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JOINT CANADA – UNITED STATES NATIONAL STANDARD

ANSI/CAN/UL/ULC 79B:2024

STANDARD FOR SAFETY

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

Approved American National Standard

ANSI/UL 79B-2024

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SCC FOREWORD

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UL Standard for Safety for Power-Operated Pumps for Diesel Fuel, Biodiesel Fuel, Diesel/Biodiesel Blends with Nominal Biodiesel Concentrations up to 20 Percent (B20), Kerosene, and Fuel Oil, ANSI/CAN/UL/ULC 79B

Second Edition, Dated May 31, 2024

Summary of Topics

This new Second Edition of ANSI/CAN/UL/ULC 79B dated May 31, 2024 is being issued as a new joint US/Canada Standard reflecting the latest ANSI and SCC approval dates and incorporating the proposal dated November 17, 2023 and March 15, 2024.

The new requirements are substantially in accordance with Proposal(s) on this subject dated November 17, 2023 and March 15, 2024.

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ANSI/UL 79B-2024

MAY 31, 2024

ANSI/CAN/UL/ULC 79B:2024

Standard for Power-Operated Pumps 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 Pumps for Diesel Fuel, Biodiesel Fuel, Diesel/Biodiesel Blends with Nominal Biodiesel Concentrations up to 20 Percent (B20), Kerosene, and Fuel Oil, UL 79B.

First Edition – February, 2015

Second Edition

May 31, 2024

This ANSI/CAN/UL/ULC Safety Standard consists of the Second Edition.

The most recent designation of ANSI/UL 79B as an American National Standard (ANSI) occurred on May 31, 2024. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, Preface or SCC Foreword.

This Standard has been designated as a National Standard of Canada (NSC) on May 31, 2024.

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Preface

This is the Second Edition of ANSI/CAN/UL/ULC 79B, Standard for Power-Operated Pumps for Diesel Fuel, Biodiesel Fuel, Diesel/Biodiesel Blends with Nominal Biodiesel Concentrations up to 20 Percent (B20), Kerosene, and Fuel Oil.

ULSE is accredited by the American National Standards Institute (ANSI) and the Standards Council of Canada (SCC) as a Standards Development Organization (SDO). ULC Standards is accredited by the Standards Council of Canada (SCC) as a Standards Development Organization (SDO).

This Standard has been developed in compliance with the requirements of ANSI and SCC for accreditation of a Standards Development Organization.

This ANSI/CAN/UL/ULC 79B Standard is under continuous maintenance, whereby each revision is approved in compliance with the requirements of ANSI and SCC for accreditation of a Standards Development Organization. In the event that no revisions are issued for a period of four years from the date of publication, action to revise, reaffirm, or withdraw the standard shall be initiated.

Annex A, identified as Normative, forms a mandatory part of this Standard.

In Canada, there are two official languages, English and French. All safety warnings must be in French and English. Attention is drawn to the possibility that some Canadian authorities may require additional markings and/or installation instructions to be in both official languages.

This Second Edition joint American National Standard and National Standard of Canada is based on, and now supersedes, the First Edition of UL 79B.

Requests for interpretation of this Standard should be sent to ULC Standards. The requests should be worded in such a manner as to permit a “yes” or “no” answer based on the literal text of the requirement concerned.

Comments or proposals for revisions on any part of the Standard may be submitted at any time. Proposals should be submitted via a Proposal Request in the Collaborative Standards Development System (CSDS) at https://csds.ul.com.

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This Edition of the Standard has been formally approved by the Technical Committee (TC) on Power-Operated Pumps for Petroleum Dispensing Products, TC 79.

This list represents the TC 79 membership when the final text in this Standard was balloted. Since that time, changes in the membership may have occurred.

TC 79 Membership

Name	Representing	Interest Category	Region
M. Ebert	Fill-Right Company	Producer	USA
M. Kawate	UL Standards & Engagement	TC Project Manager – Non-voting	USA
W. Koch	Technology Resources	General Interest	USA
P. Legault	Integrated Review Services	General Interest	Canada
J. Leonard	Veeder Root	Producer	USA
M. Mailvanganam	self	General Interest	Canada
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J. Thompson	Association for Petroleum & Explosives Admin	General Interest	United Kingdom
L. Werner	UL Standards & Engagement	TC Chair – Non-voting	Canada
E. Wolff-Klammer	UL Solutions	Testing and Standards Org.	USA

International Classification for Standards (ICS): 75.200, 23.080, 75.160.20

For information on ULSE Standards, visit https://www.shopulstandards.com, call toll free 1-888-853-3503 or email us at ClientService@shopULStandards.com.

