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Powered hand-held hedge trimmers — Safety

Taille-haies portatifs à moteur — Sécurité

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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.

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 10517 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 13, *Powered lawn and garden equipment*.

This second edition cancels and replaces the first edition (ISO 10517:1993), which has been technically revised as follows. It has been harmonized with the revised requirements of EN 774. Noise and vibration requirements have been included as well as a table listing the significant hazards.

Introduction

Noise emission and vibration levels are primarily determined for

— manufacturers' declaration of levels,

— comparisons of the vibration level and noise emitted by hedge trimmers in the family concerned, and

— for purposes of noise control at the source at the design stage.

Powered hand-held hedge trimmers — Safety

IMPORTANT — The electronic file of this document contains colours which are considered to be useful for the correct understanding of the document. Users should therefore consider printing this document using a colour printer.

1 Scope

This International Standard specifies safety requirements and their verification for the design and construction of hand-held, integrally-driven petrol combustion engine hedge trimmers, hereafter referred to as "hedge trimmers", designed to be used by a single operator for trimming hedges and bushes while utilizing one or more linear reciprocating cutter blades.

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

This International Standard deals with all significant hazards, hazardous situations and events relevant to hand-held powered hedge trimmers when they are used as intended (see Clause 4).

This International Standard does not deal with low noise design. It is not applicable to hedge trimmers with an engine displacement over 80 cm^3, nor is it applicable to hedge trimmers manufactured before the date of its 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 354:2003, *Acoustics — Measurement of sound absorption in a reverberation room*

ISO 3744:1994, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering method in an essentially free field over a reflecting plane*

ISO 3767-1:1998, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 1: Common symbols*

ISO 3767-3:1995,*Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 3: Symbols for powered lawn and garden equipment*

ISO 3767-4:1993, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 4: Symbols for forestry machinery*

ISO 3864-1:2002, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs in workplaces and public areas*

ISO 4871:1996, *Acoustics — Declaration and verification of noise emission values of machinery and equipment*

ISO 5347-22:1997, *Methods for the calibration of vibration and shock pick-ups — Part 22: Accelerometer resonance testing — General methods*

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

ISO 8041:2005, *Human response to vibration — Measuring instrumentation*

ISO 8893:1997, *Forestry machinery — Portable brush-cutters and grass-trimmers — Engine performance and fuel consumption*

ISO 11201:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Engineering method in an essentially free field over a reflecting plane*

EN 12096:1997, *Mechanical vibration — Declaration and verification of vibration emission values*

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

IEC 61672-1:2002, *Electroacoustics — Sound level meters — Part 1: Specifications*

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

IEC 60745-2-15:2006, *Hand-held motor-operated electric tools — Safety — Part 2-15: Particular requirements for hedge trimmers*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
petrol combustion engine hedge trimmer
machine fitted with reciprocating blades made of metal, intended to cut and form hedges, bushes and similar vegetation

3.2
cutting device
part of the assembly consisting of cutter blade and shear plate, or of the cutter blades together with any supporting part, which performs the cutting action and that can be single- or double-sided

See Figure 2.

3.3
cutter blade
part of the cutting device having blade teeth which cut by a shearing action either against other blade teeth or against a shear plate

See Figure 2.

3.4
blade tooth
part of the cutter blade which is sharpened to perform the shearing action

See Figure 2.