



Technical Committee on Fire Department Rescue Tools

(FDR-AAA)

NFPA 1937 First Draft Meeting

February 26th - 28th, 2019

Phoenix, AZ

AGENDA

1. Call meeting to order by Chair Glenn Mate @ 8:30 am
2. Introductions and attendance
3. Opening comments, chair Glenn Mate
4. Review/Accept meeting minutes of previous meeting, (Oct. 2018)
5. Ken Holland, NFPA Explanation of Task group Work, Process, Legal and Ethical matters pertaining to Task Groups
6. Ken Holland, NFPA Update, Explanation of 1st Draft Process
7. Chair Glenn Mate Update of NFPA 1936 Document completion
8. Task Groups, Chair Reports on NFPA 1937
9. Chair Glenn Mate, Address committee on NFPA 1937 status, direction and required work of addressing submitted public inputs
10. Old Business/New Business
11. Next meeting
 - a. Second draft meeting for 1937 date/location TBD
 - b. Discuss viable dates within timeframe of NFPA process
12. Adjourn Meeting

NFPA 1936 SDM Meeting Minutes
Technical Committee on Fire Department Rescue Tools
October 23rd - 25th, 2018
Portland, ME

Members Present

Glenn Mate – Chairman
Dave Trebisacci – NFPA Staff
Michael Canon
Paul Curtis
Pete Gunnell
Brad Havrilla
Christopher James
Eric Marquess
John McCarthy
Richard Michalo
Ronald Moore
Eric Rickenbach
John Sweezy
Richard Garber – Alternate
Tammy Horne – Alternate
Kyle Smith - Alternate

Guests

Tim O'Connell – Rescue 42
Bill Teach - Paratech

Tuesday October 23rd

The meeting was called to order at 8:10 am Tuesday Oct. 23. Minutes from the October 2017 meeting of Corpus Christi were read and approved.

Chairman outlined the schedule for the meeting and the topics to be covered. If there is time at the end of this meeting, the committee will work on the NFPA 1937 draft. He explained that for NFPA 1937, any changes made to 1937 need to be put in as a public input by January 3, 2019.

David went over the basic information of how the meeting will run and explained the rules of the meeting. He explained the relevant dates of the second draft.

Posting of second draft for balloting 12/19/2018

Posting of second draft for NITMAN 1/23/2019

NITMAN closing date 2/20/2019

NFPA annual meeting 6/20/2019

David presented a PowerPoint presentation on the procedures of the committee.

Glenn opened a discussion for approximately 20 minutes to discuss the Strut portion of the standard. The topic is to either keep the chapter and make some corrections or remove the chapter and work on it from the ground up again. Committee will take a 15 minute break and then come back to discuss a direction for the struts.

Chairman explained the opinion of the committee at this time is to remove the section on struts and to continue the work on rescue tools and lifting bags. Asked for a motion from the floor so the committee could move ahead.

A task group was formed and will keep working to move struts forward. Tim O'Connell will be the task group leader. Members: Pete Gunnell, Chris James, John McCarthy, Bill Teach, Ron Moore, Tammy Horne, Brad Havrilla and Rich Garber.

A task group was formed to review the correction and the removal of the strut content. Task Group Chair Chris James Members: Paul Curtis, John McCarthy, Tammy Horne
The lifting bags public comments were reviewed and discussed and any relevant second revisions were developed.

Chris James pointed out the figures showing the penetration test fixture will need tolerances added to the dimensions. These values will be added and submitted to NFPA.

Committee will break for lunch. After lunch the committee will review text for material cut test table then the strut task group will meet to work on struts. Those not on strut group will work on the NFPA1937 draft language for their particular section.

The group reconvened at 1:10. Public comments for the rescue tool portion of NFPA 1936 were reviewed.

The new high strength materials cut test table was discussed and it was suggested the material description properties be explained in an annex. It was proposed that the wording be changed to better describe the material by adding the text "ultra" to the description of the table 5.6.15.1 in front of the words "High-Strength".

The dates and location for the NFPA Meeting for 1937 to be held in early 2019 were discussed. Dates proposed are February 26, 27, 28-2019 in Sedona, AZ.

The task group chair for the NFPA 1937 extrication equipment will be Paul Curtis. The task group chair for the NFPA 1937 air lifting bags will be John Sweezy Jr. The committee decided to

remove Strut content in its entirety for 1937 for this revision cycle. The committee separated into task groups to review the strut editorial changes, and to review and edit the NFPA 1937 draft text for the lifting bags and rescue tools.

Wednesday Oct. 24

Meeting start times will be 8:00 am for the starting day and for the second and third days will be 9:00 am. Closing times of the meeting days will be at the discretion of the chair but for agenda purposes will be 5:00 pm.

The 1936 correlation task group successfully went through the document to remove all Strut language and assure intent was not changed.

During the morning, the strut task group will work on reformatting and producing a new outline. The 1937 Extrication tools and air lifting bags task groups are going through 1937 line by line of each chapter to make necessary corrections of syntax errors, grammatical errors and any points that require additional language or missing information. The committee will meet together at noon.

The group reconvened at noon.

The committee discussed the alignment of 1936/1937 which will be processed at a later time.

The 1937 group has reviewed the draft and made edits as necessary. The strut group has come back with the following ideas:

- Classification of struts is not appropriate for this standard
- Reach out to stakeholders of interest to gain viewpoints to aid in compilation of document
- Review federal law, and supporting documents to aid in development

David read the information pertaining to the dates of section 4.1 which dictate when manufacturers have to use the 2020 labeling on product.

The chairman called for any new business on NFPA 1936; there was none. The chairman called for any old business on NFPA 1936 there was none. The only old business is to continue to work on the NFPA 1936 strut task group.

The strut group will perform research this afternoon and the committee will reconvene at 10:00 on Thursday. The meeting was adjourned for the day.

Thursday Oct. 25

There were no further comments or questions regarding procedural or content of the progression of NFPA 1936.

No further questions from the membership regarding direction of NFPA 1936 or NFPA 1937. The strut task group leader gave a summary of the plan moving forward.

- Strategic goal in place
- Gathering new data
- Reaching out to potential stakeholders in rescue/industrial industries
- Using existing 1936 scope and purpose with minor modification.

The goal for today is to firm up the scope and purpose of the strut portion of the standard and to put together a schedule for meetings/tasks for the future. Task group met for one hour to work on scope and purpose.

Committee reconvened. The strut task group completed the scope, purpose and application. Will continue to develop the language for the rest. No clear date was given for a timeline, more research is needed.

The chairman asked for principle members to find an alternate if they do not already have one. Any other interested parties should contact Glenn or Ken Holland to be assigned to a task group.

The chairman reminded everyone that information and opinions developed by the committee, which is not provided in the minutes or as part of a publication, are to stay within the committee. This keeps the flow of information to persons outside the committee correct.

The chairman also explained the committee has a balance such that we are at the maximum level for manufacturers and we are down in end users. There are openings for end users, installers and maintainers.

The chairman thanked everyone for their time and effort. The meeting was adjourned at 11:30.

Fall 2020 Master Schedule

Process Stage	Process Step	Dates for TC	Dates for TC with CC
Public Input Stage (First Draft)	Public Input Closing Date*	1/03/2019	1/03/2019
	Final Date for TC First Draft Meeting	6/13/2019	3/14/2019
	Posting of First Draft and TC Ballot	8/01/2019	4/25/2019
	Final date for Receipt of TC First Draft ballot	8/22/2019	5/16/2019
	Final date for Receipt of TC First Draft ballot - recirc	8/29/2019	5/23/2019
	Posting of First Draft for CC Meeting		5/30/2019
	Final date for CC First Draft Meeting		7/11/2019
	Posting of First Draft and CC Ballot		8/01/2019
	Final date for Receipt of CC First Draft ballot		8/22/2019
	Final date for Receipt of CC First Draft ballot - recirc		8/29/2019
	Post First Draft Report for Public Comment	9/05/2019	9/05/2019
Comment Stage (Second Draft)	Public Comment Closing Date*	11/14/2019	11/14/2019
	Notice Published on Consent Standards (Standards that received no Comments) Note: Date varies and determined via TC ballot.		
	Appeal Closing Date for Consent Standards (Standards that received no Comments)		
	Final date for TC Second Draft Meeting	5/14/2020	2/06/2020
	Posting of Second Draft and TC Ballot	6/25/2020	3/19/2020
	Final date for Receipt of TC Second Draft ballot	7/16/2020	4/09/2020
	Final date for receipt of TC Second Draft ballot - recirc	7/23/2020	4/16/2020
	Posting of Second Draft for CC Meeting		4/23/2020
	Final date for CC Second Draft Meeting		6/04/2020
	Posting of Second Draft for CC Ballot		6/25/2020
	Final date for Receipt of CC Second Draft ballot		7/16/2020
	Final date for Receipt of CC Second Draft ballot - recirc		7/23/2020
	Post Second Draft Report for NITMAM Review	7/30/2020	7/30/2020
Tech Session Preparation (& Issuance)	Notice of Intent to Make a Motion (NITMAM) Closing Date	8/27/2020	8/27/2020
	Posting of Certified Amending Motions (CAMs) and Consent Standards	10/08/2020	10/08/2020
	Appeal Closing Date for Consent Standards	10/23/2020	10/23/2020
	SC Issuance Date for Consent Standards	11/02/2020	11/02/2020
Tech Session	Association Meeting for Standards with CAMs		
Appeals and Issuance	Appeal Closing Date for Standards with CAMs		
	SC Issuance Date for Standards with CAMs		

TC = Technical Committee or Panel
CC = Correlating Committee

As of 12/13/2017



Public Input No. 25-NFPA 1937-2018 [Global Input]

Type your content here ...

Statement of Problem and Substantiation for Public Input

Remove any references to "strut", "struts" and "strut components" from the document in its entirety, included explanatory materials and annexes, as they are not part of this standard at this time.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

City:

State:

Zip:

Submittal Date: Wed Oct 24 10:58:29 EDT 2018

Committee: FDR-AAA

**Public Input No. 42-NFPA 1937-2018 [Section No. 1.2.1]**

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

-

Statement of Problem and Substantiation for Public Input

Added the words “and their components”, “selection”, “record keeping”, and “or obsolete” for consistency with the entire scope of this standard.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

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Submittal Date: Sat Dec 29 17:05:26 EST 2018

Committee: FDR-AAA



Public Input No. 43-NFPA 1937-2018 [Section No. 1.2.3]

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

struts , and their components and that safety is the ultimate factor in the decision to service, maintain, repair, or retire lifting bags, rescue tools,

and struts

struts, and their components from service .

Statement of Problem and Substantiation for Public Input

Added information to expand options that are covered within the scope of this document (service, maintain, repair). Draft version offers only the sole choice given to “retire” equipment from service. Justification for revision is that if a tool can be serviced, maintained, and repaired to its functional condition where it will operate safely and as per manufacturer’s specs, then ‘retirement’ of the tool, meaning replacing it with new equipment, should not be the only option available to the AHJ. (See section 4.1.3(4) to understand how this revision matches for consistency.)

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Sat Dec 29 17:10:24 EST 2018

Committee: FDR-AAA



Public Input No. 44-NFPA 1937-2018 [Section No. 1.3.2]

1.3.2

This standard shall apply to the acquisition of new lifting bags, rescue tools,

and

struts , and components and to the preparation of these new lifting bags, rescue tools, struts, and

struts

components before they go into in-service status.

Statement of Problem and Substantiation for Public Input

Added the words "and components" to the draft text for consistency.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

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Submittal Date: Sat Dec 29 17:14:43 EST 2018

Committee: FDR-AAA



Public Input No. 45-NFPA 1937-2018 [Section No. 1.3.3]

1.3.3

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

Statement of Problem and Substantiation for Public Input

Added text for consistency and grammar correction.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

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Submittal Date: Sat Dec 29 17:16:30 EST 2018

Committee: FDR-AAA



Public Input No. 47-NFPA 1937-2018 [New Section after 1.3.6]

End-of-Service-Life Exemption

1.3.7.

Once permanently retired from service and destroyed or otherwise rendered unusable by the AHJ, the requirements of this standard for lifting bags, rescue tools, struts, and their components shall not apply.

-

Statement of Problem and Substantiation for Public Input

Added new section 1.3.7 to clarify that once a tool is taken permanently out of service by an AHJ, the tool shall be exempt from the requirements of NFPA 1937 and no longer requires servicing, care, or maintenance by the AHJ as per the NFPA 1937 standard. Example: An old permanently out of service lifting bag (cut-away) to use in a classroom as a training prop.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

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Submittal Date: Sat Dec 29 17:24:17 EST 2018

Committee: FDR-AAA

**Public Input No. 46-NFPA 1937-2018 [Section No. 1.3.6]****1.3.6**

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

Statement of Problem and Substantiation for Public Input

Added the words "and components" for consistency throughout standard

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

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City:

State:

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Submittal Date: Sat Dec 29 17:21:25 EST 2018

Committee: FDR-AAA



Public Input No. 48-NFPA 1937-2018 [Section No. 2.4]

2.4 References for Extracts in Mandatory Sections.

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

Statement of Problem and Substantiation for Public Input

Deleted "NFPA 1936, *Standard on Rescue Tools*, 2020 edition." as redundant with section 2.2

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Sat Dec 29 17:31:41 EST 2018

Committee: FDR-AAA



Public Input No. 16-NFPA 1937-2018 [New Section after 3.2]

3.2.XX Standard Operating Procedure.

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, 2015]

3.2.XX SOP.

Acronym used for Standard Operating Procedure (see 3.2.xx)

Statement of Problem and Substantiation for Public Input

Add a definition for SOP as it is used within this standard. Same definition as referenced in NFPA 1670.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

City:

State:

Zip:

Submittal Date: Wed Oct 24 10:09:35 EDT 2018

Committee: FDR-AAA



Public Input No. 2-NFPA 1937-2018 [Section No. 3.3.1]

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. [1936, 2020]

Statement of Problem and Substantiation for Public Input

Amend to add lifting bag for clarity.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

City:

State:

Zip:

Submittal Date: Wed Oct 24 09:27:22 EDT 2018

Committee: FDR-AAA

**Public Input No. 27-NFPA 1937-2018 [Section No. 3.3.2]****3.3.2 Accessory.**

A secondary component designed to work in conjunction with a ~~strut in a structural system~~ primary piece of rescue equipment .

Statement of Problem and Substantiation for Public Input

I think this clarifies the intent, particularly where it pertains to the previous definition. Equipment is not only limited to structural struts, etc.