This Standard is intended to be used for conformity assessment.

The intended primary application of this Standard is stated in its scope. It is important to note that it remains the responsibility of the user of the standard to judge its suitability for this particular application.

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INTRODUCTION

1 Scope

1.1 These requirements cover products described in 1.3 when used with one or more of the fuels described in 1.4.

1.2 Pumps for Diesel Fuel, Biodiesel Fuel, Diesel/Biodiesel Blends with Nominal Biodiesel Concentrations up to 20 Percent (B20), Kerosene, and Fuel shall be constructed to comply with the following:

a) The requirements defined in the Standard for Power-Operated Pumps for Petroleum Dispensing Products, UL/ULC 79; and

b) The requirements in this Standard.

1.3 This Standard sets forth minimum requirements for electrically-, hydraulically-, or pneumatically-driven power-operated pumps for use with petroleum products in the following applications:

a) Self-contained dispensing devices and submerged pumps used in storage tanks that provide the fuel to remote control dispensing devices. They are intended for operation at discharge pressures of 345 kPa (50 psig), or the marked maximum discharge pressure rating, when less, with the ambient and liquid temperature within the range of –29 °C (–20 °F) to 52 °C (125 °F).

b) Dispensing systems to transfer the fuel from a tank or container to a vehicle or another container. They are intended for operation at the marked maximum discharge pressure, or less, with the ambient and liquid temperature within the range of –29 °C (–20 °F) to 52 °C (125 °F).

c) Vapor recovery applications for dispensing devices. They are intended to operate under a vacuum at the inlet and a maximum discharge pressure of 345 kPa (50 psig), or marked discharge pressure, whichever is less.

1.4 Pumps covered by these requirements are intended for use with one or more of the following:

a) Diesel Fuel, which includes renewable diesel and diesel/biodiesel blends with nominal biodiesel concentrations up to 5 % (B0 – B5) formulated in accordance with the Standard Specification for Diesel Fuel Oils, ASTM D975.

b) Diesel/biodiesel, renewable diesel/biodiesel blends, blends with nominal biodiesel concentrations from 5 % up to 20 % (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 Kerosine, ASTM D3699.

e) Fuel Oil (Heating Oil) formulated in accordance with the Standard Specification for Fuel Oils, ASTM D396.

1.5 Products covered by this Standard are intended to be installed and used in accordance with the applicable Codes and Regulations as determined by the Authority Having Jurisdiction (AHJ), such as, but not limited to:

a) In the United States:

1) Flammable and Combustible Liquids Code, NFPA 30;

2) Code for Motor Fuel Dispensing Facilities and Repair Garages, NFPA 30A;

3) National Electrical Code, NFPA 70.

b) In Canada:

1) Canadian Electrical Code, Part I Safety Standard for Electrical Installations, CSA C22.1;

2) National Fire Code of Canada;

3) Provincial or other Regulations.

1.6 These requirements do not cover:

a) Oil burner pumps, which are evaluated in accordance with:

1) In the United States: Requirements defined in the Standard for Pumps for Oil-Burning Appliances, UL 343.

2) In Canada: Requirements defined in the Guide for Investigation of Pumps for Oil-Burning Appliances, ULC/ORD-C343.

b) Pumps for engine-powered automotive equipment.

c) Pumps for marine use which are evaluated under the Standard for Mechanically and Electrically Operated Fuel Pumps for Marine Use, UL 1130.

d) Pumps for use in chemical, petrochemical, or petroleum processing plants; utility power plants; petroleum production facilities; pipeline pump stations; pipeline or marine terminals; or bulk plant distribution and related facilities.

e) Pumps used in mobile applications, such as on tank trucks, portable tanks, or portable containers mounted on vehicles.

f) Pumps rated more than 600 volts.

g) Pump assemblies also provided with a flammable liquid meter or electrically-operated shutoff valve, which are evaluated in accordance with:

1) In the United States: The requirements defined in the 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, UL 87B.

