

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1 AMENDEMENT 1

**Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety –
Part 4-4: Particular requirements for lawn trimmers, lawn edge trimmers, grass trimmers, brush cutters and brush saws**

**Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses – Sécurité –
Partie 4-4: Exigences particulières pour les taille-gazon, les coupe bordures, les coupe herbes, les débroussailleuses et les débroussailleuses à lame de scie**





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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS,
TRANSPORTABLE TOOLS AND LAWN AND GARDEN MACHINERY –
SAFETY –****Part 4-4: Particular requirements for lawn trimmers, lawn edge trimmers,
grass trimmers, brush cutters and brush saws****AMENDMENT 1****FOREWORD**

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Amendment 1 to IEC 62841-4-4:2020 has been prepared by IEC technical committee 116: Safety of motor-operated electric tools.

The text of this Amendment is based on the following documents:

Draft	Report on voting
116/806/FDIS	116/829/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Amendment is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications/.

A list of all parts of the IEC 62841 series, under the general title: *Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 36 months from the date of publication.

2 Normative references

Add the following new reference:

ISO 22867:2021, *Forestry and gardening machinery – Vibration test code for portable hand-held machines with internal combustion engine – Vibration at the handles*

Replace, in the existing reference ISO 22868, "2011" with "2021".

3 Terms and definitions

Add, before the addition, the following new text:

3.16 Addition:

Note 101 to entry: Interchangeable **attachments** such as a lower shaft assembly or an interchangeable **guard** are considered not to be **detachable parts**.

8 Marking and instructions

Add, after the last dashed item of 8.2.101.2, the following new dashed items:

- "⚠️WARNING – Keep bystanders away" or one of the safety signs specified in Figure AA.7;
- safety sign W017 of ISO 7010 (2011-05) in accordance with Table 2, if applicable.

Delete Subclause 8.2.101.4.

Delete the first dashed item of 8.2.101.5.

Replace the existing text of the first dashed item of 8.2.101.6 with the following new text:

- "Wear head protection where there is a risk of falling objects" or a relevant safety sign of ISO 7010 or the safety sign specified in Figure AA.10;

Delete Subclause 8.4.

Replace the existing modification of 8.6 with the following new text:

n_0 **maximum speed** assigned by the manufacturer in accordance with 8.1

Delete 8.14.1.101, item o).

Delete 8.14.1.102, item h).

Replace the existing text of 8.14.1.102, item i), with the following new text:

- i) **While operating the machine, always wear non-slip and protective footwear. Do not operate the machine when barefoot or wearing open sandals. This reduces the chance of injury to the feet from contact with the moving cutter line or blade.**

Delete 8.14.1.102, Note 104.

Delete 8.14.1.102, item j).

Delete 8.14.1.102, Note 105.

In 8.14.2 b), item 116), add "assigned by the manufacturer" after "**maximum speed** of the spindle".

12 Heating

Add, after 12.2.1, the following new text:

Replacement of Table 2:

Table 2 – Maximum outside surface temperature rises

Parts	Temperature rise ^a K
External enclosure, except handles held in normal use	60
Handles, knobs, grips, and the like which, in normal use , are continuously held:	
– of metal	30
– of porcelain or vitreous material	40
– of moulded material, rubber or wood	50

Parts	Temperature rise ^a K
Handles, knobs, grips, and the like which, in normal use , are held for short periods only (e.g. switches):	
– of metal	35
– of porcelain or vitreous material	45
– of moulded material, rubber or wood	60
^a Temperature rise limits are not applicable to the cutting means or cutting accessory drive enclosure, if it is marked with the safety sign W017 of ISO 7010 (2011-05).	

18 Abnormal operation

Table 4 – Required performance levels

In the existing text of the first row after "Overspeed prevention", under the column "Type and purpose of SCF", add "assigned by the manufacturer" after "of maximum speed".

Delete the last row ("Prevent self-resetting as required in 23.3").

19 Mechanical hazards

In 19.101.1.3, add the following sentence after the first sentence of the second paragraph:

The **guard** shall cover, from above and to the operator side, the area beyond 80 % of the largest radius of the **cutting means**.

Figure 107 – Minimum guard coverage, lawn trimmer (see 19.101.1)

In key item 4, replace "radius" with "largest radius".

19.101.4 Guard requirements

Replace the existing text of the first paragraph with the following new text:

The **guards** specified in 19.101.1 and 19.101.2 shall be

- imperforate in the area of the **guard** beyond 80 % of the radius of the largest **cutting means** that can be used with the **guard** in accordance with 8.14.2 a); and
- permanently attached or secured to prevent removal without the aid of a tool, by means such as screws, nuts or snap fits.

The **guard** specified in 19.101.3 shall be permanently attached or secured to prevent removal without the aid of a tool, by means such as screws, nuts or snap fits.

19.102.1 General

Replace, in the second dashed item, "8.14.2 b) 109)" with "8.14.2 b) 6) of Part 1".

