Standards Update Notice (SUN)

Issued: February 4, 2016

Standard Information

Standard Number: UL 201
Standard Name: Garage Equipment
Standard Edition and Issue Date: 3rd Edition Dated March 31, 2015
Date of Previous Revision to Standard: 2nd Edition Revised November 5, 2009

Effective Date of New/Revised Requirements

Effective Date (see Schedule below): **December 27, 2016**

Impact, Overview, Fees and Action Required

Impact Statement: A review of all Listing Reports is necessary to determine which products comply with new/revised 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requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

Overview of Changes: This third edition of UL 201 is being published to reflect the ANSI approval of the Standard. It also includes cabinet requirements from UL 201A. Specific details of new/revised 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).

Schedule: So that production of products bearing Listing Marks will not be interrupted, the following schedule of ***approximate*** dates has been established to ensure Listing Reports are found compliant by Effective Date:

- April 27, 2016 = 8 Month Report Review – Intertek will review all Reports. Update if compliance is verified or issue Findings Letter/Quote for any re-evaluations needed
- June 27, 2016 = 6 Month Quote Cut-off – Quotes returned for necessary re-evaluations
- November 28, 2016 = 30 Day Warning – Client advised of all non-compliant Reports to be Suspended
- December 27, 2016 = Effective Date – ATM Suspended for all non-compliant Reports

Fees: An initial review of Listing Report (s) will be covered by a direct billing project and will be invoiced at not more than $1000 per report.

Client Action Required:

Information – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised 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.

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Description of New/Revised Technical Requirements

Clause	Verdict	Comment
1	Info	**Scope**
1.2 (b)	Info	*Tool cabinets added to the scope;* These requirements cover the following: b) Powered and nonpowered tool cabinets, which may or may not be provided with a work surface. These products are intended to store tools in a repair facility or residential location.
1.7		*New clause added;* These requirements do not cover portable tool chests or toolboxes intended to be transported by hand.
1.8		*New clause added;* These requirements do not cover flammable liquid storage cabinets.
1.9		*New clause added;* These requirements do not cover battery chargers, battery testers, or other equipment intended for the servicing of electric vehicles or electric vehicle battery packs.
7	Info	**Assembly**
7.1		*New clause added;* Equipment shall be completely wired with all internal splices and electrical connections made before the equipment leaves the factory. Equipment may be shipped unassembled provided no internal wiring connections are to be made in the field, unless these connections are made by connectors or appliance couplers. Exception: This requirement does not apply to field wiring connections for permanently connected products.
7.2		*New clause added;* Any equipment that requires assembly in the field to any degree shall be provided with installation instructions detailing all assembly steps. See Instruction Manual, Section 84.
7.4		*New clause added;* All uninsulated live parts shall be enclosed in the final assembly.
7.8		*New clause added;* Means shall be provided to reduce the risk of contact between the enclosure of equipment and a light fixture, other than at the intended mounting means. The means provided shall have the strength and rigidity to reduce the risk of distortion which facilitates installation in a manner other than as intended.
8	Info	**Frame and Enclosure Construction**
8.1	Info	**General**
8.1.2		*New clause added;* Materials used to form an enclosure shall be metallic or nonmetallic. Metallic and nonmetallic materials shall comply with the applicable requirements in this standard. Additionally, nonmetallic materials shall comply with the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C.

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Clause	Verdict	Comment
8.1.3		*New clause added;* Nonpowered cabinets are not required to comply with the enclosure requirements in this section.
9	Info	**Flammability of Materials and Components**
9.2	Info	**Flammability**
9.2.5		*New clause added;* Wood used as a frame or supporting part within an enclosure shall comply with the Wood Flammability Test, Section 80.
12	Info	**Supply Connections**
12.1	Info	**Cord connected equipment**
12.1.8		*New clause added;* The equipment grounding conductor of a non-detachable power supply cord shall be green with or without one or more yellow stripes.
15	Info	**Grounding and Bonding**
15.1.5		*New clause added;* All non-current carrying conductive parts shall be bonded together and to the electrical supply equipment grounding means in accordance with Bonding, 15.2.
15.1.6		*New clause added;* Connection to the electrical supply equipment grounding means shall be accomplished by connection to the equipment grounding conductor of the power supply cord.
15.1.7		*New clause added;* An equipment grounding conductor of a power supply cord shall be connected to the grounding blade of the attachment plug.
15.1.8		*Additions to existing requirements are underlined and deletions are shown ~~lined out~~ below.* The grounding conductor of a supply cord, or the grounding terminal of the appliance inlet, shall be secured to the frame or enclosure of the equipment by means of a screw or a dedicated stud and nut that is not to be removed during servicing purposes other than servicing the cord. Solder alone shall not be used for securing the grounding conductor. Exception: A quick connect that complies with the requirements in ~~15.8~~ 15.1.11 meets the intent of this requirement.
15.1.9		*Additions to existing requirements are underlined.* A screw used to secure the grounding conductor to the frame shall engage the metal by at least two full threads. The metal thickness shall not be less than 1.27 mm (0.050 inch) thick. Extrusion of the metal is acceptable to increase the effective thickness. Only the supply cord grounding conductor shall be secured by the grounding screw. The screw shall be used in conjunction with upturned lugs, a cupped washer, or an equivalent means, as needed to retain a 10 AWG conductor under the head of the screw. A sheet metal screw shall not be used.
15.2		*New section added;* **Bonding**

