NFPA®

1937

Standard for the Selection, Care, and Maintenance of Rescue Tools

2021

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NFPA® 1937

Standard for the

Selection, Care, and Maintenance of Rescue Tools

2021 Edition

This edition of NFPA 1937, *Standard for the Selection, Care, and Maintenance of Rescue Tools*, was prepared by the Technical Committee on Fire Department Rescue Tools. It was issued by the Standards Council on October 5, 2020, with an effective date of October 25, 2020.

This edition of NFPA 1937 was approved as an American National Standard on October 25, 2020.

Origin and Development of NFPA 1937

For the first edition of the standard, the committee has developed requirements to ensure that the selection, care, and maintenance of rescue tools are met as part of an overall program and that those rescue tools are compliant with NFPA 1936, *Standard on Rescue Tools*. This standard was also developed to establish the procedures that make up the selection, care, and maintenance program with which new rescue tools and lifting bags are required to comply. The standard also includes requirements for records management to ensure that pertinent data is collected and retained to reduce the potential health and safety risks that can be associated with poorly maintained or obsolete rescue tools and lifting bags.

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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 related to the design, inspection, testing, and use of rescue tools for the fire services.

Contents

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Standard for the

Selection, Care, and Maintenance of Rescue Tools

2021 Edition

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

Chapter 1 Administration

1.1 Scope.

1.1.1 This standard shall specify minimum requirements for the selection, care, maintenance, and record keeping of lifting bags and rescue tools that are compliant with NFPA 1936.

1.1.2 This standard shall not specify requirements for other organizational programs such as the use of lifting bags and rescue tools for training or operations, because these programs are under the jurisdiction of other NFPA standards.

1.1.3 Nothing herein shall restrict any jurisdiction from exceeding these minimum requirements.

1.2 Purpose.

1.2.1 The purpose of this standard shall be to establish procedures as part of a program to provide for selection, service, care, maintenance, and record keeping of lifting bags, rescue tools, and components to reduce the potential health and safety risks associated with poorly maintained, contaminated, damaged, or obsolete lifting bags, rescue tools, and components.

1.2.2 This standard shall also establish basic criteria for the evaluation and selection process associated with purchasing lifting bags and rescue tools to ensure only lifting bags and rescue tools that meet the requirements of NFPA 1936 for use by emergency services organizations are selected.

1.2.3 The purpose of this standard shall also be to establish that safety is a primary concern for the continued in-service use of lifting bags, rescue tools, and components and that safety is the ultimate factor in the decision to service, maintain, repair, or retire lifting bags, rescue tools, and components from service.

1.3 Application.

1.3.1 This standard shall apply to the requirements for selection, care, maintenance, and the associated record keeping of the lifting bags and rescue tools of the emergency service organization's program as required by NFPA 1936.

1.3.2 This standard shall apply to the acquisition of new lifting bags, rescue tools, and components and to the preparation of these new lifting bags, rescue tools, and components before they are placed in service.

1.3.3 This standard shall apply to the organization's existing lifting bags, rescue tools, and components and also apply to the selection process to acquire new lifting bags, rescue tools, and components to augment or replace existing lifting bags, rescue tools, and components.

1.3.4 When this standard is adopted by an organization or by a jurisdiction, the authority having jurisdiction shall set a date or dates for achieving compliance with the requirements of this standard.

1.3.5 The organization or the jurisdiction shall be permitted to establish a phase-in schedule for compliance with specific requirements of this standard.

1.3.6 Unless otherwise noted, this standard shall apply to lifting bags, rescue tools, and components regardless of year of manufacture, while they are in storage, in service, in use, and after use.

1.4 Equivalency.

1.4.1 Nothing in this standard shall 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.

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

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

1.5 Units of Measurement. In this standard, metric units of measurement are followed by an equivalent in Imperial units, but only the value that first appears shall be considered as the requirement, since the value in Imperial units could be approximate.

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 1936, *Standard on Rescue Tools*, 2020 edition.

2.3 Other Publications.

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

2.4 References for Extracts in Mandatory Sections.

NFPA 3, *Standard for Commissioning of Fire Protection and Life Safety Systems*, 2018 edition.

NFPA 1035, *Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist, and Youth Firesetter Program Manager Professional Qualifications*, 2015 edition.

NFPA 1521, *Standard for Fire Department Safety Officer Professional Qualifications*, 2020 edition.

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.

3.2.3 Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

3.2.4* Listed. Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

3.2.5 Shall. Indicates a mandatory requirement.

3.2.6 Should. Indicates a recommendation or that which is advised but not required.

3.2.7 Standard. An NFPA Standard, the main text of which contains only mandatory provisions using the word "shall" to indicate requirements and that is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions are not to be considered a part of the requirements of a standard and shall be located in an appendix, annex, footnote, informational note, or other means as permitted in the NFPA Manuals of Style. When used in a generic sense, such as in the phrase "standards development process" or "standards development activities," the term "standards" includes all NFPA Standards, including Codes, Standards, Recommended Practices, and Guides.

3.3 General Definitions.

3.3.1 Accessories. Those items that are attached to the rescue tool, lifting bag, or to a component but are not necessary for the rescue tool, lifting bag, or component to meet the requirements of this standard.

3.3.2 Care. Procedures for cleaning, decontamination, storage, and service preparation of lifting bags, rescue tools, components, and associated equipment.

3.3.3 Combination Tool. A rescue tool that is capable of at least spreading and cutting.

3.3.4 Compliant. Verified as meeting or exceeding all applicable requirements of this standard.

3.3.5 Components.

3.3.5.1 ***Lifting Bag Components.*** Components such as a hose and hose assembly, regulator, pressure indicator, safety valve, and a control device.

3.3.5.2* ***Powered Rescue Tool Components.*** Components such as cable assemblies, hose assemblies, power units, hose reels, and remote valve blocks.

3.3.6 Contamination/Contaminated. The process by which rescue tools, lifting bags, components, or associated equipment have been exposed to hazardous materials or biological agents.

3.3.7* Coupling. Connectors attached to the rescue tools, hose assemblies, lifting bags, or accessories to allow for the connection and disconnection of components.

3.3.8 Cutter. A rescue tool with at least one movable blade that is used to cut, shear, or sever material.

3.3.9 Follow-Up Program. The sampling, inspections, tests, or other measures conducted by the third-party certification organization on a periodic basis to determine the continued compliance of listed products that are being produced by the manufacturer to the requirements of this standard.

3.3.10 In-Service. Ready for immediate use.

3.3.11 Label. A permanently affixed identifying tag that provides manufacturer- and product-specific part number and specifications.