Submitter Information Verification

Submitter Full Name: Ryan McGovern

Organization: Boston Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Tue Nov 20 14:03:52 EST 2018

Committee: FDR-AAA



Public Input No. 3-NFPA 1937-2018 [Section No. 3.3.2]

3.3.2 – Accessory.

~~A secondary component designed to work in conjunction with a strut in a structural system.~~

Statement of Problem and Substantiation for Public Input

Restatement if 3.3.1.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

City:

State:

Zip:

Submittal Date: Wed Oct 24 09:30:08 EDT 2018

Committee: FDR-AAA



Public Input No. 49-NFPA 1937-2018 [Section No. 3.3.2]

3.3.2 Accessory.

A secondary component designed to work in conjunction with a lifting bag, rescue tool, strut , or component when applied in a
structural system
technical rescue situation .

Statement of Problem and Substantiation for Public Input

Added "lifting bag, rescue tool, strut, or component" wording to expand the scope of this section and for consistency within this standard.

Deleted "in a structural system" and substituted new text to expand the scope of the definition.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Sun Dec 30 10:54:02 EST 2018

Committee: FDR-AAA

**Public Input No. 28-NFPA 1937-2018 [Section No. 3.3.3]****3.3.3 Care.**

Procedures for cleaning, decontamination, and storage of lifting bags ~~and~~ or other associated equipment utilized for rescue .

Statement of Problem and Substantiation for Public Input

I think this clarifies the intent of the standard, as it is not only pertaining to lift bags.

Submitter Information Verification

Submitter Full Name: Ryan McGovern

Organization: Boston Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Tue Nov 20 14:09:03 EST 2018

Committee: FDR-AAA



Public Input No. 4-NFPA 1937-2018 [Section No. 3.3.3]

3.3.3 Care.

Procedures for cleaning, decontamination, and storage of rescue tools, lifting bags, and associated equipment.

Statement of Problem and Substantiation for Public Input

Add the term rescue tools to make statement all-inclusive.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

City:

State:

Zip:

Submittal Date: Wed Oct 24 09:32:22 EDT 2018

Committee: FDR-AAA



Public Input No. 50-NFPA 1937-2018 [Section No. 3.3.3]

3.3.3 Care.

Procedures for cleaning, decontamination, storage, and storage preparing for service of lifting bags , rescue tools, struts, components, and associated equipment.

Statement of Problem and Substantiation for Public Input

Added the words "lifting bag, rescue tool, strut, or component" to expand the scope of this definition and for consistency within this standard.

Added "and preparing for service" to cover all aspects of care of these tools

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Sun Dec 30 10:56:30 EST 2018

Committee: FDR-AAA



Public Input No. 5-NFPA 1937-2018 [Section No. 3.3.7]

3.3.7 Components.

See 3.3.27, ~~Rescue Tool Components~~ Components are items that are necessary for the proper use of the equipment.

Statement of Problem and Substantiation for Public Input

Better definition for components. Additional input will eliminate 3.3.27.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 11-NFPA 1937-2018 [Section No. 3.3.27]</u>	

Submitter Information Verification

Submitter Full Name: Eric Rickenbach
Organization: Pennsylvania State University
Street Address:
City:
State:
Zip:
Submittal Date: Wed Oct 24 09:34:09 EDT 2018
Committee: FDR-AAA



Public Input No. 6-NFPA 1937-2018 [Section No. 3.3.8]

3.3.8 Contamination/Contaminated.

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

Statement of Problem and Substantiation for Public Input

Add rescue tools to the definition.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

City:

State:

Zip:

Submittal Date: Wed Oct 24 09:37:50 EDT 2018

Committee: FDR-AAA

**Public Input No. 51-NFPA 1937-2018 [Section No. 3.3.9]**

3.3.9* Coupling.— ~~A hand-operated device used to provide a fast, make-or-break connection of fluid or pressurized air transfer lines.~~

-

Statement of Problem and Substantiation for Public Input

Added "or pressurized air" to clarify inclusion of air hose couplings

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Sun Dec 30 10:58:48 EST 2018

Committee: FDR-AAA



Public Input No. 7-NFPA 1937-2018 [Section No. 3.3.9]

3.3.9* Coupling.

~~A hand-operated device used to provide a fast, make-or-break connection of fluid transfer lines. Connectors attached to the hose assemblies, lifting bags, or accessories to allow for the connection and disconnection of components. [1936, 2020]~~

Statement of Problem and Substantiation for Public Input

Align definition with NFPA 1936

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

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Submittal Date: Wed Oct 24 09:42:57 EDT 2018

Committee: FDR-AAA



Public Input No. 26-NFPA 1937-2018 [Section No. 3.3.14]

3.3.14 Lifting Bag.

A portable inflatable bag used to apply force to move or lift objects. [1936, 2020] This definition does not apply to lifting bags used in water rescue and salvage operations.

Statement of Problem and Substantiation for Public Input

Lifting bags used in water rescue and recovery are not manufactured to the same specifications as those used for vehicle extrication and structural collapse. Some of these bags are as simple as an open bottomed bag for recovering a body, and would not meet these proposed standards. Rather than rewrite this standard, a simple definition adjustment or exclusion can clear up any misunderstandings.

Submitter Information Verification

Submitter Full Name: Justin Fox

Organization: Dive Rescue International

Street Address:

City:

State:

Zip:

Submittal Date: Tue Nov 20 12:18:25 EST 2018

Committee: FDR-AAA



Public Input No. 8-NFPA 1937-2018 [Section No. 3.3.15]

3.3.15 – Lock-Pin.

A mechanism or assembly that is used to join opposing parts of a structural system or a component that holds a strut to a desired fixed length.

Statement of Problem and Substantiation for Public Input

Removing section as it applies to struts.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

City:

State:

Zip:

Submittal Date: Wed Oct 24 09:45:26 EDT 2018

Committee: FDR-AAA

**Public Input No. 52-NFPA 1937-2018 [Section No. 3.3.16]****3.3.16 Maintenance.**

Procedures that include inspection, repair,

and

removal from service , and record-keeping of lifting bags , rescue tools, struts, components and associated equipment.

-

Statement of Problem and Substantiation for Public Input

Added the words "rescue tools, struts, components" and "record-keeping" to expand the scope of this definition and for consistency within this standard.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Sun Dec 30 11:00:48 EST 2018

Committee: FDR-AAA



Public Input No. 9-NFPA 1937-2018 [Section No. 3.3.16]

3.3.16 Maintenance.

Procedures that include inspection, repair, and removal from service of ~~lifting~~ rescue tools, lifting bags and associated equipment.

Statement of Problem and Substantiation for Public Input

Add rescue tools to definition.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

City:

State:

Zip:

Submittal Date: Wed Oct 24 09:46:20 EDT 2018

Committee: FDR-AAA

**Public Input No. 10-NFPA 1937-2018 [Section No. 3.3.18]****3.3.18 Nipple (Fitting).**

A short piece of pipe, usually provided with a ~~threaded~~ male or female connection on one end, that is used to connect with couplings in ~~a fluid power~~ a powered system.

Statement of Problem and Substantiation for Public Input

Revised language for clarity.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

City:

State:

Zip:

Submittal Date: Wed Oct 24 09:47:14 EDT 2018

Committee: FDR-AAA

**Public Input No. 33-NFPA 1937-2018 [Section No. 3.3.18]****3.3.18 Nipple (Fitting).**

A short piece of pipe, usually provided with a threaded male or female connection on one end, that is used to connect with couplings in a fluid or air power system.

Statement of Problem and Substantiation for Public Input

Nipple as described is also used in an air power system like lifting bags, therefore i suggest adding the word air

Submitter Information Verification

Submitter Full Name: Paul Prevost

Organization: City Of Fort Saskatchewan

Street Address:

City:

State:

Zip:

Submittal Date: Thu Dec 27 17:08:56 EST 2018

Committee: FDR-AAA

**Public Input No. 29-NFPA 1937-2018 [Section No. 3.3.21]****3.3.21 Power Unit.**

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

Statement of Problem and Substantiation for Public Input

I think by removing the prime mover piece, this also considers portable power units that would fall under this line. To me, the term "prime mover" is confusing and refers to having a vehicle.

Submitter Information Verification

Submitter Full Name: Ryan McGovern

Organization: Boston Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Tue Nov 20 14:13:42 EST 2018

Committee: FDR-AAA

**Public Input No. 11-NFPA 1937-2018 [Section No. 3.3.27]**

~~3.3.27 * – Rescue Tool Components.~~

~~The individual tools that are a part of a larger collection.~~

Statement of Problem and Substantiation for Public Input

Delete as this has been clarified in 3.3.7

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 5-NFPA 1937-2018 [Section No. 3.3.7]	

Submitter Information Verification

Submitter Full Name: Eric Rickenbach
Organization: Pennsylvania State University
Street Address:
City:
State:
Zip:
Submittal Date: Wed Oct 24 09:48:48 EDT 2018
Committee: FDR-AAA

**Public Input No. 53-NFPA 1937-2018 [Section No. 3.3.27]****3.3.27* Rescue Tool Components.**

The individual tools

~~that are a part~~

, parts, accessories, or elements of a larger

~~collection~~

system that are typically used with the larger system and allow it to function as designed by the manufacturer .

-

Statement of Problem and Substantiation for Public Input

Expanded the definition to clarify that the term 'Rescue Tool Components' includes parts, accessories, and elements used to allow the larger tool to function as designed.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Sun Dec 30 11:03:35 EST 2018

Committee: FDR-AAA

**Public Input No. 12-NFPA 1937-2018 [Section No. 3.3.28]****3.3.28 Selection.**

The process of determining what rescue tools or lifting bags are necessary for use during an emergency services response to a specific hazard or activity at an emergency incident.

Statement of Problem and Substantiation for Public Input

Add rescue tools to definition.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

City:

State:

Zip:

Submittal Date: Wed Oct 24 09:49:50 EDT 2018

Committee: FDR-AAA

**Public Input No. 30-NFPA 1937-2018 [Section No. 3.3.28]****3.3.28 Selection.**

The process of determining what ~~lifting bags are~~ equipment is necessary for use during an emergency services response to a specific hazard or activity at an emergency incident.

Statement of Problem and Substantiation for Public Input

We select tools other than lift bags. I think this just clarifies and doesn't lock the standard into only lift bags.

Submitter Information Verification

Submitter Full Name: Ryan McGovern

Organization: Boston Fire Department

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Submittal Date: Tue Nov 20 14:17:06 EST 2018

Committee: FDR-AAA



Public Input No. 54-NFPA 1937-2018 [Section No. 3.3.28]

3.3.28 Selection.

The process of determining what lifting

bags

bag, rescue tool, strut, component, and accessories are necessary

for use

to utilize during an emergency services response to a specific hazard or activity at an emergency incident
or during training activities .

-

Statement of Problem and Substantiation for Public Input

Added "rescue tools, struts, components" to expand the scope of this definition and for consistency within this standard.

Added "or during training activities" to expand the scope of this definition.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

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Submittal Date: Sun Dec 30 11:05:40 EST 2018

Committee: FDR-AAA

**Public Input No. 13-NFPA 1937-2018 [Section No. 3.3.31]****3.3.31 – Strut.**

~~A rescue tool used to perform the function of supporting loads. [1936 , 2020]~~

Statement of Problem and Substantiation for Public Input

Deleted since struts have been removed from the document at this time.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

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Submittal Date: Wed Oct 24 09:51:15 EDT 2018

Committee: FDR-AAA

**Public Input No. 55-NFPA 1937-2018 [Section No. 3.3.31]****3.3.31** Strut.

3.3.31 Strut. A rescue tool used to perform the function of stabilizing an object or supporting loads. [1936 , 2020]

-

Statement of Problem and Substantiation for Public Input

Revised definition to include a primary function of a strut to stabilize an object as well as support loads.

Submitter Information Verification

Submitter Full Name: Ronald Moore

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Street Address:

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Submittal Date: Sun Dec 30 11:07:23 EST 2018

Committee: FDR-AAA

**Public Input No. 56-NFPA 1937-2018 [New Section after 3.3.32]****Tag**

3.3.XX Tag. A uniquely-colored or distinctly marked paper, card stock, or synthetic item pre-printed with the words OUT-of-SERVICE in large black font on one side and sufficient space on the opposite side for relevant hand-written information to be added, a grommet hole at one end, and a means of affixing the tag to a lifting bag, power rescue tool, strut, or component to specifically identify the condition and status of the tagged item.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
Example_of_OOS_Tags.docx	Examples of commercially available Out-of-Service tags	

Statement of Problem and Substantiation for Public Input

Justification: The word "tag" is used through the standard and is not clearly described, identified, or otherwise defined.

Submitter Information Verification

Submitter Full Name: Ronald Moore
Organization: Prosper Texas Fire Department
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Submittal Date: Sun Dec 30 11:10:11 EST 2018
Committee: FDR-AAA



Public Input No. 57-NFPA 1937-2018 [New Section after 3.3.33]

Test

3.3.XX Test. The process of evaluating, operating, and measuring the operational fit and function of a rescue tool, lifting bag, strut, or component to establish its readiness for use, reliability, capability, and determine its performance as per manufacturer specifications.

-

Statement of Problem and Substantiation for Public Input

Justification: The word "test" or "testing" is used through the standard and is not clearly described, identified, or otherwise defined as to what the process of 'testing' an item would entail.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

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Submittal Date: Sun Dec 30 11:16:01 EST 2018

Committee: FDR-AAA

**Public Input No. 58-NFPA 1937-2018 [Section No. 4.1.2]****4.1.2**

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

Statement of Problem and Substantiation for Public Input

Added "and record-keeping" to expand this section and for consistency within the overall scope of this standard

Submitter Information Verification

Submitter Full Name: Ronald Moore

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Submittal Date: Sun Dec 30 11:19:26 EST 2018

Committee: FDR-AAA

**Public Input No. 15-NFPA 1937-2018 [Section No. 4.1.3]****4.1.3**

The program component shall have the following goals:

- (1) Provide rescue tools, lifting bags, and struts suitable and appropriate for the intended use
- (2) Maintain rescue tools, lifting bags, and struts in a safe, usable condition to provide the user with safe, usable equipment
- (3) Remove from use any rescue tool, lifting bag, and struts that could cause or contribute to user injury, illness, or death because of its condition
- (4) Replace, repair, or retire such rescue tools, lifting bags, and struts described in 4.1.3(3)
- (5) Air lifting bags shall be compliant with NFPA 1936 standard 6.2.1.3.

