Test Report issued under the responsibility of:

TEST REPORT
UL 859
Household Electric Personal Grooming Appliances

Report Number.....:	AOC250618001S
Date of issue.....:	2025-06-18
Total number of pages.....:	88
Name of Testing Laboratory preparing the Report.....:	Shenzhen AOCE Electronic Technology Service Co., Ltd Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
Applicant's name.....:	shenzhenshi ouyu Tenchnology Co.,Ltd
Address.....:	7th Floor, Building B1, Hangcheng Jinchi Industrial Park, Hangcheng Street, Bao'an District, Shenzhen City, Guangdong Province
Test specification:	
Standard.....:	☒ UL 859 Ed. 11 June 20, 2012
Test procedure.....:	Test report
Non-standard test method.....:	N/A
Test Report Form No.....:	UL 859_Rev.1
Test Report Form(s) Originator.....:	AOCE
Master TRF.....:	Dated 2016-10

General disclaimer:

The test results presented in this report relate only to the object tested.
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The authenticity of this Test Report and its contents can be verified by contacting the Testing Laboratory., responsible for this Test Report.

Test item description.....:	Skin Scrubber Face Spatula
Trade Mark.....:	N/A
Manufacturer.....:	shenzhenshi ouyu Tenchnology Co.,Ltd 7th Floor, Building B1, Hangcheng Jinchi Industrial Park, Hangcheng Street, Bao'an District, Shenzhen City, Guangdong Province
Model/Type reference.....:	K2405
Ratings.....:	DC 3V, 0.05A, 0.15W

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):

☒	**Testing Laboratory:**	Shenzhen AOCE Electronic Technology Service Co., Ltd	
	Testing location/ address.....:	Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China	
	Tested by (name, function, signature).....:	WanYang Ye Technical Engineer	Wanyang Ye
	Approved by (name, function, signature)...:	Robin Liu Technical Manager	Robin Liu
☐	**Testing procedure: CTF Stage 1:**		
	Testing location/ address.....:		
	Tested by (name, function, signature).....:		
	Approved by (name, function, signature)...:		
☐	**Testing procedure: CTF Stage 2:**		
	Testing location/ address.....:		
	Tested by (name + signature).....:		
	Witnessed by (name, function, signature)..:		
	Approved by (name, function, signature)...:		
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
	Testing location/ address.....:		
	Tested by (name, function, signature).....:		
	Witnessed by (name, function, signature)..:		
	Approved by (name, function, signature)...:		
	Supervised by (name, function, signature) :		

Shenzhen AOCE Electronic Technology Service Co., Ltd. APPROVED

List of Attachments (including a total number of pages in each attachment):

Attachment No.1: Photo document.

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
- UL 859, Edition 6	Shenzhen AOCE Electronic Technology Service Co., Ltd Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China

Summary of compliance with National Differences (List of countries addressed):

N/A

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

Skin Scrubber Face Spatula
Model: K2405
DC 3V, 0.05A, 0.15W
WARNING: To Reduce The Risk Of Possible Electric Shock Do Not Use While Bathing.
DANGER – Electrocution Possible If Used Or Dropped In Tub. Unplug After Using.

UL 859

shenzhenshi ouyu Tenchnology Co.,Ltd

Made in China

Test item particulars..... :	
Classification of installation and use.....:	Hand-held appliance
Supply Connection.....:	Supply plug
.....:	
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing.....:	
Date of receipt of test item.....:	2025-06-09
Date (s) of performance of tests.....:	2025-06-09 to 2025-06-18

General remarks:

The tested sample(s) and the sample information are provided by the client.

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.
Note: EN Group Differences together with National Differences and Special National Conditions, if any, are in the Appendix to the main body of this TRF.
Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.

When determining for test conclusion, measurement uncertainty of tests has been considered.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:	☐ **Yes** ☒ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies)..... :	Same as applicant

General product information:

/

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict

	CONSTRUCTION		--
6	**General**		--
6.1	In the following text, a requirement that applies only to a specific type or types of appliances, such as a hand-supported hair dryer and a curling iron, is so identified by specific reference in that requirement to the type or types involved. Absence of such specific reference or use of the term "appliance" indicates that the requirement applies to all appliances covered by this standard.	Hair Straightener Brush , hair straightener	P
6.2	An appliance that is a combination of two or more types (for example, an appliance having a hand-supported part and a counter-supported part), or an appliance that fits the definition of two or more types (for example, an appliance that can be used while supported by hand or while supported by a counter top), is to be investigated in accordance with the applicable requirements for the types of appliances involved. If two requirements that address the same condition differ, the appliance is to be investigated to the more severe requirement.		N/A
6.3	A heated air curling iron or brush, as defined in 5.25, shall comply with the requirements applicable to hand-supported hair dryers and curling irons.		N/A
6.4	A container for liquid intended for use with the appliance, and supplied as part of the appliance, shall comply with applicable construction requirements.		N/A
6.5	A curling iron that is likely to be laid on combustible material shall be provided with a stand made of material resistant to combustion upon which it may be placed when not in use.		N/A
	Exception: A stand need not be provided if the temperature attained by the appliance is not sufficiently high to cause the ignition of the combustible material.		N/A
6.6	A curling iron that attains a temperature higher than 100°C (212°F) when operated continuously shall be provided with an integral stand. A stand provided for other types of appliances may be a separate device or integral with the appliance.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.7	With respect to 6.6, an integral stand provided for a curling iron shall be of such design or shape that any surface of the curling iron exceeding 150°C (302°F) will not contact the supporting surface when the curling iron is supported in its intended manner by the stand..		N/A
6.8	A polymeric material used as an integral stand in compliance with the requirements in 6.7 shall be rated for the temperature it is subjected to during use.	No integral stand	N/A
7	**Hair Dryer Immersion Protection**		--
7.1	A hand-supported hair-drying appliance (such as a hair dryer, blower-styler, styler-dryer, heated air comb, heated-air hair curler, curling iron-hair dryer combination, a wall-hung hair dryer or the hand unit of a wall-mounted hair dryer, or a similar appliance) shall be constructed to reduce the risk of electric shock when the appliance is energized, with its power switch in either the ″on″ or ″off″ position, and immersed in water having an electrically conductive path to ground.		N/A
7.2	Compliance with 7.1 may be accomplished with the use of an:		--
	a) Integral ground-fault circuit-interrupter (GFCI) or		N/A
	b) Integral protective device of another type that de-energizes all current-carrying parts (hereafter referred to as a protective device) when the hand-supported hair-drying appliance is immersed in water having an electrically conductive path to ground		N/A
7.3	If a hand-supported hair-drying appliance is provided with a GFCI, the GFCI shall comply with the requirements for Class A cord-connected GFCIs in the Standard for Ground-Fault Circuit-Interrupters, UL 943.		N/A
	Exception: A GFCI located in the wall unit of a wall-mounted permanently-connected hair dryer shall comply with the requirements for Class A permanently-connected GFCIs in UL 943.		N/A
7.4	If a hand-supported hair-drying appliance is provided with a protective device other than a GFCI, the protective device shall be investigated and determined to be acceptable for the application. Investigation of the protective device shall include, but need not be limited to, consideration of:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	a) Electrical rating,		N/A
	b) Operating temperatures,		N/A
	c) Reliability of operation,		N/A
	d) Resistance to the effects of abnormal operating conditions		N/A
	e) Resistance to mechanical abuse,		N/A
	f) Resistance to electrical transients, and		N/A
	g) Resistance to moisture.		N/A
	The combination of hair-drying appliance and protective device shall comply with the test described in the Immersion-Protection Trip Time Measurement Test, Section 40.		N/A
	Exception No. 1: A protective device is deemed acceptable for the application if it complies with the requirements for Class A cord-connected GFCIs in the Standard for Ground-Fault Circuit-Interrupters, UL 943, except that it is not required to:		N/A
	a) Have a grounding conductor;		N/A
	b) Have the same type of power supply cord;		N/A
	c) Comply with the high-resistance ground faults test under the condition that any power conductor is open-circuited; or		N/A
	d) Provide grounded neutral protection by compliance with the High-Resistance Ground Faults Test, under the test condition that the neutral conductor is grounded at a point in the load circuit.		N/A
	Exception No. 2: A protective device is deemed acceptable for the application if it complies with the requirements in the Standard for Appliance Leakage-Current Interrupters, UL 943B.		N/A
	The combination of a hand-supported hair-drying appliance and such a protective device is not required to be subjected to the test described in the Conductive Coating Test, Section 35.		N/A
7.5	A GFCI or other protective device shall be integral with the attachment plug of the hand-supported hair-drying appliance power supply cord.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Exception No. 1: For a wall-mounted permanently-connected hair dryer, the GFCI or other protective device may be located in the wall unit.		N/A
	Exception No. 2: A GFCI or other protective device may be located in the power supply cord as a through-cord construction or in the hair dryer enclosure, after additional investigations with regard to acceptability after immersion, resistance to mechanical abuse, and similar considerations.		N/A
7.6	A user-resettable protective device shall incorporate a supervisory circuit as described in the Standard for Ground-Fault Circuit-Interrupters, UL 943, for GFCIs.		N/A
	Exception: A user-resettable protective device may be provided with a reset feature not having a test function based on all of the following:		N/A
	a) The protective device complies with the Standard for Tests for Safety-Related Controls Employing Solid-State Devices, UL 991. If the computational investigation is conducted, the maximum predicted failure rate (λp) shall not exceed 1.5 failures per million hours predicted. If the demonstrated method is conducted, the test acceleration multiplier shall be 5763.		N/A
	b) The instructions provided with the appliance alert the user to the reset feature and how and when to use it.		N/A
	c) The instructions provided with the appliance alert the user to not reset and reuse the appliance should the protective device trip as a result of immersion.		N/A
7.7	A switch included for testing a user resettable protective device shall be permanently marked ″Test ″ and ″Reset ″ on or adjacent to the switch actuators.		N/A
7.8	After a protective device de-energizes current-carrying parts, it shall not automatically reset.		N/A
7.9	A protective device that is integral with the attachment plug of a hand-supported hair-drying appliance may be provided with a single outlet convenience receptacle when all of the following requirements are met:		N/A
	a) The convenience receptacle is:		N/A
	1) Of the same configuration as the attachment plug,		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	2) Wired on the load side of the protective device, and		N/A
	3) Wired so that the same polarization as the attachment plug is maintained.		N/A
	b) The convenience receptacle has a rating of 15 amperes, 125 volts and complies with the Standard for Attachment Plugs and Receptacles, UL 498.		N/A
	c) The face of a convenience receptacle that is less than 5/8 inch (15.9 mm) wide or 7/8 inch (22.2 mm) long complies with the mounting clearance requirements specified in 22.8.		N/A
	d) The area surrounding the convenience receptacle is free of any projections that might interfere with full insertion of the blades of an attachment plug having a face size as specified in Figure 7.1.		N/A
	e) When an attachment plug, as shown in Figure 7.1, is fully inserted into the convenience receptacle, the test and reset buttons of a user-resettable protective device are accessible for testing and resetting the protective device without the use of a tool.		N/A
	f) The protective device complies with the requirements for cord-connected GFCIs specified in the Standard for Ground-Fault Circuit-Interrupters, UL 943.		N/A
	Exception No. 1: Flexible cord acceptable for use with hand-supported hair dryers as specified in Table 13.2 may be used		N/A
	Exception No. 2: Means for grounding need not be provided.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	g) The convenience receptacle contact slots and grounding hole, if any, are located so that the line blades of a grounding-type plug cannot be mated by deliberate manual force, including manipulation, to deflect the grounding pin to the outside of the body of the protective device. An obstruction provided to comply with this requirement is to have minimum size and shape indicated by the shaded area in Figure 7.2. The obstructions are to be coplanar with the face or recessed by no more than 3/32 inch (2.4 mm). Constructions having rigid bodies, which are materials having a minimum hardness of 90 when measured on the ″A″ scale of a Shore Durometer, may have the indicated ″A″ dimensions reduced to 0.531 inch (13.5 mm).		N/A
	h) The hair dryer immersion protective device complies with the abnormal operation test described in 46.10.1 – 46.10.5.		N/A
	i)) A permanent and legible marking is provided near the convenience receptacle to:		N/A
	1) Specify the maximum current and wattage rating of an appliance intended to be plugged into the convenience receptacle as specified in 72.1.7,		N/A
	2) Indicate that the appliance is to be unplugged immediately after use as specified in 72.10.1, and		N/A
	3) Indicate that a direct plug-in (cordless) appliance is not to be used as specified in 72.10.1.		N/A
	j) The instruction manual includes the operating instructions specified in 76.10		N/A
7.10	With regard to 7.9(f), each output circuit shall be considered if one is not representative of the other. For example, the short circuit test shall be conducted with each output short-circuited one at a time. The dielectric voltage-withstand test between line-connected circuits and load circuits shall include both load circuits. The temperature test shall be conducted with:		N/A
	a) The hair dryer load circuit and the convenience receptacle each loaded to rated value and		N/A
	b) The convenience receptacle loaded to 15 amperes with no load connected to the hair dryer load circuit.		N/A
8	**Frame and Enclosure**		--
8.1	General		--

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Clause	Requirement + Test	Result - Remark	Verdict
8.1.1	The frame and enclosure of an appliance shall be sufficiently strong and rigid to resist the abuses likely to be encountered during service. The degree of resistance inherent in the appliance shall preclude total or partial collapse with the attendant reduction of spacings, loosening or displacement of parts, and other conditions which alone or in combination constitute an increase in the risk of fire, electric shock, or injury to persons.		P
8.1.2	Among the factors taken into consideration in evaluating an enclosure for acceptability are its:		P
	a) Physical strength		P
	b) Resistance to impact,		P
	c) Moisture absorptive properties,		P
	d) Combustibility,		P
	e) Resistance to corrosion, and		P
	f) Resistance to distortion at temperatures to which the enclosure may be subjected under conditions of normal or abnormal use.		P
	For a nonmetallic enclosure, all these factors are to be considered with respect to thermal aging		P
8.2	Polymeric enclosures and parts		P
8.2.1	A polymeric enclosure shall comply with the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C.		P
	Exception: The Abnormal Operation Tests, Section 46, shall be applied in lieu of the abnormal and severe conditions requirements specified in UL 746C. For the polymeric enclosure of an appliance other than a hand-supported hair dryer, the use of HB material may require additional abnormal or severe conditions tests.		P
8.3	Metal enclosures		N/A
8.3.1	The minimum thickness of a metal enclosure shall be as indicated in Table 8.1.		N/A
8.4	Corrosion resistance		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.4.1	Iron and steel parts shall be made corrosion resistant by painting, galvanizing, plating, or other equivalent means if the malfunction of such unprotected parts would result in a risk of fire, electric shock, or injury to persons.		N/A
	Exception No. 1: In constructions in which the oxidation of iron or steel due to the exposure of the metal to air and moisture will not be appreciable – thickness of metal and temperature also being factors – surfaces of sheet steel and cast-iron parts within an enclosure not required to be made corrosion resistant		N/A
	Exception No. 2: Bearings, lamination, or minor parts of iron or steel, such as washers, screws, and similar parts are not required to be made corrosion resistant.		N/A
8.4.2	A container for liquid shall be made resistant to the possible corrosive effect of the liquid intended to be used in the container		N/A
8.5	Accessibility of live parts		P
8.5.1	An electrical part of an appliance shall be located or enclosed so that unintentional contact with any uninsulated live part and internal wiring will be prevented.		P
8.5.2	A part of the outer enclosure that is capable of being opened or removed by the user without using a tool (to attach an accessory, to make an operating adjustment, to replace a fuse, or for other reasons) is to be opened or removed when determining compliance with 8.5.1.		P
8.5.3	The enclosure of an appliance shall have no opening that permits a probe, as illustrated in Figure 8.1, to touch any part that involves a risk of electric shock.		P
8.5.4	With regard to 8.5.3, the probe is to be articulated into any configuration and rotated or angled to any position before, during, or after insertion into the opening. The penetration shall be to any depth allowed by the opening size, including minimal depth combined with maximum articulation. The probe shall be applied with the minimum force required to determine accessibility and not as an instrument to evaluate the strength of a material.		P