3.3.12 Lifting Bag. A portable inflatable bag used to apply force to move or lift objects.

3.3.13 Maintenance. Procedures that include inspection, repair, removal from service, and record keeping of lifting bags, rescue tools, components, and associated equipment.

3.3.14 Manufacturer. The entity that assembles the compliant product and also maintains the certification.

3.3.15 Organization. The entity that provides the direct management and supervision for emergency services response personnel.

3.3.16 O-Ring Seal. A mechanical gasket in a continuous loop of elastomer with a round cross-section, designed to be seated in a groove and compressed during assembly between two or more parts, creating a seal or interface.

3.3.17 Out of Service. The condition when a powered rescue tool, lifting bag, or component is not usable due to an unsafe or inoperable condition.

3.3.18 Power Unit. A rescue tool component consisting of a prime mover and the principal power output device used to power the rescue tool.

3.3.19 Prime Mover. Part of the power unit component and the energy source that drives the principal power output device of the power unit.

3.3.20 Program. A comprehensive strategy that addresses safety issues via educational means. [**1035**, 2015]

3.3.21 Ram. A powered rescue tool that has a piston or other type extender that generates extending forces or both extending and retracting forces.

3.3.22 Rebuild. To clean and examine compliant product thoroughly and make needed repairs and replace components as specified by the manufacturer.

3.3.23 Regulator. A device for regulating a generally variable inlet pressure to as constant as possible outlet pressure.

3.3.24* Rescue Tool. A device that receives power from the power unit component and generates the output forces or energy used to perform one or more of the functions of spreading, lifting, holding, crushing, pulling, or cutting.

3.3.25 Service Life. Time or exposure event to which a compliant product or component is expected to remain functional.

3.3.26 Spreader. A rescue tool that has at least one movable arm that opens to move material.

3.3.27 Standard Operating Procedure (SOP). A written organizational directive that establishes or prescribes specific operational or administrative methods to be followed routinely for the performance of designated operations or actions. [**1521,** 2020]

3.3.28 Technician. An individual qualified and authorized by the compliant product manufacturer to provide specified care and maintenance to the product and perform inspection, repair, and testing beyond the level classified as "user repair."

3.3.29 Test. A procedure intended to establish the operational status or performance of a system or component. [**3,** 2018]

3.3.30 Tool. An abbreviated name for powered rescue tool.

Chapter 4 Program Components

4.1 General.

4.1.1 Emergency services organizations shall have a written program that addresses rescue tools and lifting bags for the members of that organization.

4.1.2 As part of the organization's rescue tool and lifting bag program, the organization shall develop, implement, and apply a program component for the selection, care, maintenance, and record keeping of rescue tools and lifting bags used by the members of the organization.

4.1.3 The program component shall have the following goals:

(1) Provide rescue tools and lifting bags suitable and appropriate for the intended use
(2) Maintain rescue tools and lifting bags in a safe, usable condition to provide the user with safe, usable equipment
(3) Remove from use any rescue tool and lifting bag that could cause or contribute to user injury, illness, or death because of its condition
(4) Replace, repair, or retire such rescue tools and lifting bags described in 4.1.3(3)
(5) Create and maintain record keeping, in accordance with this standard, for rescue tools, lifting bags, and components

4.1.4 The rescue tool and lifting bag selection, care, and maintenance component of the organization's rescue tool and lifting bag program shall be in accordance with Section 4.3.

4.2 Adverse Conditions Involving Rescue Tools and Lifting Bags.

4.2.1* As part of the rescue tool and lifting bag program, the organization shall develop standard operating procedures (SOPs) for a condition or conditions involving rescue tools and lifting bags or rescue tool and lifting bag components that lead(s) to failure, near-failure, or a significant degradation of performance because of normal use.

4.3 Rescue Tool and Lifting Bag Selection, Care, and Maintenance Program Component.

4.3.1 The organization shall develop written SOPs that identify and define the various parts of the organization's lifting bag, rescue tool, and components program and the various roles and responsibilities of the organization and the members.

4.3.2 As part of the rescue tool and lifting bag program, the organization shall develop SOPs for minimizing exposure to contaminated rescue tools and lifting bags.

4.3.2.1 The organization shall define criteria to determine when a rescue tool and lifting bag is contaminated beyond the ability to remedy by cleaning and disinfecting in accordance with Section 6.1.

4.3.2.2 The SOPs shall detail methods for proper disposal of such contaminated rescue tools and lifting bags in accordance with 4.7.2.

4.3.3 The portion of the rescue tool and lifting bag program for the selection of rescue tools and lifting bags shall include the requirements specified in Chapter 5.

4.3.4 The portion of the rescue tool and lifting bag program for the care of rescue tools and lifting bags shall include the requirements specified in Chapter 6.

4.3.5 The portion of the rescue tool and lifting bag program for the maintenance of rescue tools and lifting bags shall include the requirements specified in Chapter 7.

4.3.5.1 As part of the rescue tool and lifting bag program for maintenance, the organization shall have written rescue tool and lifting bag testing procedures as recommended by the manufacturer.

4.3.5.2 As part of the rescue tool and lifting bag program for maintenance, the rescue tool and lifting bag testing procedures shall include but not be limited to the following:

(1) Administration
(2) Testing protocol
(3) Training in use of the rescue tool and lifting bag
(4) Test technician authorization
(5) Record keeping
(6) Test scheduling
(7) Evaluation of the program's effectiveness

4.3.5.3 As part of the rescue tool and lifting bag program for maintenance, the organization shall develop SOPs for the frequency of technician inspection and testing of rescue tools and lifting bags.

4.3.5.3.1 In all cases, the frequency of technician inspection shall be not less than specified in the rescue tool and lifting bag manufacturer's instructions.

4.3.5.3.2 The organization shall also consider factors including but not limited to the following:

(1) Specific manufacturer's instructions related to rescue tool and lifting bag testing
(2) Severity of environment in which the rescue tool and lifting bag is used
(3) Estimated number of uses for each rescue tool and lifting bag
(4) User reports of visual damage of lifting bags
(5) User complaints of improperly functioning rescue tools and lifting bags
(6) Specific worksite issues

4.3.5.4 Where the part of the rescue tool and lifting bag program that addresses the maintenance of rescue tools and lifting bags includes rescue tool and lifting bag technicians who are members of the organization, such technicians shall meet the requirements of Section 4.9.