Clause	Verdict	Comment
15.2.1		A conductor, including a strap, jumper, or similar part, that is used only for bonding shall: a) Be of copper, copper alloy, aluminum, or other material that has been investigated and found acceptable for use as an electrical conductor; b) Be protected from mechanical damage; c) Not be secured by a removable fastener used for any other purpose other than bonding unless the bonding conductor is not likely to be omitted after removal and replacement of the fastener; and d) Have the flexibility needed to withstand mechanical stress due to vibration of flexing during use.
15.2.2		Metal parts in a bonding path shall be galvanically compatible so as to reduce electrolytic action between dissimilar metals.
15.2.3		Bonding shall be by a positive means, such as by a clamp, rivet, bolt, screw, welded joint, or a soldered or brazed joint using materials having a softening or melting point higher than 454°C (850°F). Terminals complying with the requirements in the Standard for Electrical Quick-Connect Terminals, UL 310, are acceptable to connect bonding conductors in sizes 19 – 14 AWG under the following conditions: a) For conductor sizes 18 – 16 AWG, the minimum connector and tab width shall be 2.8 mm (0.110 inch). b) For conductor size 14 AWG, the minimum connector and tab width shall be 6.4 mm (0.250 inch). c) Quick connect tabs shall not be less than 0.8 mm (0.032 inch) thick.
15.2.4		A bonding screw shall engage at least two full threads and shall be used in conjunction with upturned lugs, a cupped washer, or an equivalent method that is capable of retaining a 10 AWG conductor under the head of the screw.
15.2.5		A bonding connection means shall penetrate nonconductive coatings, such as paint or vitreous enamel.
15.2.6		A metal-to-metal hinge bearing member of a door or cover used as a means for binding the door or cover shall be of the multiple-bearing –pin (piano) type.
15.2.7		In a product provided with a power supply cord and an attachment plug: a) A copper bonding jumper, including a clamp or strap, shall have a cross sectional area not less than that of the equipment grounding conductor of the power supply cord. b) An aluminum bonding jumper, including a clamp or strap, shall have a cross sectional area not less than that of a conductor two AWG sizes larger than the circuit equipment grounding conductor of the power supply cords. Exception: A conductor, including a strap, jumper, or similar part, for a component or electrical enclosure, need not be larger than the largest conductors supplying power to the component or component adjacent to the dead metal parts.
21	Info	**Lampholders**
21.3		*New clause added;* Lampholders shall have all wiring terminations and connections enclosed within the insulating body of the lampholder or they shall be enclosed is a suitable manner.
23	Info	**Receptacles**
23.1		*Additions to existing requirements are underlined* A 15 or 20 ampere general use attachment plug receptacle shall be of the grounding type and shall comply with the requirements in the Standard for Attachment Plugs and Receptacles, UL 498. The grounding contact of the receptacle shall be connected to dead metal intended to be grounded when the equipment is in use.

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23.4		*New clause added;* Powered cabinets provided with a general-purpose receptacle shall be marked in accordance with 84.1 at the receptacle so that the combined ampacity of the product operated under maximum normal load and the equipment connected to the receptacle does not exceed the rating of the product. A general purpose receptacle shall not increase the risk of fire, electric shock, or other injury to the user.
23.5		*New clause added;* The face of a general-purpose receptacle shall: a) Be flush with or project beyond a nonconductive surrounding surface, or b) Project at least 0.4 mm (0.015 inch) beyond a conductive surrounding surface.
23.6		*New clause added;* In a powered cabinet, the face of a receptacle mounted on the work surface shall be vertical or the receptacle shall comply with the Spill Test, Section 72.
49		*New section added;* **Powered and Non-Powered Cabinets**
49.1		A cabinet that has multiple sections that are intended to be mechanically connected together shall be subjected to the Loading Tests, Section 62.
49.2		The cabinet shall be provided with all parts required to mechanically connect the sections together and shall be provided with installation instructions. See Instruction Manual, Section 85.
50		*New section added;* **Automotive Lifts**
50.1		The mechanical requirements for automotive lifts shall be evaluated in accordance with the Standard for Automotive Lifts – Safety Requirements for the Construction, Testing, and Validation, ANSI/ALI ALCTV.
54	Info	**Dielectric Voltage Withstand Test**
54.2	Info	**Primary circuits**
54.2.1		*Additions to existing requirements are <u>underlined</u>* A 60 Hz essentially sinusoidal potential is to be applied between any live metal part conductively connected to the supply circuit and any dead metal parts. The test potential shall be: a) 1000 V for equipment employing a motor rated 375 watts (1/2 horsepower) or less and 250 V or less; or b) 1000 V plus twice the rated voltage for equipment employing a motor rated at more than 375 watts or more than 250 V. <u>c) 1000 V for cabinets rated 120 V; or</u> <u>d) 1500 V for cabinets rated 240 V.</u>
55	Info	**Humidity Conditioning**