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Clause	Requirement + Test	Result - Remark	Verdict
8.5.5	An opening that will permit entrance of a 1-inch (25.4-mm) diameter rod is permitted when it complies with the conditions shown in Figure 8.2..		P
8.5.6	A live part of a limited-energy circuit in 5.30 requires the same degree of protection against unintentional contact as a live part of a line voltage circuit. 8.5.6 revised June 20, 2012		P
8.5.7	Insulated brush caps do not require additional enclosure.		P
8.5.8	An area of an enclosure that is provided with a group of openings or with a guarded opening (such as a grille, louver, or screen) is to be subjected to the strength of enclosure test described in 35.1.		P
8.5.9	The enclosure of a remotely or automatically controlled appliance shall reduce the risk of molten metal, burning insulation, or flaming particles, from falling on combustible materials, including the surface upon which the appliance is supported.		P
8.5.10	The requirement in 8.5.9 will necessitate the use of a barrier of material that is resistant to combustion:		N/A
	a) Under a motor unless:		N/A
	1) The structural parts of the motor or of the appliance provide the equivalent of such a barrier;		N/A
	2) The protection provided with the motor is such that no burning insulation or molten material falls to the surface that supports the appliance when the motor is energized under each of the following fault conditions:		N/A
	i) Main winding opened;		N/A
	ii) Starting winding opened;		N/A
	iii) Starting switch short-circuited; and		N/A
	iv) For a permanent split capacitor motor, the capacitor short-circuited (the short circuit is to be applied before the motor is energized, and the rotor is to be locked); or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	3) The motor is provided with a thermal motor protector (a protective device that is sensitive to temperature and current) that will prevent the temperature of the motor windings from exceeding 125°C (257°F) under the maximum load under which the motor will run without causing the protector to cycle, and from exceeding 150°C (302°F) with the rotor of the motor locked.		N/A
	b) Under wiring, unless the wiring is provided with flame-retardant rating VW-1 (FR-1), or wiring contained within sleeving rated VW-1, or the equivalent. 8.5.10 revised June 20, 2012		N/A
8.5.11	The requirement in 8.5.9 will also necessitate that a switch, relay, solenoid, or the similar part be individually and completely enclosed unless there is no opening in the bottom of the appliance enclosure, or it can be shown that malfunction of the component would not result in a risk of fire.		N/A
	Exception: Terminals of a switch, relay, solenoid, or the like are not required to be individually and completely enclosed.		N/A
8.5.12	The barrier specified in 8.5.10 shall be horizontal, shall be located as indicated in Figure 8.3, and shall have an area no less than that described in Figure 8.3. An opening such as for drainage or ventilation, is permitted in the barrier if such an opening would not permit molten metal, burning insulation, or flaming particles to fall on combustible material.		N/A
8.6	Doors and covers		P
8.6.1	The door or cover of an enclosure shall be provided with means for holding it in the closed position.		P
8.6.2	The door or cover of an enclosure shall be hinged (or similarly attached) if it gives access to any overload protective device, the functioning of which requires renewal, or if it is necessary to open the cover in connection with the operation of the protective device. Such a door or cover shall be provided with a latch or similar device and shall be tight-fitting or shall overlap the surface of the enclosure around the opening.		N/A
9	Reduction of Risk of Injury to Persons		--

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
9.1	Genera		--
9.1.1	Materials that are relied upon to reduce the risk of injury to persons shall have such properties as to meet the demand of intended loading conditions.		P
9.1.2	Asbestos shall not be used		P
9.1.3	A moving part that can result in a risk of injury to persons shall be enclosed or provided with other means to reduce unintentional contact.		P
9.1.4	With respect to the requirement specified in 9.1.3, the construction and intended use of the appliance are to be considered in investigating a guard or enclosure. Among the factors to be evaluated in evaluating the acceptability of an exposed moving part are:		P
	a) The degree of exposure;		P
	b) The sharpness of the moving part; and		P
	c) The possibility of fingers, arms, hair, or clothing being drawn into the moving part (such as at points where gears mesh, where belts travel onto a pulley, or where moving parts close in a pinching or shearing action).		P
9.1.5	An appliance, or any item furnished with an appliance, shall have no sharp edge, burr, point, or spike inside or outside the appliance that results in injury to persons during intended use and maintenance.		P
9.1.6	On an appliance adjustable for height, means shall be provided for holding the upper parts securely in position. Means shall also be provided to prevent the upper part from descending rapidly if the securing means loosens or fails to operate as intended.		P
9.1.7	A hand-supported hair dryer shall have each air intake opening provided with a screen or equivalent means so that there are no openings larger than 0.004 square inch (0.03 cm2).		N/A
9.2	Appliances with reservoirs		N/A
9.2.1	An appliance in which liquid reaches a temperature greater than 46°C (114.8°F) shall comply with the requirements specified in 9.2.2 – 9.2.4, 36.1 – 36.3, and 37.2.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Exception No. 1: An electrode-type appliance is not required to comply with these requirements. For requirements for an electrode-type appliance, see Sections 78 – 84.		N/A
	Exception No. 2: A wax depilatory appliance is not required to comply with the requirements specified in 9.2.3, 9.2.4, and 36.1 – 36.3.		N/A
9.2.2	The construction of the appliance shall reduce the risk of injury to persons under conditions of intended use. Openings through which liquid can be emitted shall not be provided unless such openings are needed to perform an operating function.		N/A
9.2.3	An appliance with a vessel or container with a capacity of more than 32 fluid ounces (946 mL) shall be provided with a fully inserting or a lock-on lid.		N/A
9.2.4	If any part of an appliance requires assembly (for example, engagement of a twist-lock part), then improper assembly that results in a risk of injury to persons shall be clearly visible to the user		N/A
9.3	Wax depilatory appliances		N/A
9.3.1	The maximum temperature of the wax, measured as described in 44.2.1 – 44.2.3, shall not exceed 75°C (167°F).		N/A
9.3.2	The maximum temperature rise of surfaces that may be contacted by the user shall be as specified in Table 44.2.		N/A
9.3.3	When there are multiple heat settings (for example, a setting for maintaining molten wax at the intended temperature for application to all of the skin and a higher heat setting for quick melting of solid wax), the appliance shall comply with all of the following:		N/A
	a) If the wax is capable of being heated above 75°C (167°F) for quick melting, the reservoir in which the wax is so heated shall be provided with a nonremovable, self-closing lid or cover.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	b) A visible overheat condition indicator shall be provided. Such an indicator shall indicate when the wax temperature exceeds 75°C. This indicator shall be separate and independent of any other temperature indicator (for example, an indicator light whose functioning depends upon the setting of an adjustable thermostat) which may be provided. See 44.2.3, 74.7(l)(12), and 76.8(e).		N/A
	c) A marking (such as a number or symbol) shall be provided adjacent to each heat selector position. A permanent marking shall be provided on the appliance in accordance with 72.8.1(b), and the Use and Care Instructions shall warn the user against applying wax that has been heated at a setting higher than the intended setting [see 74.7(l)(12)].		N/A
	d) A part of a temperature control that is user-operated (an adjustment knob or similar part) shall be constructed so that deliberate and positive action by the operator is required to select a heat setting or to change from one heat setting to another. A construction that requires two separate and distinct motions by the user (such as push and turn) is an example of a control that complies with this requirement.		N/A
9.3.4	With reference to 9.3.3(a), a nonremovable cover is one which requires special tools (tools not available to other than service personnel) for removal. A self-closing cover is a cover that returns to its fully closed position without any action on the part of the user other than releasing it from any opened position while the appliance is supported by a flat, horizontal surface.		N/A
9.3.5	In accordance with 46.9.5 and 76.8, if the malfunction of a temperature-regulating control increases the application temperature of the wax above 75°C (167°F), visible means, such as an indicator light, shall be provided to inform the user of an overheat condition.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Exception: A visible overheat condition indicator is not required if a thermal cutoff or a trip-free manual-reset thermostat operates upon short-circuiting of the temperature-regulating control. The temperatures attained by the wax, and surfaces of the appliance that are handled or contacted by the user during intended use, at the time the thermal cutoff or thermostat opens shall not present a risk of burn as determined by an appropriate investigation. The investigation shall include consideration of the length of time that temperatures remain above the specified limits, the thermal inertia of the materials involved, and similar factors.		N/A
10	Mechanical Assembly		--
10.1	An appliance that involves a motor or other vibrating part shall be assembled such that the appliance will not be affected adversely by the vibration. Brush caps shall be tightly threaded or otherwise constructed to prevent loosening.		P
10.2	A switch (other than a through-cord switch), lampholder, receptacle, motor-attachment plug, or similar component shall be mounted securely and shall be prevented from turning.		P
	Exception No. 1: Turn-prevention means for a switch are not required, when all the following conditions are met:		N/A
	a) The switch is of the plunger or other type that does not tend to rotate when operated (a toggle switch is subject to forces that tend to rotate the switch during intended operation of the switch);		N/A
	b) The means of mounting the switch is such that the operation of the switch will not result in the switch becoming loosened;		N/A
	c) The spacings are not reduced below the minimum required values, if the switch does rotate; and		N/A
	d) Intended operation of the switch is by mechanical means rather than by direct contact by persons.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Exception No. 2: A lampholder in which the lamp cannot be replaced (such as a neon pilot or indicator light in which the lamp is sealed in by a nonremovable jewel) is not required to be prevented from turning if the rotation cannot reduce spacings below the minimum required values.		N/A
10.3	Friction alone shall not be relied on for turn-prevention as required in 10.2. A lock-washer, applied as intended, is a reliable means of turn-prevention of a device with a single-hole mounting means.		N/A
10.4	A positive means shall be provided to prevent parts of an appliance from turning with respect to each other if such turning would result in reduction of spacings, twisting of wires, and the like.		P
	Exception: If such parts depend upon 3/8 inch (9.5 mm) or larger pipe threads, no additional means to prevent turning need be provided.		N/A
10.5	A fastener that secures the insulating tip of a curling iron, a heated brush, or a similar appliance shall be constructed, fastened, or located so as to prevent the fastener from becoming loosened if such loosening can result in a risk of fire or electric shock.		P
10.6	Compliance with the requirement specified in 10.5 may be accomplished by use of:		P
	a) Staked and upset screws,		P
	b) Screws with properly applied lock washers,		P
	c) Press fitting of the insulating tip into place, or		P
	d) Other equivalent means.		N/A
	A polymeric material relied upon to prevent the fasteners from loosening shall have the required mechanical strength, resistance to heat, and dimensional stability. All of these properties are to be considered with respect to thermal aging.		P
10.7	If any part of a metal spring of a hair clamp of a curling iron or a similar appliance can become loose inside the enclosure of electrical parts as a result of breakage of the spring, the construction shall be such that electrical spacings will not be reduced.		P