4.3.6* The organization shall require that all members who use or are responsible for any part of the organization's rescue tool or lifting bag program are informed and trained not to make any alterations or changes to any rescue tools, lifting bags, or components except to repair or maintain the rescue tools, lifting bags, or components to their original manufacturer specifications and fully functional condition.

4.4 Rescue Tool and Lifting Bag Compliance — Allowance and Retirement.

4.4.1 Rescue tools and lifting bags that are currently in service shall be certified as compliant with NFPA 1936.

4.4.2* Where currently-in-service rescue tools and lifting bags do not meet the requirements of 4.4.1, such rescue tools and lifting bags shall be retired as specified in 4.7.1.

4.5 Records.

4.5.1 The organization shall create a written procedure to manage the record-keeping system.

4.5.2 The record-keeping system shall accommodate the documents listed in 4.5.6 and all additional documents that are needed after considering the following factors:

(1) Need for the record, report, or document
(2) How the record, report, or document contributes to realizing the organization's goals within the selection, care, and maintenance program component
(3) Number of copies needed
(4) Person(s) responsible for producing the record, report, or document
(5) Format and substance of the record, report, or document
(6) Person(s) who receives, forwards, reviews, processes, and uses the record, report, or document
(7) Disposition of the record, report, or document after it has been completely developed

4.5.3 Legal Counsel.

4.5.3.1 The organization shall consult with legal counsel concerning specific laws that determine the length of time records, reports, and documents shall be retained.

4.5.3.2 The organization shall consult with legal counsel about the form, written or electronic, that is permitted and under what circumstances original or copied documents are needed for various purposes.

4.5.4 The organization shall determine how required records, reports, and documents are created, processed, maintained, and stored and take measures to prevent loss and damage.

4.5.5 Record-Keeping Manager. The record-keeping system shall be managed by a person who is trained and qualified to ensure that information is obtained, collected, communicated, retrieved, used, and stored according to the plan.

4.5.5.1 The record-keeping manager shall also consider how to reduce waste, redundancy, and cost in the system.

4.5.5.2 The record-keeping manager shall educate and train personnel within the organization in completing, filing, and using various components of the record-keeping system.

4.5.5.3 The record-keeping manager shall be assisted by sufficient staff to fulfill the manager's duties.

4.5.5.4 The record-keeping manager shall conduct an annual inventory and audit of records, reports, and documents and recommend changes in the record-keeping system as needed.

4.5.6 The organization shall create, maintain, and disseminate the following as required:

(1) Written instructions for care, maintenance, and repair that correspond to those provided by the manufacturer
(2) Written instructions for checks while using rescue tools and lifting bags
(3) Written instructions for inspection, including manufacturer's instructions, to be followed if defects are found
(4) Forms to document the findings during inspection

(5) Forms to record and report defects found during inspections and to track the rescue tool and lifting bag
(6) Forms to document inspections, tests, and repairs by rescue tool and lifting bag users and technicians that shall include the following:
  (a) Make, model, serial number, and other information of rescue tools and lifting bags to identify components
  (b) Documentation of the date, result of the inspection or test, and all actions taken as well as who acted
(7) Written policy and procedure concerning training and authorization of rescue tool and lifting bag technicians as well as documentation of that training and authorization
(8) Written procedures for recording information about the inspection and repair
(9) Stickers, tags, or other similarly effective means to alert users and technicians to defects, document inspections, and certify that tests, repairs, and other actions have been completed
(10) Written procedures for periodic tests and comprehensive inspections that comply with the requirements of this standard
(11) Documentation of the tests to verify rescue tools and lifting bags performance
(12) Schedule for retention, disposition, and disposal of each report, record, and document
(13) Methods of identifying all parts and components of rescue tools and lifting bags so that these can be identified and tracked from initial receipt by the organization until removed from the possession and control of the organization
(14) Documentation when a defective or obsolete rescue tool, lifting bag, or component part is removed from service in accordance with the following:
  (a) Until retirement and disposal of a defective or obsolete rescue tool, lifting bag, or component as specified in 4.7.3, a tag shall be conspicuously placed on the rescue tool, lifting bag, or component.
  (b) The tag shall indicate the date and time the rescue tool, lifting bag, or component was removed from service, by whom, and for what reason.
  (c) Rescue tools, lifting bags, and components that are removed from service shall be stored separately from other rescue tools, lifting bags, and components and secured, as necessary.
  (d) Access to tagged rescue tools, lifting bags, and components shall be limited, and only authorized persons shall remove tags after repair or service.
(15) Records for maintenance of each individual rescue tool, lifting bag, or component will include the following information:
  (a) Manufacturer's serial number or another unique identifier
  (b) Date of manufacture, receipt, service, inspection, test, maintenance, and repair
  (c) Inspections, service, repairs, and tests
  (d) Who performed the work
  (e) Other comments
(16) Records of training provided to each user showing date(s) and subject(s) covered
(17) Such other reports, records, and documents including forms, tags, stickers, and other means necessary to facilitate the purposes of record keeping and the intent of this standard

4.6 Manufacturer's Instructions.

4.6.1 When issuing new rescue tools, lifting bags, and components, the organization shall provide users with the instructions provided by the manufacturer on the care, use, maintenance, and end-of-service life of the rescue tools, lifting bags, and components, including any caution or hazard warnings provided by the manufacturer.

4.6.2 Where the rescue tool, lifting bag, and component manufacturer's instructions regarding the care, use, maintenance, and end-of-service life of the rescue tools, lifting bags, and components differ from the requirements in this standard, the manufacturer's instructions shall be followed except as required in 7.1.2.1.3 and 7.1.2.3.1.

4.7 Retirement and Disposal.

4.7.1 Retired rescue tools and lifting bags shall be destroyed or altered in a manner that ensures they cannot be used as rescue tools and lifting bags.

4.7.2 Where rescue tools, lifting bags, and components are contaminated beyond the ability to be decontaminated and returned to service, such rescue tools, lifting bags, or components shall be destroyed or altered in a manner that ensures they cannot be used.

4.7.2.1 Rescue tools, lifting bags, or components identified in accordance with 4.7.2 as contaminated beyond the ability to decontaminate and return to service shall be segregated from other equipment and personnel and disposed of in a manner consistent with the type of contamination and any governmental regulations governing contaminated item disposal.

4.7.2.2 Prior to disposal, contaminated rescue tools, lifting bags, or components shall be altered in a manner that ensures they cannot be used for any purpose.

4.7.3 Defective or obsolete rescue tools, lifting bags, or components that have been removed from service and cannot be repaired or upgraded shall be dealt with as described in 4.7.1.