Statement of Problem and Substantiation for Public Input

To insure labeling on lifting bags is still legible to the user(s) and that the product is within service life.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

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Submittal Date: Wed Oct 24 09:59:35 EDT 2018

Committee: FDR-AAA



Public Input No. 59-NFPA 1937-2018 [Section No. 4.1.3]

4.1.3

The program component shall have the following goals:

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

Statement of Problem and Substantiation for Public Input

Added Item (5) to list for consistency with revised and expanded section 4.1.2

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

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Submittal Date: Sun Dec 30 11:21:58 EST 2018

Committee: FDR-AAA

**Public Input No. 60-NFPA 1937-2018 [Section No. 4.2.2]****4.2.2–**

Where

Where a specific condition identified in 4.2.1 involving rescue tools, lifting bags, and struts is identified, the organization's SOPs shall cause the rescue tool, lifting bag,

and struts manufacturer to be promptly notified in writing of the specific condition(s) or cause and the circumstances involved with the specific condition(s) or cause

strut, or component to be immediately taken out of service, marked and documented according AHJ procedures .

Statement of Problem and Substantiation for Public Input

Deleted mandatory notification of tool manufacturer. End users should NOT be required to promptly notify the tool's manufacturer in writing if a 'specific condition' as listed in 4.2.1 (failure, near-failure, or a significant degradation of performance because of normal use) occurs.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

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State:

Zip:

Submittal Date: Sun Dec 30 11:25:56 EST 2018

Committee: FDR-AAA



Public Input No. 61-NFPA 1937-2018 [Section No. 4.3.1]

4.3.1

The organization shall develop written SOPs that shall identify and define the various parts of the organization's

air bag

lifting bag, rescue tool, strut, and components. program and

the

various roles and responsibilities of the organization and the members.

Statement of Problem and Substantiation for Public Input

Existing draft section referenced air bags only. Deleted "air bag" and added "lifting bag, rescue tool, strut, and components" to expand the scope of this definition and to maintain consistency within the standard.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

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Zip:

Submittal Date: Sun Dec 30 11:30:35 EST 2018

Committee: FDR-AAA

**Public Input No. 62-NFPA 1937-2018 [Section No. 4.3.5.3.2]****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, lifting bag, and strut testing
- (2) Severity of environment in which the rescue tool, lifting bag, and strut is used
- (3) Number of uses for each rescue tool, lifting bag, and strut
- (4) User reports of visual damage of air- lifting bags
- (5) User complaints of improperly functioning rescue tools, lifting bags, and struts
- (6) Specific worksite issues

Statement of Problem and Substantiation for Public Input

Changed text from air bags to "lifting bags" for consistency.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

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Submittal Date: Sun Dec 30 11:34:16 EST 2018

Committee: FDR-AAA



Public Input No. 63-NFPA 1937-2018 [Section No. 4.3.6]

4.3.6*

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

Statement of Problem and Substantiation for Public Input

Added "or components except to repair or maintain the rescue tools, lifting bags, struts, or components to their original manufacturer specifications and fully functional condition" to allow these procedures to be acceptable changes to a tool's original condition.

This revision allows for returning a worn or damaged tool to in-service status through proper service and maintenance procedures in lieu of not allowing ANY changes to the original condition. Replacing an original damaged part with a new factory-approved replacement part would not be permitted according to the original draft version of this section.

Members using or responsible for rescue tools should be permitted to return a rescue tool 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.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

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Zip:

Submittal Date: Sun Dec 30 11:35:33 EST 2018

Committee: FDR-AAA



Public Input No. 64-NFPA 1937-2018 [Section No. 4.4.3]

4.4.3

Retired rescue tools, lifting bags, and struts shall be disposed of as described in 4.7.1; struts, and components that are obsolete, unable to be serviced, repaired or maintained, shall be taken out of service and destroyed or otherwise rendered unusable by the AHJ.

Statement of Problem and Substantiation for Public Input

Added more detailed information on retiring rescue tools and the concept of disposing of a rescue tool by way of taking it out of service and rendering the tool unusable.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Sun Dec 30 11:44:19 EST 2018

Committee: FDR-AAA



Public Input No. 65-NFPA 1937-2018 [New Section after 4.5]

Chapter 8 Record-Keeping

Type your content here ...

Statement of Problem and Substantiation for Public Input

Suggest move entire section 4.5 up to 4.6 to a new proposed Chapter 8 with the title of Record-Keeping. The standard is designed to cover selection (Chapter 5), care (Chapter 6), maintenance (Chapter 7), and record-keeping however records and record-keeping is only mentioned in existing section 4.5. Existing section 4.5 up to 4.6 content should form the basis of a new Chapter 8 on the subject of record-keeping to maintain consistency within this standard.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

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Submittal Date: Sun Dec 30 11:45:50 EST 2018

Committee: FDR-AAA



Public Input No. 17-NFPA 1937-2018 [Section No. 4.5.3.2]

4.5.3.2

~~Legal counsel shall advise the organization about the~~ 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.

Statement of Problem and Substantiation for Public Input

Better clarity of statement.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

City:

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Zip:

Submittal Date: Wed Oct 24 10:18:20 EDT 2018

Committee: FDR-AAA



Public Input No. 18-NFPA 1937-2018 [Section No. 4.6]

4.6 Manufacturer's Instructions.

4.6.1

When issuing new rescue tools, ~~lifting bags, and struts~~ lifting bags, the organization shall provide users with the instructions provided by the manufacturer on the care, use, maintenance and ~~maintenance end of service life of~~ the rescue tools, ~~lifting and lifting bags, and struts, including~~ including any warnings provided by the manufacturer.

4.6.2

Where the rescue tool, lifting bag, and strut manufacturer's instructions regarding the care, use, maintenance and ~~maintenance end of service life of~~ the rescue tools, ~~lifting bags, and struts differ and lifting bags differ~~ from the requirements in this standard other than the requirements specified in 7.1.2.1.3 and 7.1.3.1, the manufacturer's instructions shall be followed.

Statement of Problem and Substantiation for Public Input

Remove struts as they are currently not a part of this standard, and add reference to end of service life for further clarification.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

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Submission Date: Wed Oct 24 10:33:43 EDT 2018

Committee: FDR-AAA

**Public Input No. 66-NFPA 1937-2018 [Section No. 4.6.1]****4.6.1**

When issuing new rescue tools, lifting bags, and struts, and components, the organization shall provide users with the instructions provided by the manufacturer on the selection, care, use, and maintenance of the rescue tools, lifting bags, and struts, and components including any caution or hazard warnings provided by the ~~manufacturer~~ manufacture .

Statement of Problem and Substantiation for Public Input

Revised text to include selection information and to expand warnings to include caution and hazard warning information.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Mon Dec 31 02:12:44 EST 2018

Committee: FDR-AAA

**Public Input No. 67-NFPA 1937-2018 [Section No. 4.6.2]****4.6.2**

Where the rescue tool, lifting bag, strut, and
strut
component manufacturer's instructions regarding
the
selection, care, use, and maintenance of the rescue tools, lifting bags, struts, and
struts
components differ from the
requirements
requirement in this standard other than the requirements specified in 7.1.2.1.3 and 7.1.3.1, the
manufacturer's instructions shall be followed.

Statement of Problem and Substantiation for Public Input

Revised text to include 'selection' and 'component' information to maintain consistency within the standard and deleted lift bag only requirement which is a manufacturer instruction already.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Mon Dec 31 02:16:47 EST 2018

Committee: FDR-AAA



Public Input No. 1-NFPA 1937-2018 [Section No. 4.7]

4.7 Retirement and Disposal.

4.7.1

~~Retired- Defective or obsolete~~ rescue tools, ~~and~~ lifting bags, ~~and struts shall be destroyed or altered in a manner assuring that they are not used as rescue tools, lifting bags, and struts~~ rescue tool and lifting bag components, that cannot be repaired or upgraded shall be removed from service .

4.7.2

Where rescue tools ~~, and~~ lifting bags, ~~and struts~~ or rescue tool ~~,lifting bag, and strut components~~ and lifting bag components are contaminated beyond the ability to be decontaminated and returned to service, such rescue tool, lifting bag, strut, or component shall be disposed.

4.7.2.1

Contaminated rescue tools, lifting bags, ~~struts,~~ or components identified in accordance with 4.7.2 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 items.

4.7.2.2

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

4.7.3 –

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

Statement of Problem and Substantiation for Public Input

Better clarify the determining factors for removing equipment from service due to defect, damage, or obsolescence. Also removed the term "struts" from the section.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

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Submission Date: Tue Oct 23 15:48:23 EDT 2018

Committee: FDR-AAA

**Public Input No. 68-NFPA 1937-2018 [Section No. 4.7.2 [Excluding any Sub-Sections]]**4.7.2.Where rescue tools, lifting bags,

and

strutsor rescue tool

,

lifting bag,and

strut

components are contaminated beyond the ability to be decontaminated and returned to service,
such rescue

tool

tools , lifting

bag

bags ,

strut

struts , or

component

components shall be

disposed

destroyed or altered in a manner assuring that they cannot be used .**Statement of Problem and Substantiation for Public Input**

Original existing text is an incomplete statement. Revised new text to conform to section 4.7.1 wording and to maintain consistency within the standard.

Submitter Information Verification**Submitter Full Name:** Ronald Moore**Organization:** Prosper Texas Fire Department**Street Address:****City:****State:****Zip:****Submittal Date:** Mon Dec 31 02:20:47 EST 2018**Committee:** FDR-AAA



Public Input No. 69-NFPA 1937-2018 [Section No. 4.7.2.1]

4.7.2.1

Contaminated rescue

Rescue tools, lifting bags, struts, 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

government regulations governing contaminated

items

item disposal .

Statement of Problem and Substantiation for Public Input

Revised text to simplify wording and to clarify that tools that this section applies to have already been determined to be beyond cleaning and decontamination and must be disposed of.

Submitter Information Verification

Submitter Full Name: Ronald Moore

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Submittal Date: Mon Dec 31 02:26:40 EST 2018

Committee: FDR-AAA



Public Input No. 70-NFPA 1937-2018 [Section No. 4.7.3]

4.7.3

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

Statement of Problem and Substantiation for Public Input

Text has been revised to shorten and condense.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

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Submittal Date: Mon Dec 31 02:28:54 EST 2018

Committee: FDR-AAA



Public Input No. 71-NFPA 1937-2018 [Section No. 4.8.1]

4.8.1 – The organization shall establish and maintain a quality assurance plan for selection, care, maintenance, and

maintenance

record-keeping of rescue tools, lifting bags, struts, and

struts

components .

Statement of Problem and Substantiation for Public Input

Added “and record keeping” to maintain consistency with scope of standard

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Mon Dec 31 02:34:12 EST 2018

Committee: FDR-AAA

**Public Input No. 72-NFPA 1937-2018 [Section No. 4.8.2]****4.8.2**

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

- (1) Assure effective and safe performance of rescue tools, lifting bags, and struts 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, lifting bag, and strut program for selection, care, maintenance, and ~~maintenance~~ record-keeping of rescue tools, lifting bags, struts and ~~struts~~ components.

Statement of Problem and Substantiation for Public Input

Revised text within line (5) adds the words "record-keeping" and "components" to expand the scope of this specific statement and to maintain consistency within the standard.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

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Submittal Date: Mon Dec 31 02:36:27 EST 2018

Committee: FDR-AAA

**Public Input No. 38-NFPA 1937-2018 [Section No. 5.1.2.2]****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) Compability of operating air pressures and air supply fittings (hoses and nipples).

Statement of Problem and Substantiation for Public Input

Modern lifting bag manufacturers offer numerous operating pressures and air supply component systems today. Purchasers need to be cognizant of differences between operating pressure systems and their component compatibility, even within the same brands of lifting bag systems.

Submitter Information Verification

Submitter Full Name: Paul Prevost

Organization: City Of Fort Saskatchewan

Street Address:

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Submittal Date: Thu Dec 27 17:56:39 EST 2018

Committee: FDR-AAA

**Public Input No. 73-NFPA 1937-2018 [Section No. 5.1.2.3]****5.1.2.3**

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

- (1) The organization shall develop an evaluation plan including, but not limited to, testing prior to and after field evaluations.
- (2) Participants for field evaluations shall be selected based on a cross section of personnel, willingness to participate, objectivity, and level of operational activity.
- (3) Participants shall perform a field evaluation on each different lifting bag model being considered from each manufacturer of that particular lifting bag.
- (4) A product evaluation form shall be developed for each model of lifting bag .
- (5) The organization shall solicit periodic reports from participants in the field evaluation.
- (6) The organization shall conclude the evaluation process at a specified time and date established by the AHJ, analyze the results , and produce written documentation of the results .

-

Statement of Problem and Substantiation for Public Input

Justification: Revised text in this section on lifting bags to match the same intent of section 5.2.2.4 (power rescue tools) and section 5.3.2.4 (struts) appearing later in the document. Expanded five(5) line items to six(6) for consistency between the all sections on the field evaluation topic.

Submitter Information Verification

Submitter Full Name: Ronald Moore
Organization: Prosper Texas Fire Department
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City:
State:
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Submittal Date: Mon Dec 31 02:41:30 EST 2018
Committee: FDR-AAA

**Public Input No. 74-NFPA 1937-2018 [Section No. 5.1.2.5]****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) Listing and description of service and maintenance work acceptable for field users to perform and service and maintenance work requiring technician personnel 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

Statement of Problem and Substantiation for Public Input

Justification: After existing line item (9), expanded and established a new line item (10) that requires defining the distinction between what service and/or maintenance work can be conducted by end users and what maintenance requires a qualified technician to perform according the the manufacturer.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

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Submittal Date: Mon Dec 31 02:47:34 EST 2018

Committee: FDR-AAA

**Public Input No. 31-NFPA 1937-2018 [Section No. 5.2.2.2]****5.2.2.2**

The organization shall ensure that the powered rescue tools interface as intended to with other ~~structural support items~~ rescue systems already being used by the organization.

Statement of Problem and Substantiation for Public Input

As written, this line is confusing to the reader. I don't know where tools integrate with structural support systems. Was this line cut/ pasted from the section that follows?

Submitter Information Verification

Submitter Full Name: Ryan McGovern

Organization: Boston Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Tue Nov 20 14:26:02 EST 2018

Committee: FDR-AAA



Public Input No. 75-NFPA 1937-2018 [Section No. 5.2.2.2]

5.2.2.2

The organization shall

ensure that the powered rescue tools interface as intended to with other structural support items already determine the degree of compatibility and interface, if any, that may or may not be necessary between new power rescue tools being considered and similar, existing rescue tools and equipment already in-service and being used by the organization.

