



CAN/CSA-C22.2 No. 62841-1-15
**Electric motor-operated hand-held tools, transportable tools and
lawn and garden machinery — Safety — Part 1: General
requirements**
(IEC 62841-1:2014, MOD)



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CAN/CSA-C22.2 No. 62841-1-15
***Electric motor-operated hand-held tools,
transportable tools and lawn and garden
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(IEC 62841-1:2014, MOD)

Note: For brevity, this Standard will be referred to as “CAN/CSA-C22.2 No. 62841-1” throughout.

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*Prepared by
International Electrotechnical Commission*



Reviewed by



CSA Group
CAN/CSA-C22.2 No. 62841-1-15
First Edition
(IEC 62841-1:2014, MOD)



Underwriters Laboratories Inc.
UL 62841-1
First Edition

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PREFACE

This is the harmonized CSA Group and UL standard for Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 1: General Requirements. It is the First edition of CAN/CSA-C22.2 No. 62841-1, and the First edition of UL 62841-1. This harmonized standard has been jointly revised on August 21, 2020. For this purpose, CSA Group and UL are issuing revision pages dated August 21, 2020.

This harmonized standard is based on IEC Publication 62841-1: First edition Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 1: General Requirements issued March 2014. IEC publication 62841-1 is copyrighted by the IEC.

This harmonized standard was prepared by CSA Group and Underwriters Laboratories Inc. (UL). The efforts and support of the Harmonization Working Group for the Adoption of the IEC Series of Hand-Held, Motor-Operated Tool Standards are gratefully acknowledged.

This standard is considered suitable for use for conformity assessment within the stated scope of the standard.

This standard was reviewed by the CSA Subcommittee on Safety of Hand-Held Motor-Operated Electric Tools, under the jurisdiction of the CSA Technical Committee on Consumer and Commercial Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee. This standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Application of Standard

Where reference is made to a specific number of samples to be tested, the specified number is to be considered a minimum quantity.

Note: Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

This is the CAN/CSA-C22.2 No. 62841-1 Standard for Safety for Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 1: General Requirements. This CSA Group Part 1 is to be used in conjunction with the appropriate CSA Group Part 2, 3, or 4, which contains clauses to supplement or modify the corresponding clauses in the Part 1, to provide relevant requirements for each type of product.

This is the UL Standard for Safety for Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 1: General Requirements. This UL Part 1 is to be used in conjunction with the appropriate UL Part 2, 3 or 4, which contains clauses to supplement or modify the corresponding clauses in the Part 1, to provide relevant requirements for each type of product.


Level of Harmonization

This standard adopts the IEC text with national differences.

This standard is published as an equivalent standard for CSA Group and UL.

An equivalent standard is a standard that is substantially the same in technical content, except as follows: Technical national differences are allowed for codes and governmental regulations as well as those recognized as being in accordance with NAFTA Article 905, for example, because of fundamental climatic,

If additional symbols are used, they shall be in accordance with ISO 7010 or be designed in accordance with ISO 3864-2 or ISO 3864-3.

Cautionary statements having the same signal word such as " WARNING" may be combined into one paragraph under one signal word. The order of statements shall be markings required by IEC 62841-1, markings required by the relevant part of IEC 62841-2, IEC 62841-3 or IEC 62841-4 and then any optional markings.

Compliance is checked by inspection and by measurement.

8.2DV D1 Modification: Add the following to Clause 8.2:

For tools sold in Canada, safety warnings marked on the product shall be written in both English and French. For tools sold in the United States of America, safety instructions/warnings marked on the product shall be written in English.

8.3 Tools shall be marked with additional information as follows:

- the business name and address of the manufacturer and, where applicable, his authorised representative. Any address shall be sufficient to ensure contact. Country or state, city and postal code (if any) are deemed sufficient for this purpose;
- designation of the tool,
designation of the tool may be achieved by a code that is any combination of letters, numbers or symbols, providing that this code is explained by giving the explicit designation such as "drill", "planer" etc. in the instructions supplied with the tool;

NOTE 1 An example of such code is "A123-B".

- designation of series or type,
allowing the technical identification of the product. This may be achieved by a combination of letters and/or numbers and may be combined with the designation of tool;

NOTE 2 The term "designation of series or type" is also known as model number.

- the year of manufacture and a date code identifying at least the month of manufacture;
- for tools manufactured such that its parts are shipped separately for assembly by the end user, each part shall be marked with a distinct identification on the part or the package;
- "> 25 kg" if the mass of the tool is over 25 kg.

If additional markings are used, they shall not give rise to misunderstanding.

Compliance is checked by inspection.

8.4 Markings specified in [8.1](#) to [8.3](#) shall not be on a DETACHABLE PART of the tool.

Markings specified in [8.2](#) and [8.3](#) shall be clearly discernible from the outside of the tool. For markings other than symbols, this may be achieved by the use of a fold-over label on power cords of tools with TYPE Y ATTACHMENT or TYPE Z ATTACHMENT. Other markings on the tool may be visible after removal of a cover, if necessary.

