



SLOVENSKI STANDARD
SIST EN 25163:1998

01-maj-1998

Motor and aviation-type fuels - Determination of knock characteristics - Motor method (ISO 5163:1990)

Motoren- und Flugkraftstoffe - Bestimmung der Klopfestigkeit - Motor-Verfahren (ISO 5163:1990)

Carburants pour moteur automobile et aviation - Détermination des caractéristiques antidétonantes - Méthode "Moteur" (ISO 5163:1990)

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Ta slovenski standard je istoveten z: EN 25163:1993

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ICS:

75.160.20 Liquid fuels

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EUROPEAN STANDARD

EN 25163

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Descriptors: petroleum products, fuels, automotive fuels, aviation fuels, gasoline, tests, determination, antiknock rating, octane number

English version

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knock characteristics - Motor method
(ISO 5163:1990)**

Carburants pour moteur automobile et aviation
- Détermination des caractéristiques
antidétonantes - Méthode "Moteur"
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Klopffestigkeit - Motor-Verfahren
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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

This European Standard is the endorsement of ISO 5163:1990. Endorsement of ISO 5163 was recommended by Technical Committee CEN/TC 19 "Methods of test and specifications for petroleum products" under whose competence this European Standard will henceforth fall.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 1994, and conflicting national standards shall be withdrawn at the latest by May 1994.

The standard was approved and in accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

Endorsement notice

The text of the International Standard ISO 5163:1990 was approved by CEN as a European Standard without any modification.

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INTERNATIONAL STANDARD

**ISO
5163**

Second edition
1990-12-15

Motor and aviation-type fuels — Determination of knock characteristics — Motor method

iTeh *Carburants pour moteur automobile et aviation — Détermination des
caractéristiques antidétonantes — Méthode "Moteur"*
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Reference number
ISO 5163:1990(E)

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.

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.

International Standard ISO 5163 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*.

This second edition cancels and replaces the first edition (ISO 5163:1977), of which it constitutes a minor revision.

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Introduction

The purpose of this International Standard is to accord official ISO status to a test procedure which is already used in a standardized form all over the world. The procedure in question is published jointly by the American Society for Testing and Materials (ASTM) and the UK Institute of Petroleum (IP) as method ASTM D 2700-86/IP 236/83, *Standard test method for knock characteristics of motor and aviation-type fuels by the motor method*.

In publishing this International Standard, ISO recognizes that this method is used in its original text in many member countries and that the standard equipment and many of the accessories and materials required for the method are obtainable only from specific manufacturers or suppliers. To carry out the procedure requires reference to the seven annexes to the ASTM Annual Book of Standards, Section 5, Volume 05.04, *Test methods for rating motor, diesel and aviation fuels*. These comprise over 100 pages of text and include many half-tone illustrations¹⁾ which are essential to the installation, operation and maintenance of the ASTM-CFR²⁾ engine.

From the accumulated experience, in many countries, of testing the knock characteristics of motor and aviation-type fuels using the ASTM-CFR engine, the conclusion has been drawn that initiation of work with a view to using a different engine for ISO purposes would represent unnecessary duplication of effort. Furthermore, the petroleum industry has worldwide demands for motor and aviation-type fuels meeting knock characteristic requirements based on the ASTM-CFR engine test, and it is under the necessity, therefore, of having this test equipment standardized.

It is further recognized that this method for rating fuels constitutes an exceptional case in that "metrication" of operating conditions other than those already recognized would be extremely difficult. In a metricated engine, the dimensions and tolerances would be strict numerical conversions and would not reflect metric engineering practice. The engine and directly associated equipment are currently manufactured only to non-metric dimensions and tolerances, and inspection equipment to maintain these tolerances is also only available to non-metric dimensions. The essentials of the procedures for using the test engine and equipment must be strictly adhered to if comparable results are to be obtained in different laboratories.

1) An extended edition of this International Standard incorporating the above-mentioned text and illustrations is in preparation.

2) The sole authorized manufacturer of the ASTM-CFR engine is the Waukesha Engine Division, Dresser Industries, Waukesha, Wisconsin 53186, USA.

ISO 5163:1990(E)

For all these reasons, it has been considered desirable by Technical Committee ISO/TC 28, *Petroleum products and lubricants*, under whose technical authority this International Standard is published, to adopt without change the method as published in the Annual Book of ASTM Standards, Section 5, Volume 05.04, rather than to attempt the conversion of the basic method and annexes into an International Standard.

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