UL 1340

STANDARD FOR SAFETY

Hoists

UL Standard for Safety for Hoists, UL 1340

Third Edition, Dated October 14, 2016

Summary of Topics

This revision of UL 1340 dated June 9, 2021 includes Rechargeable Battery Powered Hoist Requirements; Supplement SB.

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 requirements are substantially in accordance with Proposal(s) on this subject dated April 23, 2021.

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UL 1340

Standard for Hoists

First Edition – July, 2004
Second Edition – April, 2012

Third Edition

October 14, 2016

This UL Standard for Safety consists of the Third Edition including revisions through June 9, 2021.

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 cover hoists of the overhead type intended for material lifting service using either chain, wire rope, or fibre kernmantle rope. They are intended to be suspended from a fixed member and may include trolleys for mobility.

1.2 This standard covers electrically powered hoists rated 1000 volts or less to be employed in nonhazardous environmental locations in accordance with the National Electrical Code, NFPA 70.

1.3 This standard covers pneumatically powered hoists.

1.4 These requirements do not cover:

a) Manual and power-operated type portable hoists intended for use with scaffolds suspended by wire ropes;

b) Hoists for transporting people;

c) Manual operated chain hoists;

d) The trolley as a stand-alone component; or

e) The fixed member that suspends the hoist.

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 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b) Is superseded by a requirement in this standard.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.

2.2.2 Unless otherwise indicated, all voltage and current values mentioned in this standard are root-mean-square (rms).

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 BONDED (BONDING) – The permanent joining of metallic parts to form an electrically conductive path that provides electrical continuity and the capacity to conduct any current likely to be imposed without a risk of electric shock, fire, or injury to persons.

3.3 BONDING JUMPER – A conductor, including a strap or similar part, that is used to provide the required electrical conductivity between metal parts required to be electrically connected.

3.4 CIRCUITS, ELECTRICAL –

a) High-Voltage – A circuit with a potential of not more than 1000 volts having circuit characteristics greater than those of a low-voltage power-limited circuit.

b) Low-Voltage – A circuit with a potential of not more than 30 volts AC rms, 42.4 volts DC or AC peak, and supplied by:

1) A primary battery;

2) An NEC Class 2 transformer; or

3) A combination of transformer and fixed impedance that, as a unit, complies with all of the performance requirements for a Class 2 transformer.

3.5 FIBRE KERNMANTLE ROPE – A rope design consisting of an interior core and an outer sheath.

3.6 GROUND – A conducting connection, whether intentional or accidental, between an electrical circuit or equipment and the earth or to some conducting body that serves in place of the earth.

3.7 GROUNDED – Connected to earth or to some conducting body that serves in place of earth.

3.8 GROUNDING CONDUCTOR – An equipment or circuit conductor that is intentionally connected between that electrical circuit or equipment and the earth or to some conducting body that serves in place of the earth.

3.9 HOIST – A suspended machinery unit that is used for lifting or lowering a freely suspended (unguided) load. When a hoist is suspended from a trolley, the trolley shall be considered part of the hoist.

a) ELECTRICALLY POWERED – A hoist in which the prime mover is powered by electricity.

b) PNEUMATICALLY POWERED – A hoist in which the prime mover is powered by compressed gases.

3.10 RATED WORKING LOAD – The manufacturer's specified maximum load to be lifted by the hoist. The maximum load includes the weight of all materials, and all dead loads lifted by the hoist. Dead loads include the weight of:

a) The hoist;

b) Wire rope, chains, or fibre kernmantle rope;

c) Rigging equipment/device (s) attached to the hoist's bottom hook (e. g., slings, spreader bar/beams); and

d) Ancilliary equipment supported by the hoist, such as the electrical cords, air supply hoses, chain container, etc.

CONSTRUCTION

ALL HOISTS

4 General

4.1 A product shall be constructed so that it will have the strength and durability to withstand normal usage and to comply with the performance requirements.

4.2 An exposed metal surface shall be free from sharp edges, burrs, and other features that constitute a risk of injury to persons.

5 Materials and Assembly

5.1 All metal parts and fittings shall be made of aluminum or steel alloys, wrought iron, malleable iron, or other metal that is of equivalent strength for the intended purpose and shall be securely attached by means of rivets, bolts, screws, or other means determined to be the equivalent. Cast gray iron shall not be used for load-carrying parts.

5.2 Nuts shall be lock nuts or provided with lock washers.

5.3 For a hoist that is designed to operate using a fibre kernmantle rope, the rope shall be a static type in compliance with the requirements in Low Stretch and Static Kernmantle Life Safety Rope, CI 1801.

6 Protection Against Corrosion

6.1 All hardware and materials shall be resistant to normal atmospheric corrosion.

Exception: Aluminum, brass, copper, stainless steel, or other metal inherently resistant to corrosion may be used without additional protection.

6.2 Corrosion protection shall be by metallic or nonmetallic coatings, such as galvanizing, sherardizing, plating, or painting.

6.3 Different metals shall not be used in combination such as to cause galvanic action that will adversely affect the strength of the product.

7 Lubrication

7.1 Each separate enclosure of a hoist shall be provided with a means to maintain lubrication of all moving parts requiring lubrication at all times.

7.2 Self-sealed, self-lubricating, and dry bearings may be employed.