4.8 Quality Assurance.

4.8.1 The organization shall establish and maintain a quality assurance plan for selection, care, maintenance, and record keeping of rescue tools, lifting bags, and components.

4.8.2 The quality assurance plan shall be designed to realize all the following goals:

(1) Ensure effective and safe performance of rescue tools and lifting bags provided to users
(2) Substantiate compliance with this standard
(3) Confirm the organization's policies and procedures are being followed
(4) Determine the effectiveness of those policies and procedures
(5) Improve the organization's rescue tool and lifting bag program for selection, care, maintenance, and record keeping of rescue tools, lifting bags, and components.

4.9 Technical Authorization.

4.9.1 Where the portion of the rescue tool and lifting bag program component that addresses the maintenance of rescue tools and lifting bags, as specified in 4.3.6, includes rescue tool and lifting bag technicians that are members of the organization, such technicians shall be qualified and authorized by the rescue tool and lifting bag manufacturer to perform specified allowable maintenance.

4.9.1.1 Allowable maintenance shall include periodic inspection, repair, and overhaul of all rescue tool and lifting bag components and assemblies.

4.9.1.2 Technicians shall also be qualified and authorized in the use of all special tools and equipment required to test and maintain the rescue tool and lifting bag components and assemblies.

4.9.2 The program component shall establish policies and procedures for qualification and selection of personnel for rescue tool and lifting bag technician training and authorization.

4.9.3 The organization shall maintain evidence that all rescue tool and lifting bag technicians that are used by the organization have current authorization by the rescue tool and lifting bag manufacturer and have maintained their level of competency.

Chapter 5 Selection

5.1 Lifting Bags.

5.1.1 Risk Assessment.

5.1.1.1 Prior to starting the procurement process of lifting bags, a risk assessment shall be performed.

5.1.1.2* The risk assessment shall include, but not be limited to, the expected hazards that can be encountered by users of lifting bags based on the type of duties performed, frequency of use, the organization's experiences, and the organization's geographic location and climatic conditions.

5.1.2 Selection.

5.1.2.1 The organization shall compile and evaluate information on comparative product strengths and weaknesses.

5.1.2.2 The organization shall also consider the following items during the selection process:

(1) Compatibility between users and ease of use
(2) Legibility of remote pressure indicators in reduced visibility
(3) Size and shape
(4) Weight
(5) Rated service time
(6) Environment
(7) Number and complexity of steps involved in operation and maintenance of the lifting bags
(8) Design features that prevent steps from being performed improperly
(9) Operability by user wearing the protective clothing and gloves worn when using lifting bags
(10) Method for uniquely identifying the components of the lifting bag system
(11) Number of spare lifting bags
(12) Lifting bag types
(13) Compatibility of operating air pressures, hose assemblies, and air supply couplings

5.1.2.3 Where a field or laboratory evaluation is conducted, at least the following criteria shall be used to design a systematic evaluation procedure:

(1) An evaluation plan developed by the organization that includes but is not limited to testing prior to and after field evaluations.
(2) Participants for field evaluations selected based on a cross section of personnel, willingness to participate, objectivity, and level of operational activity.
(3) Field evaluations performed by participants on each different lifting bag system being considered from each manufacturer of that particular lifting bag.
(4) A product evaluation form completed for each lifting bag system.
(5) Periodic reports solicited by the organization from participants of the field evaluation.
(6) Conclusions of the evaluation process from the organizations at a specified time and date established by the AHJ, results analysis, and documentation of the results.

5.1.2.4 Purchase specifications shall require evidence that the lifting bags are certified to the current edition NFPA 1936.

5.1.2.5 Where the organization develops purchase specifications, at least the following criteria shall be considered:

(1) All requirements developed by the organization in its evaluations conducted as specified in 5.1.2.1 through 5.1.2.4
(2) User training
(3) Maintenance training
(4) Manufacturer assistance to develop SOPs for maintenance, care, and use
(5) Lifting bag testing on-site prior to acceptance
(6) Maintenance schedule
(7) Complete list of parts
(8) Lifting bag user instruction and service manual
(9) List of any specialized equipment or special tools needed for lifting bag maintenance
(10) List that defines service and maintenance work acceptable for field users to perform and service and maintenance work that requires qualified technicians to perform according to the manufacturer
(11) List of authorized service centers
(12) Warranty statement
(13) Procedures for returning items found defective upon initial receipt

5.1.3 Acceptance.

5.1.3.1 Upon receipt, organizations shall inspect and test purchased lifting bags in accordance with 7.1.1.2.

5.1.3.2 Organizations shall verify that the equipment received is as specified.

5.1.3.3 Procedures shall be established for returning unsatisfactory products if the organization's specifications are not met.

5.1.3.4 Organizations shall review information supplied with the products such as instructions, warranties, and technical data.

5.2 Rescue Tools.

5.2.1 Risk Assessment.

5.2.1.1 Prior to starting the procurement process of powered rescue tools, a risk assessment shall be performed.

5.2.1.2* The risk assessment shall include, but not be limited to, the expected hazards that can be encountered by users of powered rescue tools based on the type of duties performed, frequency of use, the organization's experiences, and the organization's geographic location and climatic conditions.

5.2.2 Selection.

5.2.2.1 The organization shall compile and evaluate information on comparative product strengths and weaknesses.

5.2.2.2 The organization shall also consider the following items during the selection process:

(1) Capability
(2) Versatility
(3) Ease of use
(4) Environmental capabilities
(5) Size
(6) Power source
(7) Weight
(8) Ease of cleaning and maintenance
(9) Recommended service interval
(10) List that defines service and maintenance work acceptable for field users to perform and service and maintenance work that requires qualified technicians to perform according to the manufacturer
(11) Accessories available

5.2.2.3 Where a field or laboratory evaluation is conducted, at least the following criteria shall be used to design a systematic evaluation procedure:

(1) An evaluation plan developed by the organization that includes but is not limited to testing prior to and after field evaluations.
(2) Participants for field evaluations selected based on a cross section of personnel, willingness to participate, objectivity, and level of operational activity.
(3) Field evaluations performed by participants on each different rescue tool model being considered from each manufacturer of that particular rescue tool.
(4) A product evaluation form completed for each model of rescue tool.
(5) Periodic reports solicited by the organization from evaluation participants in the field evaluation process.
(6) Conclusions of the evaluation process by the organizations at a specified time and date established by the AHJ, results analysis, and documentation of the results.