NOTE In Europe (EN 62841-1), the following additional requirement applies:

The words "Original instructions" shall appear on the language version (s) verified by the manufacturer or his authorised representative. Where no "Original instructions" exist in the official language (s) of the country where the tool is to be used, a translation into that/those language (s) shall be provided by the manufacturer or his authorised representative or by the person bringing the tool into the language area in question. The translations shall bear the words "Translation of the original instructions", and they shall be accompanied by a copy of the "Original instructions".

They shall be legible and contrast with the background.

They shall include the business name and address of the manufacturer and, where applicable, his authorised representative. Any address shall be sufficient to ensure contact. Country or state, city and postal code (if any) are deemed sufficient for this purpose.

They shall include the designation of the tool and series or type as required by [8.3](#), including description of machine such as "drill", "planer" etc.

8.14DV D1 Modification: Add the following to Clause 8.14:

For tools sold in Canada, instruction manuals and safety instructions shall be written in both English and French. For tools sold in the United States of America, instruction manuals and safety instructions shall be written in English.

8.14.1 The subjects of safety instructions are the "General Power Tool Safety Warnings" of Part 1 as given in [8.14.1.1](#), the specific tool safety warnings of the relevant part of IEC 62841-2, IEC 62841-3 or IEC 62841-4 and any additional safety warning statements deemed necessary by the manufacturer. The "General Power Tool Safety Warnings" and the specific tool safety warnings, if in English, shall be verbatim and in any other official language to be equivalent. The numbering of the safety instructions, as given below, is not mandatory and may be omitted or replaced by other sorting means such as bullets. The "General Power Tool Safety Warnings" may be separate from the instruction manual.


As the term "power tool" or "tool" is not appropriate for LAWN AND GARDEN MACHINERY, for these products an appropriate term such as "machine" may be used.

The term verbatim means word-for-word but permits the differences in spelling between English-speaking countries.

Format of all safety warnings must differentiate, by font, highlighting or similar means, the context of clauses as illustrated below.

All notes in the safety instructions are not to be printed, they are information for the designer of the manual.

8.14.1.1 General power tool safety warnings

 **WARNING** Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or BATTERY-operated (cordless) power tool.

1) Work area safety

- a) **Keep work area clean and well lit.** *Cluttered or dark areas invite accidents.*
- b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** *Power tools create sparks which may ignite the dust or fumes.*
- c) **Keep children and bystanders away while operating a power tool.** *Distractions can cause you to lose control.*

2) Electrical safety

- a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** *Unmodified plugs and matching outlets will reduce risk of electric shock.*
- b) **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** *There is an increased risk of electric shock if your body is earthed or grounded.*
- c) **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*
- f) **If operating a power tool in a damp location is unavoidable, use a RESIDUAL CURRENT DEVICE (RCD) protected supply.** *Use of an RCD reduces the risk of electric shock.*

NOTE The term "RESIDUAL CURRENT DEVICE (RCD)" may be replaced by the term "ground fault circuit interrupter (GFCI)" or "earth leakage circuit breaker (ELCB)".

3) Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** *A moment of inattention while operating power tools may result in serious personal injury.*
- b) **Use personal protective equipment. Always wear eye protection.** *Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.*
- c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or BATTERY pack, picking up or carrying the tool.** *Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.*
- d) **Remove any adjusting key or wrench before turning the power tool on.** *A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*
- e) **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*

f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** *Loose clothes, jewellery or long hair can be caught in moving parts.*

g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** *Use of dust collection can reduce dust-related hazards.*

h) **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** *A careless action can cause severe injury within a fraction of a second.*

4) Power tool use and care

a) **Do not force the power tool. Use the correct power tool for your application.** *The correct power tool will do the job better and safer at the rate for which it was designed.*

b) **Do not use the power tool if the switch does not turn it on and off.** *Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*

c) **Disconnect the plug from the power source and/or remove the BATTERY pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools** *Such preventive safety measures reduce the risk of starting the power tool accidentally.*

d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** *Power tools are dangerous in the hands of untrained users.*

e) **Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** *Many accidents are caused by poorly maintained power tools.*

f) **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*

g) **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** *Use of the power tool for operations different from those intended could result in a hazardous situation.*

h) **Keep handles and grasping surfaces dry, clean and free from oil and grease.** *Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.*

5) Service

a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** *This will ensure that the safety of the power tool is maintained.*

8.14.1.2 The order of the safety warnings shall be in accordance with either item A) or B) and in accordance with item C):

A) The IEC 62841-1 warnings are followed by the relevant part of IEC 62841-2, IEC 62841-3 or IEC 62841-4 warnings. The order of the warnings within IEC 62841-1 and the IEC 62841-2, IEC 62841-3 or IEC 62841-4 warnings shall remain as given above and in the relevant part of IEC 62841-2, IEC 62841-3 or IEC 62841-4.