

# **National Fire Protection Association**

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# M E M O R A N D U M

To: NFPA Technical Committee on Fire Department Apparatus

From: Yvonne Smith, Project Administrator

Date: January 6, 2015

Subject: NFPA 1901 Second Draft TC FINAL Ballot Results (A2015)

According to the final ballot results, all ballot items received the necessary affirmative votes to pass ballot.

- 30 Members Eligible to Vote
- 3 **Not Returned** (Kelker, Metheny, Pietsch)
- **26 Affirmative on All Revisions**
- **O** Affirmative with Comment on one or more Revisions
- 1 Negative on one or more Revisions (Chestnut)
- 0 Abstentions on one or more Revisions

The attached report shows the number of affirmative, negative, and abstaining votes as well as the explanation of the vote for each second revision.

There are two criteria necessary for each second revision to pass ballot: (1) simple majority and (2) affirmative  $^2/_3$  vote. The **mock examples** below show how the calculations are determined.

- (1) Example for Simple Majority: Assuming there are 20 vote eligible committee members, 11 affirmative votes are required to pass ballot. (Sample calculation: 20 members eligible to vote  $\div$  2 = 10 + 1 = 11)
- (2) Example for Affirmative  $^2/_3$ : Assuming there are 20 vote eligible committee members and 1 member did not return their ballot and 2 members abstained, the number of affirmative votes required would be 12. (Sample calculation: 20 members eligible to vote -1 not returned -2 abstentions  $= 17 \times 0.66 = 11.22 = 12$ )

As always please feel free to contact me if you have any questions.



# DELETED



# Second Revision No. 52-NFPA 1901-2014 [ Section No. 2.3.4 ]

#### 2.3.4 ASTM Publications.

ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, www.astm.org.

ASTM B-647 B647, Standard Test Method for Indentation Hardness of Aluminum Alloys by Means of a Webster Hardness Gage, 2010.

ASTM B-648 B648, Standard Test Method for Indentation Hardness of Aluminum Alloys by Means of a Barcol Impressor, 2010.

ASTM D-4956 D4956, Standard Specification for Retroreflective Sheeting for Traffic Control, 2011a 2013.

ASTM <u>E-6 E6</u>, Standard Terminology Relating to Methods of Mechanical Testing, 2009be1.

ASTM € 10 , Standard Test Method for Brinell Hardness of Metallic Materials, 2012.

ASTM E-18 E18, Standard Test Methods for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials, 2012 2014.

ASTM <u>E-114</u> E1114, Standard Practice for Ultrasonic Pulse-Echo Straight-Beam Examination by the Contact Method, 2010.

ASTM € 165 E165 /E165M, Standard Test Method for Liquid Penetrant Examinations, 2012.

ASTM E 384 E384, Standard Test Method for Knoop and Vickers Hardness of Metallic Materials, 2011e1.

ASTM <u>E-569 E569 /E569M</u>, Standard Practice for Acoustic Emission Monitoring of Structures During Controlled Stimulation, 2013.

ASTM E-650 E650, Standard Guide for Mounting Piezoelectric Acoustic Emission Sensors, 2012.

ASTM E-709 E709, Standard Guide for Magnetic Particle Testing, 2008 2014.

 $ASTM \ \ \underline{E-797} \ \underline{E797} \ , \ Standard \ Practice \ for \ Measuring \ Thickness \ by \ Manual \ Ultrasonic \ Pulse-Echo \ Contact \ Method, \ 2010.$ 

ASTM <u>E-1004</u> <u>F1004</u>, Standard Practice for Determining Electrical Conductivity Using the Electromagnetic (Eddy-Current) Method, 2009.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 08:58:25 EDT 2014

#### Committee Statement

**Committee Statement:** Updating reference editions.

**Response Message:** 

Public Comment No. 133-NFPA 1901-2014 [Section No. 2.3.4]

# **Ballot Results**

✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 79-NFPA 1901-2014 [ Section No. 2.3.12 ]

#### 2.3.12 SAE Publications.

Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096, www.SAE.org.

SAE J156, Fusible Links, 2012.

SAE J541, Voltage Drop for Starting Motor Circuits, 1996.

SAE J551/1, Performance Levels and Methods of Measurement of Electromagnetic Compatibility of Vehicles, Boats (up to 15 m), and Machines (16.6 Hz to 18 GHz), 2010.

SAE J553, Circuit Breakers, 2004.

SAE J554, Electric Fuses (Cartridge Type), 1987.

SAE J560, Primary and Auxiliary Seven Conductor Electrical Connector for Truck-Trailer Jumper Cable, 2009.

SAE J575, Test Methods and Equipment for Lighting Devices and Components for Use on Vehicles Less Than 2032 mm in Overall Width, 2012.