5.2.2.4 Purchase specifications shall require evidence that the rescue tools to be purchased are certified to NFPA 1936.

5.2.2.5 Where the organization develops purchase specifications, at least the following criteria shall be considered:

(1) All requirements developed by the organization in its evaluations conducted as specified in 5.1.2.1 through 5.1.2.4
(2) User training
(3) Maintenance training
(4) Manufacturer assistance to develop SOPs for maintenance
(5) Maintenance schedule
(6) Complete list of parts
(7) Powered rescue tools user and service manuals
(8) List of any specialized equipment or special tools needed for rescue tools maintenance
(9) List that defines service and maintenance work acceptable for field users to perform and service and maintenance work that requires qualified technicians to perform according to the manufacturer
(10) List of authorized service centers and dealers
(11) Warranty statement
(12) Procedures for returning items found defective upon initial receipt

5.2.3 Acceptance.

5.2.3.1 Upon receipt, organizations shall inspect and test functionality of the rescue tools in accordance with Section 6.2.

5.2.3.2 Organizations shall verify that the equipment received is as specified.

5.2.3.3 Procedures shall be established for returning unsatisfactory products if the organization's specifications are not met.

5.2.3.4 Organizations shall review information supplied with the product such as instructions, warranties, and technical data.

Chapter 6 Care

6.1 Lifting Bags.

6.1.1 Lifting Bag and Lifting Bag Component Cleaning and Disinfecting.

6.1.1.1 The external surfaces of the lifting bags and lifting bag components shall be cleaned and disinfected according to the manufacturer's instructions using only those agents indicated by the manufacturer.

6.1.1.2 All lifting bag components shall be dried after cleaning and prior to storage.

6.1.1.3 Drying shall be done in accordance with manufacturer's instructions and not in direct sunlight.

6.1.1.4 Inspections according to 7.1.1.2 shall be performed after cleaning and drying.

6.1.2 Contamination and Decontamination.

6.1.2.1 Where lifting bags and components are suspected of being contaminated, the lifting bag or component shall be tagged "Contaminated, Out of Service" and segregated from the other equipment and personnel.

6.1.2.2 "Contaminated, Out of Service" tags shall include a space on one side of the tag where written details of the known or suspected contaminant are provided, the incident date is recorded, and the name of the reporting user is provided.

6.1.2.3 Cleaning and decontamination shall be conducted in accordance with the lifting bag and components manufacturer's instructions and AHJ procedures.

6.1.2.4 If cleaning and decontamination are not successful, the lifting bag and components manufacturer shall be contac-

ted for further procedures to be used to decontaminate the lifting bag or components.

6.1.2.5 Where it is determined, in accordance with 6.1.2.4, that the lifting bag or components are beyond the ability to be decontaminated and returned to service, the lifting bag or components shall be disposed of in accordance with 4.7.2.

6.1.3 Storage.

6.1.3.1 All lifting bags and lifting bag components shall be stored according to the manufacturer's specific recommendations.

6.1.3.2 After completion of the inventory check, physical inspection, cleaning, and maintenance checks, the lifting bags and all lifting bag components shall, where possible, be stored on the response vehicle in a manner as determined by the AHJ ensuring lifting bags and all lifting bag components are readily accessible, secured to prevent physical damage, and positioned so no damage is caused by proximity to other equipment.

6.1.4 Labeling.

6.1.4.1 All lifting bag labels shall be kept clean and free of cuts, rips, and other surface damage that make them unreadable.

6.1.4.2 Each lifting bag or lifting bag component that has a label(s) required by this standard shall have that label(s) inspected for visibility, readability, and physical damage.

6.1.4.3 Lifting bags or lifting bag components that do not meet 6.1.4.2 shall be removed from service as stated in 7.1.1.4.

6.2 Rescue Tools.

6.2.1 Inspection.

6.2.1.1 The AHJ shall perform a system inspection and operations check of all components of a rescue tool system after each use, or if not used, on a monthly basis, in accordance with the manufacturer's specific recommendations.

6.2.1.2 The rescue tool inspection shall include the following:

(1) All hoses, couplers, couplings, tools, and power units are visually inspected for issues that include, but are not limited to, the following:
    (a) Leaks, twists, bends, tears, cuts, cracks, nicks, burrs
    (b) Heat and chemical damage
    (c) Wear, rounding of fittings
    (d) Any signs of damage that could impact the function of the rescue tools and components
(2) The couplers are clear of obstructions or damage and function with their mating couplings.
(3) Exterior surfaces of the powered rescue tool are free of cracks and deformation.
(4) All controls and accessories operate as designed.
(5) The electrical contact surfaces are clean and undamaged.
(6) There are no missing, broken, or rusted parts.
(7) There are no missing, torn, or damaged labels.
(8) System readiness indicator(s) — lights, graphic displays — are operational.

6.2.1.3 The end-user care and maintenance check shall include an inventory check, a physical inspection and cleaning check, an operational fit and function check, and a maintenance and minor repair check.

6.2.1.4 The AHJ shall provide a work area that is clean and clear of obstructions and hazards for personnel performing end-user care and maintenance checks.

6.2.1.5 Personnel conducting any of these checks on a rescue tool system shall wear safety apparel and eye protection as approved by the AHJ.

6.2.1.6* The inventory check shall determine if all rescue tools, accessories, and components assigned to a vehicle owned by the AHJ are present and accounted for.

6.2.1.7 Missing items discovered during this inventory check shall be reported to the AHJ through appropriate channels.

6.2.1.8 If the rescue tool fails the inspection for any reason, it shall be removed from service, repaired, and service tested or replaced.

6.2.2 Cleaning.

6.2.2.1 All rescue tools shall be kept clean and free of dust, dirt, grease, oil, or other surface contamination according to the manufacturer's specific instructions.

6.2.2.2 A physical inspection and cleaning of the rescue tools system and components shall be conducted after each use, when a potential problem is suspected, or at a minimum on a monthly basis.

6.2.2.3 The rescue tools and all components shall be visually inspected for overall physical condition and integrity of the tool or component.

6.2.2.4 The exterior surfaces of all rescue tools and components shall be cleaned of all foreign dirt, grit, oil, and grease, wiped down with a lint-free cloth dampened with water, and dried with a lint-free cloth or pressurized air source.

6.2.2.5 Accessory components for use with rescue tools shall be inspected for conditions such as material defects, cuts, tears, wearing, abrasion, and unraveling.

6.2.3 Contamination and Decontamination.

6.2.3.1 Where rescue tools and components are suspected of being contaminated, the rescue tool or component shall be tagged "Contaminated, Out of Service" and segregated from the other equipment and personnel.

