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# UL 87

## **STANDARD FOR SAFETY**

### **Power-Operated Dispensing Devices for Petroleum Products**

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UL Standard for Safety for Power-Operated Dispensing Devices for Petroleum Products, UL 87

Twelfth Edition, Dated March 24, 2016

### **Summary of Topics**

***This revision of UL 87 dated September 4, 2019 includes the following changes in requirements:***

***Editorial revisions and clarification of requirements***

***Adding zones to the different divisions***

***Revisions to hose nozzle requirements***

***Harmonizing text with UL 87A and UL 87B requirements for Marking and Instructions***

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

The new and revised requirements are substantially in accordance with Proposal(s) on this subject dated May 3, 2019 and July 12, 2019.

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**MARCH 24, 2016**

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**UL 87**

**Standard for Power-Operated Dispensing Devices for Petroleum Products**

The first and second editions were titled Power-Operated Discharge Devices. The third through sixth editions were titled Power-Operated Dispensing Devices for Flammable Liquids.

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**Twelfth Edition**

**March 24, 2016**

This UL Standard for Safety consists of the Twelfth edition including revisions through September 4, 2019.

The Department of Defense (DoD) has adopted UL 87 on March 11, 1991. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

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 <https://csds.ul.com>.

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## INTRODUCTION

### 1 Scope

1.1 These requirements apply to power-operated dispensing devices for petroleum products such as gasoline for use as motor fuel. Requirements for the installation and use of these dispensing devices are included in the Automotive and Marine Service Station Code, NFPA 30A, and the National Electrical Code, NFPA 70.

1.2 These requirements apply to wiring methods used to install or interconnect such control equipment when the equipment is located directly on or within the housing of the dispensing device. These requirements do not apply to 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 typical 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 AIR GAP – A minimum of 1 inch (25.4 mm) free air space provided between the planes of Division 1, Division 2, Zone 1 or Zone 2 hazardous locations and an unclassified area of a dispensing device.

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

3.4 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, as applied to dispensing systems of other than the overhead type, the following classified areas are further defined. Such areas for overhead type systems shall be as specified in the Code for Motor Fuel Dispensing Facilities and Repair Garages, NFPA 30A. The area of the dispensing system covered by these requirements is the envelope defined by the maximum outer dimensions.

a) Class I, Group D, Division 1 or Zone 1 –

1) The area within a dispenser housing up to 4 feet (1.2 m) vertically above the base, except for that area defined as Division 2, Zone 2, or unclassified.

2) Any area within a nozzle boot.

b) Class I, Group D, Division 2 or Zone 2 –

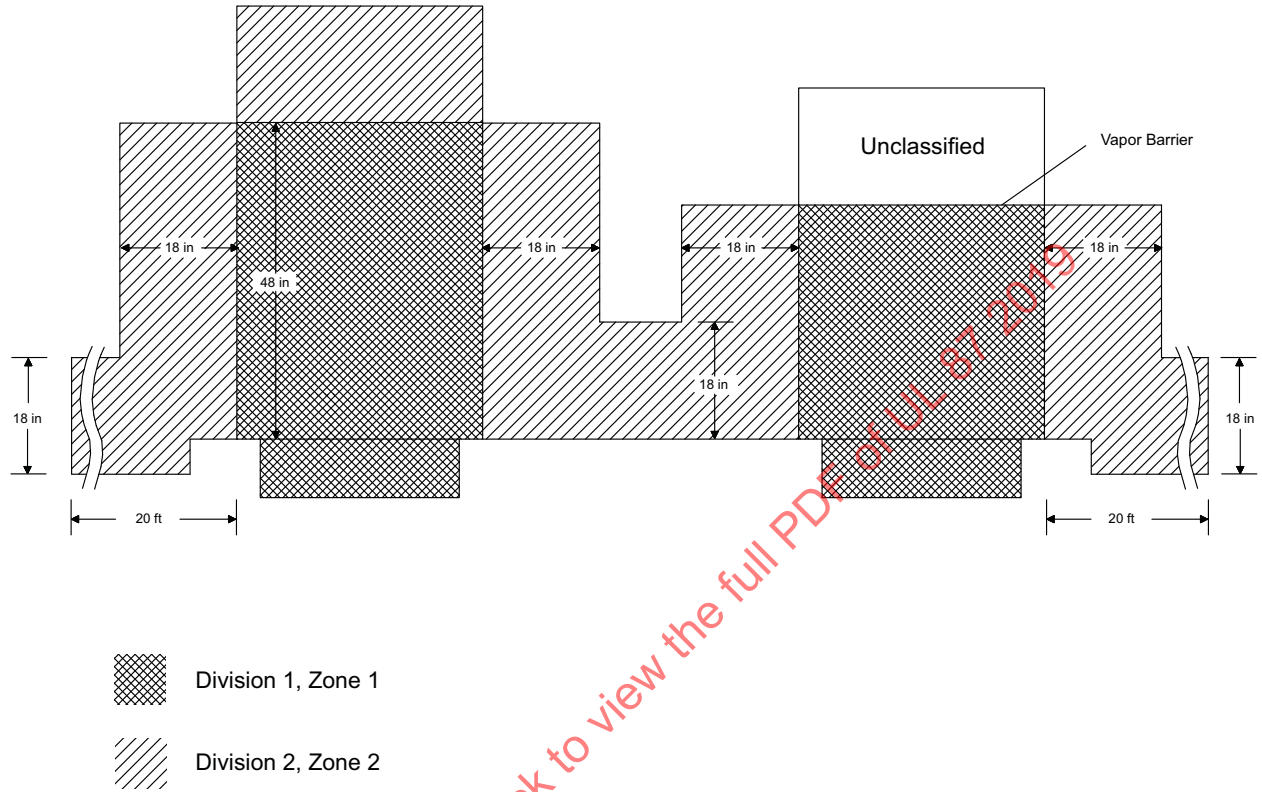
1) Areas within a dispenser housing above the Division 1 or Zone 1 area.

