INTERNATIONAL STANDARD

ISO 11680-2

Third edition
2021-10

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

Part 2: Machines for use with backpack power source

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

Partie 2: Machines pour utilisation avec source motrice portée à dos

Reference number
ISO 11680-2:2021(E)

© ISO 2021



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

© ISO 2021 – All rights reserved

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 **3**
4.1 General 3
4.2 Hand grip on backpack power unit 3
4.2.1 Requirements 3
4.2.2 Verification 3
4.3 Harness for backpack power unit 3
4.3.1 Requirements 3
4.3.2 Verification 4
4.4 Hydraulic and pneumatic pipes and hoses 4
4.4.1 Requirements 4
4.4.2 Verification 4
5 Information for use **4**
Annex A (informative) **List of significant hazards** **5**

© ISO 2021 – All rights reserved

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 17, *Manually portable (hand-held) powered lawn and garden equipment and forest machinery*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 144, *Tractors and machinery for agriculture and forestry*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 11680-2:2011), which has been technically revised.

The main changes compared to the previous edition are as follows:

— in 4.1, the references to ISO 11680-1:2021 have been updated to its latest edition;

— in 4.3, the requirements for the harness have been reworded and aligned with the requirements for double shoulder harnesses in ISO 11680-1:2021.

A list of all parts in the ISO 11680 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

© ISO 2021 – All rights reserved

Introduction

This document is a type-C standard as stated in ISO 12100:2010.

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

— machine manufacturers (small, medium and large enterprises);

— health and safety bodies (regulators, accident prevention organisations, market surveillance, etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

— machine users/employers (small, medium and large enterprises);

— machine users/employees (e.g. trade unions, organizations for people with special needs);

— service providers, e. g. for maintenance (small, medium and large enterprises);

— consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

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.

© ISO 2021 – All rights reserved

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

Part 2:
Machines for use with backpack power source

1 Scope

This document specifies safety requirements and measures for their verification for the design and construction of portable, hand-held, pole-mounted powered pruners with a backpack power unit (hereafter referred to as "machine"). These machines use a power transmission shaft to transmit power to a cutting attachment consisting of a combination of saw-chain and guide bar, a reciprocating saw blade or a single-piece 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 document, together with the relevant sections of ISO 11680-1:2021, 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 advices for inclusion in the instructions) and whole-body vibration from the backpack power unit, relevant to these machines when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer.

NOTE 1 A standardized test procedure for measuring whole-body vibration from the backpack power unit is not available at the date of publication.

NOTE 2 See Annex A for a list of significant hazards.

This document is applicable to portable, hand-held, pole-mounted powered pruners with backpack power unit manufactured after its date of publication.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 4413:2010, *Hydraulic fluid power — General rules and safety requirements for systems and their components*

ISO 4414:2010, *Pneumatic fluid power — General rules and safety requirements for systems and their components*

ISO 11680-1:2021, *Machinery for forestry — Safety requirements and testing for pole-mounted powered pruners — Part 1: Machine fitted with an integral combustion engine*

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

ISO 13857:2019, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs*

© ISO 2021 – All rights reserved