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Road vehicles — Inlet air cleaning equipment for internal combustion engines and compressors —

Part 1: Fractional efficiency testing with fine particles (0,3 μm to 5 μm optical diameter)

*Véhicules routiers — Équipement d'épuration d'air d'entrée pour
moteurs à combustion interne et compresseurs —*

*Partie 1: Contrôle d'efficacité fractionnelle avec particules fines
(diamètre optique de 0,3 μm à 5 μm)*



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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.

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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.

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An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

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/TS 19713-1 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 7, *Injection equipment and filters for use on road vehicles*.

ISO/TS 19713 consists of the following parts, under the general title *Road vehicles — Inlet air cleaning equipment for internal combustion engines and compressors*:

- *Part 1: Fractional efficiency testing with fine particles (0,3 µm to 5 µm optical diameter)*
- *Part 2: Fractional efficiency testing with coarse particles (5 µm to 40 µm optical diameter)*

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Introduction

The engine air cleaner/filter fractional efficiency test methods described in this part of ISO/TS 19713 have been developed to cover traditional and new particulate air filters in order to remove airborne contaminants specifically to protect the engine.

Air cleaner fractional efficiency is one of the main air cleaner performance characteristics. This part of ISO/TS 19713 has been established to address the measurement of this parameter. The objective of the procedure is to maintain a uniform test method for evaluating fractional efficiency of air cleaners and air filters on specified laboratory test stands.

The data collected in accordance with this part of ISO/TS 19713 can be used to establish fractional efficiency characteristics for air cleaners and filters tested in this manner. The actual field operating conditions (including contaminants, humidity, temperature, mechanical vibration, flow pulsation, etc.) are difficult to duplicate. However, with the procedure and equipment set forth, comparison of air filter fractional efficiency can be made with a high degree of confidence.