

STANDARD INFORMATION

Standard: UL 62841-3-1 / CSA C22.2 No. 62841-3-1

Standard ID:

Electric Motor-Operated Hand-Held Tools, Transportable Tools and Lawn and Garden Machinery - Safety - Part 3-1: Particular Requirements for Transportable Table Saws [UL 62841-3-1:2016 Ed.1+R:10Jun2022]

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Previous Standard ID:

Electric Motor-Operated Hand-Held Tools, Transportable Tools and Lawn and Garden Machinery - Safety - Part 3-1: Particular Requirements for Transportable Table Saws [62841-3-1:2016 Ed.1+R:29Sep2017]

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EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **June 10, 2024**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

Overview of Changes:

- Addition of warning for the United States
- Additional safety instructions for table saws
- New required performance levels
- Additional requirements for mechanical strength
- Additional requirements for tests

Specific details of new/ revised requirements are found in table below.

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.



STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		<i>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</i>
8	Info	Marking and instructions <i>New clause added;</i> Addition: NOTE 101 In the United States of America, the following additional requirements apply. The following statements shall be verbatim: a) DANGER – Never place your hands in the vicinity or in line with the saw blade. b) WARNING – “Wear eye protection”. NOTE 102 It is possible to replace the above verbatim text with symbol M004 of ISO 7010 (2011-05). c) WARNING – Always use a properly functioning saw-blade guard, riving knife and anti-kickback device for every operation for which it can be used, including all through sawing. NOTE 103 If an anti-kickback device is not provided, the text is revised as follows: WARNING – Always use a properly functioning saw-blade guard and riving knife for every operation for which it can be used, including all through sawing. NOTE 104 It is possible to replace the term “anti-kickback device” with “anti-kickback pawls” or “anti-kickback rollers”. d) WARNING – Use a push-stick or push-block when required. e) WARNING – Do not perform any operation freehand. f) WARNING – Pay particular attention to instructions on reducing risk of kickback. (or “Know how to reduce risk of kickback.”) g) WARNING – Never reach around or over saw blade. (or “Never reach in back of or over saw blade.”) h) WARNING – Turn off tool and wait for saw blade to stop before moving workpiece or changing settings. i) WARNING – Never stand directly in line with the saw blade. Always position your body on the same side of the saw blade as the fence.
8.2		



CLAUSE	VERDICT	COMMENT
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Safety instructions for table saws

1) Guarding related warnings

a) Keep guards in place. Guards must be in working order and be properly mounted. A guard that is loose, damaged, or is not functioning correctly must be repaired or replaced.

b) Always use saw blade guard, riving knife and anti-kickback device for every through-cutting operation. For through-cutting operations where the saw blade cuts completely through the thickness of the workpiece, the guard and other safety devices help reduce the risk of injury.

NOTE 1 If an anti-kickback device is not provided, the warning is revised as follows:

Always use saw blade guard and riving knife for every through-cutting operation. For through-cutting operations where the saw blade cuts completely through the thickness of the workpiece, the guard and other safety devices help reduce the risk of injury.

8.14.1.101

c) After completing a non-through cut such as rabbeting, resawing, or dadoing, restore the riving knife to the extended-up position. With the riving knife in the extended-up position, reattach the blade guard and the anti-kickback device. The guard, riving knife, and anti-kickback device help to reduce the risk of injury.

NOTE 1 The term "rabbeting" can be substituted by "rebating".

NOTE 2 If dadoing or resawing cuts are not permitted, the term "dadoing or resawing cuts" is omitted.

NOTE 3 If an anti-kickback device is not provided, the warning is revised as follows:

After completing a non-through cut such as rabbeting, resawing, or dadoing, restore the riving knife to the extended-up position. With the riving knife in the extended-up position, reattach the blade guard. The guard and riving knife help to reduce the risk of injury.

f) For the riving knife and anti-kickback device to work, they must be engaged in the workpiece. The riving knife and anti-kickback device are ineffective when cutting workpieces that are too short to be engaged with the riving knife and anti-kickback device. Under these conditions a kickback cannot be prevented by the riving knife and antikickback device.

NOTE 1 If an anti-kickback device is not provided, the warning is revised as follows:



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For the riving knife to work, it must be engaged in the workpiece. The riving knife is ineffective when cutting workpieces that are too short to be engaged with the riving knife. Under these conditions, a kickback cannot be prevented by the riving knife.

18 Info **Abnormal operation**

New table added;

Required performance levels

Table 4

Type and purpose of SCF	Minimum Performance Level (PL)
Power switch – prevent unwanted switch-on	Shall be evaluated using the fault conditions of 18.6.1 without the loss of this SCF
Power switch – provide desired switch-off	Shall be evaluated using the fault conditions of 18.6.1 without the loss of this SCF
Provide desired direction of rotation	Shall be evaluated using the fault conditions of 18.6.1 without the loss of this SCF
Any electronic control to pass the test of 18.3	c
Over-speed prevention to prevent output speed above 130% of rated no-load speed	c
Provide run-down time as required by 19.105	a
Restart prevention in accordance with 21.18.2.1	b
Lock-off function as required by 21.18.2.3	b
Prevent exceeding thermal limits as in Clause 18	a
Prevent self-resetting as required in 23.3	a

20 Info **Mechanical strength**

The saw blade guard shall be manufactured from any of the following:

20.1

- a) metal having the following characteristics:
- b) polycarbonate with a wall thickness of at least 3 mm;



CLAUSE	VERDICT	COMMENT
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c) other plastic material of at least 3 mm thickness with an ultimate tensile strength of at least 60 N/mm² and an Izod notched impact strength of at least 60 kJ/m² in accordance with ISO 180:2019.

