STANDARDS UPDATE NOTICE (SUN)
ISSUED: December 20, 2024

STANDARD INFORMATION

If the project requires any changes to the Certification Data Report outside of Section 1, then this SUN applies.

Standard: UL 62841-3-6 / CSA C22.2 No. 62841-3-6
Standard ID:
Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery - Safety - Part 3-6: Particular Requirements For Transportable Diamond Drills With Liquid System [UL 62841-3-6:216 Ed.1+R:31Aug2023]
Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery - Safety - Part 3-6: Particular Requirements For Transportable Diamond Drills With Liquid System [CSA C22.2#62841-3-6:2016 Ed.1+A1]
Previous Standard ID:
Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery - Safety - Part 3-6: Particular Requirements For Transportable Diamond Drills With Liquid System [UL 62841-3-6:2016 Ed.1+R:22Jun2018]
Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery - Safety - Part 3-6: Particular Requirements For Transportable Diamond Drills With Liquid System [CSA C22.2#62841-3-6:2016 Ed.1]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **August 31, 2026**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: No action is required for currently certified products. If modifications to the product after the effective date require an evaluation and/or testing, then the product must undergo re-evaluation to the new requirements.

This standard contains Functional Safety requirements.

Overview of Changes:

- Updated leakage current information
- Updated residual current device test
- Updated Tools employing liquid systems

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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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
		Additions to existing requirements are <u>underlined</u> and deletions are shown ~~lined out~~ below.
1		**Scope** This clause of Part 1 is applicable except as follows: <u>The rated voltage is not more than 250 V for single-phase AC or DC tools, and 480 V for three-phase AC tools.</u> This document applies to transportable diamond drills, intended to be connected to a liquid system. Liquid system can include liquid from a pipe or container.
8	Info	**Marking and instructions**
8.3		***New clause added;*** Replacement of the sixth dash: – ">25 kg" on each separable unit with a mass above 25 kg, in accordance with 8.14.2 a) 102). Replace the existing text of 8.14.2 a), item 102), with the following new text: 102) Instruction to and information about how to mount the drill unit to the drill stand, if separable;
8.14.3		***New clause added;*** If information about the mass or weight of the tool is provided, it shall either be the mass specified in 5.17, or it shall be clear which part of the tool the mass refers to. Compliance is checked by inspection.

CLAUSE	VERDICT	COMMENT
14	Info	**Moisture resistance**
14.3		***New clause added;*** Liquid systems or spillage of liquid shall not subject the user to an increased risk of electrical shock. If the tool is rated at least IPX4 in accordance with 14.2, this requirement is deemed to be fulfilled. Compliance is checked by the following test: The residual current device, if any, shall be disabled during the test. Electrical components, covers and other parts which can be removed without the aid of a tool are removed, except those fulfilling the test of 21.22. The tool is prepared with approximately 1,0 % NaCl solution in the following modes if applicable: – as described in 8.14.2; – the liquid container of the tool is completely filled, and a further quantity, equal to 15 % of the capacity of the container, or 0,25 l, whichever is the greater, is poured in steadily over a period of s, while the tool is resting in its filling position in accordance with 8.14.2 d); – a detachable liquid container is filled completely and mounted and dismounted 10 times on the tool. In each applicable preparation, the tool is operated at rated voltage in each position consistent with the instructions according to 8.14.2 b) for 1 min while monitoring the leakage current as in Clause C.3. For 3-phase diamond drills with a rated input exceeding 3 700 W, during the test the leakage current shall not exceed: – 5 mA for a, b and c in Figure C.2 in the closed position; – 10 mA for the test repeated with each of the switches a, b, c in Figure C.2 open in turn, the other two switches being closed. For all other diamond drills, during the test the leakage current shall not exceed: – 2 mA for a class II tool; – 5 mA for a class I tool. Following this test, the tool shall meet the electric strength test of Clause D.2 between live parts and accessible parts after being allowed to dry for 24 h at ambient temperature.

CLAUSE	VERDICT	COMMENT
14.3.101		Diamond drills which are intended to be used for drilling overhead in accordance with 8.14.2 a) 104) and using a liquid collection device shall prevent electric shock due to excessive liquid spillage. Compliance is checked by the following test. The drill unit runs vertically upwards at rated voltage under no-load condition with the liquid collection device installed. If the liquid collection device is designed to be connected to a liquid vacuum device, then such a device shall be attached. The test is conducted twice, the drill being fitted once with the minimum and once with the maximum diameter of the diamond core bit as specified for the liquid collection device in accordance with 8.14.2 a) 106). The test arrangement is shown in Figure 102. The liquid flow of approximately 1,0 % NaCl solution shall be in the range of 1 l/min to 1,5 l/min. The running time shall be 15 min. The measuring time starts when the core bit is filled with liquid. During the test the leakage current as in Clause C.3 is monitored. <u>For 3-phase diamond drills with a rated input exceeding 3 700 W, during the test the leakage current shall not exceed:</u> <u>– 5 mA for a, b and c in Figure C.2 in the closed position;</u> <u>– 10 mA for the test repeated with each of the switches a, b, c in Figure C.2 open in turn, the other two switches being closed.</u> For all other diamond drills, during the test the leakage current shall not exceed: – 2 mA for a class II tool; – 5 mA for a class I tool. Following this test, the tool shall meet the electric strength test of Clause D.2 between live parts and accessible parts after being allowed to dry for 24 h at ambient temperature.
14.4		***New clause added;*** Liquid systems shall not subject the user to an increased risk of electrical shock by components not capable of withstanding the pressure during operation. Compliance is checked by the following test. The residual current device, if any, shall be disabled during the test.

