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**Diesel fuel — Assessment of  
lubricity using the high-frequency  
reciprocating rig (HFRR) —**

Part 2:  
**Limit**

*Carburant diesel — Évaluation du pouvoir lubrifiant au banc  
alternatif à haute fréquence (HFRR) —*

*Partie 2: Limite*



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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](http://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](http://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 on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 34, *Propulsion, powertrain and powertrain fluids*, in collaboration with Technical Committee ISO/TC 28, *Petroleum and related products, fuels and lubricants from natural or synthetic sources*.

This third edition cancels and replaces the second edition (ISO 12156-2:2007), which has been technically revised to reconcile changes to ISO 12156-1, including improved precision, adding a second test method and eliminating humidity correction of the wear scar diameter.

A list of all parts in the ISO 12156 series can be found on the ISO website.

# Diesel fuel — Assessment of lubricity using the high-frequency reciprocating rig (HFRR) —

## Part 2: Limit

### 1 Scope

This document specifies the performance requirement (limit) necessary to ensure reliable operation of diesel fuel injection equipment with respect to lubrication by fuel of such equipment.

It applies to fuels used in diesel engines.

### 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 12156-1, *Diesel fuel — Assessment of lubricity using the high-frequency reciprocating rig (HFRR) — Part 1: Test method*

### 3 Terms and definitions

No terms and definitions are listed in this document.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

### 4 Test method

The test method for the assessment of diesel fuel lubricity to comply with this document shall be one of the methods (Method “A” — Digital Camera or Method “B” — Visual Observation) specified in ISO 12156-1.

In case of a dispute, Method “A” is considered the referee method.

### 5 Limit

The performance requirement (limit) for diesel fuel in compliance with this document shall be a wear scar diameter (WSD) not greater than 460  $\mu\text{m}$ .

### 6 Designation

If this document is used to specify a lubricity requirement for a fuel for use in a diesel engine, it shall be designated as follows: