BS EN ISO 11806-1:2011

BSI Standards Publication

Agricultural and forestry machinery — Safety requirements and testing for portable, hand-held, powered brush-cutters and grass-trimmers

Part 1: Machines fitted with an integral combustion engine

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National foreword

This British Standard is the UK implementation of EN ISO 11806-1:2011. It supersedes BS EN ISO 11806:2008 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee AGE/29, Forestry machinery.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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English Version

Agricultural and forestry machinery - Safety requirements and testing for portable, hand-held, powered brush-cutters and grass-trimmers - Part 1: Machines fitted with an integral combustion engine (ISO 11806-1:2011)

Matériel agricole et forestier - Exigences de sécurité et essais pour débroussailleuses et coupe-herbe portatifs à moteur - Partie 1: Machines équipées d'un moteur à combustion interne intégré (ISO 11806-1:2011)

Land- und forstwirtschaftliche Maschinen - Sicherheitstechnische Anforderungen und Prüfung für tragbare handgehaltene motorbetriebene Freischneider und Grastrimmer - Teil 1: Maschinen mit Antrieb durch Verbrennungsmotor (ISO 11806-1:2011)

This European Standard was approved by CEN on 30 November 2011.

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Foreword

This document (EN ISO 11806-1:2011) 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of an identical text or by endorsement, at the latest by June 2012, and conflicting national standards shall be withdrawn at the latest by June 2012.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 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.

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 11806-1:2011 has been approved by CEN as a EN ISO 11806-1:2011 without any modification.

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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.

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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 11806-1 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 17, *Manually portable forest machinery*.

This first edition of ISO 11806-1 cancels and replaces ISO 11806:1997, of which it is also a technical revision.

ISO 11806 consists of the following parts, under the general title *Agricultural and forestry machinery — Safety requirements and testing for portable, hand-held, powered brush-cutters and grass-trimmers*:

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

— *Part 2: Machines for use with back-pack power unit*

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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.

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INTERNATIONAL STANDARD ISO 11806-1:2011(E)

Agricultural and forestry machinery — Safety requirements and testing for portable, hand-held, powered brush-cutters and grass-trimmers —

Part 1:
Machines fitted with an integral combustion engine

1 Scope

This part of ISO 11806 gives safety requirements and measures for their verification for the design and construction of portable hand-held, powered brush-cutters and grass-trimmers (hereafter called machines) having an integral combustion engine as their power unit and mechanical power transmission between the power source and the cutting attachment. 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 11806 deals with all significant hazards, hazardous situations and hazardous events relevant to these machines, as well as when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer.

This part of ISO 11806 is not applicable to machines equipped with metallic cutting attachments consisting of more than one piece, e.g. pivoting chains or flail blades.

NOTE See Annex C for a list of significant hazards.

This part of ISO 11806 is applicable to portable, hand-held, powered brush-cutters and grass-trimmers 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 683-9:1988, *Heat-treatable steel, alloy steels and free-cutting steels — Part 9: Wrought free-cutting steels*

ISO 7112, *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 7918, *Forestry machinery — Portable brush-cutters and grass-trimmers — Cutting attachment guard dimensions*

ISO 8380, *Forestry machinery — Portable brush-cutters and grass-trimmers — Cutting attachment guard strength*

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

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

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

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

NOTE Figure 1 provides an example of a brush-cutter and Figure 2 of a grass-trimmer within the scope of this part of ISO 11806.

3.1
machine
complete brush-cutter (or grass-trimmer) including power unit, drive shaft tube, cutting attachment and guard, but excluding the harness

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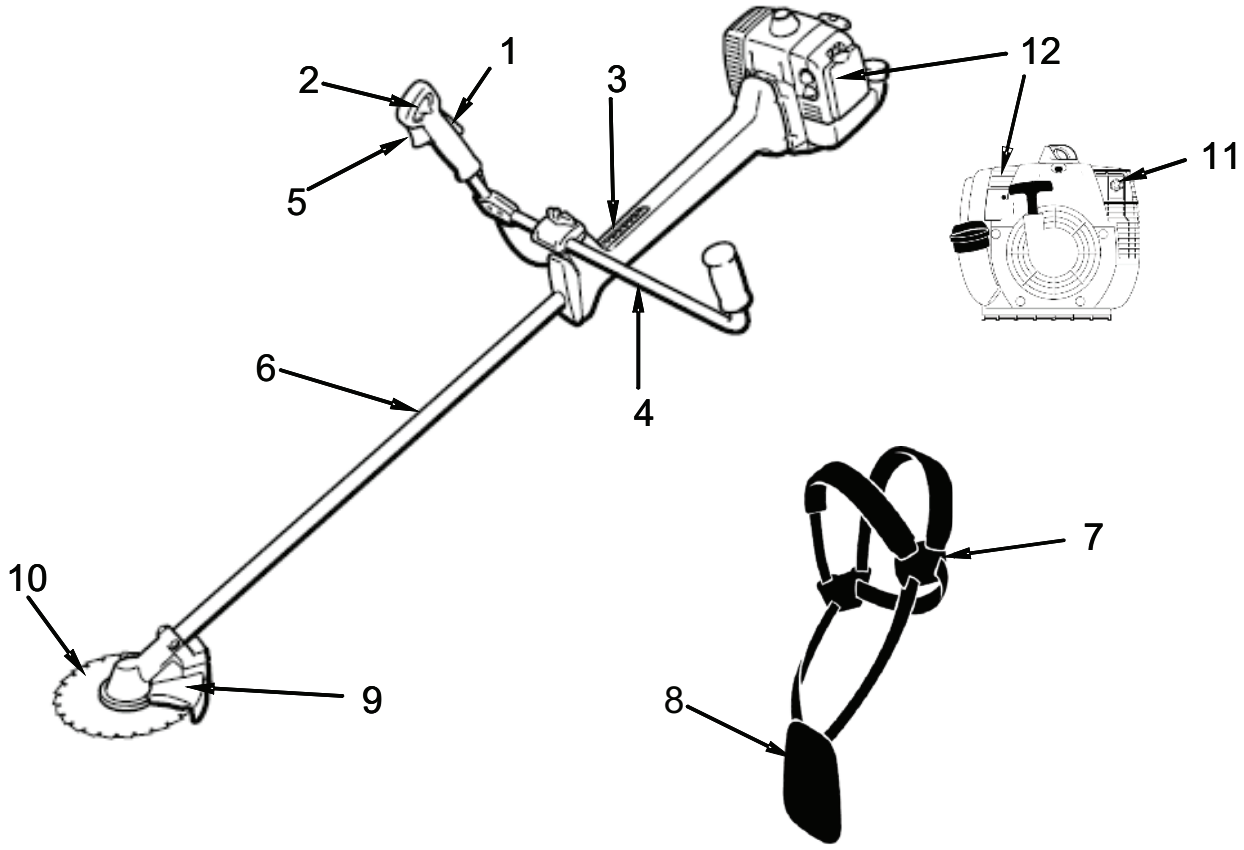

Key

1 throttle trigger lockout
2 stop switch
3 suspension point
4 handle
5 throttle trigger
6 drive shaft tube
7 harness, quick-release mechanism
8 harness, hip pad
9 cutting-attachment guard
10 cutting attachment, e.g. saw blade
11 muffler
12 power unit

Figure 1 — Brush-cutter with integral power source

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