2) In Canada: The requirements defined in the Standard for Power-Operated Dispensing Devices for Flammable Liquids, CSA B346.

h) Pumps intended for use with gasoline and gasoline/ethanol blends which are evaluated in accordance with the Standard for Power-Operated Pumps for Gasoline and Gasoline/Ethanol Blends with Nominal Ethanol Concentrations up to 85 Percent (E0 – E85), UL/ULC 79A.

1.7 The pump assembly may be constructed such that it provides for the installation and use of a hose and hose nozzle valve.

2 Components

2.1 Except as indicated in 2.2, a component of a product covered by this Standard shall comply with the requirements for that component.

2.2 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.

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

2.4 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.

2.5 Electrical components, including motors and wiring, when incorporated by a manufacturer in an assembly with a pump, and including the means provided in the pump assembly for electrical connections, shall comply with the requirements for equipment for use in hazardous locations, Class I, Group D, NFPA 70, Articles 500 and 501, in the United States; or CSA C22.1, in Canada.

3 Units of Measurement

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

4 Referenced Publications

4.1 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.

4.2 The following publications are referenced in this Standard:

ASME B1.20.1, *Pipe Threads, General Purpose*

ASME B36.10M, *Welded and Seamless Wrought Steel Pipe*

ASTM A653/A653M, *Standard Specification for Sheet Steel, Zinc Coated (Galvanized) or Zinc-Iron-Alloy Coated (Galvannealed) by the Hot Dip Process*

ASTM B858, *Standard Test Method for Ammonia Vapor Test for Determining Susceptibility to Stress Corrosion Cracking in Copper Alloys*

ASTM D396, *Standard Specification for Fuel Oils*

ASTM D471, *Standard Specification for Standard Test Method for Rubber Property – Effects of Liquids*

ASTM D664, *Standard Test Method for Acid Number of Petroleum Products by Potentiometric Titration*

ASTM D975, *Standard Specification for Diesel Fuel Oils*

ASTM D3699, *Standard Specification for Kerosine*

ASTM D6751, *Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels*

ASTM D7467, *Standard Specification for Diesel Fuel Oil, Biodiesel Blends (B6 – B20)*

ASTM E28, *Standard Test Method for Softening Point of Resins Derived from Pine Chemicals and Hydrocarbons, by Ring-and-Ball Apparatus*

ASTM E230/E230M, *Standard Specification and Temperature-Electromotive Force (emf) Tables for Standardized Thermocouples*

CSA B346, *Power-Operated Dispensing Devices for Flammable Liquids*

CSA C22.1, *Canadian Electrical Code, Part I Safety Standard for Electrical Installations*

CSA C22.2 No. 14, *Industrial Control Equipment*

CSA C22.2 No. 0.15, *Adhesive Labels*

CSA C22.2 No. 0.17, *Evaluation of Properties of Polymeric Materials*

CSA C22.2 No. 38, *Thermoset-Insulated Wires and Cables*

CSA C22.2 No. 66.1, *Low Voltage Transformers – Part 1: General Requirements*

CSA C22.2 No. 66.3, *Low Voltage Transformers – Part 3: Class 2 and Class 3 Transformers*

CSA C22.2 No. 75, *Thermoplastic-Insulated Wires and Cables*

CSA C22.2 No. 77, *Motors with Inherent Overheating Protection*

CSA C22.2 No. 100-04, *Motors and Generators*

CSA C22.2 No. 145, *Motors and Generators for Use in Hazardous Locations*

CSA C22.2 No. 153, *Electrical Quick-Connect Terminals*

CSA C22.2 No. 274, *Adjustable Speed Drives*

CSA LTR No. E-013, *List of Technical Requirements for Motors and Generators for Use in Class I, Divisions 2, and Class II, Division 2, Hazardous Locations*

NFC, *National Fire Code of Canada*

NFPA 30, *Flammable and Combustible Liquids Code*

NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*

NFPA 70, *National Electrical Code*

UL 44, *Thermoset-Insulated Wires and Cables*

UL/ULC 79, *Power-Operated Pumps for Petroleum Dispensing Products*