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55.1		*Additions to existing requirements are underlined* Garage equipment, excluding cabinets, shall comply with the requirements in Leakage Current Test, Section 53, and in the Dielectric Voltage Withstand Test, Section 54, following this exposure. Cabinets shall comply with the Dielectric Voltage Withstand Test following this exposure. The test is performed with each sample subjected to an exposure for 48 hours to air having a relative humidity of 92.5 ±2.5 percent relative humidity at a temperature of 42 ±2°C (107.6 ±4°F).
57	Info	**Normal Temperature Test**
57.2	Info	**Maximum load**
57.2.8		*New sub-section added;* Powered cabinets
57.2.8.1		All receptacles are loaded to their normally rated load. All accessories, light fixtures, and the like, are operated in a manner to create the maximum normal load on the cabinet.
57.2.9		*New sub-section added;* Automotive lifts
57.2.9.1		Automotive lifts shall be tested at the maximum load for which the lifting system is designed.
61	Info	**Stability Tests**
61.3	Info	**Ten degree tilt test**
61.3.2		*New clause added;* If a part of surface of the product not normally in contact with the horizontal supporting surface touches the supporting surface before the product has been tipped through an angle of 10 degrees, the tipping is to be continued until the surface or place of the surface of the product originally in contact with the horizontal supporting surface is at an angle of 10 degrees from the horizontal supporting surface.
61.4	Info	**Horizontal force test**
61.4.2		*New clause added;* A cabinet shall not tip over when the force indicated in Table 61.1 is applied in any direction, except upward, at any point on a cabinet including the highest point not exceeding 1 meter (3 feet) from the floor. Doors, drawers, and the like are placed in their most unfavorable position, consistent with the manufacturer's instruction manual.
62		*New section added ;* **Loading Tests** *New loading test added for cabinets that are provided with shelves or drawers (clause 62.2), and for cabinets that are provided with sections that are connected together (clause 62.3).*
72		*New section added ;* **Spill Test** *New test added for powered cabinets*

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80		*New section added ;* **Wood Flammability Test for Cabinets** *New test added for wooden cabinets*
83	Info	**Cautionary Markings**
83.23		*New clause added;* Powered cabinets that are provided with one or more convenience receptacles for the connection of equipment in the field shall be marked with the word ″CAUTION″ and the following wording or the equivalent: ″For continued protection against electric shock, this cabinet must be connected to a reliable ground connection. Do not remove the ground connection. If the receptacle in the building installation does not contain a ground pin connection, do not modify the attachment plug.″
84	Info	**Receptacles and Accessories**
84.1		*Additions to existing requirements are underlined and deletions are shown ~~lined out~~ below.* ~~A receptacle of the conventional parallel slot type that is not utilized for the connection of a part of the equipment shall have a marking on or near the receptacle that includes the electrical ratings in volts, frequency, and watts or amperes.~~ A convenience receptacle of the conventional parallel slot type provided on a unit shall have a marking on or near the receptacle that includes the electrical ratings in volts, hertz, and watts or amperes, which indicates the load that can be connected to that receptacle. For multiple receptacle groupings, the marking shall also include a rating for the entire group.
85	Info	**Instruction Manual**
85.4 (items 14, 15, and 16)		*Added new items to the Instruction manual;* 14. To reduce the risk of injury, close supervision is necessary when this product will be used around children. (Pertains to cabinets only.) 15. To reduce the risk of injury, never overload the drawers or shelves. Refer to loading instructions. 16. To reduce the risk of electric shock or fire, never overload receptacles. Refer to markings for the proper load on receptacles.
85.5		*New clause added;* Instructions shall be provided containing all required information needed to properly install the equipment.
85.8		*New clause added;* Instructions shall be provided containing all required information to properly and safely operate the equipment.
		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.