



NSAI
Standards

Irish Standard
I.S. EN ISO 11680-1:2011

Machinery for forestry - Safety requirements and testing for pole-mounted powered pruners - Part 1: Machines fitted with an integral combustion engine (ISO 11680-1:2011)

I.S. EN ISO 11680-1:2011

Incorporating amendments/corrigenda/National Annexes issued since publication:

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SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:
EN ISO 11680-1:2000

This document is based on:
EN ISO 11680-1:2011

Published:
20 December, 2011

This document was published
under the authority of the NSAI
and comes into effect on:
20 December, 2011

ICS number:
65.060.80

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Údarás um Chaighdeáin Náisiúnta na hÉireann

English Version

Machinery for forestry - Safety requirements and testing for pole-mounted powered pruners - Part 1: Machines fitted with an integral combustion engine (ISO 11680-1:2011)

Matériel forestier - Exigences de sécurité et essais pour les perches élagueuses à moteur - Partie 1: Machines équipées d'un moteur à combustion interne intégré (ISO 11680-1:2011)

Forstmaschinen - Sicherheitstechnische Anforderungen und Prüfung für motorbetriebene Hochentaster - Teil 1: Geräte mit Antrieb durch integrierten Verbrennungsmotor (ISO 11680-1:2011)

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Contents

Page

Foreword.....	3
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC	4

Foreword

This document (EN ISO 11680-1:2011) has been prepared by Technical Committee ISO/TC 23 "Tractors and machinery for agriculture and forestry" in collaboration with Technical Committee CEN/TC 144 "Tractors and machinery for agriculture and forestry" the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by June 2012, and conflicting national standards shall be withdrawn at the latest by June 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 11680-1:2000.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of ISO 11680-1:2011 has been approved by CEN as a EN ISO 11680-1:2011 without any modification.

Annex ZA
(informative)
**Relationship between this European Standard and the Essential
Requirements of EU Directive 2006/42/EC**

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide one means of conforming to Essential Requirements of the New Approach Directive 2006/42/EC on machinery.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements of that Directive and associated EFTA regulations.

WARNING — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

I.S. EN ISO 11680-1:2011
**INTERNATIONAL
STANDARD**

**ISO
11680-1**

Second edition
2011-12-01

**Machinery for forestry — Safety
requirements and testing for
pole-mounted powered pruners —**

**Part 1:
Machines fitted with an integral
combustion engine**

*Matériel forestier — Exigences de sécurité et essais pour les perches
élagueuses à moteur —*

Partie 1: Machines équipées d'un moteur à combustion interne intégré



Reference number
ISO 11680-1:2011(E)

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Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Safety requirements and/or protective measures	2
4.1 General	2
4.2 Hand-grips	2
4.3 Harness	3
4.4 Cutting attachment	4
4.5 Transport cover for cutting attachment	5
4.6 Distance to cutting attachment	5
4.7 Engine starting device	6
4.8 Engine stopping device	6
4.9 Throttle control	6
4.10 Clutch	7
4.11 Tanks	7
4.12 Protection against contact with parts under high voltage	8
4.13 Protection against contact with hot parts	8
4.14 Exhaust gases	9
4.15 Vibration	9
4.16 Noise	10
4.17 Electromagnetic immunity	10
5 Information for use	10
5.1 Instruction handbook	10
5.2 Marking	13
5.3 Warnings	14
5.4 Test of labels	14
Annex A (informative) List of significant hazards	16
Bibliography	18

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 11680-1 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 17, *Manually portable forest machinery*.

This second edition cancels and replaces the first edition (ISO 11680-1:2000), which has been technically revised to reflect the state of the art.

ISO 11680 consists of the following parts, under the general title *Machinery for forestry — Safety requirements and testing for pole-mounted powered pruners*:

- *Part 1: Machines fitted with an integral combustion engine*
- *Part 2: Machines for use with back-pack power source*

Introduction

This document is a type-C standard as stated in ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the scope of this document.

When requirements of this type-C standard are different from those which are stated in type-A or type-B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C standard.