-

Statement of Problem and Substantiation for Public Input

Justification: Original text is an incomplete sentence. Revised and new text reflects the fact that battery-powered rescue tools essentially no longer have to be compatible or able to easily interface with existing 'hosed' power rescue tools. With the introduction and popularity of battery-powered rescue tools, compatibility is less of an important factor than it has been in the past. Selecting or not selecting a similar manufacturer and/or brand of power rescue tool is still somewhat important and should remain a recommended factor to at least consider in the selection process.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

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Submittal Date: Mon Dec 31 02:53:17 EST 2018

Committee: FDR-AAA

**Public Input No. 77-NFPA 1937-2019 [Section No. 5.2.2.3]****5.2.2.3**

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) Listing and description of service and maintenance work acceptable for field users to perform and service and maintenance work requiring technician personnel to perform shall be established by the AHJ.
- (11) Accessories available

Statement of Problem and Substantiation for Public Input

Justification: Expanded and established a new line item that requires defining the distinction between what service and/or maintenance work can be conducted by end users and what maintenance requires a qualified technician to perform.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Tue Jan 01 15:45:33 EST 2019

Committee: FDR-AAA



Public Input No. 78-NFPA 1937-2019 [Section No. 5.2.2.4]

5.2.2.4

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

- (1) The organization shall develop an evaluation plan including, but not limited to, testing prior to and after field evaluations .
- (2) Participants for field evaluations shall be selected based on a cross section of personnel, willingness to participate, objectivity, and level of operational activity.
- (3) Participants shall perform a field evaluation on each different

product

rescue tool model being considered from each manufacturer

for a

of that particular

powered

rescue tool.

- (4) A product evaluation form shall be developed for each model of rescue tool .
- (5) The organization shall solicit periodic reports from evaluation participants in the field evaluation process .
- (6) The organization shall conclude the evaluation process at a time and date established by the AHJ, analyze the results , and produce written documentation of the results .

Statement of Problem and Substantiation for Public Input

Justification: Revised text in this section on rescue tools to match the same intent of section 5.1.2.3 (lifting bags) and section 5.3.2.4 (struts) appearing in this chapter of the standard. Expanded five(5) line items to six(6) for consistency between the all Chapter 5 sections on the process of field evaluation.

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Submittal Date: Tue Jan 01 15:48:06 EST 2019

Committee: FDR-AAA

**Public Input No. 20-NFPA 1937-2018 [Section No. 5.2.2.6]****5.2.2.6**

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 5.4 2 .2.1 through 5.4 2 .2.4 5
- (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 of authorized service centers and dealers
- (10) Warranty statement
- (11) Procedures for returning items found defective upon initial receipt

Statement of Problem and Substantiation for Public Input

Correcting referenced section numbers.

Submitter Information Verification

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Submittal Date: Wed Oct 24 10:47:30 EDT 2018

Committee: FDR-AAA

**Public Input No. 79-NFPA 1937-2019 [Section No. 5.2.2.6]****5.2.2.6**

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) Listing and description of service and maintenance work acceptable for field users to perform and service and maintenance work requiring technician personnel to perform shall be established by the AHJ.
- (10) List of authorized service centers and dealers
- (11) Warranty statement
- (12) Procedures for returning items found defective upon initial receipt receipt
- (13)

Statement of Problem and Substantiation for Public Input

Justification: Expanded and established a new line item that requires defining the distinction between what service and/or maintenance work can be conducted by end users and what maintenance requires a qualified technician to perform.

Submitter Information Verification

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Submission Date: Tue Jan 01 15:50:26 EST 2019

Committee: FDR-AAA



Public Input No. 19-NFPA 1937-2018 [Section No. 5.3]

5.3 – Struts.

5.3.1 – Risk Assessment.

5.3.1.1 –

Prior to starting the procurement process of struts, a risk assessment shall be performed.

5.3.1.2 * –

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

5.3.2 – Selection.

5.3.2.1 –

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

5.3.2.2 –

The organization shall ensure that the struts interface as intended to with other structural support items already being used by the organization.

5.3.2.3 –

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

- (1) Load ratings
- (2) Versatility
- (3) Ease of use
- (4) Environmental capabilities
- (5) Size range
- (6) Legibility of labeling in reduced visibility
- (7) Size
- (8) Weight
- (9) Ease of cleaning and maintenance
- (10) Recommended service interval
- (11) Design features that prevent the product from misuse
- (12) Operability by user wearing protective clothing and gloves

5.3.2.4 –

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

- (1)* ~~The organization shall develop an evaluation plan including, but not limited to, testing prior to and after field evaluations.~~
- (2) ~~Participants for field evaluations shall be selected based on a cross section of personnel, willingness to participate, objectivity, and level of operational activity.~~
- (3) ~~Participants shall perform a field evaluation on each different product model being considered from each manufacturer for a particular strut.~~
- (4) ~~A product evaluation form shall be developed for each model.~~
- (5) ~~The organization shall solicit periodic reports from participants in the field evaluation.~~
- (6) ~~The organization shall conclude the evaluation process and analyze the results.~~

5.3.2.5 –

Purchase specifications shall require evidence that the struts purchased are certified to the current edition of NFPA 1936.

5.3.2.6 –

Where struts are installed with accessories, the strut-integrated product shall be certified to the current edition of NFPA 1936.

5.3.2.7 –

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 5.3.2.1 through 5.3.2.6~~
- (2) ~~User training~~
- (3) ~~Maintenance training~~
- (4) ~~Manufacturer assistance to develop SOPs for maintenance~~
- (5) ~~Maintenance schedule~~
- (6) ~~Complete list of parts~~
- (7) ~~Strut user and service manuals~~
- (8) ~~List of any specialized equipment or special tools needed for strut maintenance~~
- (9) ~~List of authorized service centers and dealers~~
- (10) ~~Warranty statement~~
- (11) ~~Procedures for returning items found defective upon initial receipt~~

5.3.3 – Acceptance.**5.3.3.1 –**

Upon receipt, organizations shall inspect and test functionality of the struts in accordance with Section 6.3.

5.3.3.2 –

Organizations shall verify that the equipment received is as specified.

5.3.3.3 –

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

5.3.3.4 –

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

Remove entire section as struts are not covered within the standard.

Submitter Information Verification

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Submittal Date: Wed Oct 24 10:45:09 EDT 2018

Committee: FDR-AAA

**Public Input No. 80-NFPA 1937-2019 [Section No. 5.3.2.3]****5.3.2.3**

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

- (1)
 - (1) Load ratings at maximum extended column length with centered, axial loading
 - (2) Load ratings when off-set loaded and at maximum extended column length
 - (3) Type of material strut is constructed from
 - (4) Type of strut section locking system
 - (5) Type of strut extension system; none, manual, hydraulic, integrated, detachable, etc
 - (6) Design of base and head; detachable or fixed mount
 - (7) Ability to integrate detachable tensioning component, tie down, chain, etc
 - (8) Versatility to stabilize, support lifted loads, trench rescue, collapse rescue, etc
 - (9) Ease of use
 - (10) Environmental exposure concerns and capabilities
- (2) Size range
- (3)
 - (11) Minimum and maximum strut length ranges
 - (12) Legibility of labeling and load ratings in reduced visibility
- (4) Size
- (5) Weight
Ease of
- (6)
 - (13) Weight of in-service strut with base, head, and jacking unit attached
 - (15) Ease of complete disassembly for cleaning and maintenance
 - (16) Recommended care, service, and maintenance interval
 - (17) Listing and description of service and maintenance work acceptable for field users to perform and service and maintenance work requiring technician personnel to perform shall be established by the AHJ.
 - (18) Design features that prevent the product from misuse or over-loading
 - (19) Operability by user wearing protective clothing and gloves

Statement of Problem and Substantiation for Public Input

Justification: Revised text in this section on struts to more accurately include and define items that should be considered during the strut system selection process.

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Submittal Date: Tue Jan 01 15:54:32 EST 2019
Committee: FDR-AAA

**Public Input No. 76-NFPA 1937-2018 [Section No. 5.3.2.7]****5.3.2.7**

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 5.3.2.1 through 5.3.2.6
- (2) User training
- (3) Maintenance training
- (4) Manufacturer assistance to develop SOPs for maintenance
- (5) Maintenance schedule
- (6) Complete list of parts
- (7) Strut user and service manuals
- (8) List of any specialized equipment or special tools needed for strut maintenance
- (9) Listing and description of service, care, and maintenance work acceptable for field users to perform and service, care, and maintenance work requiring technician personnel to perform.
- (10) List of authorized service centers and dealers
- (11) Warranty statement
- (12) Procedures for returning items found defective upon initial receipt

-

Statement of Problem and Substantiation for Public Input

Justification: Established a new line item that defines making a distinction between what maintenance work can be conducted by users and what maintenance requires a qualified technician to perform.

Submitter Information Verification

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Submission Date: Mon Dec 31 02:58:24 EST 2018

Committee: FDR-AAA

**Public Input No. 81-NFPA 1937-2019 [New Section after 6.1.1]****6.X Accountability and Inventory**

All of the AHJ's lift bag system including lift bags, regulator(s), controller(s), air hoses, shutoff fittings, etc. shall be located, accounted for, and prepared for cleaning and disinfecting prior to the start of the cleaning and disinfecting process.

Statement of Problem and Substantiation for Public Input

Lift Bag system 'CARE' involves these steps in this order: Accountability and Inventory, Cleaning and Disinfecting, Contamination and Decontamination, Fit and Function Operational Check and Inspection. Readiness and 30-day Run Interval, Placing System In-Service or Storage. This first section begins this expanded CARE procedure. Chapter 7 'Maintenance' process involves Repairs and Adjustments, Couplings, Nipples, Labels, Out-of-Service, Tagging, Retirement and Disposal. New Chapter 8 involves Record-keeping.

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Submittal Date: Tue Jan 01 16:13:02 EST 2019
Committee: FDR-AAA

**Public Input No. 82-NFPA 1937-2019 [Section No. 6.1.1.2 [Excluding any Sub-Sections]**

]

Lifting bag control valve assemblies, regulator(s), controller(s), air hoses, shutoff fittings, etc., shall be cleaned and disinfected according to the manufacturer's instructions using only those agents indicated by the manufacturer.

Statement of Problem and Substantiation for Public Input

Added "regulator(s), controller(s), air hoses, shutoff fittings, etc," to expand the scope of the cleaning process to include all components; not just the controller unit.

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Submittal Date: Tue Jan 01 16:34:16 EST 2019

Committee: FDR-AAA

**Public Input No. 36-NFPA 1937-2018 [New Section after 6.1.1.2.1]****Nipples and couplings**

Nipples and couplings shall be inspected for damage, damaged connection nipples shall be replaced according to manufacturers recommendations.

Statement of Problem and Substantiation for Public Input

We should consider adding the "Nipple" section from struts for lifting bags also.

Submitter Information Verification

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Submittal Date: Thu Dec 27 17:44:53 EST 2018

Committee: FDR-AAA

**Public Input No. 83-NFPA 1937-2019 [Section No. 6.1.1.3.2]****6.1.1.3.2**

Drying of ~~pneumatic-~~ all lifting bags and components shall not be done in direct sunlight or in a high heat environment .

Statement of Problem and Substantiation for Public Input

Drying in sunlight is not a recommended Best Practice for any lifting bag or component of any lifting bag system regardless of whether it is a pneumatic component or not. Revised text clearly indicates that this is applicable for lifting bags as well as the entire system and therefore eliminates any confusion with use of the term 'pneumatic'.

Submitter Information Verification

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Submittal Date: Tue Jan 01 16:40:24 EST 2019

Committee: FDR-AAA



Public Input No. 84-NFPA 1937-2019 [Section No. 6.1.2.2]

6.1.2.2

Tags shall include details of the incident including known and suspected contaminants. to indicate Out-of-Service status shall be a distinctive color, be clearly marked with text in a large font that conspicuously identifies the tagged item as OUT OF SERVICE, and have adequate area allowing for hand-written documentation to be recorded on the tag as part of the record-keeping process.

Statement of Problem and Substantiation for Public Input

Justification: A tag placed on a lifting bag or component that is Out-of-Service for any reason, especially due to contamination that is beyond the normal cleaning and disinfecting process, should be readily identifiable with a distinctive color and/or marked tag. The tag should have a designated space on one side that allows hand-written documentation to be recorded on the tag as the start of the record-keeping process. Details on the OOS tag criteria are in chapter 3 definitions for Tag.

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Submittal Date: Tue Jan 01 16:44:21 EST 2019
Committee: FDR-AAA



Public Input No. 85-NFPA 1937-2019 [Section No. 6.1.2.2]

6.1.2.2

Tags- OUT-of-SERVICE tags shall include an appropriate space on one side of the tag where written details of the incident including known and suspected contaminants can be provided, known or suspected contaminants can be listed, relevant current date recorded, and the name of the reporting user provided .

Statement of Problem and Substantiation for Public Input

Justification: New text added to further improve the value of Out-of-Service tags to emphasize their role in the tool information, documentation, and record-keeping process.

Submitter Information Verification

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Submittal Date: Tue Jan 01 16:46:20 EST 2019

Committee: FDR-AAA

**Public Input No. 86-NFPA 1937-2019 [Section No. 6.1.2.5]****6.1.2.5**

Where it is determined, in accordance with 6.4 X . 2 X , that the lifting bags or components are contaminated beyond the ability to decontaminate it- and return it- the lift bag or components to service, the lifting bags- bag or components shall be taken out of service, tagged as such, and disposed of in accordance with 4.7.2 .

Statement of Problem and Substantiation for Public Input

Justification Added additional tagging step to the process of dealing with a contaminated lift bag or component to assure that contaminated item(s) is/are not accidentally placed back in service.

Submitter Information Verification

Submitter Full Name: Ronald Moore

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Submittal Date: Tue Jan 01 16:49:39 EST 2019

Committee: FDR-AAA

**Public Input No. 87-NFPA 1937-2019 [Section No. 6.1.3.1]****6.1.3.1***

Lifting bags shall be stored in their original carrying or storage cases/bags or on a shelf or within an apparatus bracket/rack designed for quick removal of each lifting bag and lifting bag components and for protection of the lifting ~~bags~~ bag, its nipple, coupling, fitting, and carry handles, and all components .

Statement of Problem and Substantiation for Public Input

Justification Revised text to add more specific requirements for storage of lift bag components that includes protection of the lift bag nipple, coupling, fitting, and system components while in storage or on the apparatus in-service.

