



UL 567

Underwriters Laboratories Inc. Standard for Safety

Emergency Breakaway
Fittings, Swivel Connectors
and Pipe-Connection Fittings
for Petroleum Products and
LP-Gas



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UL Standard for Safety for Emergency Breakaway Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas, UL 567

Ninth Edition, Dated July 28, 2003

Summary of Topics

This revision of ANSI/UL 567 covers alternate test methods and clarification of test requirements.

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. Changes in requirements are marked with a vertical line in the margin and are followed by an effective date note indicating the date of publication or the date on which the changed requirement becomes effective.

The new and/or revised requirements are substantially in accordance with Proposal(s) on this subject dated August 19, 2011.

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UL 567

Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe- Connection Fittings for Petroleum Products and LP-Gas

The first through third editions were titled Pipe Connectors for Flammable Liquids and LP-Gas. The fourth through seventh editions were titled Pipe Connectors for Flammable and Combustible Liquids and LP-Gas. The eighth edition was titled Pipe Connectors for Petroleum Products and LP-Gas.

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Ninth Edition

July 28, 2003

This ANSI/UL Standard for Safety consists of the Ninth Edition including revisions through October 21, 2011.

The most recent designation of ANSI/UL 567 as an American National Standard (ANSI) occurred on October 21, 2011. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, or effective date information.

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 emergency breakaway fittings, swivel connectors and pipe-connecting fittings of the threadless compression type. Connectors and fittings covered by these requirements are intended only for the following services.

1.2 A swivel connector is either a hose swivel or joint swivel. The swivel connector will allow radial movement and shall be constructed for petroleum product, liquefied petroleum gas (LP-Gas) or anhydrous ammonia (NH₃) service.

1.2 revised May 5, 2010

1.3 An emergency breakaway fitting is used between the outlet of the dispensing device and the hose nozzle valve or lever-operated fuel transfer valve (LP-Gas Service) and separates in the event that the coupling is subjected to an excessive pull force to safeguard against abnormally excessive pull force on the hose assembly and dispenser and prevent loss of liquid. An emergency breakaway fitting shall be constructed for petroleum product, liquefied petroleum gas (LP-Gas) or anhydrous ammonia (NH₃) service. The fittings shall be of the single-break or reconnectable type.

1.3 revised May 5, 2010

1.4 Requirements for the installation and use of dispensing equipment handling petroleum products are included in the Flammable and Combustible Liquids Code, NFPA 30, and the Code for Motor Fuel Dispensing Facilities and Repair Garages, NFPA 30A.

1.4 revised October 22, 2004

1.5 Requirements for the installation and use of dispensing devices handling LP-Gas are included in the Liquefied Petroleum Gas Code, NFPA 58.

1.6 Requirements for the installation and use of dispensing equipment handling anhydrous ammonia are included in the Safety Requirements for the Storage and Handling of Anhydrous Ammonia, ANSI/CGA G-2.1 (ANSI K61.1).

1.6 added May 5, 2010

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 purposes of this standard the following definitions apply:

3.2 FITTING, PIPE-CONNECTING – A fitting of the threadless compression seal-ring type for use in the assembly of petroleum product dispensing devices to facilitate connection of piping or tubing. These fittings shall be made in the straight coupling style, as well as in the tee, ell, reducer, adapter, and other styles.

3.3 FITTING, RECONNECTABLE TYPE – An emergency breakaway fitting designed such that upon separation it is intended to be reconnected and reused when it is not damaged.

3.4 FITTING, SINGLE-BREAK TYPE – An emergency breakaway fitting that, upon separation, is not intended to be reconnected and reused.

3.4.1 HOSE SWIVEL – A swivel connector with one end attached to a hose and the other end to an appurtenance. The hose swivel will allow radial movement of the hose and/or appurtenance to prevent the hose from twisting or having torsional stress.

3.4.1 added May 5, 2010

3.4.2 LIQUEFIED PETROLEUM GAS (LP-GAS OR LPG) – Any material having a vapor pressure not exceeding that allowed for commercial propane, as defined in Standard Specification for Liquefied Petroleum (LP) Gases, ASTM D1835, that is composed predominantly of the following hydrocarbons, either by themselves (excluding propylene) or as mixtures: propane, propylene, butane (normal butane or isobutane) and butylenes.

3.4.2 added May 5, 2010

3.5 *Deleted July 28, 2003*

3.6 PETROLEUM PRODUCTS – As used herein, means gasoline, gasoline/alcohol blends containing up to 15 percent alcohol, fuel oil, kerosene, and similar liquid motor or heating fuel products.

3.6 revised October 22, 2004

3.7 PRESSURE INDICATING DEVICE – As used herein, the pressure indicating device means one of the following:

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- a) An analog gauge having a pressure range such that the test pressure is between 30 and 70 percent of the maximum scale reading of the gauge;
- b) A digital pressure transducer, or other digital gauge, that is calibrated over a range of pressure that includes the test pressure; or
- c) Other device that is equivalent to the devices in (a) or (b).

3.7 added May 5, 2010

3.8 SWIVEL CONNECTOR – A type of swivel categorized as either a hose swivel or swivel joint.

3.8 added May 5, 2010

3.9 SWIVEL JOINT – A swivel connector installed in a piping system with at least one end attached to a rigid pipe or other appurtenance that is firmly affixed. The swivel joint will allow radial movement of the pipe or other appurtenance attached to the swivel to prevent torsional stress.

3.9 added May 5, 2010

4 Installation and Operating Instructions

4.1 A copy of the installation and operating instructions shall be provided and shall be used as a guide in the examination and test of the device. For this purpose, a final printed edition is not required.

4.1 revised May 5, 2010

4.2 The instructions shall include directions and information as deemed by the manufacturer to be adequate for proper and safe installation, maintenance and use of the device.

4.3 Each emergency breakaway fitting shall be provided with instructions that indicate how to determine that the maximum rated separation force will not damage the hose assembly or dispensing device.

4.4 Each swivel connector shall be provided with instructions that indicates if it is a hose swivel or swivel joint.

4.4 added May 5, 2010

CONSTRUCTION

5 General

5.1 A connector or fitting for use with petroleum products shall be constructed for an operating pressure of not less than 50 pounds per square inch gauge (psig) (340 kPa) for the fluid confining portion of the device and 0.5 psig (3.45 kPa) for the vapor confining portion of the device, when provided, and an ultimate rupture pressure of not less than five times the design pressure.

5.2 A swivel connector or emergency breakaway fitting for use with anhydrous ammonia or LP-Gas shall be designed for an operating pressure of not less than 350 psig (2413 kPa) and an ultimate rupture pressure of not less than five times the design pressure.

5.2 revised May 5, 2010