I.S. EN ISO 11680-1:2011

Machinery for forestry — Safety requirements and testing for pole-mounted powered pruners —

Part 1: Machines fitted with an integral combustion engine

1 Scope

This part of ISO 11680 gives safety requirements and measures for their verification for the design and construction of portable, hand-held, pole-mounted powered pruners having an integral combustion engine as their power unit and using a drive shaft to transmit power to a cutting attachment consisting of a saw chain or a reciprocating or circular saw blade with a 205 mm maximum outside diameter. Methods for the elimination or reduction of hazards arising from the use of these machines and the type of information on safe working practices to be provided by the manufacturer are specified.

This part of ISO 11680 deals with all significant hazards, hazardous situations or hazardous events with the exception of electric shock from contact with overhead electric lines (apart from warnings and advice for inclusion in the instruction handbook), relevant to these machines when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer.

NOTE See Annex A for a list of significant hazards.

This part of ISO 11680 is applicable to portable, hand-held, pole-mounted powered pruners manufactured after its date of publication.

2 Normative references

The following referenced documents are indispensable for the application 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 6531, *Machinery for forestry — Portable chain saws — Vocabulary*

ISO 7112:2008, *Machinery for forestry — Portable brush-cutters and grass-trimmers — Vocabulary*

ISO 7113:1999, *Portable hand-held forestry machines — Cutting attachments for brush cutters — Single-piece metal blades*

ISO 8893, *Forestry machinery — Portable brush cutters and grass-trimmers — Engine performance and fuel consumption*

ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

ISO 13857:2008, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs*

ISO 14982:1998, *Agricultural and forestry machinery — Electromagnetic compatibility — Test methods and acceptance criteria*

ISO 22867, *Forestry and gardening machinery — Vibration test code for portable hand-held machines with internal combustion engine — Vibration at the handles*

ISO 22868, *Forestry and gardening machinery — Noise test code for portable hand-held machines with internal combustion engine — Engineering method (Grade 2 accuracy)*

IEC 60745-1:2006, *Hand-held motor-operated electric tools — Safety — Part 1: General requirements*

3 Terms and definitions

For the purpose of this document, the terms and definitions given in ISO 6531, ISO 7112 and ISO 12100 and the following apply.

3.1

pole-mounted powered pruner

machine whose power source is attached via a long drive-shaft tube (pole) to a cutting attachment, designed to enable an operator to cut branches from a distance

NOTE See Figure 1 for an example of a pole-mounted powered pruner with integral combustion engine and a saw-chain cutting attachment within the Scope of this part of ISO 11680.

4 Safety requirements and/or protective measures

4.1 General

Machines shall comply with the safety requirements and/or protective measures of this clause. In addition, the machine shall be designed according to the principles of ISO 12100 for relevant but not significant hazards which are not dealt with by this part of ISO 11680.

The safe operation of a pole-mounted powered pruner also depends on the safe environment associated with the use of personal protective equipment (PPE), such as gloves, slip-resistant footwear, and eye, hearing and head protective equipment, as well as safe working procedures (see 5.1).

Except where otherwise specified in this part of ISO 11680, the safety distances specified in ISO 13857:2008, 4.2.4.1 and 4.2.4.3, shall be met.