Submitter Information Verification

Submitter Full Name: Ronald Moore

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Submittal Date: Tue Jan 01 16:54:07 EST 2019

Committee: FDR-AAA

**Public Input No. 88-NFPA 1937-2019 [New Section after 6.1.3.2]****Fit and Function Operational Check and Inspection****6.X Lifting Bag Operational Fit and Function Check and Inspection**

The lifting bag system Operational "Fit and Function" Check and Inspection of all cleaned and dried components shall include the following:

- (1) Visual inspection of all lift bags and their edges, surfaces, carry handles and devices, straps, clips, pneumatic hoses, couplings, fittings, and components
- (2) Lift bag couplings, fittings, and hoses checked for visual/physical signs of damage and shall be clear of obstructions or damage.
- (3) All exterior surfaces of the lift bags are free of cracks, deformation, and deterioration(dirt, cracks, tears, holes, pliability, and delamination).
- (4) All lift bag control equipment, components, and accessories operate as designed.
- (5) Lift bag couplings, nipples, fittings, and hoses shall be checked for fit and function with its mating coupling.
- (6) There are no missing, broken, or rusted parts or components.
- (7) There are no missing, torn, or damaged labels.
- (8) Seals are in place, free of cuts and cracks, and clean and lubricated per manufacturer's recommendation.
- (9)* Each high-pressure lifting air bag shall be checked for pressure retention as prescribed by the manufacturer. _

Statement of Problem and Substantiation for Public Input

Recommending a new section within the 'CARE' section on lift bags that addresses the Lifting Bag Operational Fit and Function Check and Inspection process and what should be included in that process. There is no mention within the standard of assuring that the lift bag system with all its components is functional after accountability, inventory, and cleaning so this Fit & Function Ops Check accomplishes this.

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Submission Date: Tue Jan 01 16:57:02 EST 2019
Committee: FDR-AAA



Public Input No. 89-NFPA 1937-2019 [New Section after 6.1.3.2]

Readiness

6.X.X Readiness

All lifting bags and all components of the lift bag system are functional and in a readiness state.

Statement of Problem and Substantiation for Public Input

This new step clarifies that there is a responsibility for a member within the AHJ and designated by the AHJ within their lift bag care program to assure that the now clean, dry, and re-assembled lift bag system is confirmed in a readiness state.

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Submittal Date: Tue Jan 01 17:05:06 EST 2019

Committee: FDR-AAA



Public Input No. 90-NFPA 1937-2019 [New Section after 6.1.3.2]

Lift Bag System Storage

Lifting bags shall be stored according to AHJ instructions and in conformance with recommendations from the manufacturer in their original carrying or storage cases/bags or on a shelf or within an apparatus bracket/rack designed for quick removal of each lifting bag and component, where there is protection of the lifting bag, its nipple, coupling, fitting, carry handles, and all components.

Statement of Problem and Substantiation for Public Input

Justification Revised text to add more specific requirements for storage of lift bag and components either in storage or on a vehicle with added details for protection of the lift bag nipple, coupling, fitting, and components while in storage or on the apparatus.

Submitter Information Verification

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Submittal Date: Tue Jan 01 17:12:58 EST 2019

Committee: FDR-AAA

**Public Input No. 91-NFPA 1937-2019 [New Section after 6.2.1]****Inventory and Accountability**

Accountability and Inventory _____ 6.2.1

Cleaning and Disinfecting _____ 6.2.2

Contamination and Decontamination _____ 6.2.3

Fit & Function Operational Check and Inspection 6.2.4

Readiness _____ 6.2.5

Placing In-service and Storage _____ 6.2.6

Statement of Problem and Substantiation for Public Input

This is a new, recommended sequence for section 6.2 in the 'CARE' chapter, for Rescue Tools and is intended to closely match the previous 6.1 CARE for lift bags. Rescue tool 'CARE' involves these steps in this order: 6.2.1 Accountability and Inventory, 6.2.2 Cleaning and Disinfecting, 6.2.3 Contamination and Decontamination, Fit and Function Operational Check and Inspection 6.2.4. Readiness 6.2.5, Placing System In-Service or Storage 6.2.6. Chapter 7 'Maintenance' process for lift bags, rescue tools, and struts involves Repairs and Adjustments, Couplings, Nipples, Labels, Out-of-Service, Tagging, Retirement and Disposal. New Chapter 8 involves Record-keeping.

Submitter Information Verification

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Submittal Date: Tue Jan 01 17:58:47 EST 2019

Committee: FDR-AAA



Public Input No. 92-NFPA 1937-2019 [Section No. 6.2.1.1]

6.2.1 ~~X~~.4 – ~~X~~

The AHJ shall perform a system inspection and operations “Fit and Function” check of all components of a the power rescue tool system after each use, or if not used, on a monthly basis, in accordance with the manufacturer’s specific recommendations

6.2.X.X.The rescue tool Fit and Function Operational Check and Inspection of all rescue tools and components including a separate power plant shall include but not be limited to the following items; check for leaks, twists, bends, tears, cuts, cracks, heat damage, chemical damage, wear, rounding of fittings, nicks, burrs, or any condition that could impact the function of the rescue tool or its components.

6.2.X.X.X The rescue tool Operational Fit and Function Check and Inspection of all rescue tools that include a separate power plant shall include but not be limited to connecting and operating each tool and component of each power rescue tool system through their normal range, and evaluating the tool performance to determine that all power rescue tools are suitable for service.

6.2.X.X.X Rescue tool power plant hydraulic & engine oil fluid levels shall be checked & maintained at the proper level.

6.2.X.X.X The function, condition, and operation of any internal combustion-powered power plant for a rescue tool (if so equipped) shall be checked to include the following :

Engine ON/OFF Switch functional,

Run/Choke control functional,

Throttle control functional,

Spark plug & plug wire intact and functional,

Engine oil level proper,

Hydraulic fluid at proper level,

Hydraulic and liquid fuel fluid level sight glass intact and functional,

Hydraulic control handles functional,

Hydraulic couplings intact, free of debris, functional w/caps present(if provided)

Hydraulic hose couplings functional with no damaged connectors

Ball control valve function (opens and closes easily) and undamaged

Gaskets are in place,

Internal combustion engine muffler/spark arrestor present, undamaged, functional,

6.2.X.X.X The frame, handle(s), and feet of a separate and detached rescue tool power plant shall be intact, undamaged, and functional.

6.2.X.X.X The power plant engine/motor starter pull cord & recoiler unit shall be undamaged and functional.

6.2.1.1.1

Rescue tool manufacturers shall provide documentation to the end user explaining the proper operation of the rescue tool system and its components.

6.2.1.1.2

Rescue tool manufacturers shall provide the end user with documentation explaining the procedure for conducting inspection and maintenance checks in accordance with this standard.

Statement of Problem and Substantiation for Public Input

Added additional section numbers and text sections to expand the components of Chapter 6, Care, for Rescue Tools to closely match previous Lift Bag content for the Care section- Accountability and Inventory (Rescue Tools) 6.2.1

Cleaning and Disinfecting	6.2.2
Contamination and Decontamination	6.2.3
Fit & Function Operational Check and Inspection	6.2.4
Readiness	6.2.5
Placing In-service and Storage	6.2.6

Submitter Information Verification

Submitter Full Name: Ronald Moore

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Submittal Date: Tue Jan 01 18:12:46 EST 2019

Committee: FDR-AAA

**Public Input No. 34-NFPA 1937-2018 [Section No. 6.2.1.2]****6.2.1.2**

The rescue tool inspection shall include the following:

- (1) A visual inspection of all hoses, couplers, couplings, tools, and power units.
- (2) The couplers are clear of obstructions or damage and functions with its 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

Statement of Problem and Substantiation for Public Input

Many rescue tools are using electric power sources with indicating power switches and bar graph energy storage indicators. These should be inspected for proper operation regularly.

Submitter Information Verification

Submitter Full Name: Paul Prevost

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Submittal Date: Thu Dec 27 17:31:51 EST 2018

Committee: FDR-AAA



Public Input No. 93-NFPA 1937-2019 [New Section after 6.2.2.6]

Contamination and Decontamination

6.2.X.X Where rescue tools are suspected of being contaminated, it/they shall be tagged Out-of-Service and segregated from the other equipment and personnel.

6.2.X.X Tags to indicate Out-of-Service status shall be a distinctive color, be clearly marked with text in a large font that conspicuously identifies the tagged item as OUT-of-SERVICE, and have adequate space allowing for hand-written documentation to be recorded on the tag as part of the record-keeping process.

Justification: A tag placed on a rescue tool or component that is Out-of-Service for any reason, especially due to contamination that is beyond the normal cleaning and disinfecting process, should be readily identifiable with a distinctive color and/or marked tag. The tag should have a designated space on one side that allows hand-written documentation to be recorded on the tag as the start of the record-keeping process.

6.2.X.X OUT-of-SERVICE tags shall include an appropriate space on one side of the tag where written details of the incident can be provided, known or suspected contaminants can be listed, relevant current date recorded, and the name of the reporting user provided.

Justification: New text section added to further improve the value of Out-of-Service tags that emphasizes their role in the tool record-keeping process.

6.2.X.X Cleaning and decontamination shall be conducted in accordance with the rescue tool manufacturer's instructions.

Justification: Cleaning and decontamination should be placed prior to the section on out of ordinary decontamination procedures. Users should conduct normal, standard, routine cleaning and disinfecting procedures first, anticipating that the lifting bags are most likely contaminated with dirt, mud, and/or vehicle-related liquids (gasoline/diesel fuel). After these efforts are found to be unsuccessful or not practical to attempt, the user should then contact the manufacturer for further instructions or guidance on how to proceed with special decontamination procedures.

6.2.X.X If initial cleaning and decontamination is not able to be completed or not successful, the rescue tool manufacturer shall be contacted to determine if any additional special procedures can be used to decontaminate the rescue tool or components.

Justification: This section is added for consistency between bags, tools, and strut sections and is placed after the section on normal cleaning to reflect the reality that users should first conduct routine cleaning and disinfecting procedures and then contact the manufacturer for further instructions if the initial cleaning effort is not successful.

6.2.X.X Where it is determined, in accordance with 6.2.X, that the rescue tool or components are contaminated beyond the ability to decontaminate it and return it to service, the rescue tool or component shall be taken out of service, tagged as such, and disposed of in accordance with 4.7.2.

Justification: Added additional steps to the process to assure that contaminated rescue tools are not accidentally placed back in service.

Statement of Problem and Substantiation for Public Input

Justifications provided with each suggested new section text. Addition and sequencing will add consistency to new text for lift bags and struts.

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Submittal Date:	Tue Jan 01 18:28:04 EST 2019
Committee:	FDR-AAA



Public Input No. 94-NFPA 1937-2019 [New Section after 6.2.2.6]

Readiness

6.2.X.X Readiness (Copy text from the equivalent section for lift bags)

6.2.X.X Placing In-service and Storage

Rescue Tools shall be on a shelf or tray, or within a bracket/rack on the apparatus designed for protection of the rescue tool and all components and allowing for quick removal of each.

Justification Revised text to add more accurate requirements for storage of rescue tools and components and for protection of the rescue tool and components.

Statement of Problem and Substantiation for Public Input

Justification: Revised text to add more specific requirements for rescue tool and component storage and for protection of the rescue tool and component.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

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Submittal Date: Tue Jan 01 18:35:04 EST 2019

Committee: FDR-AAA

**Public Input No. 95-NFPA 1937-2019 [Section No. 6.2.4]**

Suggest moving this section to Chapter 7 MAINTENANCE and re-number it as 7.1.X.X. Maintenance for lift bags, rescue tools, and struts, can be located under this Chapter.

Repairs and Adjustments _____ 7.1.1

Couplings _____ 7.1.2

Nipples _____ 7.1.3

Labels _____ 7.1.4

Out-of-Service and Tags _____ 7.1.5

Retirement and Disposal _____ 7.1. 6

(Existing Text to move) 6 .2.4 _ Couplings.

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

Statement of Problem and Substantiation for Public Input

Suggest moving this section to Chapter 7 MAINTENANCE and re-number it as 7.1.X.X. Maintenance for lift bags, rescue tools, and struts, can all be located under this Chapter.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

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Submission Date: Tue Jan 01 18:50:15 EST 2019

Committee: FDR-AAA

**Public Input No. 96-NFPA 1937-2019 [Section No. 6.2.5]**

Label info is good but suggest also moving this section to Chapter 7 MAINTENANCE and re-number it as 7.1.4.X. These six(6) components of "Maintenance" for lift bags, rescue tools, and struts, can all be located under this Chapter on maintenance .

Repairs and Adjustments _____ 7.1.1

Couplings _____ 7.1.2

Nipples _____ 7.1.3

Labels _____ 7.1.4

Out-of-Service and Tags _____ 7.1.5

Retirement and Disposal _____ 7.1.6

(Existing Text to move) 6.2.5 Labeling.

6.2.5.1

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

6.2.5.2

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

6.2.5.3

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.

6.2.5.4

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

Statement of Problem and Substantiation for Public Input

Suggest moving the existing text to Chapter 7 MAINTENANCE and re-number it accordingly. Elements of "Maintenance" found in Chapter 7 would then include Repairs and Adjustments, Couplings, Nipples, Labels, Out-of-Service and Tags, and Retirement and Disposal in that order.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

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Submittal Date: Tue Jan 01 18:55:09 EST 2019

Committee: FDR-AAA



Public Input No. 21-NFPA 1937-2018 [Section No. 6.3]

6.3 – Struts.

6.3.1 – Inspection.

6.3.1.1 –

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

6.3.1.1.1 –

Strut manufacturers shall provide documentation to the end user explaining the intended operation of the strut system and its components.

6.3.1.1.2 –

Strut manufacturers shall provide the end user with documentation explaining the procedure for conducting inspection and maintenance checks in accordance with this standard.

6.3.1.2 –

The strut inspection shall verify the following:

- (1) The maintenance check shall require separation of all sections of a strut so each can be individually checked, inspected, and maintenance activity performed.
- (2) The nipple is clear of obstructions, nicks, scratches, or damage and functions with its mating coupling.
- (3) Exterior strut surfaces are free of cracks and deformation.
- (4) All control equipment and accessories operate as designed.
- (5) The lock pins, if so equipped, operate as designed and function properly with strut accessories.
- (6) There are no missing, broken, or rusted parts.
- (7) There are no missing, torn, or damaged labels.
- (8) O-ring/U-cup seals are in place, free of cuts and cracks, and clean and lubricated per manufacturer's recommendation.

6.3.1.3 –

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

6.3.1.4 –

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.

6.3.1.5 –

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

6.3.1.6 * –

The inventory check shall determine if all struts, accessories, and components assigned to a vehicle owned by the AHJ are present and accounted.