Compliance is checked by measurement and by inspection of the tool and by receipt of confirmation of the ultimate strength and the Izod notched impact strength of the material from the material manufacturer or through measurement of samples of the material.

21	Info	Construction
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The depth of cut and bevel angle settings as well as the saw blade alignment shall not change and cause saw blade jamming during normal and reasonably foreseeable misuse cutting. In addition, for a table saw with sliding function, the saw blade guide locking mechanism during the ripping operation shall not allow the displacement of the saw blade assembly.

Compliance is checked by the following tests.

General test conditions:

21.103.2

a) For these tests, a steel test disc with a thickness of (2,0 ± 0,2) mm and a diameter D is installed. The steel disc shall have an unbalance of (0,005 × D2 0 +20) g mm, where D is expressed in mm. The unbalance may be achieved by either adding or removing material from the steel disc. The steel test disc adjustments are made in accordance with 8.14.2 a). The steel test disc is set to approximately one half of the maximum cutting capacity at the given bevel angle settings. Once the steel test disc adjustments are made, they shall not be readjusted during the test or prior to the measurements. The steel test disc is marked as needed with reference points prior to performing the required measurements in order to ensure consistency of the measurements. The steel test disc is provided with an attachment point which may be a hole or other means located at a radial distance of (20 ± 1) mm from the outer periphery of the steel test disc for applying the test forces. The attachment point may be achieved by the same means as used for fulfilling the required unbalance.

b) For a table saw with sliding function, prior to the test, lock the saw blade assembly in the rip cutting position in accordance with 8.14.2 b) and mark the saw blade assembly position in such way as to detect a displacement from the locked position greater than 1 mm.

c) For each test, the force is applied at the steel test disc attachment point in a direction perpendicular to the plane of the tabletop for 1 min. The force is then released and the amount of displacement of the steel test disc is measured at the same location.

Bevel setting evaluation:



CLAUSE	VERDICT	COMMENT
		<p><u>1) The steel test disc bevel angle is set to the midpoint of the bevel adjusting range in accordance with 8.14.2 a). The steel test disc attachment point is rotated to the 12 o'clock position. The bevel angle of the steel test disc is measured in the plane perpendicular to the tabletop. The accuracy of angular measurements shall be within $\pm 0,1^\circ$. The measured bevel angle is recorded.</u></p> <p><u>2) The tool is then operated at no-load for 5 min.</u></p> <p><u>3) The steel test disc attachment point is returned to the 12 o'clock position. The test is then conducted in accordance with c), using a force of 1,1 D.</u></p> <p><u>4) After the conclusion of the test, the bevel angle of the steel test disc shall be measured as above. The difference between the before and after test measurements of the steel test disc bevel angle shall not exceed 1°. In addition, for table saws with sliding function, the position of the steel test disc assembly shall not have displaced by more than 1 mm.</u></p> <p><u>Depth of cut evaluation:</u></p> <p><u>1) The steel test disc is set to 0° bevel angle in accordance with 8.14.2 a). The steel test disc attachment point is positioned at the 12 o'clock position. The maximum height of the outer periphery of the steel test disc over the tabletop shall be measured and recorded. The accuracy of the measurements shall be within $\pm 0,1$ mm.</u></p> <p><u>2) The tool is then operated at no-load for 5 min.</u></p> <p><u>3) The steel test disc attachment point is returned to the 12 o'clock position. The test is then conducted in accordance with c), using a force of 1,1 D.</u></p> <p><u>4) After the conclusion of the test, the maximum height of the outer periphery of the steel test disc over the tabletop is measured as above. The difference between the before and after test measurements of the steel test disc height shall not exceed 1 % of D. In addition, for table saws with sliding function, the position of the steel test disc assembly shall not have displaced by more than 1 mm.</u></p>
Annex K	Info	Battery tools and battery packs
		<p><u>Replacement of item 2) j):</u></p> <p><u>j) Feed the workpiece at an even pace. Do not bend, twist or shift the workpiece from side to side. If jamming occurs, turn the tool off immediately, remove or disconnect the battery pack, then clear the jam. Jamming the saw blade by the workpiece can cause kickback or stall the motor.</u></p>
K.8.14.1.101		<p><u>Replacement of item 4) a):</u></p> <p><u>a) Turn off the table saw and remove or disconnect the battery pack when removing the table insert, changing the saw blade or making adjustments to the riving knife, antikickback device or blade guard, and when the machine is left unattended. Precautionary measures will avoid accidents.</u></p>