

## STANDARD INFORMATION

**Standard Number:** UL 1563

**Standard Name:** Electric Spas, Equipment Assemblies, and Associated Equipment

**Standard Edition and Issue Date:** 6<sup>th</sup> Edition dated July 16, 2009

**Date of Revision:** July 14, 2017

**Date of Previous Revision of Standard:** October 7, 2016

## EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

**Effective Date:** **September 1, 2020**

## IMPACT, OVERVIEW, AND ACTION REQUIRED

**Impact Statement:** A review of all Listing Reports is necessary to determine which products comply with new/revise requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revise requirements.

### Overview of Changes:

- Add requirements for electronic circuits.
- Update requirements for switches.

Specific details of new/revise requirements are found in table below

**If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).**

### Client Action Required:

**Information** – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revise paragraphs noted in the attached or explain why these new/revise requirements do not apply to your product (s).

***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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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 <del>shown lined out</del> below.</i>
6A		<b><i>New section added;</i></b>  <b>Safety Critical Functions</b>
6A.1		Any function involved in the control, protection, and monitoring of safety-related attributes of a pump whereby a loss/malfunction of its functionality would represent an unacceptable risk of fire, electric shock, or casualty hazards would be considered a Safety Critical Function.
6A.2		Electronic circuits that manage a Safety Critical Function shall be:  a) Reliable as defined as being able to maintain the Safety Critical Function in the event of single defined component faults and  b) Not susceptible to electromagnetic environmental stresses encountered in the anticipated environments of the appliance.
6A.3		Electronic circuits managing Safety Critical Functions shall comply with:  a) Supplement SB; or  b) The Standard for Automatic Electrical Controls – Part 1: General Requirements, UL 60730-1 and it's Part 2's as specified in this standard. The function shall be considered Class B. When utilizing UL 60730-1, surge protective devices are defeated for the EMC immunity testing unless they are provided with spark gaps (gas tube surge suppressors); or  c) The requirements in Appendix B for circuits providing the Safety Critical heater functions relating to the risk of hyperthermia, scalding and loss of water flow (dry-fire protection).
6A.4		Functions specified in Table 6A.1 represent the common safety critical circuit functions of spas. It is not intended to represent all possible Safety Critical Functions.
29	Info	<b>Motors</b>
29.2	Info	<b>Motor circuit overload protection</b>
29.2.1		A unit employing a motor shall incorporate thermal or overcurrent protection that consists of one of the following:  a) Thermal protection complying with the applicable requirements in the Standard for Overheating Protection for Motors, UL 2111; the Standard for Impedance Protected Motors, UL 1004-2; or the Standard for Thermally



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Protected Motors, UL 1004-3.

*Exception No. 1: For a motor that includes a control that limits the length of time the motor can be operated, such as a timer, the duration of the temperature test and the endurance test (both under locked rotor conditions) may be less than that specified but shall be no less than the period of operation permitted by the control.*

*Exception No. 2: When the time required to operate a manually reset protective device through 10 cycles of operation is longer than the time that the motor is likely to be operated during each use, the number of operations of the device for the temperature test under locked-rotor conditions may be less than 10 cycles but no less than 4 cycles.*

*Exception No. 3: A motor intended to move air only, by means of an air-moving fan that is integrally attached, keyed, or otherwise fixed to the motor, is not required to have running-overload protection.*

- ~~b) Impedance protection complying with the applicable requirements in UL 2111, UL 1004-2, or UL 1004-3, when the motor is tested as used in the product.~~
  - ~~c) Other protection that is shown by test to be equivalent to the protection mentioned in (a).~~
  - d) Electronic protection that complies with the requirements of the Standard for Electronically Protected Motors, UL 1004-7;
  - e) Electronic overcurrent protection provided as part of a motor-drive complying with the Standard for Power Conversion Equipment, UL 508C. The combination of the motor and the motor drive shall comply with the running overcurrent and locked rotor protection requirements specified in the Standard for Electronically Protected Motors, UL 1004-7;
  - f) Electronic protection complying with Standard for Automatic Electrical Controls – Part 1: General Requirements, UL 60730-1 and the tests of the Standard for Thermally Protected Motors, UL 1004-3;
  - g) Electronic circuits complying with Supplement SB and the tests of the Standard for Thermally Protected Motors, UL 1004-3;
  - h) Impedance protection complying with the applicable requirements in the Standard for Overheating Protection for Motors, UL 2111, the Standard for Impedance Protected Motors, UL 1004-2, or the Standard for Thermally Protected Motors, UL 1004-3, when the motor is tested as used in the product; or,
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- i) Other protection that is shown by test to be equivalent to the protection mentioned in (a).
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***New clause added;***

32.1.2.1

Electronic motor drives that additionally provide motor overload protection shall comply with 29.2.1.

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***New clause added;***

Power switches shall be rated as follows:

- a) For a voltage not less than the rated voltage of the appliance;
- b) For a current not less than the rated current of the appliance;
- c) For Continuous Duty;
- d) With respect to load:

32.1.1.2

- 1) Switches for motor-operated appliances: for resistance and motor load in accordance with the Standard for Switches for Appliances – Part 1: General Requirements, UL 61058-1, or Outline for Particular Requirements for Switches for Tools, UL 6059, if the switch would encounter this load in normal use; or
  - 2) Switches may be regarded as switches for a declared specific load in accordance with UL 61058-1, or UL 6059, and may be classified based upon the load conditions encountered in the appliance under normal load.
- e) For ac if the appliance is rated for ac;
  - f) For dc if the appliance is rated for dc.
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***New clause added;***

32.1.1.3

Ratings and load classifications for switches other than power switches shall be based on the conditions encountered in the appliance under normal load.

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***New clause added;***

Switches shall also be rated with respect to endurance as follows:

32.1.1.4

- a) Power switches: 6000 cycles;
  - b) Power switches provided with series electronics shall be subject to an additional 1000 cycles of operation with the electronics bypassed;
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- c) Switches other than power switches, such as speed selector switches, that may be switched under electrical load: 1000 cycles;
  - d) The following non-power switches are not required to be rated for endurance:
    - 1) Switches not intended for operation without electrical load, and which can be operated only with the aid of a tool or are interlocked so that they cannot be operated under electrical load; or
    - 2) Switches for 20 mA load as classified in Clause 7.1.2.6 of Standard for Switches for Appliances – Part 1: General Requirements, UL 61058-1.
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***New supplement added;***

Supplement  
SB

**REQUIREMENTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS**

This supplement contains requirements for the investigation of electric controls (see standard for details).

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**CUSTOMERS PLEASE NOTE:** This Table and column “Verdict” can be used in determining how your current or future production is or will be in compliance with new/revised requirements.

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