



UL 495

STANDARD FOR SAFETY

Power-Operated Dispensing Devices for LP-Gas

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UL Standard for Safety for Power-Operated Dispensing Devices for LP-Gas, UL 495

Fourth Edition, Dated April 7, 2016

Summary of Topics:

The new edition of UL 495 is being issued to revise the Moist Ammonia-Air Stress Cracking Test.

The revised requirements are substantially in accordance with Proposal(s) on this subject dated February 12, 2016.

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APRIL 7, 2016

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UL 495

Standard for Power-Operated Dispensing Devices for LP-Gas

First Edition – February, 1986

Second Edition – November, 1994

Third Edition – March, 2000

Fourth Edition

April 7, 2016

This UL Standard for Safety consists of the Fourth Edition.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <http://csds.ul.com>.

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INTRODUCTION

1 Scope

1.1 These requirements cover power-operated dispensing devices intended to be installed outside of buildings and used at service stations for dispensing liquefied petroleum gas used as an engine fuel. Requirements for installation and use of these dispensing devices are included in the Liquefied Petroleum Gas Code (National Fire Codes, vol 2), NFPA 58, and the National Electrical Code, NFPA 70.

1.2 These requirements cover wiring methods used to install or interconnect control equipment when the equipment is located directly on or within the housing of the dispensing device.

1.3 These requirements do not cover control equipment that may authorize, monitor, or interrupt operation of a power-operated dispensing device. Such equipment includes panel mounted equipment located adjacent to the dispensing device, remote consoles located inside a permanent structure, and auxiliary equipment physically attached to the dispensing device or enclosed by the pedestal and housing.

2 General

2.1 Components

2.1.1 Except as indicated in 2.1.2, a component of a product covered by this standard shall comply with the requirements for that component. See Appendix A for a list of standards covering components used in the products covered by this standard.

2.1.2 A component is not required to comply with a specific requirement that:

- a) Involves a feature or characteristic not required in the application of the component in the product covered by this standard, or
- b) Is superseded by a requirement in this standard.

2.1.3 A component shall be used in accordance with its rating established for the intended conditions of use.

2.1.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

2.2 Units of measurement

2.2.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

2.3 Undated references

2.3.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

3 Glossary

3.1 For the purpose of this standard the following definitions apply.

3.2 BASE – That part of the assembly that is intended to be secured to the foundation on which the dispensing device will be installed.

3.3 CLASS I HAZARDOUS LOCATIONS – Locations in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures. For the purpose of these requirements Class I hazardous locations are further defined as follows:

- a) Class I, Group D, Division 1 – The entire space within a dispenser enclosure and 18 inches (457 mm) horizontally from the enclosure exterior up to an elevation 4 feet (1.2 m) above the dispenser base.
- b) Class I, Group D, Division 2 – The area up to 18 inches above grade and from 18 inches to 20 feet (6.1 m) horizontally from any edge of the dispenser enclosure.

3.4 ELECTRICAL CIRCUITS

a) High-Voltage Circuit – A circuit involving a potential of not more than 600 volts and having circuit characteristics in excess of those of a low-voltage or Class 2 circuit.

b) Low-Voltage Circuit – A circuit involving a potential of not more than 30 volts alternating current (rms) (42.4 volts peak or direct current), and:

- 1) Supplied by a Class 2 transformer, or by a battery, by a battery and fixed impedance, or by a transformer and fixed impedance each of which, as a unit, is in compliance with what is required for a Class 2 transformer or
- 2) Limited to a maximum of 100 volt-amperes. A circuit derived from a high-voltage circuit, by connecting resistance in series with the supply circuit as a means of limiting the voltage and current, is not considered to be a low-voltage circuit.

c) Intrinsically Safe Circuit – A circuit incapable of releasing sufficient electrical energy under normal or abnormal conditions to cause ignition of a specific hazardous atmospheric mixture. Abnormal conditions include unintentional damage to any part of the equipment or wiring, insulation or other malfunction of electrical components, application of overvoltage, adjustment and maintenance operations, and other similar conditions.

3.5 HOUSING – That section of a dispensing device that encloses and is intended to protect operating parts, control mechanisms, or other mechanical or electrical components, the damage of which would:

- a) Render the device incapable of being operated as intended,
- b) Lead to tampering,
- c) Introduce the possibility of escape of liquid, or
- d) Expose bare live electrical parts.

3.6 INTENDED CARE AND USAGE – Intended care means tasks such as lubrication and cleaning. Intended usage covers the manipulations involved in starting the dispenser, dispensing the liquid, and restoring the dispenser to its standby condition.

3.7 PANEL – A principal section of a housing or enclosure. A mounting arrangement for control and other components.

3.8 PEDESTAL – That part of the structure above the base that supports the component units, and to which they are attached.

3.9 PUMPING UNIT – A power-operated pump for LP-Gas that may incorporate a strainer, bypass valve, relief device, or other auxiliary parts.

CONSTRUCTION

MECHANICAL EQUIPMENT

4 General

4.1 A power-operated dispensing device typically includes a base, housing, pedestal, power-operated pump, pressure-relief device, strainer, meter, valves as required, hose, hose-nozzle valve, motor control, locking mechanism, piping, and electrical wiring and fixtures.

4.2 A dispensing device may be of the self-contained type with components mounted in a common pedestal and housing, or it may be comprised of separately housed assemblies intended for installation as individual units but in conjunction with each other.

4.3 A dispensing device, other than one including a hose reel or weighted loop in its assembly, may be furnished without the hose.

4.4 The construction of a dispensing device shall be such that parts can be replaced or reassembled to function as intended after being dismantled.

4.5 A dispensing device shall incorporate provisions for support independent of piping, tubing, or conduit that may be connected thereto.