6.2.3.2 "Contaminated, Out of Service" tags shall include a space on one side of the tag where written details of the known or suspected contaminant are provided, the incident date is recorded, and the name of the reporting user is provided.

6.2.3.3 Cleaning and decontamination shall be conducted in accordance with the rescue tool and components manufacturer's instructions and AHJ procedures.

6.2.3.4 If cleaning and decontamination are not successful, the rescue tool and components manufacturer shall be contacted for further procedures to be used to decontaminate the rescue tool or components.

6.2.3.5 Where it is determined, in accordance with 6.2.3.4, that the rescue tool or components are beyond the ability to be decontaminated and returned to service, the rescue tool or components shall be disposed of in accordance with 4.7.2.

6.2.4 Storage.

6.2.4.1 All rescue tools shall be stored according to the manufacturer's specific recommendations.

6.2.4.2 After completion of the inventory check, physical inspection, cleaning, and maintenance checks, the powered rescue tools and all components shall, where possible, be stored on the response vehicle in a manner as determined by the AHJ ensuring tools and all components are readily accessible, secured to prevent physical damage, and positioned so no damage is caused by proximity to other equipment.

6.2.5 Couplings. The replacement of worn or damaged couplings shall be performed according to the manufacturer's specific instructions.

6.2.6 Labeling.

6.2.6.1 All rescue tool labels shall be kept clean and free of cuts, rips, and other surface damage that make them unreadable.

6.2.6.2 Replacement labels shall be available by the specific manufacturer and applied according to the manufacturer's instructions.

6.2.6.3 Each rescue tool or rescue tool system component that has a label(s) required by this standard shall have that label(s) inspected for visibility, readability, and/or physical damage.

6.2.6.4 The AHJ shall replace any label(s) required by this standard if determined to be damaged or missing.

Chapter 7 Maintenance

7.1 Lifting Bags.

7.1.1 User Maintenance.

7.1.1.1 Inspection Frequency. Inspection of the lifting bag components shall be conducted after every use or monthly at a minimum.

7.1.1.2 Inspection.

7.1.1.2.1 All the following lifting bag components shall be present:

(1) Lifting bags
(2) Controls
(3) Hoses, couplings, and shutoff valves
(4) Regulators
(5) Accessories

7.1.1.2.2 Lifting bag inspection shall include the following:

(1) Material is checked for deterioration, dirt, cracks, tears, holes, pliability, and delamination.
(2) Inlet connection is functional and undamaged.

7.1.1.2.3 Lifting bag component inspection shall include the following:

(1) Gauges, control, actuators for inflation/deflation, and relief valves
(2) All buckles, fasteners, and adjustment straps checked for proper operation

7.1.1.2.4 Hose inspection shall include the following:

(1) Hose checked for cuts, abrasions, bubbling, cracks, heat damage, and chemical damage
(2) External fittings checked for visual signs of damage
(3) Hose checked for tight connections

7.1.1.2.5 Regulator inspection shall include the following:

(1) Regulator controls, where present, checked for damage and proper function
(2) Pressure relief devices checked visually for damage
(3) Housing and components checked for damage
(4) Regulator checked for any unusual sounds such as whistling, chattering, clicking, or rattling during operation
(5) Regulator and pressure relief device checked for proper function when each is operated

7.1.1.2.6 As the final inspection item, the entire lifting bag system shall be checked for pressure retention as prescribed by the manufacturer.

7.1.1.3 Repair.

7.1.1.3.1 Where user repair can be accomplished promptly and replacement items or remedial action are immediately available, the lifting bags shall be permitted to be restored to proper condition and returned to in-service status.

7.1.1.3.2 Where user repair cannot be accomplished promptly or where replacement items or remedial action are not immediately available, the lifting bags shall be tagged out-of-service and removed from the response vehicle or standby location until the user repair can be completed.

7.1.1.3.3 The organization's personnel shall act as follows:

(1) Follow the organization's SOPs and the manufacturer's written instructions for allowable user repairs
(2) Be trained on the specific repair procedures before performing them

7.1.1.3.4 Users shall not perform work beyond the limits of the organization's SOPs and their training and not exceed what is allowed by the manufacturer's written instructions.

7.1.1.3.5 All repairs shall be done with the proper tools, parts, and equipment as specified by the manufacturer.

7.1.1.3.6 After repairs are completed, the user shall conduct the applicable inspection as specified in 7.1.1.2 to verify proper function of the lifting bag system and/or test in accordance with 7.1.2.3 if applicable.

7.1.1.4 Removal from Service.

7.1.1.4.1 Where a condition exists that is beyond user repair in accordance with 7.1.1.3, or the lifting bag is suspected to be in an unsafe condition, the lifting bag shall be removed from service, tagged, and referred to personnel responsible for technical maintenance.

7.1.1.4.2 Any lifting bag or lifting bag component being taken out of service shall be tagged as specified in 4.5.6(14).

7.1.1.4.3 In addition, the tag shall be identified using an affixed distinctive color sign with the words "Out of Service" printed on the tag.

7.1.1.4.4 Where a condition exists that is beyond the user repair in accordance with 7.1.1.4.1, or the lifting bag is suspected to be in an unsafe condition, the lifting bag shall be

removed from service, tagged, and referred to personnel responsible for technical maintenance.

7.1.2 Technician Maintenance.

7.1.2.1 Inspection Frequency.

7.1.2.1.1 The technician shall perform the inspection specified in 7.1.1.2 upon receipt of any lifting bag removed from service.

7.1.2.1.2 The technician shall perform the inspection specified in 7.1.1.2 and the testing specified in 7.1.2.3 prior to returning any lifting bags to service.

7.1.2.1.3 The lifting bags shall be tested annually by a technician certified to perform at that level through advanced training and education from the manufacturer.

7.1.2.1.4 The frequency of technician inspection and testing of lifting bags shall be conducted in accordance with the organization's SOPs as specified in 4.3.5.3.

7.1.2.1.5 The organization shall test all newly purchased lifting bags as specified in 7.1.2.3 prior to putting the lifting bags in service.

7.1.2.2 Inspection.

7.1.2.2.1 Technicians shall perform the level of inspection for which they have been trained and qualified to conduct by the lifting bag manufacturer.

7.1.2.2.2 Where a lifting bag is removed from service in accordance with 7.1.1.4, the technician shall verify the user-reported condition.

7.1.2.2.3 Where the user-reported condition is verified by the technician, the technician then shall determine the action to be taken to repair, return to service, or retire the lifting bags or lifting bag component(s).

7.1.2.2.4 Where the user-reported condition cannot be substantiated, the technician shall perform a complete lifting bag inspection in accordance with the manufacturer's instructions.