CLAUSE	VERDICT	COMMENT
		The liquid system is closed and an approximately 1,0 % NaCl solution at a hydrostatic pressure equal to twice the pressure stated in 8.14.2 d) 1) is applied for 1 h. The tool is then placed for 1 min in all positions consistent with the instructions in accordance with 8.14.2 b) while monitoring the leakage current as in Clause C.2. For 3-phase diamond drills with a rated input exceeding 3 700 W, during the test the leakage current shall not exceed: – 5 mA for a, b and c in Figure C.2 in the closed position; – 10 mA for the test repeated with each of the switches a, b, c in Figure C.2 open in turn, the other two switches being closed. For all other diamond drills, during the test the leakage current shall not exceed: – 2 mA for a class II tool; – 5 mA for a class I tool. Following this test, the tool shall meet the electric strength test of Clause D.2 between live parts and accessible parts after being allowed to dry for 24 h at ambient temperature.
14.5		***New clause added;*** Residual current devices used to provide protection from shock in the case of failure of the liquid system shall comply with – IEC 61540:1997; or – alternatively for 3-phase tools, IEC 61008-1:2010 and shall meet the following requirements a) to c): a) The RCD shall disconnect all mains conductors, but not the earth conductor if provided, when the leakage exceeds – 10 mA and with a maximum response of 300 ms; or – alternatively for 3-phase tools, 30 mA with a maximum response time of 300 ms. NOTE 1 For 3-phase tools, the values are based on specified levels in IEC 61008-1:2010. Compliance is checked by inspection and by the test of – IEC 61540:1997,9.9.2 for single phase tools; or – alternatively, IEC 61008-1:2010, 9.9.2 and IEC 61008-1/AMD2:2013, 9.9.2 for 3 phase tools.

CLAUSE	VERDICT	COMMENT
		In addition, during the test, the earthing conductor shall not become disconnected. b) The RCD shall be reliable for its intended use. Compliance is checked at rated voltage by operating the residual current device under conditions of simulated leakage as in a) above during conditions of locked rotor of the tool for 50 cycles. The residual current device shall operate correctly for all cycles. c) The RCD shall be installed such that it is unlikely to be removed during use or normal maintenance. This requirement is considered fulfilled if the residual current device is fixed to the tool or the supply cord connected to the tool. Where fitted in the supply cord, the residual current device shall be provided with type Y attachment or type Z attachment for connection with the supply cord and interconnection cord. Compliance is checked by inspection.
21	Info	**Construction**
21.15		***New clause added;*** Tools employing liquid systems shall be either: – of class III construction; or – of class I or class II construction and be provided with a residual current device and comply with 14.3, 14.4 and 14.5; or – of class I or class II construction and be designed for use in combination with an isolating transformer and comply with 14.3 and 14.4; or – a class I tool that fulfils the requirements of at least IPX3 in accordance with IEC 60529: 1989, IEC 60529, AMD1:1999, IEC 60529, AMD2:2013 when it is operating and fulfils the requirements of at least IPX5 in accordance with IEC 60529:1989, IEC 60529, AMD1:1999, IEC 60529, AMD2:2013 when it is not operating. The enclosure shall not be required to be opened during operation or user maintenance in accordance with 8.14.2. Compliance is checked by inspection.

CLAUSE	VERDICT	COMMENT
28	Info	**Creepage distances, clearances and distances through insulation**
28.1		***New clause added;*** Creepage distances and clearances shall not be less than the values in millimetres shown in Table 12. The values specified in the table do not apply to cross-over points of motor windings. For working voltages greater than 480 V, the requirements of IEC 60664-1 are applicable.
Annex C	Info	**Leakage current**
Annex C.1		***New clause added;*** **General** The leakage current to accessible metal parts and metal foil shall not exceed the following values, unless otherwise specified in the relevant clause of this document: For 3-phase class I tools with a rated input exceeding 3 700 W: – 5 mA; For all other diamond drills – for class I tools 0,75 mA; – for class II tools 0,25 mA.