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Clause	Requirement + Test	Result - Remark	Verdict
10.8	Compliance with the requirement specified in 10.7 may be accomplished by		P
	a) Locating all parts of the spring outside the enclosure of electrical parts,		P
	b) Using barriers,		P
	c) Using physical restraints, or		P
	d) Using other equivalent means.		P
10.9	The temperature sensor of a temperature controller, a thermostat, a thermal cutoff, or a similar device shall be secured in place.		P
11	**Stability**		N/A
11.1	A floor- or counter-supported appliance shall be constructed such that it will not be overturned when tested in accordance with 37.1.	Hand-held appliance and no stand	N/A
	Exception: An appliance whose overturning during intended use will not present a risk of burns or injury to persons need not be tested.		N/A
11.2	With regard to 11.1, a hand-supported hair dryer provided with a stand for conversion into a counter-supported hair dryer is to be evaluated as a hand-supported appliance and is not to be subjected to the stability test.		N/A
11.3	A wax depilatory appliance shall be tested and the results shall be evaluated as described in 37.2, except that the wax may be in any combination of solid and liquid states anticipated during the intended operation of the appliance. Any movable parts or covers are to be in the positions that result in the most adverse conditions of use.		N/A
	Exception: The test need not be conducted on a construction for which there is no possibility of molten wax spilling from its container under any condition of use, such as constructions in which the wax material is contained within completely enclosed wax applicators.		N/A
12	**Hanging and Mounting Means**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
12.1	A wall-hung or a wall-mounted appliance shall withstand a force as described in 59.1 without evidence of damage to the mounting surface, to the hanging means, to the mounting means, or to the appliance that results in the risk of electric shock, fire, or injury to persons.		N/A
12.2	A cord-connected appliance that is provided with keyhole slots, notches, hanger holes, or similar feature, for hanging the appliance on a wall, shall be:		N/A
	a) Provided with the necessary hardware for hanging the appliance in accordance with the installation instructions and		N/A
	b) Constructed in such a manner that the hanging means (such as screws) shall not be accessible without removing the appliance from the supporting means.		N/A
12.3	When determining compliance with 12.2, any part of the enclosure or barriers that can be removed without the use of tools to gain access to the hanging means is to be removed.		N/A
12.4	A keyhole slot, notch, or hanger hole shall be located so that the supporting screws or similar hardware cannot damage any electrical insulation or reduce spacings to current-carrying parts of the appliance		N/A
12.5	A permanently installed wall-mounted appliance shall be provided with the necessary hardware for mounting in accordance with the installation instructions.		N/A
	Exception: Small parts commonly available for the mounting of the appliance need not be provided if the installation instructions refer to such parts as specified in 75.4.		N/A
13	**Supply Connections**		--
13.1	Permanently-connected appliances		N/A
13.1.1	An appliance intended for permanent connection to a power supply, either by being fastened in place, located in a dedicated space, or both, shall have provision for connection of one of the wiring systems that is acceptable for the appliance.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Exception: If an appliance is not intended for permanent connection to a power supply, but is intended to be either fastened in place, located in a dedicated space, or both, it may be provided with a short length of flexible cord in accordance with 13.3.1.1 – 13.3.1.3 and 13.3.1.6 and with an attachment plug for supply connection. The investigation of such a feature will include consideration of the utility of the appliance and the reasons for having it detachable from its supply source by means of the attachment plug.		N/A
13.1.2	The location of a terminal box or compartment in which a power supply connection to a permanently-connected appliance is to be made shall be such that the connection may be readily inspected after the appliance is installed as intended.		N/A
13.1.3	A terminal compartment intended for the connection of a supply raceway shall be attached to the appliance so as to be prevented from turning		N/A
13.2	Wiring terminals		N/A
13.2.1	An appliance intended for permanent connection to the power supply shall be provided with wiring terminals or leads for connection of supply circuit conductors. Such wiring terminals or leads shall accommodate conductors having an ampacity of not less than 125 percent of the appliance current rating when the load is continuous (3 hours or more), and not less than the appliance current rating when the load is intermittent.		N/A
13.2.2	For the purpose of these requirements, wiring terminals are considered to be terminals to which power supply or control connections will be made in the field when the appliance is installed.		N/A
13.2.3	A wiring terminal shall be provided with a soldering lug or with a pressure terminal connector securely fastened in place (for example, firmly bolted or held by a screw).		N/A
	Exception: A wire-binding screw may be used at a wiring terminal intended to accommodate a 10 AWG (5.3 mm2) or smaller conductor if upturned lugs or the equivalent are provided to hold the wire in position.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
13.2.4	A wiring terminal shall be prevented from turning or shifting in position by means other than friction between surfaces. This may be accomplished by two screws or rivets; by square shoulders or mortices; by a dowel pin, lug, or offset; by a connecting strap or clip fitted into an adjacent part; or by an equivalent means.		N/A
13.2.5	A wire-binding screw at a wiring terminal shall be no smaller than No. 10 (4.8 mm).		N/A
	Exception: A No. 8 (4.2 mm) screw may be used at a terminal intended only for the connection of a 14 AWG (2.1 mm2) conductor, and a No. 6 (3.5 mm) screw may be used for the connection of a 16 AWG (1.3 mm2) or 18 AWG (0.82 mm2) control-circuit conductor.		N/A
13.2.6	A terminal plate tapped for a wire-binding screw shall be of metal not less than 0.050 inch (1.27 mm) thick. There shall be two or more full threads in the metal, which may be extruded if necessary to provide the threads.		N/A
	Exception: A plate less than 0.050 inch thick, but not less than 0.030 inch (0.762 mm) thick, is acceptable if the tapped threads are determined to have equivalent mechanical strength.		N/A
13.2.7	Upturned lugs or a cupped washer shall be capable of retaining a conductor of the size specified in 13.2.1, but not smaller than 14 AWG (2.1 mm2), under the head of the screw or the washer.		N/A
13.2.8	A wire-binding screw shall thread into metal		N/A
13.2.9	An appliance intended for connection to a grounded power supply conductor and using a:		N/A
	a) Lampholder or element holder of the Edison screw shell type,		N/A
	b) Single pole switch, or		N/A
	c) Single pole automatic control		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	shall have one terminal or lead intended for connection of the grounded conductor of the supply circuit. The terminal or lead intended for grounded connection shall be the one that is connected to the screw shell of a lampholder or element holder and that has no connection to a single pole switch or single pole automatic control.		N/A
	Exception: With regard to connection of a single pole automatic control, the requirements specified in 24.1 shall apply		N/A
13.2.10	A terminal intended for the connection of a grounded circuit conductor shall be made of, or plated with, a metal substantially white in color and shall be readily distinguishable from the other terminals. If not of such metal, the identification of that terminal shall be clearly shown in some other manner, such as on an attached wiring diagram. A lead intended for the connection of a grounded circuit conductor shall be finished to show a white or gray color and shall be readily distinguishable from the other leads.		N/A
13.2.11	The free length of a lead inside an outlet box or wiring compartment shall be 6 inches (152.4 mm) or more if the lead is intended for field connection to an external circuit.		N/A
	Exception: A lead may be less than 6 inches long if it is evident that the use of a longer lead will result in a risk of fire, electric shock, or injury to persons.		N/A
13.2.12	The surface of an insulated lead intended solely for the connection of an equipment-grounding conductor shall be green, with or without one or more yellow stripes, and no other lead shall be so identified.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
13.2.13	A wire-binding screw intended for the connection of an equipment grounding conductor shall have a green colored head that is hexagonal shaped, slotted, or both. A pressure wire connector shall be plainly identified as such by being marked ″G,″ ″GR,″ ″GND,″ ″Grounding,″ or the like or by a marking on the wiring diagram provided on the appliance. The wire-binding screw or pressure wire connector shall be located so that it is unlikely to be removed during servicing of the appliance.		N/A
13.2.14	A terminal solely for connection of an equipment grounding conductor shall be capable of securing a conductor of the correct size for that purpose.		N/A
13.3	Cord-connected appliances		P
13.3.1	Cords and plugs		P
13.3.1.1	An appliance shall be provided with a length of flexible cord in accordance with Table 13.1 and an attachment plug for connection to the supply circuit. A coiled cord shall not be used with a floor- or counter-supported appliance where such use would present a risk of burn, fire, electric shock, or injury to persons (for example, the appliance being pulled off a table by the force of the cord). The cord length is measured from the point of cord entry into the enclosure, or into the wiring device at the appliance end of the cord, to the face of the attachment plug. The length for a coiled cord is to be measured with the cord in an uncoiled position.		P
	Exception: When a power supply cord contains a right-angle attachment plug, the cord length shall be measured from the point of cord entry into the enclosure, or into the wiring device at the appliance end of the cord, to the edge of the line blades or grounding pin nearest the point of cord entry into the attachment plug as shown in Figure 13.1.		N/A
13.3.1.2	The flexible cord:		P
	a) May be permanently attached to the appliance or		P
	b) For other than a hand-supported appliance, may be in the form of a detachable power supply cord with means for connection to the appliance.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Examples of the means for connection are an appliance plug, a flatiron plug, or a cord connector cooperating with pin or blade terminals on the appliance.		N/A
	Exception: Hand-supported appliances other than appliances provided with integral GFCI or other immersion protective devices, whether required or not, may be provided with a detachable power supply cord if all the following conditions are met:		N/A
	a) When inserted into the appliance, the detachable power supply cord shall be provided with a positive means to securely hold and lock it in place during normal use;		N/A
	b) Disengaging the locking feature requires positive actuation by the user by means independent of normal handling and use. Friction is not considered to be an acceptable locking means;		N/A
	c) While attached to the appliance, the power supply cord shall comply with construction and performance requirements applicable to non-detachable power supply cords detailed in this standard;		N/A
	d) The construction of the appliance coupling shall comply with the construction requirements of 13.3.1.14 or 13.3.1.15 and with the performance requirements of 65.4 or 65.6, as applicable to the construction;		N/A
	e) The appliance coupling and mating connector shall be a non-standard configuration. Flatiron, appliance (standard or jumbo), motor attachment, ANSI/NEMA WD6, Standard for Wiring Devices – Dimensional Requirements, or IEC 60320-1, Appliance couplers for household and similar general purposes – Part 1: General requirements, configurations are not considered to be acceptable;		N/A
	f) In addition to the requirements detailed in this standard, the detachable power supply cord shall comply with the applicable requirements for special purpose detachable power supply cords cited in the Standard for Cord Sets and Power-Supply Cords, UL 817;		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	g) The detachable supply cord shall be a minimum 18 AWG (0.82 mm2), SPT-2 cord type; and		N/A
	h) The drop impact test of 65.2 is to be conducted with acceptable results. 13.3.1.2 revised June 20, 2012		N/A
13.3.1.3	The ampacity of the cord (as specified in Table 400.5(A) of the National Electrical Code, ANSI/NFPA 70) and of the plug shall not be less than the current rating of the appliance. The cord and the plug voltage rating shall be at least equal to the rated voltage of the appliance.		P
13.3.1.4	With respect to 13.3.1.3, the voltage rating of a dual voltage appliance is deemed to be that to which the appliance is set when it is shipped from the factory.		P
13.3.1.5	If a dual-voltage appliance is provided with an adapter for connection to an alternate supply source, the adapter shall comply with the applicable requirements in the Standard for Attachment Plugs and Receptacles, UL 498.		N/A
13.3.1.6	The flexible cord shall be of a type indicated in Table 13.2 or the equivalent.		P
13.3.1.7	The attachment plug of a cord-connected appliance, and the integral blades of a direct plug-in appliance, provided with a 15- or 20-ampere general-use receptacle shall be of the 3-wire grounding type. The attachment plug and the integral blades of all other cord-connected and direct plug-in appliances provided with either a line-connected, single-pole on-off switch or overcurrent protective device, or an Edison-base lampholder shall be polarized or of the grounding type.		P
13.3.1.8	Attachment plugs, appliance couplers, appliance inlets (motor attachment plugs), and appliance (flatiron) plugs, shall comply with the Standard for Attachment Plugs and Receptacles, UL 498. See 16.19 for single and multipole connectors for use in data, signal, control and power applications within and between electrical equipment.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
13.3.1.9	Female devices (such as appliance couplers, and connectors) that are intended, or that may be used, to interrupt current in the end product, shall be suitably rated for current interruption of the specific type of load, when evaluated with its mating plug or connector. For example, an appliance coupler that can be used to interrupt the current of a motor load shall have a suitable horsepower rating when tested with its mating plug.		N/A
13.3.1.10	When a 3-wire grounding-type attachment plug or a 2-wire polarized attachment plug is provided, the attachment plug connections shall comply with Figure 13.2 and the polarity identification of the flexible cord shall comply with Table 13.3.		N/A
13.3.1.11	Type SPT-2, SVT, or SVTO flexible cord may be used for connecting a pendant-type on-off switch, a temperature control, or both to a table- or floor-supported hair dryer.		P
13.3.1.12	A power supply cord shall not employ conductors smaller than 18 AWG (0.82 mm2). Exception: Hand-supported household appliances weighing less than 1/2 pound (0.23 kg), including facial saunas, curling irons and brushes, manicure and pedicure sets, hair crimping and hair straightening irons, may employ non-detachable power-supply cords with 20 AWG (0.52 mm2) conductors provided that:		P
	a) The flexible cord is type SPT-1, SP-1, SPE-1 or is a type that is, at minimum, equivalent to these types;		N/A
	b) The appliance is not intended for continuous use nor for being indefinitely left ″on″ in stand-by mode (initial warm-up period excluded);		N/A
	c) The appliance is rated 2 amperes or less and does not continuously draw more than 2 amperes under intended use conditions; and		N/A
	d) The temperatures on the flexible cord are monitored during the normal temperature test and the temperatures do not exceed the temperature limit of the flexible cord.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
13.3.1.13	A power supply cord with integral fittings shall comply with the requirements in the Standard for Cord Sets and Power-Supply Cords, UL 817, except that it is not required to be provided with integral overcurrent protection.		P
13.3.1.14	Hand-supported appliances provided with detachable power supply cords, including hand-supported appliances likely to be disconnected while under load, shall not pose a risk of electric shock, fire or injury when mated or disconnected under any orientation or polarity permitted by the construction. The mating connector shall be held securely in place and shall not be allowed to rotate. Compliance is determined by the test of 65.4 and 65.5.		N/A
13.3.1.15	Appliances provided with a detachable base or stand subject to repeated connection and disconnection during normal use shall not pose a risk of electric shock, fire or injury when mated or disconnected under any orientation or polarity permitted by the construction. The mating connector shall be held securely in place and shall not be allowed to rotate. Compliance is determined by the test of 65.6 and 65.7.		N/A
13.3.1.16	Appliances provided with a detachable base or stand intended to power a hand-supported appliance which may be disconnected from power during normal use shall not tip over when the hand-supported portion of the appliance is assembled as intended to the base. Compliance is determined by the stability test of 65.8 and 65.9.		N/A
13.3.1.17	Locking features provided in accordance with (a) and (b) in the Exception to 13.3.1.2 shall be formed and assembled to have the strength and rigidity required to resist the abuses to which it is able to be subjected. Compliance is determined by the test of 65.10.		N/A
13.3.1.18	Female contacts and live parts associated with connectors for appliances intended to be disconnected under load during normal use shall not have exposed contacts or terminals accessible to the probe in Figure 13.3.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Exception: Exposed contacts or terminals are acceptable if located in a secondary circuit and all of the following conditions are met:		N/A
	a) The maximum output voltage (Vmax) does not exceed 42.4 volts peak (30 Vrms)		N/A
	b) The output current does not exceed 8 amperes under any connection of loading including and up to short circuit for ac or dc voltages up to 42.2 V peak (30 Vrms)		N/A
13.3.1.19	A cord reel shall comply with ″special use cord reel″ requirements of the Standard for Cord Reels, UL 355. For products provided with cord tag, the cord tag shall not retract into cord reel.		N/A
13.3.2	Pin terminals		P
13.3.2.1	When an appliance is provided with pin terminals, the construction of the appliance shall be such that no live part will be exposed to unintentional contact both during and after the placement of the plug on the pins in the intended manner.		P
13.3.2.2	When an appliance is provided with pin terminals, a pin guard is required, such that:		P
	a) A straight edge placed in any position, including across and in contact with edges of the plug opening without the plug in place, cannot be made to contact any current-carrying pin.		P
	b) With the plug aligned with the pins and the face of the plug in a plane located perpendicular to the end or ends of the farthest projecting current-carrying pin, the probe illustrated in Figure 8.1 shall not touch any current-carrying pin while the probe is inserted through any opening with the appliance in any position.		P
13.3.2.3	When the pins on the appliance are of American National Standard configuration, the plug used in 13.3.2.2(b) shall consist of an appliance plug in accordance with the Standard for Wiring Devices – Dimensional Requirements, ANSI/NEMA WD6.		P
13.3.2.4	When the pins on the appliance are not of an American National Standard configuration, the plug used in 13.3.2.2(b) shall be the plug supplied with the appliance – 125 volts, 10 amperes, and 250 volts, 5 amperes.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
13.3.2.5	When an appliance uses three or more pin terminals intended for use with a plug that covers all the pins, the terminals shall be spaced so that they will not accommodate a flatiron, appliance plug, or cord connector. These pins shall accommodate the plug required for the particular application.		N/A
13.3.2.6	A pin terminal shall be securely and rigidly mounted and shall be prevented from shifting in position by means other than friction between surfaces.		P
13.3.2.7	The requirement specified in 13.3.2.6 is intended primarily to provide for the maintenance of spacings as specified in 26.1.6, and to maintain required spacings between pin terminals. Under this requirement, consideration is also to be given to the means for locking terminals in position to maintain tightness.		P
13.3.2.8	For a heating appliance, the dimensions of pins and their center-to-center spacings (including the corresponding spacings of the female contacts of general use plugs that these arrangements of pins will accommodate) shall be as indicated in Table 13.4.		P
13.3.2.9	The material on which the pins are mounted, the proximity of any vapor outlet to the terminals, and the direction of the vapor spray shall be such that water shall be prevented from accumulating at the terminal.		P
13.4	Strain relief		P
13.4.1	Strain relief shall be provided such that stress on a flexible cord will not be transmitted to a terminal, splice, or internal wiring in the appliance or in a fitting (attachment plug, appliance plug, or similar component.		P
13.4.2	If a knot in a flexible cord serves as strain relief, the surface against which the knot bears or with which it contacts shall be free of any projection, sharp edge, burr, fin, results in abrasion of the insulation on the conductors.		P

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Clause	Requirement + Test	Result - Remark	Verdict
13.4.3	Insulating bushings serving as strain relief shall comply with the Standard for Insulating Bushings, UL 635. Tests specified in this standard (e.g. Strain Relief Test) may still need to be performed to confirm the combination of the insulating bushing and the supporting part are suitable.		P
	Exception: A bushing that is an integral part of power supply cord and a soft rubber bushing specified in the Exception to 13.5.5 need not comply with UL 635. Tests specified in this standard (e.g. Strain Relief Test) need to be performed to confirm the combination of the insulating bushing and the supporting part are suitable.		P
13.5	Bushings		P
13.5.1	At a point where a flexible cord passes through an opening in a wall, barrier, or enclosing case, there shall be a bushing or the equivalent that is substantial, reliably secured in place, and that has a smooth, rounded surface against which the cord bears. The bushing or the equivalent is to protect the cord from abrasion damage; it is not intended for strain-relief or flex-relief purposes. An insulating bushing shall be provided if:		N/A
	a) Type SP-1, SPE-1, SPT-1, SP-2, SPE-2, SPT-2, or other cord lighter than Type HSJ is used;		N/A
	b) The wall or barrier is of metal; and		N/A
	c) Construction is such that the cord might be subjected to strain or motion.		N/A
	The heat- and moisture-resistant properties of the bushing material shall be that required for the particular application.		N/A
13.5.2	In addition to the requirements in 13.5.1, Insulating bushings shall comply with the Standard for Insulating Bushings, UL 635.		N/A
	Exception: Bushings specified in 13.5.5 need not comply with UL 635		N/A
13.5.3	If the cord hole is in wood, porcelain, phenolic composition, or other nonconducting material, a smooth rounded surface is deemed equivalent to a bushing.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
13.5.4	Ceramic materials and some molded compositions are acceptable for insulating bushings. A separate bushing of wood or rubber material (other than in a motor) is not. Vulcanized fiber may be used if the bushing is no less than 1/16 inch (1.6 mm) thick [with a minus tolerance of 1/64 inch (0.4 mm) for manufacturing variations] and if it is formed and secured in place so that it will not be affected adversely by conditions of ordinary moisture.		P
13.5.5	A separate soft rubber, neoprene, or polyvinyl chloride bushing may be used in the frame of a motor or in the enclosure of a capacitor physically attached to a motor (but not elsewhere in an appliance) when:		P
	a) The bushing is not less than 1/16 inch (1.6 mm) thick, with a minus tolerance of 1/64 inch (0.4 mm); and		P
	b) The bushing is located so that it will not be exposed to oil, grease, oily vapor, or other substance having a harmful effect on the bushing material.		P
	Exception: A bushing of any of the materials specified may be used at any point in an appliance if used in conjunction with a type of cord for which an insulating bushing is not required and if the edges of the hole in which the bushing is mounted are smooth and free from any burr, fin, or similar abrading surface.		N/A
13.5.6	An insulated metal grommet may be used in place of an insulating bushing if the insulating material used is not less than 1/32 inch (0.8 mm) thick and completely fills the space between the grommet and the metal in which it is mounted.		P
13.6	Direct plug-in appliances		N/A
13.6.1	With regard to Figure 13.4, the maximum moment, center of gravity, dimensions, and weight of a direct plug-in appliance shall comply with the requirements specified in (a) – (d). See 13.6.2 and 13.6.3 for symbol definitions and methods of application:		N/A
	a) The quotient of WY/Z shall not exceed 48 ounces (1.36 kg).		N/A
	b) The quotient of WY/S shall not exceed 48 ounces.		N/A
	c) The product of WX shall not exceed 80 ounce-inches (0.56 N•m).		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	d) The weight of an appliance shall not exceed 28 ounces (0.79 kg).		N/A
13.6.2	Definitions for the symbols used in 13.6.1 are as follows: a) W is the weight of the appliance. b) Y is the distance illustrated in Figure 13.4. c) Z is the shorter distance, Z1 or Z2, as illustrated in Figure 13.4. d) S is the shorter distance, S1 or S2, as illustrated in Figure 13.4. e) X is the longer distance, X1 or X2, as illustrated in Figure 13.4.		N/A
13.6.3	The moment and weight specified in 13.6.1 are to be determined as follows for:		N/A
	a) An appliance with an attached cord, the cord is to be cut off at the enclosure or at the strain-relief means if the strain-relief means extends outside the enclosure.		N/A
	b) An appliance with a directly mounted accessory, the values are to be measured with the accessory in place.		N/A
	c) An appliance with a mounting tab, the tab is not to be included in the measurement of linear dimensions for the purpose of determining moments.		N/A
13.6.4	When inserted in a parallel-blade duplex receptacle, any part of an appliance, including a mounting tab, shall not interfere with full insertion of an attachment plug into the adjacent receptacle as illustrated in Figure 13.5.		N/A
	Exception: An appliance that renders the adjacent receptacle completely unusable is acceptable.		N/A
13.6.5	An appliance shall not be provided with a mounting tab unless all the following conditions are met:		N/A
	a) The appliance is of a type such that semipermanent mounting will not introduce a risk of fire or electric shock;		N/A
	b) The appliance is intended for use on a 15-ampere, 125-volt receptacle;		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	c) A screw is provided and constructed so as to secure the mounting tab of the appliance to a parallel-blade duplex receptacle that has a center screw, as shown in Figure 13.5;		N/A
	d) For an appliance without a grounding pin, the mounting tab is constructed so that the appliance may be mounted to both grounding and nongrounding receptacles; and		N/A
	e) A marking as specified in 72.7.1 is provided		N/A
13.6.6	The enclosure of a direct plug-in appliance shall be capable of being gripped for removal from the receptacle to which it is connected, and the perimeter of the face section from which the blades project shall be no less than 5/16 inch (7.9 mm) from any point on either blade..		N/A
	Exception: For tab-mounted appliances intended for use with fixed systems, the perimeter of the face section shall not be less than 1/4 inch (6.4 mm) from any point on either blade.		N/A
14	**Live Parts**		--
14.1	A current-carrying part shall be of silver, copper, a copper alloy, or equivalent material.		P
14.2	Plated iron or steel may be used for a current-carrying part:		P
	a) Whose temperature during intended operation is more than 100°C (212°F);		N/A
	b) Within a motor or associated governor; or		N/A
	c) If provided in a component in accordance with 2.1; but unplated iron or steel shall not be used.		P
	Exception: Stainless steel and other corrosion-resistant alloys may be used for current-carrying parts regardless of temperature.		P
14.3	An uninsulated live part shall be secured to the base or mounting surface so that it will be prevented from turning or shifting in position if such motion results in a reduction of spacings below the minimum required values.		P
14.4	Friction between surfaces shall not be used as a means to prevent shifting or turning of an uninsulated live part, but a lock washer applied as intended is acceptable.		P