4.2 Hand-grips

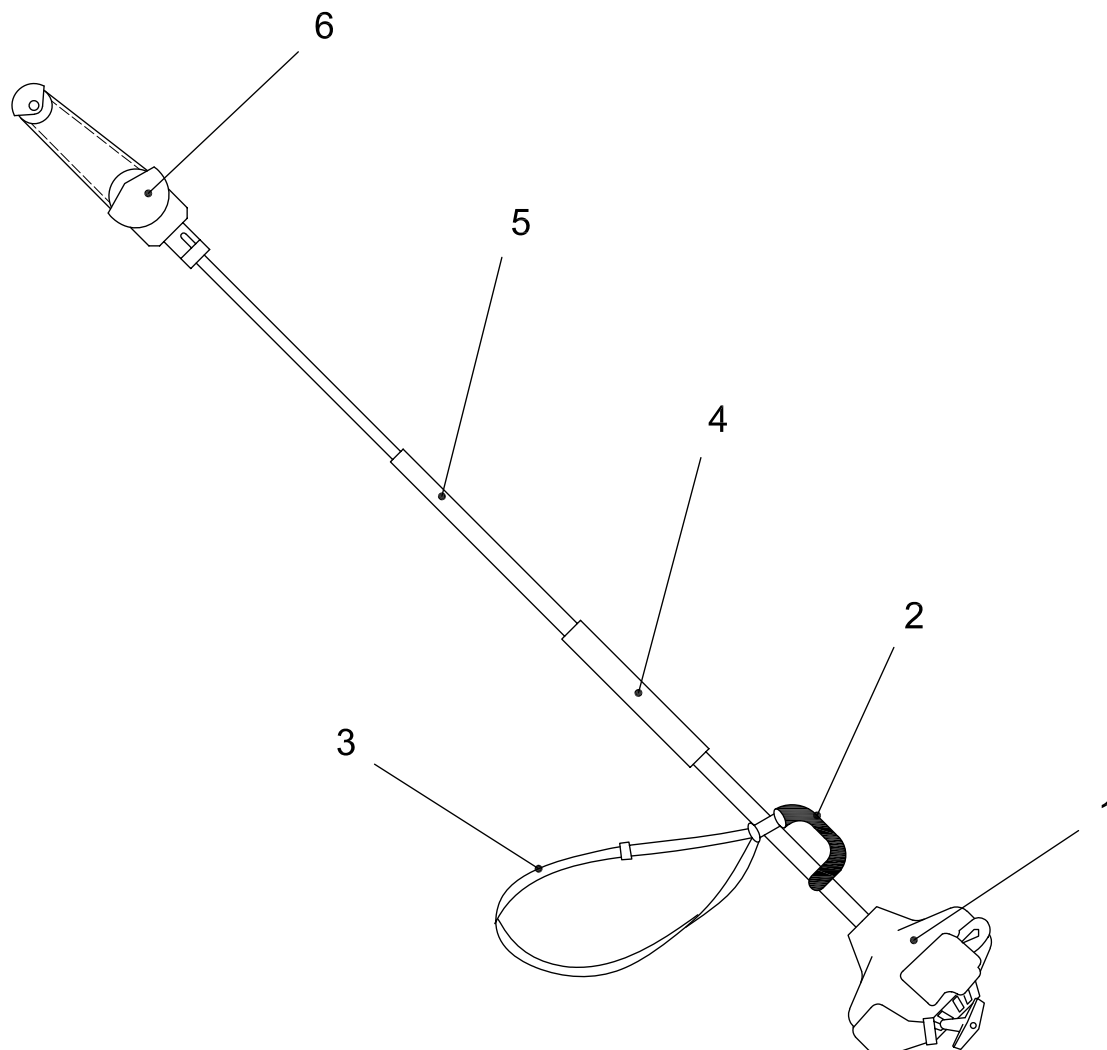
4.2.1 Requirements

The machine shall have a hand-grip for each hand. The shape and surface of the hand-grip shall be designed so as to provide the necessary sureness of grip, regardless of whether or not the operator wears gloves. If the hand-grip nearest the cutting attachment is an integral part of the drive-shaft tube, the diameter shall be between 20 mm and 50 mm. The hand-grip length shall be at least 100 mm.

The gripping length of a bail or closed hand-grip shall comprise any length that is straight or curved at a radius greater than 100 mm together with any blend radius, but not more than 10 mm, at one or both ends of the gripping surface.

4.2.2 Verification

The design and dimensions shall be verified by inspection and measurement.



Key

- 1 power unit
- 2 rear hand-grip
- 3 harness
- 4 front hand-grip
- 5 shaft tube
- 6 cutting attachment

Figure 1 — Example of pole-mounted powered pruner with integral combustion engine and saw-chain cutting attachment

4.3 Harness

4.3.1 Requirements

All machines shall be equipped with a harness to be worn by the operator. The harness is primarily for supporting the machine during movement between cutting tasks and for reducing the risk of unintentional contact with the cutting attachment. The harness shall be adjustable to the size of the operator.

A harness shall either be provided with a quick-release mechanism or the design shall be such that the harness can be removed quickly in the event of an emergency. Any such quick-release mechanism for emergency release shall enable rapid release of the machine from the harness or harness from operator.

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