
**Machinery for forestry — Portable
chain-saw safety requirements and
testing —**

**Part 1:
Chain-saws for forest service**

*Matériel forestier — Exigences de sécurité et essais des scies à chaîne
portatives —*

Partie 1: Scies à chaîne pour travaux forestiers



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Contents

Page

Foreword.....	iv
Introduction	v
1 Scope.....	1
2 Normative references	1
3 Terms and definitions.....	3
4 List of significant hazards.....	4
5 Safety requirements and verification.....	4
6 Information for use.....	14
Annex A (informative) Pictorial	17
Bibliography	18

Foreword

ISO (the International Organization for Standardization) is a world-wide 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 11681-1 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 11681-1:1996), which has been technically revised.

ISO 11681 consists of the following parts, under the general title *Machinery for forestry — Portable chain-saw safety requirements and testing*:

- *Part 1: Chain-saws for forest service*
- *Part 2: Tree service chain-saws*

Introduction

This document is a type C standard as defined in ISO 12100-2.

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

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

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Machinery for forestry — Portable chain-saw safety requirements and testing —

Part 1: Chain-saws for forest service

1 Scope

This part of ISO 11681 deals with the significant hazards and specifies safety requirements and their verification for design and construction of portable combustion-engine, hand-held chain-saws, designed only for use by one operator and intended for forest work.

It describes methods for the elimination or reduction of hazards arising from their use. In addition it specifies the type of information on safe working practices to be provided by the manufacturer.

It deals with all significant hazards. It does not cover the hazard from kickback for machines with an engine displacement over 80 cm³. The environmental aspects, except for noise, have not been considered.

Chain-saws covered by this part of ISO 11681 are designed for use by persons having read and understood the safety requirements in the instruction handbook and using the appropriate personal protective equipment (PPE). The chain-saws covered are designed only to be operated with the right hand on the rear handle and the left hand on the front handle.

This part of ISO 11681 is not applicable to chain-saws which are manufactured before the date of publication of this document.

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 6531:1999, *Machinery for forestry — Portable chain-saws — Vocabulary*

ISO 6533:2001, *Forestry machinery — Portable chain-saw front hand-guard — Dimensions and clearances*

ISO 6534:1992, *Portable chain-saws — Hand guards — Mechanical strength*

ISO 6535:1991, *Portable chain-saws — Chain brake performance*

ISO 7293:1997, *Forestry machinery — Portable chain-saws — Engine performance and fuel consumption*

ISO 7914:2002, *Forestry machinery — Portable chain-saws — Minimum handle clearance and sizes*

ISO 7915:1991, *Forestry machinery — Portable chain-saws — Determination of handle strength*

ISO 8334:1985, *Forestry machinery — Portable chain-saws — Determination of balance*

ISO 9518:1998, *Forestry machinery — Portable chain-saws — Kickback test*

ISO 10726:1992, *Portable chain-saws — Chain catcher — Dimensions and mechanical strength*

ISO/TR 11688-1:1995, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning*

ISO 13772:1997, *Forestry machinery — Portable chain-saws — Non-manually actuated chain brake performance*

ISO 12100-1:2003, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology*

ISO 12100-2:2003, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles*

ISO 22867:—¹⁾, *Portable hand-held forestry machines with internal combustion engine — Vibration test code — Measurement of vibration at the handles*

ISO 22868:—¹⁾, *Noise test code for portable hand-held forestry machines with an internal combustion engine — Determination of A-weighted emission sound pressure levels at the operator's position, and the sound power level — Engineering method (grade 2)*

IEC 60335-1, *Household and similar electrical appliances — Safety — Part 1: General requirements*

1) To be published.