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Clause	Requirement + Test	Result - Remark	Verdict

15	**Reservoirs**		**--**
15.1	If a reservoir is part of an appliance, a live part shall be located or protected so that it will not be subject to dripping if the reservoir does not perform as intended.		N/A
	Exception: The requirement need not apply if the reservoir is resistant to corrosion from the liquid intended for use in it, and the reservoir does not develop cracks as a result of aging.		N/A
16	**Internal Wiring**		**--**
16.1	The wiring and connections between parts of an appliance shall be protected or enclosed.		P
	Exception: A length of flexible cord may be used for external connections between parts of the appliance if flexibility is essential.		N/A
16.2	A wireway shall be smooth and entirely free from sharp edges, burrs, fins, moving part similar abrading surfaces that might damage the insulation on the conductors.		P
16.3	A hole in a sheet metal wall through which insulated wires pass shall be provided with a smooth rounded bushing or shall have a smooth, well-rounded surface upon which the wires bear.		P
16.4	A separate foot switch provided with an appliance shall be connected to the appliance by flexible cord no lighter than Type SJ.		N/A
16.5	Insulated internal wiring (including a grounding conductor) shall consist of a type or types of wire that are acceptable for the application with regard to:		P
	a) The temperature and voltage to which the wiring is likely to be subjected;		P
	b) Exposure to oil, grease, or other substances likely to have a harmful effect on the insulation;		P
	c) Exposure to moisture; and		P
	d) Other conditions of service to which it is likely to be subjected.		P
	Exception: Insulated internal wiring evaluated as an uninsulated live part is not required to comply with the criteria specified in (a) – (d).		P

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Clause	Requirement + Test	Result - Remark	Verdict
16.6	Internal wiring composed of insulated conductors shall comply with the Standard for Appliance Wiring Material, UL 758.		P
	Exception No. 1: Insulated conductors need not comply with UL 758 if they comply with one of the following:		P
	a) The Standard for Thermoset-Insulated Wires and Cables, UL 44;		P
	b) The Standard for Thermoplastic-Insulated Wires and Cables, UL 83;		P
	c) The applicable UL standard(s) for other insulated conductor types specified in Chapter 3, Wiring Methods and Materials, of the National Electrical Code, ANSI/NFPA 70.		P
	Exception No. 2: Insulated conductors for specialty applications (e.g. data processing or communications) and located in a low-voltage circuit not involving the risk of fire, electric shock or injury to persons need not comply with UL 758.		N/A
16.7	A splice and connection shall be mechanically secure and shall provide effective electrical contact.		P
16.8	Aluminum conductors, insulated or uninsulated, used as internal wiring, such as for interconnection between current-carrying parts or as motor windings, shall be terminated at each end by a method acceptable for the combination of metals involved at the connection point.		P
16.9	If a wire-binding screw construction or a pressure wire connector is used as a terminating device for aluminum, it shall be required for use with aluminum under the conditions involved (for example, temperature, heat cycling, vibration).		N/A
16.10	A soldered connection shall be made mechanically secure before being soldered if breaking or loosening of the connection results in a risk of fire, electric shock, or injury to persons.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
16.11	A wire-binding screw or nut shall be provided with a lock-washer if loosening by vibration permits shifting of parts thereby reducing spacings, or otherwise results in a risk of fire, electric shock, or injury to persons. The lock-washer shall be located under the head of a wire-binding screw or under a wire-binding nut.		N/A
16.12	An open-end spade lug shall not be used unless additional means (such as upturned ends on the tangs of the lug) are provided to hold the lug in place if the wire-binding screw or nut becomes slightly loosened.		N/A
16.13	The means of connecting stranded internal wiring to a wire-binding screw shall be such that loose strands of wire are prevented from contacting other live parts not always of the same polarity as the wire and from contacting dead-metal parts. This can be accomplished by using a pressure terminal connector, a soldering lug, a crimped eyelet, or by soldering all strands of the wire together or the equivalent.		N/A
16.14	A splice shall be provided with insulation equivalent to that of the wires involved if spacing between the splice and other metal parts is not permanently maintained.		N/A
16.15	Insulation consisting of two layers of friction tape, two layers of thermoplastic tape, or one layer of friction tape on top of one layer of rubber tape is acceptable on a splice. In determining whether splice insulation consisting of coated fabric, thermoplastic, or other type of tubing is acceptable, consideration is to be given to such factors as dielectric properties, heat- and moisture-resistant characteristics, and similar criteria. Thermoplastic tape wrapped over a sharp edge shall not be used.		N/A
16.16	Quick-connect type wire connectors shall be suitable for the wire size, type (solid or stranded), conductor material (copper or aluminum) and the number of conductors terminated. If insulated, they shall be rated for the voltage and temperature of the intended use. They shall be applied per the installation instructions of the wire connector manufacturer.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
16.17	Quick-connect terminals, both connectors and tabs, for use with one or two 22 – 10 AWG copper conductors, having nominal widths of 2.8, 3.2, 4.8, 5.2, and 6.3 mm (0.110, 0.125, 0.187, 0.205, and 0.250 inch), intended for internal wiring connections in appliances, or for the field termination of conductors to the appliance, shall comply with the Standard for Electrical Quick-Connect Terminals, UL 310.		N/A
	Exception: Other sizes of quick-connect terminals shall be investigated with respect to crimp pull out, insertion-withdrawal, temperature rise, and all tests shall be conducted in accordance with UL 310. 16.17 added June 20, 2012		N/A
16.18	Wire connectors shall comply with the Standard for Wire Connectors, UL 486A-486B.		N/A
16.19	Splicing wire connectors shall comply with the Standard for Splicing Wire Connectors, UL 486C		N/A
16.20	Single and multipole connectors for use in data, signal, control and power applications within and between electrical equipment, and that are intended for factory assembly to copper or copper alloy conductors, or for factory assembly to printed wiring boards, shall comply with the Standard for Component Connectors for Use in Data, Signal, Control and Power Applications, UL 1977.		N/A
16.21	Multi-pole splicing wire connectors that are intended to facilitate the connection of hard-wired utilization equipment to the branch-circuit conductors of buildings shall comply with the Standard for Insulated Multi-Pole Splicing Wire Connectors, UL 2459. 16.21 added June 20, 2012		N/A
16.22	Equipment wiring terminals for use with all alloys of copper, aluminum, or copper-clad aluminum conductors, shall comply with the Standard for Equipment Wiring Terminals for Use with Aluminum and/or Copper Conductors, UL 486E. 1		N/A
16.23	Terminal blocks shall comply with the Standard for Terminal Blocks, UL 1059, and, if applicable, be suitably rated for field wiring.		N/A
17	**Heating Element**		P

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Clause	Requirement + Test	Result - Remark	Verdict
17.1	A heating element shall be supported in a reliable manner and shall be protected against mechanical damage and contact with outside objects.		P
17.2	In determining whether a heating element is reliably supported, consideration is to be given to sagging, loosening, and other adverse conditions resulting from continuous heating.		P
17.3	An appliance in which the heating element is designed for operation only in an air stream shall be wired or controlled so that the element is capable of operation only when under the cooling effect of the air stream.		P
17.4	A sheathed element, open-wire heating element or the like shall be judged under the applicable requirements of this Standard.		P
17.5	Insulated heating wire shall comply with the Standard for Appliance Wiring Material, UL 758		P
17.6	Thermistor-type heaters (e.g. PTC or NTC heaters) shall comply with the Standard for Thermistor-Type Devices, UL 1434.		P
18	Electrical Insulation		--
18.1	General		--
18.1.1	An insulating washer, bushing, or similar part that is an integral part of an appliance, and a base or support for the mounting of a current-carrying part, shall be of a moisture-resistant material that will not be adversely affected by the temperatures to which it will be subjected under conditions of intended use. Molded parts shall be constructed so that they will have strength and rigidity to withstand the stresses of intended service.		P

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Clause	Requirement + Test	Result - Remark	Verdict
18.1.2	Insulating material is to be evaluated with respect to its acceptability for the particular application. Materials such as mica, some molded compounds, and certain refractory materials are usually acceptable for use as the sole support of live parts. Other materials that shall not be used for general use, such as magnesium oxide, may be used if used in conjunction with other insulating materials, or if so located and protected that the risk of mechanical damage and the absorption of moisture are reduced. When it is necessary to investigate a material to determine its acceptability, consideration is to be given to its mechanical strength, insulation resistance, heat-resistant qualities, the degree to which it is enclosed or protected, and any other features having a bearing on the risk of fire, electric shock, or injury to persons involved in conjunction with conditions of service. All these factors are to be considered with respect to thermal aging. When a polymeric enclosure also serves as an insulating material, or as the direct or indirect support for any live part, the polymeric material shall comply with the requirements specified in 8.2.1.		P
18.1.3	In the mounting or supporting of a small fragile insulating part, a screw or other fastening is not to be so tight as to result in cracking or breaking with expansion and contraction. Such a part shall be slightly loose.		P
18.1.4	A small molded part, such as a brush cap, shall be constructed so that it will have the strength and rigidity to withstand stresses during intended use.		P
18.1.5	Insulating material on which the opposite polarity fixed contacts of a hand-held hair dryer power “on-off” slide switch are mounted shall have a comparative tracking index (CTI) rating of 2 or better, and a flammability rating of V-1 or better.		P
18.1.6	Insulating tape shall comply with the Standard for Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape, UL 510.		P
18.1.7	Insulation sleeving shall comply with the Standard for Coated Electrical Sleeving, UL 1441.		P
18.1.8	Insulation tubing shall comply with the Standard for Extruded Insulating Tubing, UL 224.		P

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Clause	Requirement + Test	Result - Remark	Verdict
18.1.9	A printed-wiring board shall comply with the requirements in the Standard for Printed-Wiring Boards, UL 796. A printed-wiring board shall be rated V-1 or better and shall comply with the direct-support requirements for insulating materials in the Standard for Polymeric Materials – Use in Electrical Equipment Evaluation, UL 746C.		P
	Exception: A printed-wiring board containing Class 2 non-safety circuit only is required to comply with the Standard for Printed-Wiring Boards, UL 796 with flammability rating of HB or better.		N/A
18.1.10	Unless otherwise specified, the flammability class and temperature rating shall be that specified for insulating materials in the Standard for Polymeric Materials – Use in Electrical Equipment Evaluation, UL 746C.		P
18.2	Film-coated wire (magnet wire)		N/A
18.2.1	The component requirements for film coated wire and Class 105 (A) insulation systems are not specified.		N/A
18.2.2	Film coated wire in intimate combination with one or more insulators, or the magnet wire of induction heating coil, incorporated with an insulation system rated Class 120 (E) or higher, shall comply with the magnet wire requirements in the Standard for Systems of Insulating Materials – General, UL 1446 and shall have a suitable temperature class.		N/A
19	**Thermal Insulation**		--
19.1	Combustible thermal and electrically conductive insulation shall not contact an uninsulated live part		P
19.2	Mineral wool thermal insulation that contains conductive impurities in the form of slag shall not come into contact with any uninsulated live part.		P
19.3	Thermal insulation shall be rated for the temperature to which it is exposed when tested under the conditions described in 44.1.1.		P
20	**Overcurrent Protection**		--

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Clause	Requirement + Test	Result - Remark	Verdict
20.1	If overcurrent conditions are likely to occur, the appliance shall be provided with a circuit breaker or fuse.		P
20.2	Overcurrent protection at not more than 20 amperes shall be provided by means of a circuit breaker or fuse in the appliance for each general use receptacle circuit and each lampholder circuit in the appliance, unless the appliance would be correctly connected to a branch circuit rated at 20 amperes or less.		P
20.3	The overcurrent protection specified in 18.2 shall be of a type rated for branch circuit protection.		N/A
20.4	A fuseholder or circuit breaker provided as a part of an appliance shall be of a type rated for the particular application and shall not be accessible from outside the appliance without opening a door or cover. A fuseholder for a plug fuse shall be constructed and installed so that an uninsulated live part other than the screw shell will not be exposed to contact by persons removing or replacing a fuse.		N/A
	Exception: The operating handle of a circuit breaker may project outside the enclosure.		N/A
20.5	For other than a hand-supported appliance, if the handle of a circuit breaker is operated vertically rather than rotationally or horizontally, the up position of the handle shall be the on position.		N/A
21	**Thermal Cutoffs (Fusible Links)**		P
21.1	If an appliance is provided with a thermal cutoff, the cutoff shall open the circuit in the intended manner without causing the short circuiting of live parts and without causing live parts to become grounded to the enclosure. This determination is to be made in accordance with the test requirements specified in the Test of Thermal Cutoffs (Fusible Links), Section 55.		P
21.2	A thermal cutoff shall comply with the Standard for Thermal-Links – Requirements and Applications Guide, UL 60691.		P
22	**Lampholders and Receptacles**		--

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Clause	Requirement + Test	Result - Remark	Verdict
22.1	Lampholders and indicating lamps integral with lampholder shall comply with the Standard for Lampholders, UL 496. A female screw shell used as a holder for a heating element shall be of copper or of copper alloy and shall be plated with nickel or an equivalent oxidation-resistant metal.		N/A
22.2	The circuit conductor of a power supply cord that is intended to be grounded shall have the following items connected to it:		N/A
	a) The screw shell of an Edison-base lampholder and		N/A
	b) The terminal or lead of a receptacle intended to be grounded.		N/A
22.3	An Edison-base lampholder shall not be used in an appliance rated over 150 volts.		N/A
	Exception: An Edison-base lampholder may be used if the construction is such that live parts of the lampholder and the lamp will not be exposed to contact by persons when the screw shell of the lamp is in contact with live parts of the lampholder or if used on a three-wire Edison system.		N/A
22.4	In determining compliance with the Exception to 22.3, the probe shown in Figure 8.1 shall be used as described in 8.5.3.		N/A
22.5	An Edison-base lampholder in an appliance rated 150 volts or less shall be constructed or installed so that an uninsulated live part other than the screw shell will not be exposed to contact by a person removing or replacing a lamp during intended service.		N/A
	Exception: This requirement is not applicable to an appliance:		N/A
	a) For which it is necessary to dismantle the appliance or remove a cover plate or other part by means of a tool to remove or replace a lamp or		N/A
	b) That is permanently and legibly marked to indicate that such relamping is to be done with the appliance disconnected from the supply source.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
22.6	A 15- or 20-ampere attachment plug receptacle intended for general use in an appliance shall be of the grounding type. The grounding contact of the receptacle shall be electrically connected to dead metal that will be grounded when the appliance is in use.		N/A
22.7	Attachment plug receptacle shall comply with the Standard for Attachment Plugs and Receptacles, UL 498.		N/A
22.8	The face of a receptacle that is less than 5/8 inch (15.9 mm) wide or 7/8 inch (22.2 mm) long shall project a minimum of 0.015 inch (0.38 mm) and a maximum of 3/16 inch (4.8 mm) from the part of the receptacle-mounting surface that is within a rectangle 5/8 inch wide and 7/8 inch long, the rectangle being symmetrically located about the receptacle contacts		N/A
	Exception: If the mounting surface for the receptacle is electrically conductive, the face of the receptacle shall project a minimum of 3/32 inch (2.4 mm).		N/A
22.9	An appliance provided with one or more general use receptacles shall not be equipped with a flexible cord not smaller than 16 AWG (1.3 mm2).		N/A
22.10	When the branch circuit over current protection will be inadequate for any general use receptacle or receptacles provided as part of an appliance, over current protection for the receptacle or receptacles shall be provided as part of the appliance as follows:		N/A
	a) Not more than 15 amperes for a single receptacle, and		N/A
	b) Not more than 20 amperes for two or more receptacles (including a single duplex receptacle).		N/A
23	**Switches**		--
23.1	**General**		--
23.1.1	An appliance having any driven moving part, which by function could cause entrapment of hair, body parts, clothing or the like, shall be provided with a main on-off switch. Appliances in this group include, but are not limited to, hair dryers, hair untanglers, and the like.		P