6.3.1.7 –

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

6.3.1.8 –

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

6.3.2 – Cleaning.**6.3.2.1 –**

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

6.3.2.2 –

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

6.3.2.3 –

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

6.3.2.4 –

Checks for physical damage shall include inspection for twists, bends, strut squareness, rips, tears, cuts, cracks, elongation of holes in struts or components, heat damage, chemical damage, wear, rounding of fittings, nicks, burrs, or any signs of physical abuse damage.

6.3.2.5 –

The exterior surfaces of all struts and components shall be clean 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.

6.3.2.6 –

Accessory components for use with the strut system that incorporate nylon or other material as webbing, strapping, or threads shall be inspected for conditions such as material defects, cuts, tears, wearing, abrasion, and unraveling.

6.3.3 – Storage.**6.3.3.1 –**

All struts shall be stored according to the manufacturer's specific recommendations.

6.3.3.2 –

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

6.3.4 – Nipples and Couplings.

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

6.3.5 – Labeling.**6.3.5.1 –**

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

6.3.5.2 –

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

6.3.5.3 –

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

6.3.5.4 –

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

Statement of Problem and Substantiation for Public Input

Delete section as struts are not part of the standard.

Submitter Information Verification**Submitter Full Name:** Eric Rickenbach**Organization:** Pennsylvania State University**Street Address:****City:****State:****Zip:****Submittal Date:** Wed Oct 24 10:48:40 EDT 2018**Committee:** FDR-AAA



Public Input No. 98-NFPA 1937-2019 [New Section after 7.1]

MAINTENANCE

Suggest new sections and new sequence to more accurately reflect activities that are "Maintenance"-related. Suggested sections and sequence include:

Repairs and Adjustments , , Couplings , , Nipples , , Labels , , Out-of-Service and Tags , and Retirement and Disposal _____

Statement of Problem and Substantiation for Public Input

Under Chapter 7 Maintenance, suggest new sections and a different sequence of sections to more accurately reflect activities that are "Maintenance"-related such as Repairs and Adjustments, Couplings, Nipples, Labels, Out-of-Service and Tags, and Retirement and Disposal.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

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Submittal Date: Tue Jan 01 19:42:06 EST 2019

Committee: FDR-AAA

**Public Input No. 23-NFPA 1937-2018 [Section No. 7.1.1.1]****7.1.1.1** Inspection Frequency.

Inspection of the lifting bag components shall be conducted after every use or ~~as determined by the organizations' SOP~~ at a minimum, monthly .

Statement of Problem and Substantiation for Public Input

Further clarify inspection requirements.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

City:

State:

Zip:

Submittal Date: Wed Oct 24 10:53:15 EDT 2018

Committee: FDR-AAA



Public Input No. 97-NFPA 1937-2019 [Section No. 7.1.1.1]

7.1.1.1 Inspection Frequency.

Inspection of the lifting bag components shall be conducted after every- each use , or if not used, on a monthly basis as determined by the organizations' SOP, or in accordance with the manufacturer's specific recommendations .

Statement of Problem and Substantiation for Public Input

Justification: Added text to provide more option for inspection frequency and for consistency with the standard.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

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Submittal Date: Tue Jan 01 19:13:01 EST 2019

Committee: FDR-AAA



Public Input No. 99-NFPA 1937-2019 [Section No. 7.1.1.1]

Relocate this section to Chapter 6 CARE, under the appropriate section for Fit and Function Operational Check and Inspection

7.1.1.1 Inspection Frequency.

Inspection of the lifting bag components shall be conducted after every use or as determined by the organizations' SOP.

Statement of Problem and Substantiation for Public Input

Suggestion consolidates inspection under Chapter 6, CARE.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

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Zip:

Submittal Date: Tue Jan 01 19:47:35 EST 2019

Committee: FDR-AAA

**Public Input No. 100-NFPA 1937-2019 [Section No. 7.1.1.2.1]**

Relocate this section to Chapter 6, CARE, under the Inventory and Accountability section

7.1.1.2.1

All the following lifting bag components shall be present:

- (1) Lifting bags
- (2) Controls
- (3) Hoses
- (4) Storage cases
- (5) Regulators
- (6) Accessories

Statement of Problem and Substantiation for Public Input

Relocating this section to Chapter 6 CARE, under the appropriate section for Accountability and Inventory consolidates similar information in one place.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

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Submittal Date: Tue Jan 01 19:49:58 EST 2019

Committee: FDR-AAA

**Public Input No. 22-NFPA 1937-2018 [Section No. 7.1.1.2.1]****7.1.1.2.1**

All the following lifting bag components shall be present:

- (1) Lifting bags
- (2) Controls
- (3) Hoses
- (4) ~~Storage cases~~
- (5) Regulators
- (6) Components and Accessories

Statement of Problem and Substantiation for Public Input

Remove "storage box" as they are not necessary for the safe operation of the system. Add "components" to cover all parts of the system.

Submitter Information Verification

Submitter Full Name: Eric Rickenbach

Organization: Pennsylvania State University

Street Address:

City:

State:

Zip:

Submittal Date: Wed Oct 24 10:51:45 EDT 2018

Committee: FDR-AAA

**Public Input No. 39-NFPA 1937-2018 [Section No. 7.1.1.2.1]****7.1.1.2.1**

All the following lifting bag components shall be present:

- (1) Lifting bags
- (2) Controls
- (3) Hoses, couplings and shut off valves
- (4) Storage cases
- (5) Regulators
- (6) Accessories

Statement of Problem and Substantiation for Public Input

Air hose couplings including short shut off hoses are often the most problematic component of a lifting bag system, these should be present for inspection to assure proper function.

Submitter Information Verification

Submitter Full Name: Paul Prevost

Organization: City Of Fort Saskatchewan

Street Address:

City:

State:

Zip:

Submittal Date: Thu Dec 27 18:04:07 EST 2018

Committee: FDR-AAA

**Public Input No. 40-NFPA 1937-2018 [Section No. 7.1.1.2.2]****7.1.1.2.2**

Lifting bag inspection shall include the following:

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

Statement of Problem and Substantiation for Public Input

Calling the inlet of th air bag a valve is potentially confusing, adding the Nipple to the descriptor may clairify the intent.

Submitter Information Verification

Submitter Full Name: Paul Prevost

Organization: City Of Fort Saskatchewan

Street Address:

City:

State:

Zip:

Submittal Date: Thu Dec 27 18:08:35 EST 2018

Committee: FDR-AAA

**Public Input No. 101-NFPA 1937-2019 [New Section after 7.1.1.3.6]****Nipples and Couplings****(New)7.X.X**

The replacement of worn or damaged nipples and couplings shall be completed with original equipment parts available from the manufacturer with replacement work performed according to the manufacturer's specific instructions .

Statement of Problem and Substantiation for Public Input

Justification: Recommendation that Nipples and Couplings sections relocated so to be addressed within Chapter 7 under the category of 'Maintenance'.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submittal Date: Tue Jan 01 19:54:23 EST 2019

Committee: FDR-AAA



Public Input No. 102-NFPA 1937-2019 [New Section after 7.1.1.3.6]

Labels

7.X.X Labels All lift bag and component labels shall be kept clean and free of cuts, rips, and other surface damage that make them unreadable.

Justification New section number added for lift bag labels as a maintenance function (Chapter 7)

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

Justification Sequence of the sections under 6.1.5 have been edited to read in a more logical flow from inspection to replacement. _ New section added for lift bag labels to be consistent with similar section for power rescue tools (6.2.5).

-

7.X.X.X The AHJ shall replace any label(s) required by this standard to be on the tool or component if determined to be damaged or missing.

Justification New section added for lift bag labels to be consistent with similar section for power rescue tools (6.2.5).

7.X.X.X Replacement labels shall be available from the specific manufacturer and applied according to the manufacturer's instructions by the end user.

Justification New section added for lift bag labels to be consistent with similar section for power rescue tools (6.2.5).

-

-

Statement of Problem and Substantiation for Public Input

Justification: Suggestion for moving and consolidating labels for lift bag labels as a maintenance function (Chapter 7).

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

State:

Zip:

Submission Date: Tue Jan 01 20:12:10 EST 2019

Committee: FDR-AAA

**Public Input No. 103-NFPA 1937-2019 [Section No. 7.1.1.4.2]****7.1.1.4.2**

Any- Where user repair cannot be accomplished promptly or where replacement items or remedial action are not immediately available, the lifting bag or lifting bag- component being taken out of service- shall be tagged as specified in- 4.5.6 (15)- "Out-of-Service" and segregated from other equipment.

-

Statement of Problem and Substantiation for Public Input

Provide further details on Out-of-Service equipment tagging process.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

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Zip:

Submittal Date: Tue Jan 01 20:17:38 EST 2019

Committee: FDR-AAA



Public Input No. 104-NFPA 1937-2019 [Section No. 7.1.2.1.3]

7.1.2.1.3

The lifting bags shall be tested annually ~~in accordance with the manufacturer's recommendation~~ by a Technician certified to perform at that level through advanced training and education from the manufacturer .

Statement of Problem and Substantiation for Public Input

End users 'test' lift bags after each use or monthly per Chapter 6. This section in chapter 7 is a requirement for annual 'testing' by a Technician certified by the manufacturer which assumes that this test is done with a different set of eyes and by an individual more knowledgeable in lift bag maintenance and testing procedures than the typical end user.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

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Submittal Date: Tue Jan 01 20:21:41 EST 2019

Committee: FDR-AAA

**Public Input No. 105-NFPA 1937-2019 [Section No. 7.1.2.2.4]****7.1.2.2.4**

Where the user-reported condition cannot be substantiated, the technician shall perform a complete lifting bag inspection- Fit and Function Operations Check and Inspection in accordance with the manufacturer's instructions.

Statement of Problem and Substantiation for Public Input

Revised wording to clarify what process (Fit and Function operational Check and Inspection) is used for accomplishing this task and which is further described in details in Chapter 6, Care, Fit and Function....

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

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Submittal Date: Tue Jan 01 20:28:03 EST 2019

Committee: FDR-AAA



Public Input No. 106-NFPA 1937-2019 [New Section after 7.2]

Repairs and Adjustments

Repairs and Adjustments, (Reserved: Use text from lift bag section 7.1 wth global substitution of rescue tools for lift bags within the text)

Nipples and Couplings, (Reserved: Use text from lift bag section 7.1 with global substitution of rescue tools for lift bags within the text)

Labels, (Reserved: Use text from lift bag section 7.1 wth global substitution of rescue tools for lift bags within the text)

Out-of-Service Tags, (Reserved: Use text from lift bag section 7.1 with global substitution of rescue tools for lift bags within the text)

Retirement and Disposal (Reserved: Use text from lift bag section 7.1 with global substitution of rescue tools for lift bags within the text)

-

Statement of Problem and Substantiation for Public Input

This is a global recommendation to take the agreed upon text fro the applicable sections of Chapter 7 for Lift Bags (7.1) and modify the text by substituting the words rescue tools for lift bags where appropriate to add consistency of maintenance information between lift bags and rescue tools.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

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Submittal Date: Tue Jan 01 20:34:46 EST 2019

Committee: FDR-AAA



Public Input No. 32-NFPA 1937-2018 [New Section after 7.2]

TITLE OF NEW CONTENT

7.2 Rescue Tools

-

7.2.1 User Maintenance.

7.2.1.1 Inspection Frequency.

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

7.2.1.2 Inspection.

7.2.1.2.1

All the following rescue tool components shall be present:

- (1) Rescue Tool
- (2) Power Source
- (3) Hoses (if applicable)
- (4) Tips
- (5) Blades
- (6) Accessories

7.2.1.2.2

Rescue tool inspection shall include the following:

- (1) Material checked for deterioration, dirt, cracks, tears, holes, stress fractures, leaks and separation of parts
- (2) Inlet valves and connection points for hoses (if applicable) is 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 undamaged and securely attached to tool
- (6) Blades and tips are undamaged and securely mounted

7.2.1.2.3

Rescue tool component inspection shall include the following:

- (1) Power source checked for deterioration, dirt, cracks, tears, holes, stress fractures, leaks and separation of parts
- (2) Hoses checked for cuts, abrasions, bubbling, cracks, delamination, heat damage and chemical damage
- (3) Batteries checked for damage, nicks, cracks, heat damage, drop damage, leaking and chemical damage

7.2.1.2.4

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

7.2.1.3 Repair

7.2.1.3.1

Where user has completed manufacturer recommended service and/or repair training and repair can be accomplished promptly and replacement items or remedial action are 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 are 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 organizations 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/or test in accordance with 7.2.3 if applicable.

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(15).

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 7.2.3 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 7.2.3 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 then 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 may be returned to service.

7.2.2.3 Repairing and Rebuilding

-

7.2.2.3.1

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

7.2.2.3.2

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

7.2.2.3.3

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

7.2.2.4 Removal from Service and Disposition

-

7.2.2.4.1

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.

7.2.3 Testing

-

7.2.3.1

The organization responsible for the maintenance of the rescue tools shall perform periodic testing in accordance with the manufacturer's specifications at a minimum monthly. In addition, on an annual basis, the rescue tool system(s) shall be tested to confirm tool or component performance as specified by the manufacturer, by a manufacturer trained authorized technician.

7.2.3.2

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

7.2.3.2.1

Calibration shall be performed periodically in accordance with the test equipment manufacturer's instructions and the test equipment shall be calibrated at a minimum annually.

7.2.3.2.2

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.

7.2.3.2.3

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

7.2.3.3

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

7.2.4 Record Keeping**7.2.3.1.1**

The organization shall maintain a written or electronic record of each rescue tool and/or system. The record shall include date of in service, all inspections, all maintenance and all repairs.

7.2.3.1.2

The organization shall maintain the record of each rescue tool and/or system as required in 7.2.3.1.1 for a minimum of 5 years after retirement of each rescue tool and/or system.

Statement of Problem and Substantiation for Public Input

Adding new Section 7.2 for Rescue Tools Maintenance from Task Group input at latest NFPA 1937 meeting

Submitter Information Verification

Submitter Full Name: Paul Curtis

Organization: L.N. Curtis & Sons

Street Address:

City:

State:

Zip:

Submittal Date: Wed Dec 26 17:24:07 EST 2018

Committee: FDR-AAA



Public Input No. 107-NFPA 1937-2019 [New Section after 7.3]

Repairs and Adjustments

Repairs and Adjustments, (Reserved: Use text from lift bag section 7.1 with global substitution of strut and components for lift bags within the text)

Nipples and Couplings, (Reserved: Use text from lift bag section 7.1 with global substitution of strut and components for lift bags within the text)

Labels, (Reserved: Use text from lift bag section 7.1 with global substitution of strut and components for lift bags within the text)

Out-of-Service Tags, (Reserved: Use text from lift bag section 7.1 with global substitution of strut and components for lift bags within the text)

Retirement and Disposal (Reserved: Use text from lift bag section 7.1 with global substitution of strut and components for lift bags within the text)

.