7.1.2.2.5 Replacement labels shall be available by the specific manufacturer and applied according to the manufacturer's instructions.

7.1.2.2.6 The AHJ shall replace any label(s) required by this standard if determined to be damaged or missing.

7.1.2.3 Testing.

7.1.2.3.1 The organization responsible for the maintenance of the lifting bags shall perform periodic testing in accordance with the manufacturer's specifications at least annually.

7.1.2.3.2 All equipment used to test lifting bags shall be calibrated in accordance with the test equipment manufacturer's instructions for calibration.

7.1.2.3.2.1 Calibration shall be performed periodically in accordance with the test equipment manufacturer's instructions.

7.1.2.3.2.2* Test equipment shall be calibrated at least annually.

7.1.2.3.2.3 A label shall be affixed to each piece of test equipment stating the date of the latest calibration and the date of the next scheduled calibration.

7.1.2.3.2.4 Records of calibration results shall be kept on file at the maintenance facility in accordance with Section 4.5.

7.1.2.3.3 All lifting bag tests shall be completed as specified by the manufacturer.

7.1.2.4 Repairing and Rebuilding.

7.1.2.4.1 Technicians shall perform the level of repair or re-build for which they have been qualified and are authorized to conduct by the lifting bag manufacturer.

7.1.2.4.2 The replacement of worn or damaged couplings and inlet connections shall be performed according to the manufacturer's specific instructions.

7.1.2.4.3 The technician shall perform the repair or re-build in accordance with the manufacturer's instructions.

7.1.2.4.4 After repair or rebuild, the lifting bag component shall be inspected and tested in accordance with manufacturer's instructions.

7.1.2.5 Removal from Service and Disposition. Any lifting bags or lifting bag component that is damaged and cannot be repaired shall be removed from service and retired as specified in Section 4.7.

7.2 Rescue Tools.

7.2.1 User Maintenance.

7.2.1.1 Inspection Frequency. Inspection of the rescue tool and components shall be conducted after every use or monthly at a minimum.

7.2.1.2 Inspection.

7.2.1.2.1 Rescue tool inspection shall include the following:

(1) Tool is checked for damage, deterioration, dirt, cracks, tears, and leaks.
(2) Couplers and connection points for hoses (if applicable) are functional and undamaged.
(3) Battery connection points (if applicable) are functional and undamaged.
(4) Operational controls are free of dirt and debris and function properly.
(5) Handles are functional and securely attached to the tool.
(6) Blades and tips and other parts prone to wear are functional and securely mounted.

7.2.1.2.2 Rescue tool component inspection shall include the following:

(1) Power source is checked for damage, deterioration, dirt, cracks, tears, and leaks.
(2) Hoses are checked for cuts, kinks, abrasions, cracks, delamination, and heat damage.
(3) Batteries are checked for damage, cracks, and leaking.

7.2.1.2.3 As the final inspection item, the entire rescue tool system shall be checked for proper opening and closing operation as prescribed by the manufacturer.

7.2.1.3 Repair.

7.2.1.3.1 Where the user has completed manufacturer recommended service and repair training and repair can be accom-

plished promptly and replacement items or remedial action is immediately available, the rescue tool shall be permitted to be restored to proper condition and returned to in-service status.

7.2.1.3.2 Where user repair cannot be accomplished promptly or where replacement items or remedial action is not immediately available, the rescue tools shall be tagged out of service and removed from the response vehicle or standby location until the repair can be completed.

7.2.1.3.3 The organization's personnel shall act as follows:

(1) Follow the organization's SOPs and the manufacturer's written instructions for allowable user repairs
(2) Be trained by the manufacturer on the specific repair procedures before performing them

7.2.1.3.4 Users shall not perform work beyond the limits of the organization's SOPs and their training and not exceed what is allowed by the manufacturer's written instructions.

7.2.1.3.5 All repairs shall be done with the proper tools, parts, and equipment as specified by the manufacturer.

7.2.1.3.6 After repairs are completed, the user shall conduct the applicable inspection as specified in 7.2.1.2 to verify proper function of the rescue tool and test in accordance with 7.2.2.3 if applicable.

7.2.1.3.7 The replacement of worn or damaged couplings and inlet connections shall be performed according to the manufacturer's specific instructions.

7.2.1.4 Removal from Service.

7.2.1.4.1 Where a condition exists that is beyond user repair in accordance with 7.2.1.3, or the rescue tool is suspected to be in an unsafe condition, the rescue tool shall be removed from service, tagged out of service, and referred to personnel responsible for technical maintenance.

7.2.1.4.2 Any rescue tool or rescue tool component being taken out of service shall be tagged as specified in 4.5.6(14).

7.2.1.4.3 In addition, the tag shall be identified using an affixed distinctive color sign with the words "Out of Service" printed on the tag.

7.2.1.4.4 Where a condition exists that is beyond the user repair in accordance with 7.2.1.4.1, or the rescue tool or component is suspected to be in an unsafe condition, the rescue tool or component shall be removed from service, tagged, and referred to personnel responsible for technical maintenance.

7.2.2 Technician Maintenance.

7.2.2.1 Inspection Frequency.

7.2.2.1.1 The technician shall perform the inspection specified in 7.2.1.2 upon receipt of any rescue tool removed from service.

7.2.2.1.2 The technician shall perform the inspection specified in 7.2.1.2 and the testing specified in 7.2.2.3 prior to returning any rescue tool to service.

7.2.2.1.3 The rescue tool shall be tested monthly in accordance with the manufacturer's recommendation.

7.2.2.1.4 The frequency of technician inspection and testing of rescue tools shall be conducted in accordance with the organization's SOPs developed as specified in 4.3.5.3.

7.2.2.1.5 The organization shall test all newly purchased rescue tools as specified in 7.2.2.3 prior to putting rescue tools in service.

7.2.2.2 Inspection.

7.2.2.2.1 Technicians shall only perform the level of inspection for which they have been trained and qualified to conduct by the rescue tool manufacturer.

7.2.2.2.2 Where a rescue tool is removed from service in accordance with 7.2.1.4, the technician shall verify the user-reported condition.

7.2.2.2.3 Where the user-reported condition is verified by the technician, the technician shall determine the action to be taken to repair, return to service, or retire the rescue tool or rescue tool component(s).

7.2.2.2.4 Where the user-reported condition cannot be substantiated, the technician shall perform a complete rescue tool inspection and functional test in accordance with the manufacturer's instructions.

