UL 896

STANDARD FOR SAFETY

Oil-Burning Stoves

UL Standard for Safety for Oil-Burning Stoves, UL 896

Fifth Edition, Dated July 29, 1993

Summary of Topics

This revision of ANSI/UL 896 is being issued to reaffirm approval as an American National Standard. No changes in requirements are involved.

The revisions are substantially in accordance with Proposal(s) on this subject dated September 30, 2016.

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.

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UL 896

Standard for Oil-Burning Stoves

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Fifth Edition

July 29, 1993

This ANSI/UL Standard for Safety consists of the Fifth Edition including revisions through November 22, 2016.

The most recent designation of ANSI/UL 896 as a Reaffirmed American National Standard (ANS) occurred on November 22, 2016. 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 oil-burning flue-connected room heaters and ranges as defined herein. They may be used where a competent attendant will not be constantly on duty in the room where the appliance is located, while the appliance is in operation. They are required to be equipped with automatic primary safety controls to prevent abnormal discharge of oil at the burner in case of ignition failure or flame failure. They are not intended for use in spaces in which flammable vapors or gases may be present.

1.2 Requirements for the installation and use of oil-burning equipment are included in the Standard of the National Fire Projection Association for the Installation of Oil-Burning Equipment, NFPA No. 31.

1.3 A product that contains features, characteristics, components, materials, or systems new or different from those covered by the requirements in this Standard, and that involves a risk of fire, electric shock, or injury to persons shall be evaluated using the appropriate additional component and end-product requirements to determine that the level of safety as originally anticipated by the intent of this Standard is maintained. A product whose features, characteristics, components, materials, or systems conflict with specific requirements or provisions of this Standard shall not be judged to comply with this Standard. Where appropriate, revision of requirements shall be proposed and adopted in conformance with the methods employed for development, revision, and implementation of this Standard.

1.3 revised November 17, 1999

2 Components

2.1 Components of an oil burner, except as specified herein, or a gas burner as well as burner and stove accessories such as constant-level oil valves, metering valves, fire pots, etc.; electrical components and materials such as attachment plugs, industrial control equipment, switches, transformers, electrically operated valves, wires, etc.; and other components or parts shall comply with the requirements for those components, except that such requirements may be modified if appropriate for the particular application.

3 Units of Measurement

3.1 If a value for measurement is followed by a value in other units in parentheses, the second value may be only approximate. The first stated value is the requirement.

4 Glossary

4.1 AIR SHUTTER – An adjustable device for varying the size of the air inlet or inlets regulating primary or secondary air.

4.2 ANTIFLOODING DEVICE – A primary safety control which causes the fuel flow to be shut off upon a rise in fuel level or upon receiving excess fuel, and which operates before the hazardous discharge of fuel can occur.

4.3 APPLIANCE FLUE – The flue passages within the appliance.

4.4 AUTOMATICALLY LIGHTED APPLIANCE – An appliance in which fuel to the main burner is normally turned on and ignited automatically.

4.5 BAFFLE – An object placed in an appliance to direct or to retard the flow of air of flue gases.

4.6 BASE – The main supporting frame or structure of an assembly.

4.7 BURNER – A device for the final conveyance of fuel or a mixture of fuel and air to the combustion zone.

4.8 BURNER, MECHANICAL-ATOMIZING TYPE – A power-operated burner which prepares and delivers the oil and all or part of the air by mechanical process in controllable quantities for combustion. Some examples are air atomizing, high- and low-pressure atomizing, horizontal rotary, vertical rotary atomizing, and vertical rotary wall-flame burners.

4.9 BURNER, MECHANICAL-DRAFT TYPE – A burner which includes a power-driven fan, blower, or other mechanism as the principal means for supplying air for combustion.

4.10 BURNER, NATURAL-DRAFT TYPE – A burner which depends principally upon the natural draft created in the flue to induce into the burner the air required for combustion.

4.11 BURNER, VAPORIZING TYPE – A burner consisting of an oil-vaporizing bowl or other receptacle to which liquid fuel may be fed in controllable quantities; the heat of combustion being used to vaporize the fuel, with provision for admitting air and mixing it with the oil vapor in combustible proportions.

4.12 CASING – An enclosure forming the outside of the appliance, no parts of which are likely to be subjected to intense heat.

4.13 COMBUSTIBLE CONSTRUCTION – As pertaining to materials adjacent to or in contact with heat producing appliances and flue pipes, steam pipes, and warm air ducts connected thereto, combustible construction shall mean structures made of or surfaced with wood, compressed paper and plant fibers, or other material that will ignite and burn, whether plastered or unplastered. Plastered construction having combustible supports, regardless of the type of lath employed, and gypsum or other wallboard surfaced with combustible material, are classified as combustible construction.

4.14 COMBUSTION – As used herein, the rapid oxidation of fuel accompanied by the production of heat, or heat and light. Complete combustion of a fuel is possible only in the presence of an adequate supply of oxygen.

4.15 COMBUSTION CHAMBER – The portion of an appliance within which combustion occurs and which is usually part of the heat exchanger.

4.16 CONSTANT-LEVEL VALVE – A device for maintaining within a reservoir a constant level of fuel for delivery to the burner.

4.17 CONTROL – A device designed to regulate the fuel, air, water, or electrical supply to the controlled equipment. It may be automatic, semi-automatic, or manual.

4.18 CONTROL, LIMIT – An automatic safety control responsive to changes in liquid level, pressure, or temperature; for limiting the operation of the controlled equipment.

4.19 CONTROL, PRIMARY SAFETY – The automatic safety control intended to prevent abnormal discharge of oil at the burner in case of ignition failure or flame failure.

4.20 CONTROL, SAFETY – See Safety Control.

4.21 CONTROL, SAFETY COMBUSTION – A primary safety control responsive directly to flame properties; sensing the presence of flame and causing fuel to be shut off in event of flame failure.

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