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Clause	Requirement + Test	Result - Remark	Verdict
23.1.2	A switch, as required in 23.1.1, shall be located so that it can be operated by the user to turn off the appliance.		P
23.1.3	A switch shall be acceptable for the particular application and shall have a current and voltage rating no less than that of the circuit (load) it controls. See 18.1.5 for electrical insulation of slide switch.		P
23.1.4	Manually operated snap-switches shall comply with one of the following, as applicable:		P-
	a) Standard for Switches for Appliances – Part 1: General Requirements, UL 61058-1;		P
	b) Standard for Special-Use Switches, UL 1054;		N/A
	c) Standard for General-Use Snap Switches, UL 20; or		N/A
	d) Standard for Nonindustrial Photoelectric Switches for Lighting Control, UL 773A.		N/A
	Exception: Switching devices that comply with the appropriate UL standard for specialty applications (e.g. transfer switch equipment), industrial use (e.g. contactors, relays, auxiliary devices), or are integral to another component (e.g. switched lampholder) need not comply with this requirement.		N/A
23.1.5	A clock-operated switch, in which the switching contacts are actuated by a clock-work, by a gear-train, by electrically-wound spring motors, by electric clock-type motors, or by equivalent arrangements shall comply with one of the following:		N/A
	a) The Standard for Automatic Electrical Controls for Household and Similar Use; Part 1: General Requirements, UL 60730-1; and the Standard for Automatic Electrical Controls for Household and Similar Use; Part 2: Particular Requirements for Timers and Time Switches, UL 60730-2-7 or		N/A
	b) The Standard for Clock-Operated Switches, UL 917.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
23.1.6	A timer or time switch, incorporating electronic timing circuits or switching circuits, with or without separable contacts, shall comply with the requirements for an operating control with Type 1 action for 6000 cycles of operation, or as a manual control for 5000 cycles of operation, in accordance with the following:		N/A
	a) The Standard for Automatic Electrical Controls for Household and Similar Use; Part 1: General Requirements, UL 60730-1; and the Standard for Automatic Electrical Controls for Household and Similar Use; Part 2: Particular Requirements for Timers and Time Switches, UL 60730-2-7 or		N/A
	b) The Standard for Solid-State Controls for Appliances, UL 244A.		N/A
23.1.7	A manually operated, line-connected, single-pole switch for appliance on-off operation shall not be connected to the conductor of the power supply cord or circuit intended to be grounded. Table 13.3 specifies the identification of the power supply cord conductor intended to be grounded.		N/A
23.1.8	A switch that is subjected to a temperature of more than 65°C (149°F) shall be evaluated with respect to the temperature limitations of the materials used.		N/A
23.1.9	A switch shall be located or protected so that it will not be subjected to mechanical damage during use.		N/A
23.1.10	A switch, as required in 23.1.1, shall have a plainly marked ″off ″ position. The use of a symbol alone, such as the symbol ″O,″ shall not be used to denote the off position. The switch position marking need not be an integral part of the switch itself.		N/A
	Exception: An appliance that is provided with a momentary contact on-off switch that automatically returns to the off position when the actuator is released is not required to have a marked ″off ″ position.		N/A
23.1.11	A hand-supported hair-drying appliance is not intended to be immersible and shall not be so marked.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
23.1.12	A maintained contact switch for a hand-supported hair dryer shall be subjected to a 6,000-cycle switch endurance test. A momentary contact switch that is likely to be operated several times during each use of a hand-supported hair dryer, such as the on-off switch, shall be subjected to a 30,000-cycle switch endurance test. A momentary-contact switch that is not likely to be operated several times during each use of a hand-supported hair dryer, such as a switch used to provide low-velocity, cool air for setting a curl (a ″cool shot″ switch), shall be subjected to 6,000 cycles of the switch endurance test. The tests, when required, are to be conducted in accordance with the Standard for Special-Use Switches, UL 1054 or the Standard for Switches for Appliances – Part 1: General Requirements, UL 61058-1.		N/A
23.2	**Dual-voltage selector**		N/A
23.2.1	The construction of the supply circuit voltage selector shall be such that the supply circuit voltage setting cannot be changed without the use of a tool (a coin, screwdriver, or the like is considered to be a tool for the purpose of this requirement).		N/A
23.2.2	If the appliance is constructed so that the supply circuit voltage selector setting can be changed, the action of changing the voltage selector setting shall also change the supply circuit voltage indication.		N/A
23.2.3	An appliance that can be set to different rated supply circuit voltages shall be provided with the statement required in 74.7(k)(12).		N/A
24	**Automatic Controls and Control Circuits**		N/A
24.1	**General**		N/A
24.1.1	The operation of an automatic control device in an appliance shall disconnect the element or elements it controls from all ungrounded conductors of the supply circuit.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Exception: Disconnection from all ungrounded conductors of the supply circuit is not required if there is no uninsulated live part exposed to unintentional contact when the switch is open, or if the fact that such part is live is definitely apparent.		N/A
24.1.2	Breakdown of a temperature control in a hand-supported hair dryer shall not result in a risk of fire, electric shock, or injury to persons as determined in accordance with 46.4.2.4 and 46.4.3.3. A limit control that operates to interrupt all heater and motor circuits and end the test shall comply with the requirements specified in Thermal Cutoffs (Fusible Links), Section 21.		N/A
24.1.3	The overload and endurance tests of a temperature controller consisting of a temperature sensor and the associated control circuit for an appliance having a preheat cycle shall be conducted in the appliance, or under conditions representative of those in the appliance, as described in the Test of Automatic Controls, Section 54. See 24.2.4.		N/A
24.1.4	A temperature controller that controls the duration of a preheat cycle by a timing circuit or by an equivalent means without using a temperature sensor is considered to be a temperature-regulating control and shall comply with the overload and endurance requirements specified in the Test of Automatic Controls, Section 54.		N/A
24.1.5	Auxiliary controls shall be evaluated in accordance with the applicable requirements of this standard and the parameters in Controls – End Product Test Parameters, Section 25 unless otherwise specified in this standard. See 24.1.12.		N/A
24.1.6	Operating (regulating) controls shall be evaluated in accordance with the applicable component standard requirements specified in 24.2, if applicable, and the parameters in Controls – End Product Test Parameters, Section 25, unless otherwise specified in this standard. See 24.1.12.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
24.1.7	Electronic operating controls that rely upon software for the normal operation of the end product where deviation or drift of the control may result in a risk of fire, electric shock, or injury to persons, such as a speed control unexpectedly changing its output, shall comply with one of the following:		N/A
	a) The Standard for Tests for Safety-Related Controls Employing Solid-State Devices, UL 991; and the Standard for Software in Programmable Components, UL 1998 or		N/A
	b) The Standard for Automatic Electrical Controls for Household and Similar Use; Part 1: General Requirements, UL 60730-1.		N/A
24.1.8	Protective (limiting) controls shall be evaluated in accordance with the applicable component standard requirements specified in 24.2 and if applicable, the parameters in Controls – End Product Test Parameters, Section 25, unless otherwise specified in this standard.		N/A
24.1.9	Electronic protective controls that do not rely upon software as a protective component shall comply with one of the following:		N/A
	a) The Standard for Tests for Safety-Related Controls Employing Solid-State Devices, UL 991 or		N/A
	b) The Standard for Automatic Electrical Controls for Household and Similar Use; Part 1: General Requirements, UL 60730-1 except the Controls Using Software requirements, Clause H 11.12.		N/A
24.1.10	Electronic protective controls that rely upon software as a protective component shall comply with one of the following:		N/A
	a) The Standard for Tests for Safety-Related Controls Employing Solid-State Devices, UL 991; and the Standard for Software in Programmable Components, UL 1998 or		N/A
	b) The Standard for Automatic Electrical Controls for Household and Similar Use; Part 1: General Requirements, UL 60730-1.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
24.1.11	If a single malfunction or breakdown of an electronic component, located in electronic operating control, results in increased risk of injury to persons, such as a loss of OFF control or unexpected operation, this control shall comply with the applicable requirements specified in 24.1.7 – 24.1.10. See 25.4.		N/A
24.1.12	An electronic, auxiliary or operating control (e.g. a non-protective control), the failure of which would not increase the risk of fire, electric shock, or injury to persons (i.e. burn injury), is not required to comply with the requirements in 24.1.6 – 24.1.11, and is only required to be subjected to the applicable requirements of this standard.		N/A
24.2	Electromechanical and electronic controls		N/A
	A temperature control shall comply with one of the following:		N/A
	a) The Standard for Temperature-Indicating and -Regulating Equipment, UL 873 or		N/A
	b) The Standard for Automatic Electrical Controls for Household and Similar Use; Part 1: General Requirements, UL 60730-1; and the Standard for Automatic Electrical Controls for Household and Similar Use; Part 2: Particular Requirements for Temperature Sensing Controls, UL 60730-2-9.		N/A
24.2.2	A temperature control installed in a hand-supported hair dryer shall operate at not more than 8.3°C (15°F) above or below its rated operating temperature. Compliance is determined by subjecting the control, a sub-assembly including the control, or the complete appliance to the appropriate temperatures in an air oven.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
24.2.3	In a wax depilatory appliance, an automatic-reset temperature control shall be a calibrated control endurance tested for at least 6,000 cycles of operation and shall comply with all other requirements applicable to limit controls in the Standard for Limit Controls, UL 353, or the requirements applicable to temperature-limiting controls in the Standard for Temperature-Indicating and -Regulating Equipment, UL 873. The calibration requirements shall be as specified for water-heater limit controls in UL 353 or water-heater temperature-limiting controls in UL 873. Compliance with the Standard for Automatic Electrical Controls for Household and Similar Use, Part 1: General Requirements, UL 60730-1, and/or the applicable Part 2 standard from the UL 60730 series fulfills the UL 873 requirements.		N/A
24.2.4	A temperature sensing positive temperature coefficient (PTC) or a negative temperature coefficient (NTC) thermistor, that performs the same function as an operating or protective control shall comply with:		P
	a) The Standard for Automatic Electrical Controls for Household and Similar Use; Part 1: General Requirements, UL 60730-1; and the Standard for Automatic Electrical Controls for Household and Similar Use; Part 2: Particular Requirements for Temperature Sensing Controls, UL 60730-2-9 with Annex J or		P
	b) The Standard for Thermistor-Type Devices, UL 1434.		N/A
25	**Controls – End Product Test Parameters**		--
25.1	General		--
25.1.1	Spacings of controls shall comply with the electrical spacing, or clearances and clearance distance requirements of the applicable control standard as determined in Spacings, Section 26.		N/A
25.1.2	Where reference is made to declared deviation and drift, this indicates the manufacturer's declaration of the control's tolerance before and after certain conditioning tests.		N/A
25.2	Auxiliary controls		N/A
25.2.1	Auxiliary controls shall not introduce a risk of electric shock, fire, or personal injury.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
25.2.2	Auxiliary controls shall comply with the requirements of this standard.		N/A
	Exception: An auxiliary control that complies with a component standard(s) specified in 24.2 is considered to fulfill this requirement.		N/A
25.3	Electronic Operating controls (regulating controls)		N/A
25.3.1	The following test parameters shall be among the items considered when judging the acceptability of an operating control investigated using the Standard for Automatic Electrical Controls for Household and Similar Use, Part 1: General Requirements, UL 60730-1:		N/A
	a) Control action Types 1 or 2;		N/A
	b) Unless otherwise specified this standard, manual and automatic controls shall be tested for 6,000 cycles with under maximum normal load conditions, and 50 cycles under overload conditions. See Table 54.1;		N/A
	c) Installation class 2 per the Standard for Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test, IEC 61000-4-5		N/A
	d) For the applicable Overvoltage Category, see Table 25.1;		N/A
	e) For the applicable Material Group, see Table 25.2;		N/A
	f) For the applicable Pollution Degree, see Table 25.3		N/A
25.3.2	The following test parameters shall be among the items considered when judging the acceptability of an operating control investigated using other than the Standard for Automatic Electrical Controls for Household and Similar Use, Part 1: General Requirements, UL 60730-1:		N/A
	a) Control action Types 1 or 2;		N/A
	b) Unless otherwise specified this standard, manual and automatic controls shall be tested for 6,000 cycles with under maximum normal load conditions, and 50 cycles under overload conditions. See Table 54.1;		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	c) For the applicable Overvoltage Category, see Table 25.1;		N/A
	d) For the applicable Material Group, see Table 25.2;		N/A
	e) For the applicable Pollution Degree, see Table 25.3.		N/A
25.4	**Electronic Protective controls (limiting controls)**		N/A
25.4.1	An electronic control that performs a protective function shall comply with the applicable requirements in Automatic Controls and Control Circuits, Section 24 while tested using the parameters in this Section. Examples of protective controls are:		N/A
	a) A control used to sense abnormal temperatures of components within the appliance;		N/A
	b) An interlock function to de-energize a motor, etc.;		N/A
	c) Temperature protection of the motor due to locked rotor, running overload, loss of phase; or		N/A
	d) Other safety or limit function intended to reduce the risk of electric shock, fire, or injury to persons.		N/A
	Exception: An electronic protective control, the failure of which would not increase the risk of fire, electric shock, or injury to persons, is not required to comply with the requirements in this Section.		N/A
25.4.2	The following test parameters shall be among the items considered when judging the acceptability of an electronic protective control investigated using the Standard for Automatic Electrical Controls for Household and Similar Use, Part 1: General Requirements, UL 60730-1:		N/A
	a) Failure-Mode and Effect Analysis (FMEA) or equivalent Risk Analysis method;		N/A
	b) Power Supply Voltage Dips, Variation and Interruptions within a temperature range of 10°C (18°F) and the maximum ambient temperature determined by conducting the Normal Temperature Test; Section 44;		N/A
	c) Surge Immunity Test – installation class 3 shall be used;		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
	d) Electrical Fast Transient/Burst Test, a test level 3 shall be used;		N/A
	e) Electrostatic Discharge Test;		N/A
	f) Radio-Frequency Electromagnetic Field Immunity:		N/A
	1) Immunity to conducted disturbances – When applicable, test level 3 shall be used and		N/A
	2) Immunity to radiated electromagnetic fields; field strength of 3 V/m shall be used;		N/A
	g) Thermal Cycling test shall be conducted at ambient temperatures of 10.0+2°C and the maximum ambient temperature determined by conducting the Normal Temperature Test; see Section 44. The test shall be conducted for 14 days; and		N/A
	h) Overload shall be conducted based on the maximum declared ambient temperature (Tmax) or as determined by conducting the Normal Temperature Test, Section 44.		N/A
	i) If software is relied upon as part of the protective electronic control, it shall be evaluated as software Class B.		N/A
25.4.3	The test parameters and conditions used in the investigation of the circuit covered by 25.4.1 shall be as specified in the Standard for Tests for Safety-Related Controls Employing Solid-State Devices, UL 991, using the following test parameters:		N/A
	a) With regard to electrical supervision of critical components, for attended appliances, a motor operated system becoming permanently inoperative with respect to movement of an exposed portion of the appliance meets the criteria for trouble indication. For unattended appliances, electrical supervision of critical components may not rely on trouble indication;		N/A
	b) A field strength of 3 volts per meter is to be used for the Radiated EMI Test;		N/A
	c) The Composite Operational and Cycling Test is to be conducted for 14 days at temperature extremes of 0°C (32°F) and 70°C (158°F);		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
	d) The Humidity Class is to be based on the appliance's intended end use and is to be used for the Humidity Test;		N/A
	e) A vibration level of 5 g is to be used for the Vibration Test;		N/A
	f) The Computational Investigation is not applicable to equipment covered by this standard;		N/A
	g) For the Demonstrated Method Test, the multiplier for the test acceleration factor is to be 576.30 for intermittent use appliances, or 5763.00 for continuous use appliances. The test acceleration factor equation is to be based on a 25°C (77°F) use ambient;		N/A
	h) The Endurance Test is to be conducted concurrently with the Operational Test. The control shall perform its intended function while being conditioned for 14 days in an ambient air temperature of 60°C (140°F), or 10°C (18°F) greater than the operating temperature of the control, whichever is higher. During the test, the control is to be operated in a manner representing normal use;		N/A
	i) For the Electrical Fast Transient Burst Test, test level 1 is to be used; and		N/A
	j) Conduct a failure-mode and effect analysis (FMEA).		N/A
	k) If software is relied upon as part of the protective electronic control, it shall be evaluated as software Class 1 in accordance with the Standard for Software in Programmable Components, UL 1998.		N/A
25.4.4	Unless otherwise specified in this Standard, protective controls shall be evaluated for 100,000 cycles for Type 2 devices, and 6,000 cycles for Type 1 devices, with rated current.		N/A
26	**Spacings**		--
26.1	**General**		--

