

NFPA 505

Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations

2006 Edition



NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471
An International Codes and Standards Organization

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This edition of NFPA 505, *Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations*, was prepared by the Technical Committee on Industrial Trucks and acted on by NFPA at its June Association Technical Meeting held June 6–10, 2005, in Las Vegas, NV. It was issued by the Standards Council on July 29, 2005, with an effective date of August 18, 2005, and supersedes all previous editions.

This edition of NFPA 505 was approved as an American National Standard on August 18, 2005.

Origin and Development of NFPA 505

Chapter 1 (formerly Part A) of this standard was originally designated as NFPA 505A and was first adopted by the Association in 1951. Chapters 7 and 8 (formerly Parts A and B), “Maintenance of Industrial Trucks” and “Fuel Recharging, Marking, and Operation of Industrial Trucks,” were originally adopted in 1952 and published by NFPA under the designations NFPA 505B and 505C, *Standards for the Maintenance and Safe Operation of Industrial Trucks*. In 1955, the three documents were combined into one standard, NFPA 505. Revisions were made in 1955, 1957, 1963, 1965, 1966, 1967, 1968, 1969, 1971, 1972, 1973, 1975, 1978, 1982, and 1987. The 1971 edition was the first edition to be approved by ANSI.

In the 1992 edition, Group F was added to the list of classified locations to correlate with NFPA 70, *National Electrical Code*®.

In the 1996 edition, changes were made to the types of trucks listed for operation in Class I, Division 2 locations, and a new Type DX designation was added. Also, a new section on compressed natural gas (CNG) was added, and related changes to the chapters on dual-fuel trucks and converted trucks were made.

The 1999 edition was revised to make the entire document more user friendly and to facilitate its use with NFPA 70.

The 2002 edition was editorially reorganized to conform with the *Manual of Style for NFPA Technical Committee Documents* and to further clarify specific use areas for industrial trucks.

Changes to the 2006 edition are primarily editorial reviews that clarify requirements and provide additional information on hazardous areas and their classifications.

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This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Committee Scope: This Committee shall have primary responsibility for documents on the safe use, maintenance, and operation of industrial trucks and other material-handling equipment to minimize fire hazards.

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NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

Changes other than editorial are indicated by a vertical rule beside the paragraph, table, or figure in which the change occurred. These rules are included as an aid to the user in identifying changes from the previous edition. Where one or more complete paragraphs have been deleted, the deletion is indicated by a bullet (•) between the paragraphs that remain.

Information on referenced publications can be found in Chapter 2 and Annex B.

Chapter 1 Administration**1.1 Scope.**

1.1.1 This standard shall apply to fork trucks, tractors, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines.

1.1.2 This standard shall not apply to compressed air-operated or nonflammable compressed gas-operated industrial trucks, farm vehicles, or automotive vehicles for highway use.

1.2 Purpose. (Reserved)**1.3 Application.**

1.3.1 The design and installation of the compressed natural gas (CNG) fuel systems on CNG-powered and dual fuel-powered (gasoline and CNG) industrial trucks shall be in accordance with the applicable provisions of NFPA 52.

1.3.2 The design and installation of the LP-Gas fuel systems on LP-Gas-powered and dual fuel-powered (gasoline and LP-Gas) industrial trucks shall be in accordance with the applicable provisions of NFPA 58.

1.3.3 The approved powered industrial trucks addressed in this standard are trucks that are listed by a testing laboratory for the use intended and shall be tested and labeled in accordance with UL 558 or UL 583.

1.4 Equivalency. Nothing in this standard is intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by this standard.

1.4.1 Technical documentation shall be submitted to the authority having jurisdiction to demonstrate equivalency.

1.4.2 The system, method, or device shall be approved for the intended purpose by the authority having jurisdiction.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 10, *Standard for Portable Fire Extinguishers*, 2002 edition.

NFPA 30, *Flammable and Combustible Liquids Code*, 2003 edition.

NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*, 2003 edition.

NFPA 52, *Vehicular Fuel Systems Code*, 2006 edition.

NFPA 58, *Liquefied Petroleum Gas Code*, 2004 edition.

NFPA 70, *National Electrical Code*®, 2005 edition.

2.3 Other Publications.

2.3.1 ASME Publication. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.

ASME/ANSI B56.1, *Safety Standard for Low Lift and High Lift Trucks*, 1993.

2.3.2 ASTM Publication. American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM D 3175, *Standard Test Method for Volatile Matter in the Analysis Sample of Coal and Coke*, 1989.

2.3.3 UL Publications. Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

UL 558, *Standard for Safety Industrial Trucks, Internal Combustion Engine-Powered*, 1991.

UL 583, *Standard for Safety Electric-Battery-Powered Industrial Trucks*, 1991.

2.3.4 Other Publication. Merriam-Webster's Collegiate Dictionary, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

2.4 References for Extracts in Mandatory Sections. (Reserved)**Chapter 3 Definitions**

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. Merriam-Webster's Collegiate Dictionary, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.