauliques placés à l'entrée des moteurs à combustion
interne et des compresseurs — Détermination des performances*



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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
Web www.iso.org

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 22, *Road vehicles*, Subcommittee SC 7, *Injection equipment and filters for use on road vehicles*.

This third edition cancels and replaces the second edition (ISO 5011:2000), which has been technically revised.

Inlet air cleaning equipment for internal combustion engines and compressors — Performance testing

1 Scope

This International Standard establishes and specifies uniform test procedures, conditions, equipment, and a performance report to permit the direct laboratory performance comparison of air cleaners.

The basic performance characteristics of greatest interest are air flow restriction or differential pressure, dust collection efficiency, dust capacity, and oil carry-over on oil bath air cleaners. This test code therefore deals with the measurement of these parameters.

This International Standard is applicable to air cleaners used on internal combustion engines and compressors generally used in automotive and industrial applications.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5167-1, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full — Part 1: General principles and requirements*

ISO 12103-1, *Road vehicles — Test contaminants for filter evaluation — Part 1: Arizona test dust*

3 Terms and definitions

3.1 Terms, definitions, symbols and units

For the purposes of this International Standard, the following terms and definitions apply.

3.1.1

air filter

air cleaner

device which removes particles suspended in the fresh charge as it is drawn into the engine

3.1.2

filter element

replaceable part of the air filter, consisting of the filter material and carrying frame

3.1.3

secondary element

air cleaner element fitted downstream of the primary element for the purpose of providing the engine with protection against dust in the event of

- a) certain types of primary element failure, or
- b) dust being present during the removal of the primary element for servicing

3.1.4

unit under test

either a single air cleaner element or a complete air cleaner assembly