SAE J578, Color Specification, 2012.

SAE J595, Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles, 2008.

SAE J683, Tire Chain Clearance — Trucks, Buses (Except Suburban, Intercity, and Transit Buses), and Combinations of Vehicles, Stabilized 2011.

SAE J845, Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles, 2007.

SAE J994, Alarm — Backup — Electric, Laboratory Performance Testing, 2009.

SAE J1127, Low Voltage Battery Cable, 2012.

SAE J1128, Low Voltage Primary Cable, 2012.

SAE J1330, Photometry Laboratory Accuracy Guidelines, 2007.

SAE J1690, Flashers, 1996.

SAE J1849, Emergency Vehicle Sirens, Stabilized 2012.

SAE J1888, High Current Time Lag Electric Fuses, 1990.

SAE J1889, L.E.D. Signal and Marking Lighting Devices, 2011.

SAE J2077, Miniature Blade Type Electrical Fuses, 1990.

SAE J2174, Heavy-Duty Wiring Systems for Trailers 2032 mm or More in Width, 2009.

SAE J2180, A Tilt Table Procedure for Measuring the Static Rollover Threshold for Heavy Trucks, Stabilized 2011.

SAE J2202, Heavy-Duty Wiring Systems for On-Highway Trucks, 2003.

SAE J2394, Seven-Conductor Cable for ABS Power — Truck and Bus, 2013.

SAE J2418, Occupant Restraint System Evaluation — Frontal Impact Component-Level Heavy Trucks, 2003.

SAE J2420, COE Frontal Strength Evaluation — Dynamic Loading Heavy Trucks, 2010.

SAE J2422, Cab Roof Strength Evaluation — Quasi-Static Loading Heavy Trucks, 2010.

SAE J2863, Automotive Trailer Tow Connector, 2013.

#### Submitter Information Verification

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 17:12:00 EDT 2014

# **Committee Statement**

**Committee Statement:** Adding reference to SAE J2863 in accordance with SR-40 in 26.10.4.5.

**Response Message:** 

#### **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

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Terefinko, John M.
Tull, Richard
Wilde, Stephen
Yohn, William H.

# NFPA

# Second Revision No. 5-NFPA 1901-2014 [ Section No. 2.3.16 ]

2.3.16 U.S. Government Publications.

U.S. Government Printing Office, Washington, DC 20402, www.gpo.gov.

Title 29, Code of Federal Regulations, Part 1910.169, "Air receivers." 29 CFR 1910.169.

Title 49, Code of Federal Regulations, Part 178.37, "Specification 3AA and 3AAX, seamless steel cylinders." 49 CFR 178.37.

Title 49, Code of Federal Regulations, Part 393.94, "Interior noise levels in power units, paragraph (c), Test procedure." 49 CFR 393.94.

Title 49, Code of Federal Regulations, Part 567, "Certification." 49 CFR 567.

Title 49, Code of Federal Regulations, Part 571, Subpart B, "Federal Motor Vehicle Safety Standards," No. 108, "Lamps, reflective devices, and associated equipment." 49 CFR 571.108.

Title 49, Code of Federal Regulations, Part 571, Subpart B, "Federal Motor Vehicle Safety Standards," No. 302, "Flammability of interior materials." 49 CFR 571.302.

Title 49, Code of Federal Regulations. Part 571.121, "Air Brake Systems," 49 CFR 571.121.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Wed Jul 23 13:29:11 EDT 2014

#### **Committee Statement**

Committee Statement: The standard is not being referenced as the section referencing it was deleted .

Response Message:

Public Comment No. 102-NFPA 1901-2014 [Section No. 2.3.16]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 33-NFPA 1901-2014 [ New Section after 3.3.47 ]

3.3.48 Curb Weight.

The total weight of the complete vehicle less the payload.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 16:59:37 EDT 2014

#### **Committee Statement**

**Committee Statement:** Adding definition of curb weight to be consistent with terminology used in chapter 15. **Response Message:** 

# **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# Affirmative All

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 6-NFPA 1901-2014 [ Section No. 3.3.108 ]

#### 3.3.109 Manufacturer.

The person or persons, company, firm, corporation, partnership, or other organization responsible for turning raw materials or components into a finished product. entity responsible for the assembly of a finished product from materials or components.

3.3.110 Maximum Discharge Pressure Capability Rating.

The maximum permissible discharge gauge pressure at which the fire pump can be operated.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Wed Jul 23 13:33:39 EDT 2014

# **Committee Statement**

**Committee**Updating definition for 'manufacturer' and adding new definition for 'maximum discharge **Statement:**pressure capability rating' which is used in the standard but was not previously defined.