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
26.1.1	All uninsulated live parts connected to different circuits – line voltage, low voltage (Class 2), or limited energy primary – and separated electrically by insulation or impedance shall be spaced from one another as though they were parts of opposite polarity and shall be judged on the basis of the highest voltage involved.		P
26.1.2	The spacing between uninsulated live parts of opposite polarity and between such parts and dead metal that may be grounded in service is not specified for parts of circuits that are classified as low-voltage (Class 2) circuits.		P
26.1.3	The spacing between uninsulated live parts within a limited energy primary circuit is not specified if the:		P
	a) Location and relative arrangement of the parts are such that permanent separation is provided and		P
	b) Limited-energy circuit meets the abnormal test requirements specified in 46.6.1 – 46.6.4.		P
26.1.4	The spacing between uninsulated live parts of a limited-energy primary circuit and dead metal that may be contacted by persons, or that may become grounded in service, is as specified in 26.1.6.		P
26.1.5	With respect to 26.1.4, an entire component shall be evaluated as live part if any dead metal of the component is isolated from a live part by an insulation system or by a spacing that is inadequate for the line voltage involved.		P
26.1.6	There shall be a spacing of not less than 1/16 inch (1.6 mm) between uninsulated line voltage parts of opposite polarity, and between an uninsulated line-voltage part and a dead-metal part that might be exposed to contact by persons during operation of the appliance or that might be grounded. If an uninsulated live part is not rigidly supported, or if a movable dead-metal part is in close proximity to an uninsulated live part, the construction shall be such that this minimum spacing will be maintained under all operating conditions.		P

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
	Exception: At closed-in points only, such as the screw and washer construction of an insulated terminal mounted in metal, a spacing of no less than 3/64 inch (1.2 mm) may be used. Within a thermostat, other than at contacts, the spacing between uninsulated live parts on opposite sides of the contacts shall not be less than 1/32 inch (0.8 mm) through air and 3/64 inch over surface of insulating material, and the construction shall be such that the spacings will be permanently maintained.		N/A
26.1.7	An insulating lining or barrier of fiber or similar material shall be so located or of such material that it will not be affected adversely by arcing. If the lining or barrier is used instead of an air spacing, the material shall not be less than 1/32 inch (0.8 mm) thick.		P
	Exception No. 1: The insulating material may be 1/64 inch (0.4 mm) thick if a fiber liner or barrier is used in conjunction with an air spacing not less than 50 percent of that required for air alone.		N/A
	Exception No. 2: Insulating material having a thickness less than that specified may be used if, upon investigation, it has been determined to be acceptable for the particular application.		N/A
26.2	**Spacings on printed wiring boards**		--
26.2.1	As an alternative to the spacing requirements in 26.1.6, a printed wiring board with spacings between opposite polarity circuits (other than a low-voltage circuit) less than those required is acceptable provided that the spacings:		P
	a) Are located on a portion of the printed wiring board provided with a conformal coating that complies with the requirements in the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C, and the dielectric voltage-withstand test described in Section 45; or		P
	b) Are located on the load side of a resistor such that a short circuit from the load side of the resistor to the other side of the line does not result in the resistor power dissipation exceeding the resistor wattage rating; or		P

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
	c) Comply with the spacing requirements in the Standard for Solid-State Controls for Appliances, UL 244A. Compliance with the Standard for Automatic Electrical Controls for Household and Similar Use, Part 1: General Requirements, UL 60730-1, and/or the applicable Part 2 standard from the UL 60730 Series fulfills these requirements; or		N/A
	d) Comply with the spacing requirements in the Standard for Insulation Coordination Including Clearances and Creepage Distances for Electrical Equipment, UL 840. The spacing requirements of UL 840 shall not be used for field wiring terminals and spacings to a dead metal enclosure.		N/A
26.2.2	When conducting evaluations in accordance with the requirements in the Standard for Insulation Coordination Including Clearances and Creepage Distances for Electrical Equipment, UL 840, the following guidelines shall be used:		N/A
	a) A household appliance is to be categorized as Overvoltage Category II. See Table 25.1;		N/A
	b) The applicable Material Group per Table 25.2;		N/A
	c) The pollution degree shall be Pollution Degree 2. See Table 25.3;		N/A
	d) Any printed-wiring board which complies with the requirements in the Standard for PrintedWiring Boards, UL 796, shall be determined to provide a Comparative Tracking Index (CTI) of 100, and when it further complies with the requirements for Direct Support in UL 796 then it shall be determined to provide a CTI of 175.		N/A
26.2.3	In order to apply Clearance B (controlled overvoltage) clearances, control of overvoltage shall be achieved by providing an overvoltage device or system as an integral part of the product. This voltage limiting device or system shall comply with the Standard for Surge Protective Devices, UL 1449.		N/A
27	**Grounding**		--
27.1	All permanently connected appliances shall have provision for the grounding of all exposed metal parts that are likely to become energized.		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
	Exception: An appliance provided with a double-insulation system, shall be constructed in accordance with the Standard for Double Insulation Systems for Use in Electrical Equipment, UL 1097, and is not required to be grounded.		N/A
27.2	An appliance marked as double insulated shall not be provided with a means for grounding.		N/A
27.3	If a grounding means is provided on the appliance, whether required or not, all exposed dead-metal parts and all dead-metal parts within the enclosure that are exposed to contact during any servicing operation and that are likely to become energized shall be reliably connected to the grounding means.		N/A
27.4	An equipment grounding conductor of a flexible cord shall comply with all of the following:		N/A
	a) Finished to show a green color with or without one or more yellow stripes.		N/A
	b) Conductively connected to:		N/A
	1) All exposed dead-metal parts that are likely to become energized and		N/A
	2) All dead-metal parts within the enclosure that are exposed to contact during any user servicing and that are likely to become energized.		N/A
	The grounding conductor shall be connected by means of a screw or other means not likely to be removed during any servicing operation not involving the power supply cord. Solder alone shall not be used for securing this conductor.		N/A
	c) Connected to the fixed grounding member of an attachment plug of the grounding type.		N/A
	Exception: The grounding contact member of a grounding attachment plug used on the power supply cord of a portable hand-held, hand-guided, or hand-supported appliance may be of the movable, self-restoring type on circuits operating at 150 volts or less between any conductor and ground.		N/A
28	**Motors**		--
28.1	**Construction**		--

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
28.1.1	A motor provided as part of an appliance shall be capable of handling the load it is intended todrive without introducing a risk of fire, electric shock, or injury to persons.		N/A
28.1.2	A motor winding shall be constructed so as to resist the absorption of moisture.		N/A
28.1.3	With reference to the requirement specified in 28.1.2, film-coated wire is not required to be additionally treated to prevent absorption of moisture. Fiber slot liners, cloth coil wrap, and similar moisture-absorptive materials shall be provided with impregnation or otherwise treated to prevent moisture absorption.		N/A
28.1.4	A brush cap, accessible from outside an enclosure of a portable appliance that prevents contact with a live part at a potential of more than 30 volts rms (42.4 volts peak) to any other part or to ground, shall be fastened in place so that removal cannot be accomplished by an ordinary tool used in the intended manner. Wrenches, pliers, and flat-blade or cross-blade screwdrivers are deemed to be ordinary tools		N/A
28.2	**Brush wear-out**		N/A
28.2.1	A brush-holder assembly shall be constructed so that when a brush is worn out (no longer capable of performing its function), the brush, spring, and other parts of the assembly will be retained to the degree necessary to reduce the likelihood of:		N/A
	a) Accessible dead metal parts becoming energized and		N/A
	b) Live parts becoming accessible.		N/A
28.2.2	With reference to the requirement in 28.2.1, the parts of a brush holder assembly are considered to be acceptably retained if:		N/A
	a) The motor is enclosed, independently of the appliance enclosure, to the degree that the brush, spring, or other parts of the assembly will be contained within the motor enclosure, and no conductive parts of the motor enclosure are accessible.		N/A
	b) The appliance has spacings such that parts of the brush holder assembly which can become free to move will not become live and accessible, nor bridge live parts to accessible metal parts, and the motor enclosure is not accessible; or		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
	c) Other constructions equivalent to (a) or (b).		N/A
28.2.3	A motor control device not having a horsepower rating equivalent to the motor it controls, shall be capable of performing effectively when subjected to an overload test as specified in the Motor Control Overload Test, Section 56.		N/A
28.3	**Overload protection**		N/A
28.3.1	Except as indicated in 28.3.8, the following appliances in which a 1 hp or smaller motor is used shall incorporate thermal or overload protection that prevents the motor from attaining excessive temperatures under any operating conditions:		N/A
	a) A remotely or automatically controlled appliance and		N/A
	b) A permanently connected, continuous-duty, manually started appliance.		N/A
	An impedance-protected motor is not required to have additional thermal or overload protection.		N/A
28.3.2	An appliance intended to be automatically or remotely controlled, and employing a motor rated at more than 1 hp, shall incorporate thermal or overcurrent protection.		N/A
28.3.3	Fuses shall not be used as motor-overload-protective devices unless the motor is protected by the largest size of fuse that can be inserted in the fuseholder.		N/A
28.3.4	Thermal protection devices integral with the motor shall comply with one of the following:		N/A
	a) The Standard for Overheating Protection for Motors, UL 2111;		N/A
	b) The Standard for Thermally Protected Motors, UL 1004-3; or		N/A
	c) The Standard for Automatic Electrical Controls for Household and Similar Use, Part 1: General Requirements, UL 60730-1; and the Standard for Automatic Electrical Controls for Household and Similar Use; Part 2 Particular Requirements for Thermal Motor Protectors, UL 60730-2-2; in conjunction with the Standard for Thermally Protected Motors, UL 1004-3 (to evaluate the motor-protector combination).		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
28.3.5	Impedance protection shall comply with one of the following:		N/A
	a) The Standard for Overheating Protection for Motors, UL 2111 or		N/A
	b) The Standard for Impedance Protected Motors, UL 1004-2.		N/A
28.3.6	Electronic protection integral to the motor shall comply with the Standard for Electronically Protected Motors, UL 1004-7.		N/A
28.3.7	Electronically protected motor circuits shall comply with one of the following:		N/A
	a) The Standard for Tests for Safety-Related Controls Employing Solid-State Devices, UL 991. When the protective electronic circuit is relying upon software as a protective component, it shall comply with the requirements in the Standard for Software in Programmable Components, UL 1998. If software is relied upon to perform a safety function, it shall be considered software Class 1;		N/A
	b) The Standard for Automatic Electrical Controls for Household and Similar Use, Part 1: General Requirements, UL 60730-1. If software is relied upon to perform a safety function, it shall be considered software Class B; or		N/A
	c) The Standard for Power Conversion Equipment, UL 508C.		N/A
	Exception: Compliance with the above standards is not required for an electronically protected motor circuit if there is no risk of fire, electric shock, or injury to persons during abnormal testing with the motor electronic circuit rendered ineffective; compliance with the applicable requirements of this standard is then required.		N/A
28.3.8	Motors indicated below are not required to comply with the overload protection requirement:		N/A
	a) Motors that are supplied by Class 2 circuits.		N/A
	b) Motors rated less than 1 horsepower and		N/A
	1) Which are manually started;		N/A
	2) Where the operator is in attendance during the entire operating cycle;		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	3) Where malfunction of the motor is evident.		N/A
28.3.9	Running overload protection is not required for the following constructions:		N/A
	a) A motor that is used for air-handling only when the blower or fan impeller is coupled directly to the motor shaft or		N/A
	b) A shaded-pole motor with a 2:1 or smaller ratio between locked-rotor and no-load currents and a 1 ampere or smaller difference between no-load and locked-rotor currents.		N/A
28.3.10	An overload-protective device that complies with the National Electrical Code, ANSI/NFPA 70, is determined to comply with 28.3.1. This overload-protective device shall be responsive to motor current and rated or set as specified in Column A of Table 430-72(b) of the NEC. When the rating of the motor-running overload protection determined in accordance with the foregoing does not correspond to a standard size or rating of a fuse, nonadjustable circuit breaker, thermal cutout, thermal relay, or heating element of a thermal-trip motor switch, the next higher size, rating, or setting is not prohibited from being used, and shall not be more than that specified in Column B of Table 430-72(b) of the NEC. For a multi-speed motor, each winding connection is to be evaluated separately.		N/A
28.3.11	The functioning of an overload protective device, whether or not such a device is required, shall not result in a risk of fire, electric shock, or injury to persons. Overload devices used for running overload protection, other than those that are inherent in a motor, shall be located in each ungrounded conductor of a supply system.		N/A
28.3.12	Motor-overload protection in which contacts control a relay coil in a motor starter shall comply with the requirements of 28.3.1.		N/A
28.3.13	Fuses used in motor-overload-protective devices shall be configured so that the motor is investigated with the largest size of fuse that is capable of being inserted in the fuseholder.		N/A
28.4	**Insulation systems**		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
28.4.1	Class A insulation systems shall consist of a combination of magnet wire and major component insulation materials evaluated and found to operate as intended in its end use. Thermoset materials and materials specified in Table 28.1 at the thicknesses specified are permitted to be used without further evaluation.		N/A
28.4.2	For Class A insulation systems employing other materials or thinner materials than those indicated in Table 28.1 or a combination of materials, the materials, whether polymeric or not polymeric (treated cloth, for example), shall comply with the requirements in 28.4.3.		N/A
28.4.3	A polymeric material employed in a Class 105 (A) insulation system that isolates the windings from dead metal parts shall be unfilled or glass-reinforced nylon, polycarbonate, polybutylene terephthalate, polyethylene terephthalate, phenolic or acetal, and shall have a relative or generic thermal index for electrical properties of 105°C (221°F) minimum. Leads shall be rated 90°C (194°F) minimum. Motors employing thermoplastic materials shall be subjected to the tests in Thermoplastic Motor Insulation Systems, Section 66.		N/A
	Exception No. 1: Other polymeric materials used in a Class 105 (A) insulation system shall comply with the requirements for Thermal Aging, 66.4.		N/A
	Exception No. 2: Class (105) A DC motor located in limited energy primary circuit (See 5.30) or Class 2 circuit, shall comply with the applicable requirements in this standard.		N/A
28.4.4	Materials used in an insulation system that operates above Class 105 (A) temperatures shall comply with the Standard for Systems of Insulating Materials – General, UL 1446.		N/A
28.4.5	All insulation systems employing integral ground insulation shall comply with the requirements specified in the Standard for Systems of Insulating Materials – General, UL 1446		N/A
	Exception: Class (105) A DC motor located in limited energy primary circuit (See 5.30) or Class 2 circuit, shall comply with the applicable requirements in this standard.		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
29	Transformers		N/A
29.1	General-purpose transformers shall comply with the Standard for Low Voltage Transformers – Part 1: General Requirements, UL 5085-1 and the Standard for Low Voltage Transformers – Part 2: General Purpose Transformers, UL 5085-2		N/A
	Exception: A transformer that complies with the Standard for Transformers and Motor Transformers for Use in Audio-, Radio-, and Television-Type Appliances, UL 1411, and that is used in a circuit involving an audio or video component, meets the intent of this requirement.		N/A
29.2	Class 2 and Class 3 transformers shall comply with the Standard for Low Voltage Transformers – Part 1: General Requirements, UL 5085-1 and the Standard for Low Voltage Transformers: Class 2 and Class 3 Transformers, UL 5085-3.		N/A
30	Batteries and Battery Chargers		N/A
30.1	A lithium ion (Li-On) single cell battery shall comply with the requirements for secondary lithium cells in the Standard for Lithium Batteries, UL 1642.		N/A
30.2	Rechargeable nickel cadmium (Ni-Cad) cells and battery packs shall comply with the applicable construction and performance requirements of this standard.		N/A
30.3	Rechargeable nickel metal-hydride (Ni-MH) battery cells and packs shall comply with the applicable construction and performance requirements of this standard, or the applicable requirements for secondary cells or battery packs in the Standard for Household and Commercial Batteries, UL 2054.		N/A
30.4	Primary batteries (non-rechargeable) that comply with the requirements of the relevant UL Standard and of 2.4 are considered to fulfill the requirements of this standard.		N/A
30.5	A Class 2 battery charger shall comply with one of the following:		N/A
	a) The Standard for Class 2 Power Units, UL 1310 or		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
	b) The Standard for Information Technology Equipment – Safety – Part 1: General Requirements, UL 60950-1 with an output marked ″Class 2 ″.		N/A
31	Capacitors		N/A
32	Light Sources and Associated Component		N/A
32.1	Lighting ballasts shall comply with the Standard for Fluorescent-Lamp Ballasts, UL 935, or the Standard for High-Intensity Discharge Lamp Ballasts, UL 1029. Ballasts forming part of a luminaire that complies with an appropriate luminaire standard are considered to fulfill this requirement.		
	Exception: Ballasts for other light sources shall comply with the appropriate standard(s) and need not comply with UL 935 or UL 1029.		N/A
32.2	Light emitting diode (LED) light sources shall comply with the Standard for Light Emitting Diode (LED) Light Sources For Use In Lighting Products, UL 8750. LED light sources forming part of a luminaire that complies with an appropriate luminaire standard are considered to fulfill this requirement.		N/A
	Exception: Individual LED light sources intended for indicating purposes only, need not comply with UL 8750.		N/A
	PERFORMANCE		--
33	Ionization Circuits		N/A
33.1	Grooming appliances which employ ionization technology shall comply with 33.2 and 33.3.		N/A
33.2	The high voltage power supply used in the ionizer shall be evaluated to the applicable construction and component requirements for power supplies contained in the Standard for Electrostatic Air Cleaners, UL 867. The following performance tests of UL 867 shall be considered:		N/A
	a) Output Test;		N/A
	b) Temperature Test;		N/A
	c) Dielectric Voltage Withstand Test – High Voltage Transformer Core;		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
	d) Dielectric Voltage Withstand Test – Induced Energy, (for linear-type transformer only);		N/A
	e) Abnormal Operations Test – Component Short- And Open-Circuit Test; and		N N/A /A
	f) High Voltage Insulating Materials Arcing Test.		N/A
33.3	The high voltage pins (electrodes) of ionizer shall not be accessible per 8.5		N/A
33.4	A grooming appliance employing ionization circuitry shall not produce a concentration of ozone exceeding 0.05 parts per million by volume when tested as described in Ozone Test, Section 67.		N/A
34	General		N/A
34.1	The tests described in Sections 38 – 46 shall be conducted in that order on the same samples.		N/A
	Exception: Some tests on hand-supported hair dryers will require more than one sample.		N/A
34.2	A simulated head used for temperature testing is to consist of a foamed plastic wig form, approximately 21-1/2 inches (546 mm) in circumference, closely wrapped with two layers of cheesecloth. Pieces of black (exposed and developed) cellulose acetate photographic film to represent hair-holding devices are to be attached to the top and sides.		N/A
34.3	Wherever cheesecloth is specified in connection with either a temperature test or an abnormal test, the cloth is to be bleached cheesecloth 36 inches (914 mm) wide, running 14 – 15 yards per pound mass (approximately 28 – 30 m/kg mass), and having what is known in the trade as a ″count of 32 x 28,″ which means that for any square inch there are 32 threads in one direction and 28 threads in the other direction (for any square centimeter there are 13 threads in one direction and 11 threads in the other direction).		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
34.4	For the purpose of these requirements, a primary temperature limiting control in an appliance that has two different temperature limiting controls is the control that is intended to operate before the second control operates. The second control, termed the backup temperature limiting control, is intended to operate in the event of malfunction of the primary control.		N/A
34.5	Wherever a hardwood surface is specified in connection with a test, the hardwood surface is to consist of a layer of tongue-and-groove oak flooring mounted on two layers of nominal 3/4 inch (19.1 mm) plywood. The oak flooring is to be nominally 3/4 inch thick [actual size 3/4 by 2-1/4 inch (19.1 by 57.2 mm)]. The assembly is to rest on a concrete floor or an equivalent nonresilient floor during the test.		N/A
35	Strength of Enclosure Test		P
35.1	A 5-pound (22.2-N) force shall be applied by means of the flat end of a circular steel rod that is 1/4 inch (6.4 mm) in diameter and 5 inches (127 mm) long for 1 minute to any part of the area described in 8.5.8. The rod is to be vertical, and the appliance may be oriented in any position relative to the rod before the force is applied. The results are acceptable if:		P
	a) During the test, the rod does not contact an uninsulated live part; and		P
	b) After the test, the construction is in compliance with 8.5.3, 8.5.4, and 26.1.6		P
35.2	With reference to 35.1, the test is to be conducted on a guard such as a screen, which is located under an opening in an enclosure, through the opening in the enclosure only if the following conditions are met:		N/A
	a)The guard is: 1) Metal or other electrically conductive material, 2) Accessible to user contact as determined in accordance with 8.5.4, and 3) Accessible to the rod; or		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
	b)The guard is: 1) Electrically nonconductive material, 2) Accessible to user contact as determined in accordance with 8.5.4, 3) Accessible to the rod, and 4) Required for compliance with the accessibility requirements specified in 8.5.3.		N/A
36	Tip-Over Test		N/A
37	Stability Test		N/A
38	Leakage Current Test		P
39	Leakage Current Test Following Humidity Conditioning		P
40	Immersion Protection Trip Time Measurement Test		P
40.1	As-received hair dryers		N/A
40.2	Conditioned hair dryers		N/A
41	Dew Point Humidity Test		P
42	Conductive Coating Test		N/A
42.1	General		--
42.2	Thermal cycling		P
42.3	Limited thermal aging		P
42.4	Short term aging		P
42.5	Humidity conditioning		P
43	Power Input Test		P
43.1	The power input to an appliance marked with a rating of 50 watts or less shall be within the inclusive range of 75 – 110 percent of that rating. If the marked rating is greater than 50 watts, the power input shall be within the inclusive range of 90 – 110 percent of that rating.		P
43.2	With respect to 43.1, the wattage of an appliance marked with its electrical rating only in amperes and volts will be assumed to be the product of those two values.		P