Statement of Problem and Substantiation for Public Input

This is a global recommendation to take the agreed upon text from the applicable sections of Chapter 7 for Lift Bags (7.1) and modify the text by substituting the words struts and components for lift bags where appropriate to add consistency of maintenance information between lift bags, rescue tools, and struts.

Submitter Information Verification

Submitter Full Name: Ronald Moore

Organization: Prosper Texas Fire Department

Street Address:

City:

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Zip:

Submittal Date: Tue Jan 01 20:41:30 EST 2019

Committee: FDR-AAA



Public Input No. 113-NFPA 1937-2019 [New Section after 7.3]

Chapter 8 Record-keeping

8.1 Records

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

Justification : Suggest move entire section 4.5 through 6.1 to a new proposed Chapter 8 with the title of Record-keeping. The standard is designed to cover selection (Chapter 5), care (Chapter 6), and maintenance (Chapter 7). Record-keeping, however is only mentioned in existing section 4.5. Existing section 4.5 content through 6.1 should form the basis of a new Chapter 8 on the subject of record-keeping to maintain consistency within this standard.

8.1.2 The record-keeping system shall accommodate the documents listed in 8.X.X 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

8.1.3 Legal Counsel.

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

8.1.3.2 Legal counsel shall advise the organization about the form, written or electronic, that is permitted and under what circumstances original or copied documents are needed for various purposes.

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

8.1.4 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.

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

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

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

8.1.4.4 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.

8.1.4.5 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, lifting bags, and struts
- (3) Written instructions for Fit and Function Operational Check and Inspection, including manufacturer's instructions, to be followed if defects are found

Justification: Added new text describing Fit and Function Operational Check and Inspection

- (4) Forms to document the findings during Fit and Function Operational Check and Inspection

Justification: Added new text describing Fit and Function Operational Check and Inspection

- (5) Forms to record and report defects found during inspections and to track the rescue tool, lifting bag, and struts

- (6) Forms to document inspections, tests, and repairs by rescue tool, lifting bag, and strut users and

technicians that shall include the following:

(a) Make, model, serial number, and other information of rescue tools, lifting bags, and struts 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, lifting bag, and strut technicians as well as documentation of that training and authorization

(8) Written procedures for recording information about the inspection, maintenance, repair, and adjustments completed

Justification: Added new that includes maintenance and adjustments as recordable information

(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 Fit and Function Operational Check and Inspection and tests to verify rescue tools, lifting bags, and struts performance

Justification: Added new text describing Fit and Function Operational Check and Inspection as part of the documentation

(12) Schedule for retention, disposition, and disposal of each report, record, and document

(13) Methods of identifying all major components of rescue tool, lifting bag, and strut systems so that these can be identified and tracked from initial receipt by the organization until removed from the possession and control of the organization

Justification: Added new text describing "major" components. It is not appropriate that all parts of a tool or system be identified and tracked. this would

include screws, washers, o-rings, etc.

(14) Documentation when a defective or obsolete rescue tool, lifting bag, strut, 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, strut, or component as specified in 8.X.X, a tag shall be conspicuously placed on the rescue tool, lifting bag, struts, or component.

Justification: Added placeholder numbers for this reference assuming that Record-keeping will be moved from Chapter 4 to Chapter 8.

(b) The tag shall indicate the date and time the rescue tool, lifting bag, strut, or component was removed from service, by whom, and for what reason.

(c) Rescue tools, lifting bags, struts, and components that are removed from service shall be stored separately from other rescue tools, lifting bags, struts, and components and secured, as necessary.

(d) Access to tagged rescue tools, lifting bags, struts, and components shall be limited as determined by the AHJ and should include approved technician personnel.

Justification: Deleted existing text that allows for returning defective or obsolete tools to in-service status by anyone without determination. It is not appropriate that 'defective or obsolete tools' be allowed to be repaired or serviced and have their tags removed. If a tool is obsolete, it is obsolete (old) and therefore considered beyond ever returning to in-service status. If a tool is declared to be 'defective', especially if due to damage during use or due to a manufacturing defect, the tool should be tagged Out-of-Service (beyond repair and in-service status) and destroyed or rendered unusable by the AHJ.

(e) Rescue tools, lifting bags, struts, and components documented as defective or obsolete shall remain tagged Out-of-Service and destroyed or otherwise rendered unusable by the AHJ.

Justification: Added new section to assure that tag remains on these items until destroyed or disposed of

(15) Records for maintenance of each individual rescue tool, lifting bag, strut, 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

-
-
-

Statement of Problem and Substantiation for Public Input

Suggested text for new Chapter 8 Record-keeping. The foundation of the text is excerpted from Chapter 4.5 Records with revisions and updates as noted. The requirement for record-keeping is found to be most effective for the reader when consolidated into one major section covering lift bags, rescue tools, struts, and component record-keeping and related topics.

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Submittal Date: Wed Jan 02 11:24:26 EST 2019

Committee: FDR-AAA

**Public Input No. 24-NFPA 1937-2018 [Section No. 7.3]**

7.3 – Struts.

(Reserved)

Statement of Problem and Substantiation for Public Input

Remove struts from the document as not part of the standard.

Submitter Information Verification

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Submittal Date: Wed Oct 24 10:57:10 EDT 2018

Committee: FDR-AAA



Public Input No. 108-NFPA 1937-2019 [New Section after B.1]

Lift Cushion (2 Bar) Checklist

1) Air Cushion Inventory & Tool Accountability Check

All of the following medium-pressure (2 Bar) air cushion components are found to be present and accounted for including Air Cushions, Regulator, Controller, Air Hoses. _____

2) Air Cushions, Regulator, and Controller Cleaning and Disinfecting

External surfaces on top, bottom, and sides of each medium-pressure air cushion shall be cleaned in soap and water. Avoid getting water inside the bag itself.

Remove any foreign objects that may be on the bag surface, such as dirt, pebbles, debris, broken glass, etc.

Air cushion control valve assembly and all air hoses shall be cleaned, disinfected, and determined free of any debris accumulation

All air cushions & components shall be thoroughly air-dried after cleaning and prior to storage. ____ (Drying shall not be done in direct sunlight or with high heat)

All air cushion components shall be re-inspected after cleaning

3) Air Cushion Operational “Fit & Function” Check & Inspection.

All surfaces of each air cushion checked for deterioration, dirt, cracks, tears, leaks, holes, pliability, and delamination

Inlet fitting on each air cushion is clean, undamaged, unobstructed, and determined to be functional.

All buckles, handles, and adjustment straps on the air cushion are checked for cuts, abrasions, tears, cracks, heat damage, or chemical damage.

All medium-pressure air hoses and couplings checked for cuts, abrasions, bubbling, cracks, heat damage, and chemical damage.

Conduct a **Leak Test** by pressurizing unloaded air cushion to 10 PSI for a period of 10 minutes. If a loss of pressure occurs, immerse surface of cushion in soap & water solution. Note appearance of air bubbles indicating air leaks.

Air hose couplings and air inlet nipple checked for air-tight and leak-free connections.

Regulator controller housing unit checked for damage and function.

Regulator and pressure relief device checked for damage and function.

Regulator checked for any unusual sounds such as whistling, chattering, clicking, or rattling during air flow operation.

Controller, inflation/deflation buttons, and relief valves are checked and determined operational/functional.

Each air cushion shall be checked for ability to hold pressure as prescribed by the manufacturer.

4) Air Cushion System Readiness & In-Service Status

All air cushions and components, inflated, tested, determined functional and in a readiness state

Air cushions and all components shall be stored as directed by a TCC Staff member.

5) Air Cushion Repairs & Adjustments

When field-level user repair is accomplished promptly and replacement items or remedial action are immediately available, the air cushion and/or components shall be restored to proper condition in the field and returned to in-service status.

6) Air Cushion Out-of-Service & "Red Tagged"

Where user repair in the field cannot be accomplished promptly or where replacement items or remedial action are not immediately available, the air cushion shall be Red-tagged "Out-of-Service" and reported to a TCC Staff member.

Where an air cushion or any component of the system is suspected of being contaminated or damaged beyond the capability of routine field-level maintenance, the air cushion or component shall be Red-tagged and marked "Out-of-Service", and segregated from other equipment.

-

Note Red-Tagged Item(s): _____

Reported Problem(s): _____

Statement of Problem and Substantiation for Public Input

Suggested content for creating a checklist for medium pressure air cushion care and maintenance process

Submitter Information Verification

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Submittal Date: Tue Jan 01 20:49:16 EST 2019

Committee: FDR-AAA



Public Input No. 109-NFPA 1937-2019 [New Section after B.1]

Lift Bag Checklist

1) Lifting Bag Inventory & Tool Accountability Check

All of the following lifting bags and system components shall be located and accounted for including the following; High-pressure Lifting bags, _

Regulators, Controller, Air Hoses, inline shutoffs, couplings, 'Y' connectors.

2) Lifting Bag Cleaning and Disinfecting:

_ External surfaces cleaned & disinfected on both sides of each lifting bag

Control valves & all lifting bag components/accessories cleaned & disinfected

All lifting bag components thoroughly air-dried after cleaning and prior to storage. _ **NOTE** : (Drying shall not be done in direct sunlight or with high heat)

All lifting bags and components shall be visually inspected after cleaning.

3) Lifting Bag Operational "Fit & Function" Check & Inspection.

Lifting Bag Operational Check and Inspection shall include the following:

All surfaces of each air bag shall be checked for deterioration, ____
(dirt, cracks, tears, holes, pliability, and delamination)

Air hose couplings & fittings checked for visual/physical signs of damage

Each high-pressure lifting bag shall be checked for pressure retention as prescribed by the manufacturer. _

1) With the sides and edges of the air bag wet with a soapy water cleaning solution, inflate to maximum of 30psi; no load.

2) While inflated, check air bag for air bubbles denoting a leak.

All air hose couplings & fittings confirmed air-tight w/o leakage _

Inlet fitting for each lift bag is clean, inside of air fitting clear, fitting/nipple functional, and coupling collars undamaged

All high-pressure air hoses checked for cuts, abrasions, bubbling, cracks, _ heat damage, chemical damage, etc.

Actuator buttons for inflation/deflation Controller unit functional

Lift bag Regulator device checked for damage and proper function

Regulator & Controller housing checked for damage (gauges, needle, etc)

Pressure relief devices checked for damage and proper function

High-pressure Teflon O-ring & stem screw in air cylinder connection

Regulator and pressure relief device checked for proper function when each is operated

Regulator checked for any unusual sounds during operation and air flow

(whistling, chattering, clicking, rattling, etc)

4) Lifting Bag Readiness & In-Service Status

All high-pressure lifting bags and all components of the system are in a readiness state

The lifting bags shall be stored on edge with air fitting/coupling facing upward and unobstructed and system components properly stored nearby.

5) Lifting Bag Minor Repairs & Adjustments

Where field-level user repair can be accomplished promptly and replacement items or remedial action are immediately available, the lifting bags and/or components can be restored to proper condition and returned to service.

6) Lifting Bag Out-of-Service & "Red-Tagged"

Where lifting bags are suspected of being damaged beyond the capability of routine field-level maintenance, the component shall be red-tagged as "Out-of-Service", segregated from other functional equipment, and reported via AHJ SOPs.

Where user repair in the field cannot be accomplished promptly or where replacement items or remedial action are not immediately available, the lifting bag or component shall be tagged "Out-of-Service" and reported via AHJ SOPs.

Red-Tagged Item(s): _____

Reported Problem(s): _____

Statement of Problem and Substantiation for Public Input

Provision of sample, generic content for lift bag checklist

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Submittal Date: Tue Jan 01 20:52:43 EST 2019

Committee: FDR-AAA



Public Input No. 111-NFPA 1937-2019 [New Section after B.1]

1) Strut System Inventory & Accountability

The Service, Care, and Maintenance process shall include an Inventory and Accountability check of all strut components to determine that all strut items and components are accounted including

Brand X:

4- RJ3 Jack Stands and steel pins

3- RJ3 Struts w/Jacking Unit and steel pins

3- Steel Extension Pieces

Brand Y

3- Struts w/base, swivel head, yellow pins, & metal retainer clips

1- Jacking unit w/steel pins and safety clasp

1- Tripod head

1- Claw foot

1- Telescoping head

1- Spare Yellow pin, 1" diameter w/safety retainer clip

Brand Z1

2- Model 100 w/ratchet webbing coiled, swivel base, Multi-head

2- Model 200 w/ratchet webbing coiled, swivel base, Multi-head

Brand Z2

2- 406 Strut

2- 610 Strut

2- 235 Extension

2- 435 Extension

2- 16" Hydraulic jacking unit

1- 10" Hydraulic jacking unit

3- Jacking unit hand pump w/orange male-to-male hose

2- Load Indicators and Red carry bag,

load gauge intact & functional w/black & red needles

8-Base plates, 12"x12" with swivel base & anchor rings

NOTE: Missing, broken, or damaged components for any strut system discovered during the Inventory and Accountability Check shall be reported as per SOPs.

2) Strut System Cleaning & Disinfecting

Each strut section of a telescoping or extendable strut shall be separated/disassembled so each individual section and its fittings can be individually cleaned of all debris, dirt, and/or obstructions.

A physical inspection of the strut, base, heads, pins, extensions, and components shall be completed during this cleaning process.

The exterior surfaces of all struts and components shall be wiped down with a lint-free cloth (dampened with water), and dried with either a _ lint-free cloth or a pressurized air source.

NOTE: If a Paratech strut is cleaned with a soap and water solution, lubricate

O-rings/seals with grease and lubricate lock pins/couplings with WD40.

3) Strut System Inspection & Operational Check

The Inspection & Operational Check for struts shall include a visual check and inspection of all components of each strut system including;

overall condition of strut

nicks, scratches, cracks, burrs, twists, bends,

squareness of strut

rips, tears, cuts,

elongation of pin holes

heat or chemical damage,

unusual strut wear,

rounding of strut fittings,

telescoping of strut,

pins, catches, & hooks,

base plates, strut heads

All accessory components for use with each strut system that incorporates nylon or materials such as webbing, strapping, or threads shall be inspected for material defects, cuts, tears, wearing, abrasion, and unraveling.

All strut labels shall be clean and free of cuts, rips, and other surface damage that makes them unreadable.

NOTE: If replacement labels are deemed necessary, this condition shall be reported and a TCC Staff member notified of this condition

Each strut or strut system component that has a label shall have that label inspected for visibility, readability, and physical damage.