7.2.2.2.4.1 Where the user-reported condition cannot be substantiated by the technician, and the technician has performed the tool inspection and functional test in accordance with 7.2.2.2.4 and the tool performs in accordance with the manufacturer's specifications, the tool shall be returned to service.

7.2.2.2.5 The following power unit maintenance shall be performed annually at a minimum and by personnel qualified as technician level by the manufacturer in this order:

(1) Power units to be free of damage to the prime mover, frame, and connections.
(2) Power units to be operated at the rated system input for the specified power unit.
(3) Output safety pressure relief valves or automatic limiting devices to be checked to ensure operation at appropriate pressures per manufacturer's recommendation.
(4) Rated system input to be maintained for no less than 30 seconds.
(5) Pressure fluctuations during the 30 second test to be not more than ±5 percent of the rated system input.
(6) Power units to be checked during and immediately after pressure tests to check for leaks or malfunction.
(7) Power units to be connected to a rescue tool via hose and hose assembly and directional valves checked for proper operation.

7.2.2.2.6 Replacement labels shall be available by the specific manufacturer and applied according to the manufacturer's instructions.

7.2.2.2.7 The AHJ shall replace any label(s) required by this standard if determined to be damaged or missing.

7.2.2.3 Testing.

7.2.2.3.1 The organization responsible for the maintenance of the rescue tools shall perform periodic testing in accordance with the manufacturer's specifications.

7.2.2.3.2 In addition, the rescue tool system(s) shall be tested annually by a manufacturer-trained and -authorized technician to confirm tool or component performance as specified by the manufacturer.

7.2.2.3.3 All equipment used to test rescue tools shall be calibrated in accordance with the test equipment manufacturer's instructions for calibration.

7.2.2.3.3.1 Calibration shall be performed periodically in accordance with the test equipment manufacturer's instructions.

7.2.2.3.3.2* Test equipment shall be calibrated annually at a minimum.

7.2.2.3.3.3 A label shall be affixed to each piece of test equipment stating the date of the latest calibration and the date of the next scheduled calibration.

7.2.2.3.3.4 Records of calibration results shall be kept on file at the maintenance facility in accordance with Section 4.5.

7.2.2.3.4 All rescue tool tests shall be completed as specified by the manufacturer.

7.2.2.4 Repairing and Rebuilding.

7.2.2.4.1 Technicians shall only perform the level of repair or rebuild for which they have been trained and qualified and are authorized by the rescue tool manufacturer.

7.2.2.4.2 The technician shall perform the repair or rebuild in accordance with the manufacturer's instructions.

7.2.2.4.3 After repair or rebuild, the rescue tool or rescue tool component shall be inspected and tested in accordance with manufacturer's instructions.

7.2.2.5 Removal from Service and Disposition. Any rescue tool or rescue tool component that is damaged and cannot be repaired shall be removed from service and retired as specified in Section 4.7.

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

A.3.2.2 Authority Having Jurisdiction (AHJ). The phrase "authority having jurisdiction," or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

A.3.2.4 Listed. The means for identifying listed equipment may vary for each organization concerned with product evaluation; some organizations do not recognize equipment as listed unless it is also labeled. The authority having jurisdiction should utilize the system employed by the listing organization to identify a listed product.

A.3.3.5.2 Powered Rescue Tool Components. The individual parts that are assembled in a rescue tool or component thereof, such as seals, screws, valves, and switches, are not themselves considered components for the purposes of this standard.

A.3.3.7 Coupling. A coupling, also referred to as a quick-release coupling, replaces threaded connections.

A.3.3.24 Rescue Tool. This is also another term for powered rescue tool.

A.4.2.1 Where a specific condition involving rescue tools and lifting bags is identified, the organization's SOPs should cause the rescue tool and lifting bag manufacturer to be promptly notified of the specific condition(s) or cause and the circumstances involved with the specific condition(s) or cause.

A.4.3.6 As part of the risk assessment program, the organization should ensure that all users are trained in the proper operations and use of rescue tool and lifting bag systems in accordance with the manufacturer's instructions. Members using or responsible for rescue tools or lifting bags should be permitted to return a rescue tool or lifting bag to its original condition and manufacturer's specifications by way of any field-level or technician-level adjustments and necessary maintenance work or repair efforts.

A.4.4.2 For currently-in-service lifting bags that are not certified as compliant with NFPA 1936, it is recommended to apply a 15-year service life from the date of manufacture.

A.5.1.1.2 The organization should review the relevant sections within the following standards and regulations as a minimum:

(1) NFPA 1936
(2) NFPA 1500
(3) NFPA 1006
(4) NFPA 1670
(5) National, state, local, and provincial regulations

A.5.2.1.2 The organization should review the following standards and regulations as a minimum:

(1) NFPA 1936
(2) NFPA 1006
(3) NFPA 1670
(4) NFPA 1500
(5) National, state, local, and provincial regulations

A.6.2.1.6 This inventory check can include accountability for items such as rescue tools, power units, cutters, spreaders,

rams, combination tools, hoses, hose reels, batteries, chargers, and accessories.

A.7.1.2.3.2.2 Some examples of test equipment are torque wrenches, pressure gauges, force gauges, and certain electrical equipment. However, there might be more equipment that needs to be calibrated.

A.7.2.2.3.3.2 Some examples of test equipment that should be calibrated are torque wrenches, pressure gauges, force gauges, and certain electrical equipment. However, there might be more equipment that needs to be calibrated.

Annex B Informational References

B.1 Referenced Publications. The documents or portions thereof listed in this annex are referenced within the informational sections of this standard and are not part of the requirements of this document unless also listed in Chapter 2 for other reasons.

B.1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1006, *Standard for Technical Rescue Personnel Professional Qualifications*, 2021 edition.

NFPA 1500™, *Standard on Fire Department Occupational Safety, Health, and Wellness Program*, 2021 edition.

NFPA 1670, *Standard on Operations and Training for Technical Search and Rescue Incidents*, 2017 edition.

NFPA 1936, *Standard on Rescue Tools*, 2020 edition.

B.1.2 Other Publications. (Reserved)

B.2 Informational References. The following documents or portions thereof are listed here as informational resources only. They are not a part of the requirements of this document.

B.2.1 CENELEC Publications. CENELEC, European Committee for Electrotechnical Standardization, CEN-CENELEC Management Centre, Avenue Marnix 17, 4th floor, B - 1000 Brussels.

EN 13731, *Lifting bag systems for fire and rescue service use — Safety and performance requirements*, 2007 edition.

B.3 References for Extracts in Informational Sections. (Reserved)