Response Message:

Public Comment No. 59-NFPA 1901-2014 [Section No. 3.3.108]

Public Comment No. 136-NFPA 1901-2014 [New Section after 3.3.108]

### **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D. Cranfill, Jeff

Darley, Peter F.

1/5/2015 3:42 PM

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 70-NFPA 1901-2014 [ New Section after 3.3.140 ]

3.3.143 Pump Discharge Pressure Classification.

3.3.143.1 High Pressure .

Pump discharge pressure from 500 psi (3500 kPa) to less than 1100 psi (7600 kPa).

3.3.143.2 Normal Pressure.

Pump discharge pressure less than 500 psi (3500 kPa).

3.3.143.3 Ultra-High Pressure.

Pump discharge pressure of 1100 psi (7600 kPa) or greater.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 16:17:24 EDT 2014

# **Committee Statement**

**Committee** Moving definition of terms from deleted annex A.28.2.1 into Chapter 3. Add new definitions

**Statement:** and renumber remaining sections accordingly.

Response Message:

#### **Ballot Results**

#### ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 53-NFPA 1901-2014 [ Section No. 4.3.1 ]

#### 4.3.1\*

It shall be the responsibility of the purchaser to specify the following details of the apparatus: in addition to the requirements in NFPA 1901 needed by the manufacturer to build the apparatus, including:

Its required performance, including where operations at elevations above 2000 ft (600 m) or on grades greater than 6 percent are required

The maximum number of fire fighters to ride within the apparatus

Specific electrical loads that are to be part of the minimum continuous electrical load defined in 13.3.3

Any hose, ground ladders, or equipment to be carried by the apparatus that exceed the minimum requirements of this standard

If a trailer for the purpose of transporting fire rescue response equipment, whether it is a Type I, Type II, or Type III configuration

- (1) Requirements not uniquely specified in NFPA 1901, such as the type of apparatus desired.
- (2) Any features of the apparatus desired in addition to, or in excess of, the requirements in NFPA 1901.

# **Supplemental Information**

File Name Description

A.4.3.1\_edited.docx

### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

**Organization:** National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 09:26:06 EDT 2014

# **Committee Statement**

**Committee**This text clarifies the purchaser's responsibilities as it pertains to specifying the details of the apparatus such as type and features. Revise existing text and edit annex A material as seen in

attachment A.4.3.1.

Response Message:

Public Comment No. 66-NFPA 1901-2014 [Section No. 4.3.1]

#### **Ballot Results**

This item has passed ballot

30 Eligible Voters

3 Not Returned

- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 123-NFPA 1901-2014 [ Section No. 4.7.1 ]

# 4.7.1

All certification shall be performed by a certification organization that is accredited for inspection and testing systems on fire apparatus in accordance with ISO/IEC 17020, General criteria for the operation of various types of bodies performing inspection, or ISO/IEC Guide 65 17065, General requirements for bodies operating product certification systems Conformity Assessment: Requirements for bodies certifying products, processes and services.

#### Submitter Information Verification

Submitter Full Name: Michael Beady
Organization: [ Not Specified ]

**Street Address:** 

City: State: Zip:

Submittal Date: Mon Sep 08 09:50:31 EDT 2014

# **Committee Statement**

Committee Statement: Reference update

**Response Message:** 

### **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

1/5/2015 3:42 PM

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 54-NFPA 1901-2014 [ Section No. 4.7.4 ]

#### 4.7.4\*

The independent third-party organization shall witness all required tests by an in-person representative(s) at the test site or by use of verifiable automated data collection and image recording equipment. The third-party organization shall refuse to certify any test results for a system if all components of that system requiring testing do not pass the testing required by this standard.

# **Supplemental Information**

File Name Description

A.4.7.4\_edited.docx

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 09:58:24 EDT 2014

# **Committee Statement**

Committee Add new annex A material as seen in attachment A.4.7.4. The added annex material provides

**Statement:** guidance and clarifies remote third party testing.

Response Message:

Public Comment No. 97-NFPA 1901-2014 [Section No. 4.7.4]

# **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D.

1/5/2015 3:42 PM

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 106-NFPA 1901-2014 [ New Section after 4.9.4.2 ]

# 4.9.4.3\*

Safety signs referenced in this standard beginning with the letters FAMA shall conform to the text and graphics of the referenced safety sign number found in FAMA TC010, Standard Product Safety Sign Catalog for Automotive Fire Apparatus.