TCC Staff shall replace any damaged or missing strut tool label.

Strut "Fit & Function" Check -

All components of each strut system are re-assembled in the normal fashion as for their engineered use with no load applied to the assembled strut or powered strut unit.

Each strut coupling shall be visually checked for function with its mating coupling or hose fitting.

Strut lock-pins, if so equipped, operate as designed and function properly with the appropriate strut accessories.

Strut O-rings/seals, if so equipped, are in place, free of cuts and cracks, and clean and lubricated per manufacturer's recommendation.

All adjustable length powered struts and their jacking units should be extended through their full travel distance and retracted, checking for normal function and ability to extend to their maximum design length.

During extension of an adjustable length strut or powered jacking unit, function of a safety stop/overextension feature should be checked for proper function at the desired maximum useable extended length.

All strut bases should be inspected to determine that their swivel function is working properly and that they readily accept and secure a strut or strut component into the base fitting.

All strut heads should each be fitted on a strut or strut extension and checked for operation, tightness and firm fit, ability to rotate or swivel (if applicable), and its ability to securely attach to the strut.

Each end of each strut and strut extension should be connected to a base or strut head to determine that they function properly.

Each strut connection pin should be inserted into an appropriate hole or pin location to determine the pin's ability to function properly.

Locking collars, if present on a strut system, should be operated in a normal fashion that typically would be employed during actual tool use to determine their proper function.

Struts with permanently affixed bases and/or heads should be inspected visually for their proper operation.

Hydraulic hoses fittings and air hose couplings present with a strut system should be connected, tested for fit and function, and operated as would be done during normal operation.

Hoses and connectors should be inspected for physical damage and connected to the proper fitting to determine proper operation.

All safety retainer pins , locks , and pop-out type knobs should be physically operated and inspected for correct operation.

Threads on struts or strut components should be inspected for functionality.

Any locking collar feature available on a TCC strut system, should have the locking collar run up and down the full length of the threads of the strut to determine thread status and functionality.

The hydraulic jacking unit strut component pump and strut unit should be connected/coupled together and operated to a pressure sufficient to extend and retract the unit, checking for leaks and function of relief or bypass valves.

The pressure regulator of any air-operated strut component should be set so to not exceed the maximum pressure rating of any component in the system.

The hydraulic jacking unit pump should have the air bled out of the hydraulic system and the hydraulic fluid level checked for correct quantity and fill level.

= To remove the air, the hydraulic strut unit should be positioned at a lower level than the hydraulic pump and extended fully and retracted several times without putting a load on the system.

=Air entrapped into the reservoir of the hydraulic pump should then be removed by loosening the pump fill cap on the reservoir.

=After the air bleeding process is completed, the fluid level in the hydraulic pump should be checked and refilled to the proper level.

Fluid level in a strut system hydraulic pump reservoir should be adjusted to the level required by the strut tool manufacturer.

Hydrافusion hydraulic pump units should be lubricated with the appropriate oil or grease at all pivot and rubbing points on the pump during the maintenance and minor repair check.

4) Strut System Readiness & Storage

After completion of the inventory check, cleaning, operational and maintenance checks, the struts and all components shall be stored according to instructions and directions according to SOPs, ensuring that the strut tool and all strut components are readily accessible, secured to prevent physical damage, and positioned so no damage is caused by proximity to other pieces of equipment.

NOTE: If Paratech-brand struts are stored horizontally, rotate/turn threaded shaft to prevent flat spotting the cup seal.

5) Strut System Minor Field Repairs

Field-level preventative maintenance work activity shall be performed according to this

procedure or when assigned by a repair technician or rescue officer.

Minor repairs should be completed on the strut or strut components prior to returning the tool to in-service status.

Worn, frayed, cut, or otherwise damaged ratchet strap webbing or buckles should be replaced by a qualified repair individual prior to returning the ratchet strap component to in-service status.

Strut systems and components that exhibit an air or hydraulic fluid leakage condition should be taken out of service until appropriate repairs or replacement has occurred.

Worn, kinked, leaking, or cut air or hydraulic hoses, couplings, or fittings should be replaced by a qualified repair individual prior to returning the tool to in-service status.

Worn or damaged strut nipples and couplings shall be replaced under the supervision of a qualified repair individual and done according to each manufacturer's specific instructions.

5) . . . Strut System Out-of-Service & "Red Tagged"

When damage could influence the tool's operation or the safety of those using the tool, the unit shall be repaired or taken out of service and "Red Tagged"

Non-working or non-functional strut pins should be repaired or replaced prior to placing the system in service.

If any strut fails the field-level operational check for any reason, it shall be "Red Tagged" and removed from service.

Struts or strut system components that are not field-repairable, shall be repaired, service tested, or replaced by TCC personnel.

Damaged, non-functioning, and/or 'Red Tagged' tools and components should be repaired or replaced according to SOPs prior to returning the tool to service.

-

Statement of Problem and Substantiation for Public Input

Generic content for a Strut service, care, and maintenance checklist.

Submitter Information Verification

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Submittal Date:	Tue Jan 01 21:22:09 EST 2019
Committee:	FDR-AAA

**Public Input No. 110-NFPA 1937-2019 [New Section after B.1.1]**

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Rescue Tool Checklist**) _ Power Rescue Tool Inventory & Accountability Check**

An Inventory and Accountability Check shall be conducted on all power rescue tool systems to determine that all tools, power plants, accessories, and all components of the system are present and accounted for including:

-

_____ Combi Spreader: Model _____

_____ Spreader: Model _____

_____ Cutter: Model _____

_____ Ram, (single plunger), Model _____

_____ Ram, Telescoping, Model _____

_____ Ram Accessory Kit w/serrated head, pointed head

_____ Hoses

_____ Power Plant, single unit

_____ Power Plant, simo pump

_____ Battery-powered rescue tool Li-Ion batteries

-

2) Power Rescue Tool Cleaning & Disinfecting

_____ Exterior surfaces of all Power Rescue Tools, Power Plants, tool accessories and components are:

1) washed/wiped clean of all dirt, oil, and grease,

2) wiped down with a lint-free cloth (dampened with water), and

3) dried with a lint-free cloth or pressurized air source.

_____ All powered rescue tools, power plants, & rescue tool components free of damage such as cracks, missing, broken, rusted.

_____ All hydraulic hose couplings , connections , and electrical contact surfaces shall be cleaned,
inspected and found free of obstructions and damage.

_____ All rescue tool system label(s) inspected for visibility and/or physical damage. NOTE: Unreadable or damaged labels shall be reported according to SOPs

3) Power Rescue Tool Operational "Fit & Function" Check

Members shall perform an Operational 'Fit & Function' check of all components and carry frame of each rescue tool system checking for the following:

leaks,

twists, bends,

tears, cuts,

cracks,

heat damage,

chemical damage,

wear,

rounding of fittings,

nicks,

burrs, or

any condition that could of impact the function of the rescue tool or its component

Connect and operate each tool of each Power Rescue Tool system through their normal range, and measure the following tool performance to determine that all power rescue tools are suitable for service;

Spreader maximum opening distance inches?

Cutter Blades maximum opening distance inches?

Ram maximum extended length inches?

Power plant hydraulic & engine oil fluid levels checked & proper level

Check function & condition of the following for each Power Plant -

Engine ON/OFF Switch,

Run/Choke,

Throttle control,

Spark plug & plug wire

Engine oil level check,

Hydraulic fluid level

Fluid level sight glass,

Hydraulic control handles

_____ Hydraulic couplings intact, free of debris, w/caps present

_____ Couplings operate, no damaged connectors

_____ Ball control valve opens and closes easily, undamaged

_____ Gaskets are in place, Muffler/spark arrestor,

_____ Frame, handle, feet

_____ Pull cord & recoiler condition

_____ Loose nuts/bolts replaced or tightened as necessary

-

4) Readiness Check for All Power Plants

_____ Power plant starts properly

_____ Check throttle function

_____ Check idle run operation,

_____ Check red toggle Stop switch

_____ Check fuel level,

_____ Store motor in OFF position.

_____ Fuel Cut-off in OFF position.

5) Minor Repair Work for Power Plants

_____ Clean/replace engine air filter as deemed necessary

NOTE: If the rescue tool, power plant, or any component fails the field-level inspection or the operational checks for any reason, the tool or component shall be removed from service, repaired, service tested and/or replaced .

Power Rescue Tool Readiness & Storage

_____ After completion of the inventory check, physical inspection, cleaning, and operational checks, the powered rescue tools and all components shall be stored as appropriate, ensuring the power rescue tools and all components are:

- 1) _____ readily accessible,
- 2) _____ secured to prevent physical damage, and
- 3) _____ positioned so no damage is caused by proximity to other pieces of equipment.

Power Rescue Tool Field Repairs & Adjustments

_____ Minor field-level maintenance or repair work has been completed on the power rescue tool system and its components as needed _____

Repairs/Adjustments Made _____

Repairs/Adjustments Made _____

6) Power Rescue Tool Out-of-Service & “Red Tagged”

Where any component of any Power Rescue Tool system is suspected of being damaged beyond the capability of routine field-level maintenance, the component shall be ‘Red-Tagged’ as “Out-of-Service”, segregated from other functional equipment, and reported as per SOPs.

Where user repairs or adjustments in the field cannot be accomplished promptly or where replacement items or remedial action are not immediately available, the Power Rescue Tool or its component shall be tagged “Out-of-Service” and reported as per SOPs

Red-Tagged Item(s): _____

Reported Problem(s): _____

Statement of Problem and Substantiation for Public Input

Example of content for a generic rescue tool service, care, and maintenance checklist.

Submitter Information Verification

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Submittal Date: Tue Jan 01 21:02:23 EST 2019

Committee: FDR-AAA

**Public Input No. 112-NFPA 1937-2019 [New Section after B.1.1]**

Sample: Rescue Tool Service Care and maintenance Checklist

1) Power Rescue Tool Inventory & Accountability Check

The following inventory and Accountability Check shall be conducted on all power rescue tool systems to determine that the tools, power plants, accessories, and all components of the system are present and accounted for.

System Inventory & Accountability Check -

_____ Combi Spreader, Model # _____

_____ Spreader, Model # _____

_____ Cutter, Model # _____

_____ Ram, (single plunger), Model # _____

_____ Ram, Telescoping, Model # _____

_____ Ram Accessory Kit w/1 serrated head, 1-pointed head

_____ Hydraulic Hoses, _____ # of hoses

_____ Power Plant, single tool unit, Model # _____

Hour meter reading on power plant: _____

_____ Holmatro Power Plant, simo unit, Model # _____

Hour meter reading on power plant: _____

-

Battery-powered Rescue Tool System Inventory-

_____ Spreader, Model # _____

_____ Cutter, Model # _____

_____ Ram, Model # _____

_____ Li-Ion Rechargeable Batteries, _____ # of batteries

2) Power Rescue Tool Cleaning & Disinfecting

-

_____ Exterior surfaces of all Power Rescue Tools, Power Plants, tool accessories and components are:

1) washed/wiped clean of all dirt, oil, and grease.

2) wiped down with a lint-free cloth (dampened with water), and

3) dried with a lint-free cloth or pressurized air source.

Power Plant engine & power plant unit exterior cleaned

All powered rescue tools, power plants, & rescue tool components free of damage such as cracks, missing, broken, rusted.

All hydraulic hose couplings, connections, and electrical contact surfaces shall be cleaned, inspected and found free of obstructions and damage.

All rescue tool system label(s) inspected for visibility and/or physical damage. NOTE: Unreadable or damaged labels shall be reported per SOPs.

3) Power Rescue Tool Operational "Fit & Function" Check

Members shall perform an Operational 'Fit & Function' check of all components and carry frame of each rescue tool system checking for the following:

leaks,

twists, bends,

tears, cuts,

cracks,

heat damage,

chemical damage,

wear,

rounding of fittings,

nicks,

burrs, or

any condition that could impact the function of the rescue tool or its component

Connect and operate each tool of each Power Rescue Tool system through their normal range, and measure the following tool performance to determine that all power rescue tools are suitable for service;

Spreader maximum opening distance inches?

Cutter Blades maximum opening distance inches?

Ram maximum extended length inches?

Power plant hydraulic & engine oil fluid levels checked & proper level

Power Plants - fluid levels checked:

Check function & condition of the following for each Power Plant -

Engine ON/OFF Switch,

Run/Choke,

Throttle control,

Spark plug & plug wire

Engine oil level check,

Hydraulic fluid level

Fluid level sight glass,

Hydraulic control handles

Hydraulic couplings intact, - free of debris, w/caps present

Couplings operate, no damaged connectors

Ball valve opens and closes easily, undamaged

Gaskets are in place, Muffler/spark arrestor,

Frame, handle, feet

Pull cord & recoiler condition

Loose nuts/bolts replaced or tightened as necessary

4) Readiness Check for All Power Plants

Power plant starts properly

Check throttle function

Check idle run operation,

Check red toggle Stop switch

Check fuel level,

Store motor in OFF position,

5) Minor Repair Work for Power Plants

Clean/replace engine air filter as deemed necessary

NOTE: If the rescue tool, power plant, or any component fails the field-level inspection or the operational checks for any reason, the tool or component shall be removed from service, repaired, service tested and/or replaced .

Power Rescue Tool Readiness & Storage

After completion of the inventory check, physical inspection, cleaning, and operational checks, the powered rescue tools and all components shall be stored in a manner as determined by Department SOP, ensuring the power rescue tools and all components are:

- 1) ___ readily accessible,
- 2) ___ secured to prevent physical damage, and
- 3) ___ positioned so no damage is caused by proximity to other pieces of equipment.

5) Power Rescue Tool Field Repairs & Adjustments

Minor field-level maintenance or repair work has been completed on the power rescue tool system and its components as needed

Repairs/Adjustments Made

Repairs/Adjustments Made

6) Power Rescue Tool Out-of-Service & "Red Tagged"

Where any component of any Power Rescue Tool system is suspected of being damaged beyond the capability of routine field-level maintenance, the component shall be 'Red-Tagged' as "Out-of-Service", segregated from other functional equipment, and reported as per Department SOP.

Where user repairs or adjustments in the field cannot be accomplished promptly or where replacement items or remedial action are not immediately available, the Power Rescue Tool or its component shall be tagged "Out-of-Service" and reported as per Department SOP.

Red-Tagged Item(s):

Reported Problem(s):

Statement of Problem and Substantiation for Public Input

Sample of Content for Rescue Tool Service, Care, and Maintenance Checklist

Submitter Information Verification

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Committee: FDR-AAA