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Tyres — Coast-by methods for measurement of tyre-to-road sound emission

Pneumatiques — Méthodes en roue libre pour le mesurage de l'émission acoustique issue du contact pneumatique/chaussée

Reference number
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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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 31, *Tyres, rims and valves*.

This second edition cancels and replaces the first edition (ISO 13325:2003), which has been technically revised. The main changes compared to the previous edition are as follows:

— Test site description has been improved.

— Preparation and adjustment depending of the tyre type has been improved.

— Trailer method has been withdrawn.

— Clarification of the formula for the determination of test result has been added.

— Parameters and calculation method have been aligned with UN regulation 117.

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.

This corrected version of ISO 13325:2019 incorporates the following correction: the coefficient “2” has been added to the formula of the slope of the regression line in 10.2.3.

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Tyres — Coast-by methods for measurement of tyre-to-road sound emission

1 Scope

This document specifies methods for measuring tyre-to-road sound emissions from tyres fitted on a motor vehicle under coast-by conditions, i.e. when the vehicle is in free-rolling, non-powered operation. This is typically achieved by putting the transmission in the neutral or equivalent position and switching off the engine as well as all auxiliary systems not necessary for safe driving.

This document is applicable to passenger cars and commercial vehicles as defined in ISO 3833. It is not intended to be used to determine the sound contribution of tyres of vehicles running in powered condition nor for the determination of traffic sound nuisance at a given location.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4223-1, *Definitions of some terms used in the tyre industry — Part 1: Pneumatic tyres*

ISO 10844, *Acoustics — Specification of test tracks for measuring noise emitted by road vehicles and their tyres*

IEC 60942, *Electroacoustics — Sound calibrators*

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

IEC 61672-3, *Electroacoustic — Sound level meters — Part 3: Periodic tests*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4223-1 apply.

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

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

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

4 Symbols and abbreviated terms

4.1 LI

The load index (LI) is a numerical code associated with the maximum load a tyre can carry at the speed indicated by its speed symbol under the service conditions specified by the tyre manufacturer. In cases where the LI consists of two numbers, reference shall be made to the first number. For tyres where the load index is not available, reference shall be made to the maximum load marked on the tyre sidewall.

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