Figure 112 – Measurement of handle gripping length

In the title of Figure 112 b), delete the word "straight".

19.102.1.1 Lawn trimmers and lawn edge trimmers

In the third paragraph, replace "lawn trimmers or lawn edge trimmers" with "hand-held trimmers".

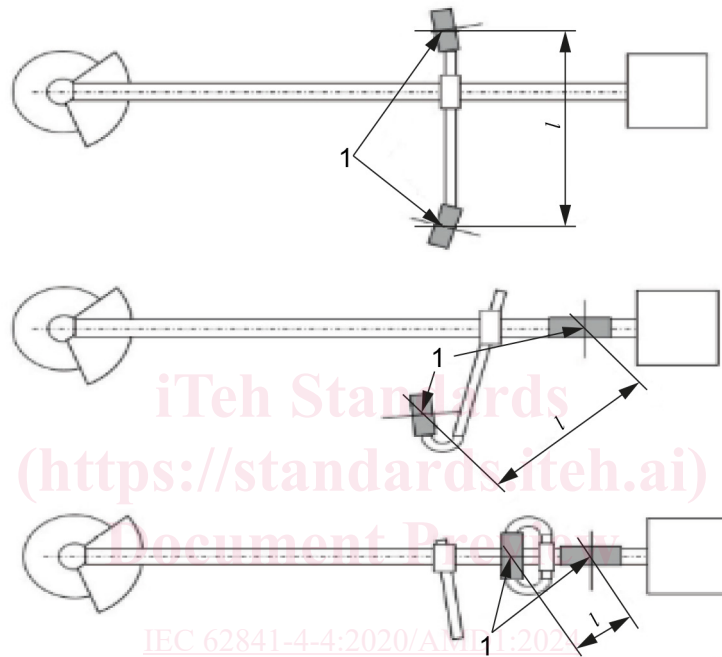
19.102.1.2 Grass trimmers, brush cutters and brush saws

In the first paragraph, delete "or grasping surfaces".

In the third paragraph, replace "8.3.101" with "8.3.102".

Figure 113 – Measurement of distance between handles for grass trimmers, brush cutters and brush saws

Replace the existing Figure 113 with the following new figure:



Key

1 centre of the handle

l distance between handles

Figure 113 – Measurement of distance between handles for grass trimmers, brush cutters and brush saws

19.102.3 Dimensions of straight handles supported centrally (T-type)

In the title and in the first paragraph, delete "straight" before "handles".

20 Mechanical strength

In 20.3.1, delete the eighth paragraph (starting with "In addition").

Replace the existing text of the last paragraph with the following new text:

Each drop shall be conducted on a separate sample, unless a single sample can be subjected to multiple drops without failure. If a sample has been subjected to multiple drops and fails, then the drop in the orientation that resulted in the failure is repeated using a new sample. If the new sample passes the test for the drop in that orientation, then the requirements for the drop in that orientation are considered to be fulfilled. The test is continued in this manner until all drops in each of the three orientations are completed.

In 20.5, replace the existing text of the third paragraph with the following new text:

For **grass trimmers, brush cutters and brush saws**, if a pliable insulation material is used

- to cover a tubular shaped metal handle, and
- is relied upon to fulfil the requirements of this subclause,

it shall be suitable for temperatures foreseen in **normal use** and shall have adequate mechanical strength in order to provide insulation between the grasping area and the **cutting device**. This requirement is not applicable for metal handles that are isolated by insulating barrier(s) from accessible metal parts that can become live by the **cutting device** in accordance with 21.30.

NOTE 102 Examples of pliable insulation material include foam, heat shrink and elastomeric tubing.

NOTE 103 Examples of a tubular shaped metal handle include those with a round, oval or square cross section.

21 Construction

Replace the existing text of 21.17.1 with the following new text:

21.17.1 Addition:

This subclause of Part 1 is also applicable for an **operator presence sensor** whose motion is mechanically obstructed and either

- functions as a lock-off device; or
- is locked off by the lock-off device.

In 21.18.1, replace, in the first paragraph, "8.14.2 b) 109)" with "8.14.2 b) 6) of Part 1".

*In 21.18.101, replace, in the penultimate paragraph, "longitudinal vertical plane" with "surrounding surface", "8.14.2 a)" with "8.14.2 b) 6) of Part 1" and "actuate the **power switch**" with "actuate the locked-off control (i.e. the **power switch** or the **operator presence sensor**, as applicable)".*

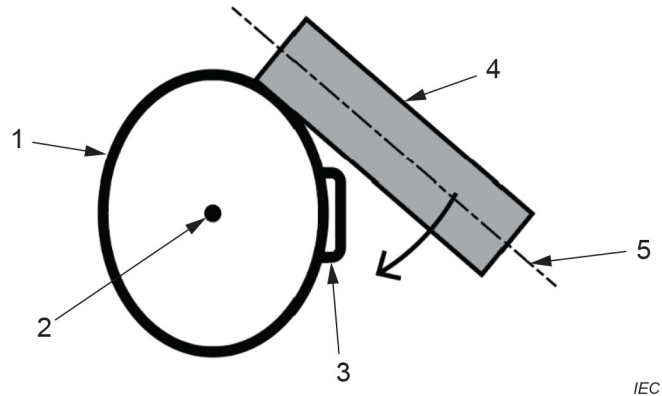
Replace the last paragraph with the following new text and figures:

*With the **power switch** or the **operator presence sensor**, as applicable, in the "off" position, the lock-off device shall not be actuated by the cylindrical face of a 25 mm diameter × 75 mm long steel rod when applied with a force not exceeding 20 N. The axis of the rod is applied perpendicular to the axis of the handle and is:*

- first rotated around the handle, see Figure 122, and
- then applied in the direction perpendicular to the handle axis, see Figure 123,

while bridging the handle surface and surface of the lock-off device and any surface adjacent to the lock-off device. When applying the steel rod, the circular end faces and edges shall not be used for probing.

During the test, it shall not be possible to actuate the locked-off control by applying a force as specified in Table 7.

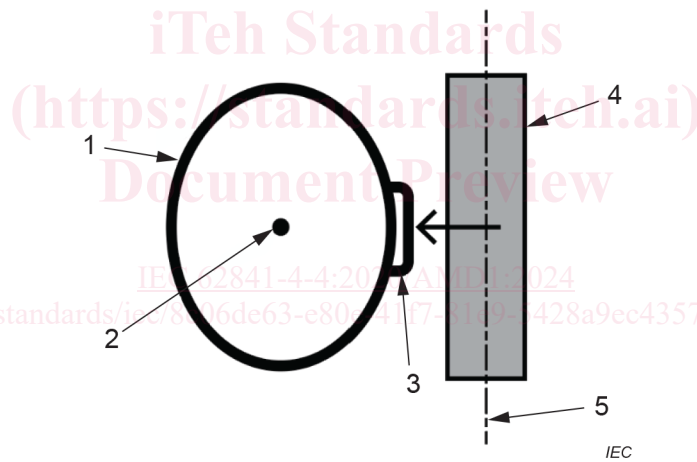


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Key

- 1 handle
- 2 handle axis
- 3 lock-off device
- 4 steel rod
- 5 steel rod axis

Figure 122 – Application of steel rod when rotated around the handle



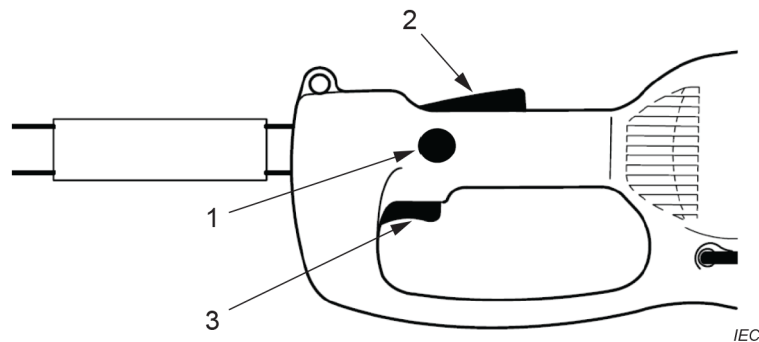
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Key

- 1 handle
- 2 handle axis
- 3 lock-off device
- 4 steel rod
- 5 steel rod axis

Figure 123 – Application of steel rod when applied in the direction perpendicular to the handle axis

In 21.18.102, replace the existing Figure 119 with the following new figure:



Key

- 1 lock-off device
- 2 operator presence sensor
- 3 power switch

Figure 119 – Example of an operator presence sensor

In 21.30, replace, in the first paragraph, "brush cutters and brush saws" with "brush cutter and brush saw", replace "8.14.2 b) 109)" with "8.14.2 b) 6) of Part 1", replace "may" with "can" and delete the last sentence of the paragraph.

21.102 Lawn trimmer and lawn edge trimmer cutting elements

Replace the existing title with the following new title:

21.102 Lawn trimmer, lawn edge trimmer and grass trimmer distances to guard

In 21.107.1, replace the existing text of the third paragraph with the following new text:

For machines provided with an appliance inlet or a **supply cord** with a length between 0,2 m and 0,5 m, a mass of (300 ± 20) g is suspended from either

- the appliance inlet; or
- the **supply cord** plug; or
- any **supply cord** retaining device in accordance with 8.14.2,

whichever is the most unfavourable.

For machines provided with a **supply cord** with a length not less than 6 m, the **supply cord** is placed resting on the ground.

In the last dashed item of the paragraph, replace "blade" with "cutting accessory".

In 21.107.2, replace the existing text of the third paragraph with the following new text:

A mass of (300 ± 20) g is suspended from either

- the appliance inlet; or
- the **supply cord** plug; or
- any **supply cord** retaining device in accordance with 8.14.2,

whichever is the most unfavourable.