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
43.3	The power input to the appliance is to be measured with the appliance at operating temperature under full-load conditions, and while connected to a circuit of a voltage in accordance with 44.1.13. Control switches or the equivalent, if provided, are to be set to give the maximum power input. For an appliance having a preheat cycle of operation as defined in 5.33, the maximum input value measured during the preheat cycle, with the appliance at room temperature at the beginning of the measurement, is to be used to determine compliance with the requirement specified in 43.1		P
	Exception: The power input of an appliance that uses a positive temperature coefficient (PTC) heating element shall be measured 1 minute after it has become energized.		P
44	Normal Temperature Test		P
44.1	All appliances		P
44.2	Wax depilatory appliances		N/A
44.3	Heated air curling irons and brushes		P
44.4	Hair-drying appliances		N/A
44.5	Hand-supported hair dryers		N/A
45	Dielectric Voltage-Withstand Test		P
46	Abnormal Operation Tests		P
46.1	General		P
46.2	Hair dryers – drape test		N/A
46.3	Hair dryer locked rotor test		N/A
46.4	Hand-supported hair dryers		N/A
46.5	Dual-voltage appliances		N/A
46.6	All appliances – short-circuit, stall tests		P
46.7	Curling Iron heater – short-circuit test		N/A
46.8	Bonnet-type hair dryers – hair entanglement test		N/A
46.9	Wax depilatory appliances		N/A
46.10	Hair dryer immersion protective devices with convenience receptacles		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
46.11	Appliances having an automatically-controlled preheat cycle		N/A
47	Exposure to Moisture Test		N/A
48	Strain Relief Test		P
49	Cord Flexing Test		P
50	Cord Flexing Test for Appliance Leakage-Current-Interrupter (ALCI)		P
51	Test for Security of Swivel Assembly		N/A
52	Swivel Endurance Test		N/A
53	Hinge Endurance Test		N/A
54	Test of Automatic Controls		N/A
54.1	Overload		N/A
54.2	Endurance		P
55	Test of Thermal Cutoffs (Fusible Links)		P
56	Motor Control Overload Test		N/A
57	Grounding Continuity Test		N/A
58	Test for Permanence of Cord Tag for Hand-Supported Hair-Drying Appliances		N/A
58.1	General		N/A
58.2	Test conditions		N/A
58.3	Test method		N/A
59	Mounting Means Strength Test		P
60	Extended Operation Test		P
61	Heating Element Endurance Test		P
62	Test of Physical Properties of a Liquid Container, Seal, or Diaphragm		N/A
63	Label Adhesion Test		P
64	Flammability Test – Wax for Depilatory Appliances		N/A
65	Additional Testing for Hand-Supported Grooming Appliances with a Detachable Power Supply Cord and for Hand-Supported Grooming Appliances with Detachable Parts Intended to be Disconnected From Power Under Load Conditions		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
66	Thermoplastic Motor Insulation Systems		N/A
66.1	General		N/A
66.2	Abnormal conditioning		N/A
66.3	Overload-burnout conditioning		N/A
66.4	Thermal aging		N/A
67	Ozone Test		N/A
	MANUFACTURING AND PRODUCTION-LINE TESTS		--
68	Dielectric Voltage-Withstand Test		P
69	Grounding Continuity Test		N/A
69.1	Continuity of grounding connection		N/A
69.2	Electrical indicating device		P
70	Hair Dryer Power Input Test		N/A
	RATINGS		--
71	Details		--
	MARKINGS		P
72	Details		--
72.1	General		P
72.2	Body- or table-supported hood- or bonnet-type hair dryers		N/A
72.3	Dual-voltage appliances		N/A
72.4	Hand-supported hair-drying appliances		N/A
72.5	Permanently-installed wall-mounted hair dryers		N/A
72.6	Curling irons		N/A
72.7	Direct plug-in appliances		N/A
72.8	Wax depilatory appliances		N/A
72.9	Appliances with GFCIs or similar protective devices		N/A
72.10	Convenience receptacle of a hand-supported hair dryer immersion protective device		N/A
72.11	Hand-supported appliances with detachable power supply cords		N/A
	INSTRUCTION MANUALS		--
73	General		--

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
74	Instructions Pertaining to a Risk of Fire, Electric Shock, or Injury to Persons		P
75	Installation Instructions		P
76	Operating Instructions		P
77	User-Maintenance Instructions		P
	ELECTRODE-TYPE APPLIANCES		--
78	General		--
78.1	A portable electrode-type appliance designed for household use on nominal 120-volt branch circuits shall comply with all applicable requirements in this standard and the particular requirements that follow. Accessories provided for electrode-type vaporizers or heating appliances are covered under requirements for those appliances		N/A
79	Construction		N/A
79.1	An electrode-type facial steamer or attachment shall include a guard or barrier assembly (or the equivalent) to prevent emission of hot water droplets into the facial area of the appliance during intended use. The barrier assembly shall be constructed of materials acceptable for and mounted in the manner required for the enclosure of live parts.		N/A
79.2	The interposed barrier assembly may consist of two or more layers arranged to provide a baffle effect for all openings.		N/A
80	Operation Test		N/A
80.1	An electrode-type facial steamer, when subjected to the operation test specified in 80.2, shall be such that		N/A
	a) There is neither appreciable distortion nor any cracking of any of its parts, b) There is no evidence of arcing or tracking over the surface or through insulating material, c) There is no evidence of glowing or flaming, d) There is no spitting of water in the area where the user's face may be located, and e) There are no more than five fuses ruptured by a single appliance.		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
80.2	Three samples completely assembled as for intended use are to be subjected to the following test. A test solution of 4 grams of sodium chloride (NaCl) per liter of distilled water is to be prepared. The electrode portion of the appliance is to be connected to a 150-volt alternating-current supply through a 20-ampere time-delay fuse and filled to the recommended fill level from a nonconducting container with the test solution. After the current in the electrode portion has reduced to an average value of less than 20 percent of rated current of the electrode portion, the unit is to remain connected to the supply for an additional 10 minutes. Without emptying or cleaning, the unit is then to be filled to the fill level with distilled, deionized, or tap water having a resistivity greater than 20,000 ohm-centimeters. The cycling is to be continued for a total of 30 complete cycles. After the thirtieth cycle, the unit is to be de-energized and filled with tap water and then emptied. The preceding steps are to be repeated nine times starting with the filling using the saline test solution to obtain 300 cycles of operation. In cases where there is loss of solution salt, sufficient sodium chloride is to be added to the distilled, de-ionized, or tap water to prevent the operating portion of a cycle from exceeding 200 percent of the time consumed by the initial operating cycle. If the fuse blows at any time during the test, the appliance is to be emptied, filled with tap water, allowed to stand for 5 seconds, and emptied. The unit is then to be filled with the test solution, and the test continued. In each filling care should be taken to fill only to the manufacturer's recommended fill level and not to overfill the samples.		N/A
80.3	An electrode-type appliance other than specified in 80.1, when subjected to the operation test specified in 80.4, shall be such that:		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
	a) There is neither appreciable distortion nor any cracking of any of its parts, b) There is not evidence of arcing or tracking over the surface or through insulating material, c) There is not evidence of glowing or flaming, d) There is not continuous spitting of water beyond the outer perimeter of the appliance, and e) There are not more than three fuses ruptured by a single appliance.		N/A
80.4	Three samples are to be subjected to the test indicated in 80.2.		N/A
	Exception: The test solution is to be 3 grams of sodium chloride per liter of distilled water		N/A
81	Leakage Current Test		N/A
82	Disassembly and Reassembly		N/A
83	Markings		N/A
83.1	The appliance shall be marked with the following:		N/A
	a) A fill-level marking that can easily be compared with the actual water level during filling, or instructions for the use of any integral measuring container or other measuring means for filling. If the measuring container is not integral with the appliance, the amount shall be expressed in standard measurements in addition to the use of any measure provided.		N/A
	b) The word ″CAUTION ″ and the following or the equivalent: ″Shock hazard. To provide continued protection against electric shock: 1) Disconnect the supply cord before filling, rinsing, or cleaning. 2) Do not fill above the fill-mark ″ or ″Do not fill with more than ___ cups of water. ″		N/A
	c) Instructions for filling, cleaning, and rinsing the appliance and any instructions on additives to be used.		N/A
	d) Instructions to keep the appliance out of reach of children.		N/A
	e) Instructions to locate the appliance where it will not be likely to be upset		N/A

