

INTERNATIONAL  
STANDARD

**ISO**  
**11547**

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**Small craft — Start-in-gear protection**

*Navires de plaisance — Dispositif de protection contre le démarrage avec vitesse en prise*

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Reference number  
ISO 11547:1994(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 11547 was prepared by Technical Committee ISO/TC 188, *Small craft*.

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# Small craft — Start-in-gear protection

## 1 Scope

This International Standard specifies requirements to prevent an outboard motor from being started in gear, when installed on small craft of up to 24 m length of hull.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 11192:—<sup>1)</sup>, *Small craft — Graphical symbols*.

ISO 13342:—<sup>1)</sup>, *Small craft — Static thrust measurement for outboard motors*.

## 3 Definitions

For the purposes of this International Standard, the following definitions apply.

**3.1 static thrust:** Forward or astern thrust developed by an outboard motor while stationary.

**3.2 remote control:** Engine throttle, shift and starting control mechanism located at a position remote from the outboard motor.

**3.3 remote starting:** Engine starting control mechanism located at a position remote from the outboard motor.

**3.4 local starting:** Starting control mechanism located at or on the outboard motor.

## 4 Requirements

**4.1** Every outboard motor capable of developing a static thrust (bollard pull) according to ISO 13342 of 500 N or more with any propeller or jet attachment available for that motor from the manufacturer shall be equipped with a device to prevent the motor from being started in gear when the controls are set so as to attain or exceed a thrust of 500 N.

**4.2** Motors equipped with remote starting systems may have either an integral start-in-gear protection device as required in 4.1, or a similar device incorporated in the remote control system. In the latter case, a label shall be affixed to the motor close to the control connection with the WARNING and the READ OWNER'S MANUAL symbols in accordance with ISO 11192 (see figure 1).

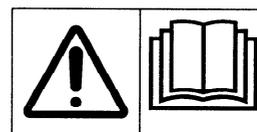


Figure 1

1) To be published.

**4.3** Motors which are normally started by remote control but also have provision for manual local starting that is not readily accessible need not be fitted with a start-in-gear protection device for this system, provided the information label in figure 2 is displayed on the product.

The information label shall be displayed in a prominent position visible to the person operating this manual starting system.

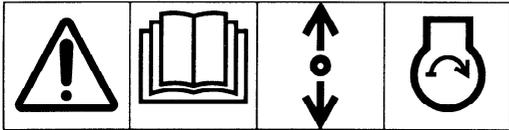


Figure 2

## 5 Owner's manual

**5.1** For motors not equipped with, but required to have start-in-gear protection, the Owner's Manual shall contain the information that controls installed with this motor must have a start-in-gear protection device.

**5.2** For motors which are normally started by remote control but also have provision for manual starting that is not readily accessible, the Owner's Manual shall contain an explanation of the correct use of the system.

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