INTERNATIONAL STANDARD

ISO 3046-6

Fourth edition
2020-02

Reciprocating internal combustion engines — Performance —

Part 6: Overspeed protection

Moteurs alternatifs à combustion interne — Performances —

Partie 6: Protection contre la survitesse

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Reference number
ISO 3046-6:2020(E)

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Published in Switzerland

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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).

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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, *Internal combustion engines*.

This fourth edition cancels and replaces the third edition (ISO 3046-6:1990), which has been technically revised. The main changes compared to the previous editions are as follows:

— the scope has been changed;

— new terms have been added;

— overspeed limiting mechanical security requirements have been added;

— overspeed limiting electronic control system security requirements have been added.

All parts of the ISO 3046 series can be found on the ISO website.

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.

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Reciprocating internal combustion engines — Performance —

Part 6: Overspeed protection

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1 Scope

This document specifies general requirements for overspeed limiting devices used for the protection of reciprocating internal combustion (RIC) engines and their driven machinery.

It applies to reciprocating internal combustion engines for land, rail traction and marine use, excluding engines used in road vehicles and aircrafts.

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 3046-4, *Reciprocating internal combustion engines — Performance — Part 4: Speed governing*

ISO 12100, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

IEC 60204-1, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 3046-4 and the following 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/

3.1
overspeed
condition of the engine exceeding the predetermined speed due to the sudden descent of the engine load, the slow response of the speed regulating system or malfunction

3.2
overspeed limiting device
combination of speed sensing, actuating elements and/or an electronic control system which controls the fuel supply, the intake of air, the load and/or the ignition system for the engine when a predetermined speed is exceeded

3.3
setting speed of overspeed limiting device
$n_{d,s}$
speed at which the activation of the *overspeed limiting device* (3.2) is initiated

Note 1 to entry: See Figure 1.

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