2) The area surrounding the dispenser housing within 18 inches (46 cm) horizontally in all directions from the Division 1 or Zone 1 area located within the housing.

3) The area within 18 inches horizontally, in all directions from the opening of a nozzle boot not isolated by a vapor-tight partition, except that the area is not required to be extended around a 90-degree or greater corner.

See Figures 3.1 and 3.2 for an illustration of Class I and Zone hazardous locations.

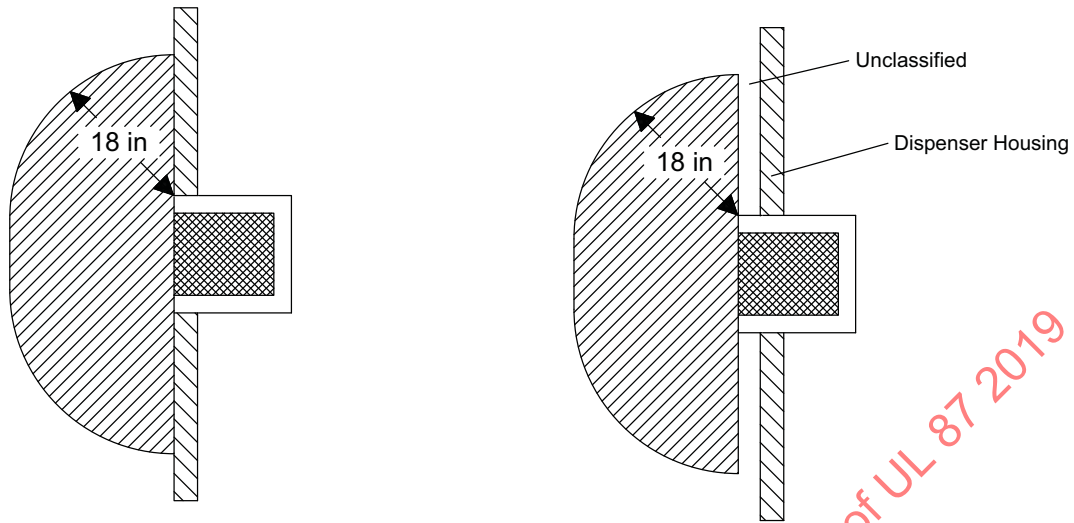
**Figure 3.1**  
**Hazardous location classifications within a typical dispenser**  
Dispenser Without Vapor Barrier Construction      Dispenser With Vapor Barrier Construction



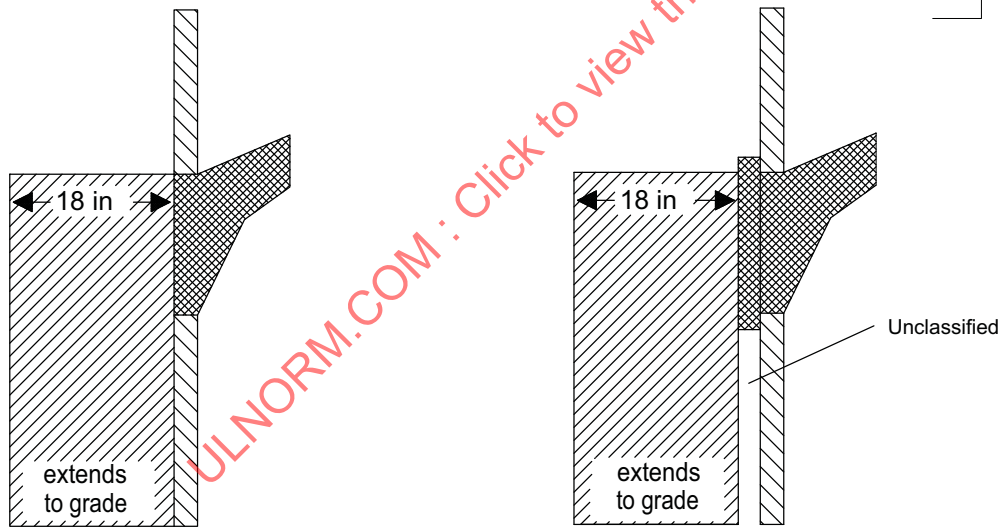
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**Figure 3.2**  
**Hazardous location classifications associated with a hose nozzle valve boot**  
**TOP VIEW**



**SIDE VIEW**



Unclassified area might be a Division 2 or Zone 2 area if there is a Division 1 or Zone 1 area on the other side of the housing

-  Division 1 or Zone 1
-  Division 2 or Zone 2