Technical Specification

ISO/TS 19425

Reciprocating internal combustion engines — Measurement method for air cleaners — Sound power level of combustion air inlet noise and insertion loss using sound pressure

Moteurs alternatifs à combustion interne — Méthode de mesure du bruit des purificateurs d'air — Niveau de puissance sonore du bruit d'entrée d'air de combustion et de perte d'insertion utilisant une pression sonore

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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 document 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 of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 70, *Air-borne noise*.

This second edition cancels and replaces the first edition (ISO 19425:2015), which has been technically revised.

The main changes are as follows:

— the terms and definitions have been revised and sources have been added (see Clause 3);

— the criterion for background noise has been changed (see 4.2);

— the application has been changed (see 5.3);

— the installation condition has been changed (see 6.2);

— the operation condition has been changed (see 6.3);

— the measurement radius has been changed (see 7.4).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Reciprocating internal combustion engines — Measurement method for air cleaners — Sound power level of combustion air inlet noise and insertion loss using sound pressure

1 Scope

This document specifies the measurement method and requirements for combustion air inlet noise of air cleaners which are installed on reciprocating internal combustion engines, including laboratory measurement (engineering method and survey method) and site measurement (survey method).

This document applies to all air cleaners installed on reciprocating internal combustion engines (reciprocating internal combustion engine is referred to as engine hereafter, except for specific explanations) falling within the field of application of ISO 3046-1 and/or other air induction installation.

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 3046-1, *Reciprocating internal combustion engines — Performance — Part 1: Declarations of power, fuel and lubricating oil consumptions, and test methods — Additional requirements for engines for general use*

ISO 3046-3, *Reciprocating internal combustion engines — Performance — Part 3: Test measurements*

ISO 6926, *Acoustics — Requirements for the performance and calibration of reference sound sources used for the determination of sound power levels*

IEC 60942, *Electroacoustics — Sound calibrators*

IEC 61260, *Electroacoustics — Octave-band and fractional-octave-band filters*

IEC 61672-1, *Electroacoustics — Sound level meters—Part 1: Specifications*

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in ISO 3046-1, ISO 3046-3, ISO 6926, IEC 60942, IEC 61260 and IEC 61672-1 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
sound pressure
p
difference between instantaneous pressure and static pressure

Note 1 to entry: It is expressed in pascals.

[SOURCE: ISO 80000-8:2007, 8-9.2]