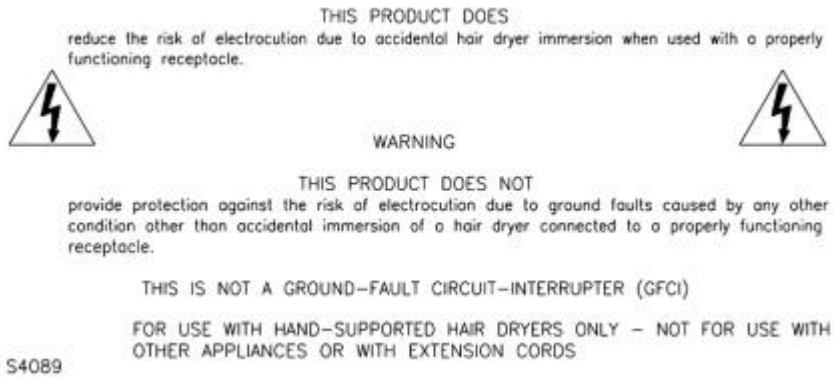
UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
83.2	An electrode-type appliance having a water reservoir or boiling chamber with a capacity of 8 ounces (23.7 mL) or less shall be marked with the word ″CAUTION ″ and the following or the equivalent: ″To reduce the risk of excessive water temperatures that may cause burns if the unit is upset, follow manufacturer's instructions on filling, cleaning, and rinsing. ″ The height of the letters in the word ″CAUTION″ shall not be less than 1/8 inch (3.2 mm), and the height of the remaining letters shall not be less than 7/64 inch (2.8 mm). For an electrode-type appliance, this marking shall be in addition to the marking specified in 83.1.		N/A
	Exception: The additional marking is not required on an electrode-type appliance that, does not release more than 2 ounces (5.9 mL) of water when filled with water in accordance with the manufacturer's instructions and placed on a 30-degree inclined plane and in the position determined most likely to result in water spillage or overflow. For purposes of this test, the appliance may be restrained on the inclined plane to avoid tipover.		N/A
83.3	Cautionary markings and instructions shall be permanent and legible and shall be located on a part that cannot be removed without impairing the operation of the appliance.		N/A
83.4	Cautionary markings and instructions intended to instruct the operator shall be legible and clearly visible to the operator in the intended use of the appliance. Other such markings for servicing instructions should be legible and clearly visible when such servicing is being accomplished. Markings intended to reduce the risk of injury to persons shall be prefixed by the word ″CAUTION ″ in letters no less than 3/32 inch (2.4 mm) in height		N/A
83.5	A marking that is required to be permanent shall be:		N/A
	a) Molded, die-stamped, paint-stenciled, stamped, or etched on metal;		N/A
	b) Indelibly stamped lettering; or		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
	c) A pressure-sensitive label secured by adhesive that meets the requirements for the particular application (see 63.1 – 63.7). Ordinary usage, handling and storage of the appliance is to be considered in the determination of the permanence of the marking.		N/A
84	Operating Instructions		N/A
	WALL-HUNG HAIR DRYERS		--
85	Scope		N/A
85.1	These requirements cover cord-connected hair dryers rated 250 volts or less that consist of two non-detachable units– a hand unit and a wall unit with a length of flexible cord between the units. The hand unit provides the hair drying function and is supported by the user's hand during intended use. The wall unit is intended for hanging on a wall and has means for holding or supporting the hand unit when not in use.		N/A
86	General		N/A
86.1	The appliance shall comply with the applicable requirements specified in Sections 2 – 77 and with the requirements specified in Sections 87 – 91. The hand unit shall comply with the applicable requirements for a hand-supported hair dryer. If there is a discrepancy between the requirements in Sections 87 – 91 and those in Sections 2 – 77, the requirements in Sections 87 – 91 shall apply.		N/A
87	Construction		N/A
87.1	The appliance shall be provided with all the hardware necessary for hanging the wall unit in accordance with the installation instructions. The construction shall be such that the appliance withstands the force as described in 59.1 without damage to the supporting surface, to the hanging means, or to the appliance that results in the risk of electric shock, fire, or injury to persons.		N/A
87.2	The wall unit shall engage the hanging means on the wall. Dismounting the wall unit from the hanging means shall not require the use of a tool but shall require a positive and deliberate action by the user.		N/A

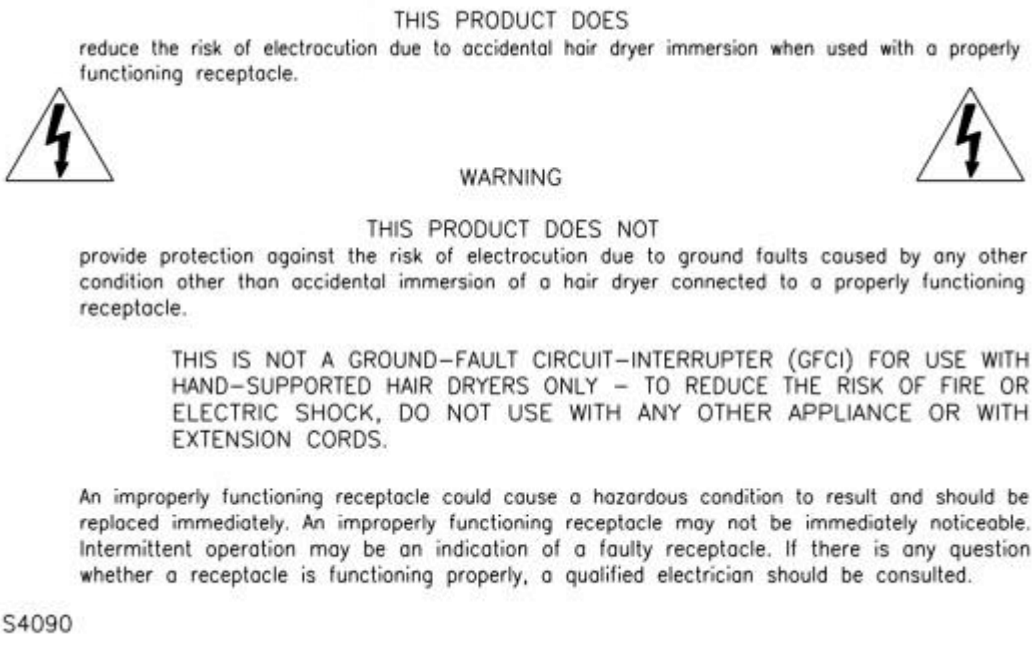
UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
87.3	The appliance shall be constructed so that the hand unit cannot be energized while stored in the wall unit as intended.		N/A
87.4	The switch provided in accordance with 23.1.1 shall be in the wall unit, in the hand unit, or in both the wall unit and the hand unit. The switch shall be located so that it is readily accessible to the user to turn off the unit.		
87.5	A GFCI or other immersion protective device shall be integral with the attachment plug of the wall-hung hair-drying appliance power supply cord.		N/A
	Exception: Immersion protection shall comply with the requirements in Exception No. 2 of 7.5		N/A
88	Performance		N/A
88.1	As part of the investigation, a wall-hung hair dryer shall be trial-installed to determine that the installation is feasible and that the instructions are detailed and correct.		N/A
88.2	The appliance shall comply with the Immersion Protection Trip Time Measurement Test, Section 40. The hand unit and wall unit shall be immersed simultaneously and the hand unit shall be off its holder. Power switches shall be tested in both the ″on″ position and the ″off″ position.		N/A
	Exception No. 1: A wall-hung hair dryer protected by a GFCI need not be subjected to this test		N/A
	Exception No. 2: A wall-hung hair dryer provided with a protective device as described in the Exception to 7.4 need not be subjected to this test.		N/A
89	Markings		N/A
89.1	A wall unit or a hanging bracket shall be permanently marked where readily visible during installation in letters having a contrasting color to the background with the word ″DANGER ″ and the following or the equivalent: ″To reduce risk of death by electric shock, do not install where unit can fall into a tub or sink. ″ The height of the letters in the word ″DANGER″ shall be no less than 1/8 inch (3.2 mm), and the height of the remaining letters shall not be less than 1/16 inch (1.6 mm). Block lettering shall be used for all words.		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
	Exception: The marking is not required to be in contrasting colors if the letters are embossed or indented to a depth of not less than 0.020 inch (0.5 mm).		N/A
89.2	A warning tag that is in compliance with 72.4.2 – 72.4.4 shall be provided; however, use of following items are optional:		N/A
	a) ″Always 'unplug it' after use.″ See 72.4.2(a).		N/A
	b) The heading ″unplug it.″ See Figure 72.1.		N/A
90	Use and Care Instructions		N/A
90.1	Warning instructions in compliance with Instructions Pertaining to a Risk of Fire, Electric Shock, or Injury to Persons, Section 74, shall be provided, with the following modifications:		N/A
	a) Item 1 under DANGER of Important Safety Instructions (see 74.6) shall be replaced with ″Do not install unit where it can fall into a tub or sink. Always return hand unit to wall unit after using.″		N/A
	b) Item 1 under WARNING of Important Safety Instructions (see 74.6) need not be provided.		N/A
	c) The following statement or the equivalent shall be included after Item 9 under WARNING of Important Safety Instructions (see 74.6): ″Periodically inspect the wall unit for secure mounting.″		N/A
91	Installation Instructions		N/A
91.1	Installation instructions for hanging of the wall unit as intended shall be packaged with a wall-hung hair dryer. The instructions shall include a list of the items provided (such as screws, anchors, brackets, and similar hardware); the tools needed; and the step-by-step instructions for preparation of mounting surface, application of the hanging hardware, method of hanging the wall unit, and the like.		N/A
91.2	The installation instructions shall include the warning specified in 89.1, preceding the detailed instructions specified in 91.1.		N/A
	SUPPLEMENT SA - HAIR DRYER ACCESSORIES		--
SA1	Scope		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
SA1.1	These requirements cover hair dryer accessories defined as direct plug-in devices intended to be used only with hand-supported hair dryers to reduce the risk of electrocution due to accidental immersion in water. These devices function to interrupt all conductors of the electric circuit to the connected hair dryer when the leakage current to ground exceeds a predetermined value that is less than that required to operate the overcurrent protective device of the supply circuit. At the line side, a hair dryer accessory is provided with a polarized blade for use with a 15-ampere, 125-volt convenience receptacle. At the load side, a polarized 15-ampere, 125-volt receptacle outlet is provided for connection of a hand-supported hair dryer		N/A
SA2	**General**		N/A
SA2.1	A hair dryer accessory shall comply with the requirements specified in this Supplement and with the applicable requirements specified in the Standard for Ground-Fault Circuit-Interrupters, UL 943.		N/A
	Exception: A hair dryer accessory is not required to comply with the high-resistance ground fault tests in UL 943 when:		N/A
	a) There is an open circuit in any one power conductor or		N/A
	b) The circuit conductor that is normally grounded at the service only is also grounded at a point in the load circuit.		N/A
SA3	Markings		N/A
SA3.1	General		N/A
SA3.1.1	Hair dryer accessories, packaging, and instruction sheets shall contain markings that are readily visible in letters having a color contrasting with the color of the background. The height of the uppercase letters shall be no less than 1/8 inch (3.2 mm), and the height of the lowercase letters shall not be less than 1/16 inch (1.6 mm).		N/A
SA3.2	Hair dryer accessories		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict
SA3.2.1	The face of a hair dryer accessory shall be permanently marked: "FOR USE WITH HAND-SUPPORTED HAIR DRYERS ONLY – NOT FOR USE WITH OTHER APPLIANCES OR WITH EXTENSION CORDS. "		N/A
	Exception: If the marking is too large to be placed on the face of the accessory, it may be located on another surface that is visible after installation if the face of the accessory is marked "HAIR DRYER ONLY."		N/A
SA3.3	Product packaging		N/A
SA3.3.1	The packaging of a hair dryer accessory shall be marked:		N/A
			
SA3.4	Instruction sheet		N/A
SA3.4.1	The instruction sheet of a hair dryer accessory shall include the following:		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict



THIS PRODUCT DOES

reduce the risk of electrocution due to accidental hair dryer immersion when used with a properly functioning receptacle.

WARNING

THIS PRODUCT DOES NOT

provide protection against the risk of electrocution due to ground faults caused by any other condition other than accidental immersion of a hair dryer connected to a properly functioning receptacle.

THIS IS NOT A GROUND-FAULT CIRCUIT-INTERRUPTER (GFCI) FOR USE WITH HAND-SUPPORTED HAIR DRYERS ONLY - TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT USE WITH ANY OTHER APPLIANCE OR WITH EXTENSION CORDS.

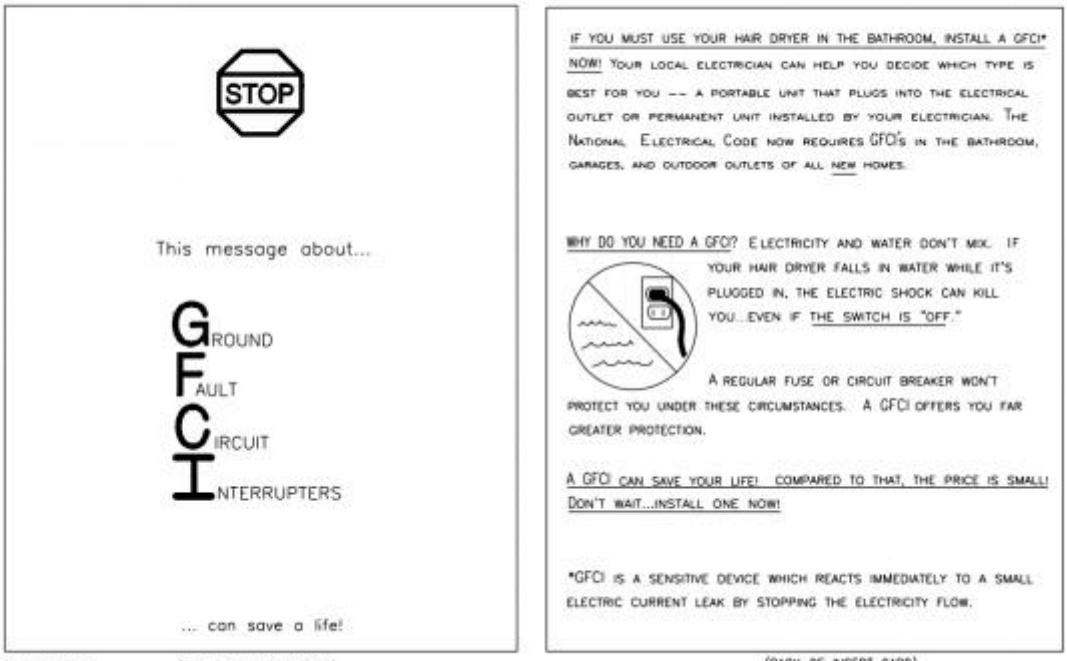
An improperly functioning receptacle could cause a hazardous condition to result and should be replaced immediately. An improperly functioning receptacle may not be immediately noticeable. Intermittent operation may be an indication of a faulty receptacle. If there is any question whether a receptacle is functioning properly, a qualified electrician should be consulted.

S4090

SA4	Instructions		N/A
SA4.1	Instructions shall be provided for using a hair dryer (whenever it is used in bathrooms) on a circuit protected by a ground-fault circuit-interrupter. Information shall be included describing what a ground-fault circuit-interrupter is, how it reduces the risk of death by electric shock, the types available (portable and permanent), and a statement that the permanent types are to be installed by a qualified electrician. Figure SA4.1 shows an example of these instructions. The instructions shall also consist of a graphical symbol (such as the octagon on the front of the insert card shown in Figure SA4.1), and a referent (such as the word ″stop″ within the octagon), or equivalent wording. These instructions shall be a permanent part of the instruction sheet or on a stuffer sheet.		N/A

UL 859			
Clause	Requirement + Test	Result - Remark	Verdict

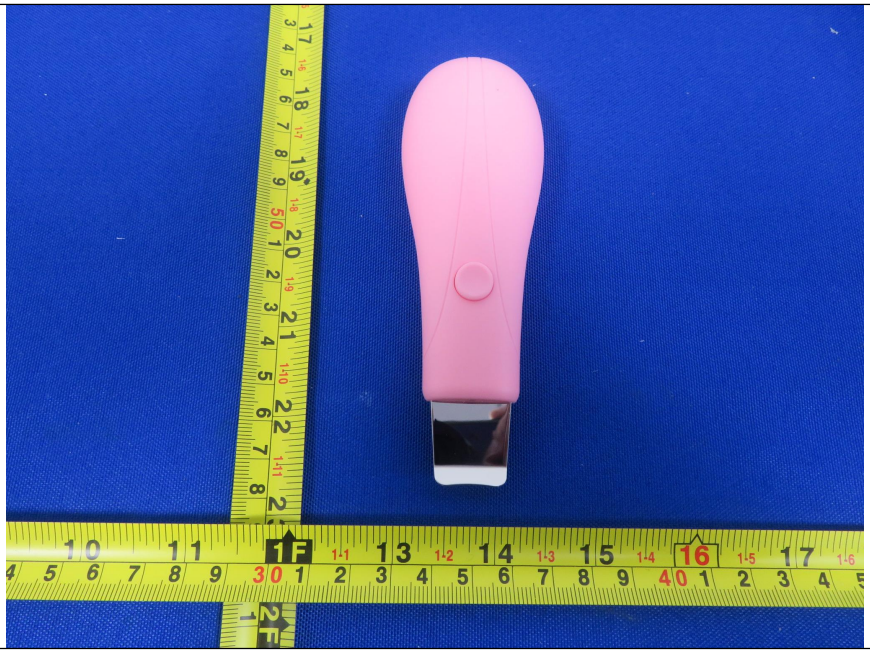
Figure SA4.1
Example of ground-fault circuit-interrupter instructions



SA4.2	The instruction sheet shall be provided with instructions on the proper use of the accessory. These instructions shall include information on the purpose of the test and reset buttons of the accessory, and specify the frequency of testing. The instruction sheet shall also describe the indication of proper functioning of the accessory and instruct the user to not reuse a hair dryer which has been immersed, but to return it to a service center for examination and repair.		N/A

Attachment No.2 **Product Photos**

Details of: Fig.1



Details of: Fig.2

Attachment No.2 **Product Photos**

Details of: Fig.3

- End of test report -