



# UL 87B

## STANDARD FOR SAFETY

Power-Operated Dispensing Devices  
for Diesel Fuel, Biodiesel Fuel,  
Diesel/Biodiesel Blends with Nominal  
Biodiesel Concentrations up to 20  
Percent (B20), Kerosene, and Fuel Oil

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UL Standard for Safety for Power-Operated Dispensing Devices for Diesel Fuel, Biodiesel Fuel, Diesel/Biodiesel Blends with Nominal Biodiesel Concentrations up to 20 Percent (B20), Kerosene, and Fuel Oil, UL 87B

First Edition, Dated February 13, 2015

### **Summary of Topics**

***This revisions of ANSI/UL 87B dated January 14, 2020 includes the following:***

- Adding renewable diesel blends; [1.2](#)***
- Adding zones to the different divisions; [3.2](#), [3.4](#), [3.19](#), [3.20](#), [7.6](#), [24.7](#), [24.11](#), [Section 23](#), [Figure 7.1](#), and [Figure 8.1](#)***

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 revised requirements are substantially in accordance with Proposal(s) on this subject dated August 9, 2019 and October 25, 2019.

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**ANSI/UL 87B-2019**

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**UL 87B**

**Standard for Power-Operated Dispensing Devices for Diesel Fuel, Biodiesel Fuel, Diesel/Biodiesel Blends with Nominal Biodiesel Concentrations up to 20 Percent (B20), Kerosene, and Fuel Oil**

Prior to the first edition, the requirements for the products covered by this standard were included in the Outline of Investigation for Power-Operated Dispensing Devices for Diesel Fuel, Biodiesel Fuel, Diesel/Biodiesel Blends with Nominal Biodiesel Concentrations up to 20 Percent (B20), Kerosene, and Fuel Oil, UL 87B.

**First Edition**

**February 13, 2015**

This ANSI/UL Standard for Safety consists of the First Edition including revisions through January 14, 2020.

The most recent designation of ANSI/UL 87B as an American National Standard (ANSI) occurred on December 12, 2019. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

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, rated 600 V ac or less, for use with fuels. Fuels, as defined by these requirements, include one or more of the fuels described in [1.2](#).

1.2 Dispensing devices covered by these requirements are intended for use with one or more of the following:

- a) Diesel fuel, which includes renewable diesel and diesel fuel/biodiesel blends with nominal biodiesel concentrations up to and including 5 percent (B0 – B5) formulated in accordance with the Standard Specification for Diesel Fuel Oils, ASTM D975.
- b) Diesel/biodiesel, renewable diesel/biodiesel blends, with nominal biodiesel concentrations from 5 percent up to 20 percent (B6 – B20) formulated in accordance with the Standard Specification for Diesel Fuel Oil, Biodiesel Blends (B6 – B20), ASTM D7467.
- c) Biodiesel (B99.9/B100) formulated in accordance with the Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels, ASTM D6751.
- d) Kerosene formulated in accordance with the Standard Specification for Kerosene, ANSI/ASTM D3699.
- e) Fuel Oil (heating oil) formulated in accordance with the Standard Specification for Fuel Oils, ASTM D396.

1.3 Requirements for the installation and use of dispensing devices are included in the Code for Motor Fuel Dispensing Facilities and Repair Garages, ANSI/NFPA 30A, and the National Electrical Code, ANSI/NFPA 70.

1.4 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.

1.5 These requirements do not apply to control equipment that may authorize, monitor, or interrupt operation of a power-operated dispensing device, nor other auxiliary equipment. These products would be covered under the Standard for Control Equipment for Use with Flammable Liquid Dispensing Devices, UL 1238.

1.6 These requirements do not cover dispensing devices for use with gasoline or gasoline/ethanol blends of any concentration. These dispensing devices are covered under the Standard for Power-Operated Dispensing Devices for Gasoline and Gasoline/Ethanol Blends with Nominal Ethanol Concentrations up to 85 Percent (E0 – E85), UL 87A.

1.7 These requirements do not cover dispensing devices for use with LP-Gas, which are covered under the Standard for Power-Operated Dispensing Devices for LP-Gas, UL 495.

1.8 These requirements do not cover equipment intended for diesel/biodiesel blends with a biodiesel concentration between B20 and B99.9/B100.

## 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.

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 – The part of the assembly that is intended to be secured to the foundation on which the device will be installed.

3.4 CLASS I OR ZONE 1 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. 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.