# **Supplemental Information**

File Name Description

A.4.9.4.3.docx edited - no changes

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 15:38:12 EDT 2014

#### **Committee Statement**

**Committee** Add section to general requirements for safety symbols throughout the standard. Add annex

**Statement:** A material as seen in A.4.9.4.3.

Response Message:

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 55-NFPA 1901-2014 [ Section No. 4.13.1.1 [Excluding any

# Sub-Sections]]

The apparatus shall <u>not exceed the chassis manufacturer's maximum allowable vertical center of gravity for a completed vehicle, if specified, and meet the criteria defined in either of the following:</u>

- (1)\* The apparatus shall remain remains stable to 26.5 degrees in both directions when tested on a tilt table in accordance with SAE J2180, A Tilt Table Procedure for Measuring the Static Rollover Threshold for Heavy Trucks.
- (2) The calculated or measured center of gravity (CG) shall be is no higher than 80 percent of the rear axle track width.

#### Submitter Information Verification

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 10:07:15 EDT 2014

# **Committee Statement**

Committee the 80 % rule allows the OEM maximun CG for complete vehicles to be exceeded for

**Statement:** vehicles under 19,500 GVWR

Response Message:

Public Comment No. 91-NFPA 1901-2014 [Section No. 4.13.1.1 [Excluding any Sub-Sections]]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 8-NFPA 1901-2014 [ Section No. 4.15.2 ]

# 4.15.2\*

The maximum top speed of fire apparatus with a GVWR over 26,000 lb (11,800 kg) shall not exceed either 68 mph (105 109 km/hr) or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 14:05:17 EDT 2014

# **Committee Statement**

Committee There may be a conversion error on the speed from MPH to KPH 68mph equals 109.43

Statement: KPH.

**Response Message:** 

Public Comment No. 35-NFPA 1901-2014 [Section No. 4.15.2]

### **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NFPA

# Second Revision No. 9-NFPA 1901-2014 [ Section No. 4.15.3 ]

#### 4.15.3

If the combined water tank and foam agent tank capacities on the fire apparatus exceed 1250 gal (4732 L), or the GVWR of the vehicle is over 50,000 lb (22,680 kg), the maximum top speed of the apparatus shall not exceed either 60 mph (85 95 km/hr) or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Wed Jul 23 14:09:17 EDT 2014

# **Committee Statement**

**Committee** The conversion from MPH to K/HR seems to be erroneous, the correct conversion is 60MPH = **Statement:** 96.56K/hr. I think this should be revised, I assume you want it rounded to the nearest (5k/hr).

Response Message:

Public Comment No. 33-NFPA 1901-2014 [Section No. 4.15.3]

#### **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# Affirmative All

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 10-NFPA 1901-2014 [ Section No. 4.17.1 [Excluding any

# Sub-Sections]]

Each apparatus shall be tested by the manufacturer before delivery to verify that it meets the criteria in this section.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 14:10:38 EDT 2014

# **Committee Statement**

Committee Statement: Clarifying requirement.

Response Message:

Public Comment No. 60-NFPA 1901-2014 [Section No. 4.17.1 [Excluding any Sub-Sections]]

# **Ballot Results**

### ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

4.20.1	Fire Apparatus Documentation.	

The contractor shall deliver with the fire apparatus at least one copy of the following documents:

- (1) The manufacturer's record of apparatus construction details, including the following information:
  - (a) Owner's name and address
  - (b) Apparatus manufacturer, model, and serial number
  - (c) Chassis make, model, and serial number
  - (d) GAWR of front and rear axles and GVWR
  - (e) Front tire size and total rated capacity in pounds (kilograms)
  - (f) Rear tire size and total rated capacity in pounds (kilograms)
  - (g) Chassis weight distribution in pounds (kilograms) with water and manufacturer-mounted equipment (front and rear)
  - (h) Engine make, model, serial number, rated horsepower and related speed, and governed speed; and if so equipped, engine transmission PTO(s) make, model, and gear ratio
  - Type of fuel and fuel tank capacity
  - (j) Electrical system voltage and alternator output in amps
  - (k) Battery make, model, and capacity in cold cranking amps (CCA)
  - Chassis transmission make, model, and serial number; and if so equipped, chassis transmission PTO(s) make, model, and gear ratio
  - (m) Ratios of all driving axles
  - (n) Maximum governed road speed
  - (o) Pump make, model, rated capacity in gallons per minute (liters per minute where applicable), maximum discharge pressure capability rating, and serial number
  - (p) Pump transmission make, model, serial number, and gear ratio
  - (q) Auxiliary pump make, model, rated capacity in gallons per minute (liters per minute where applicable), and serial number
  - (r) Water tank certified capacity in gallons or liters
  - (s) Foam tank (if provided) certified capacity in gallons (liters)
  - (t) Aerial device type, rated vertical height in feet (meters), rated horizontal reach in feet (meters), and rated capacity in pounds (kilograms)
  - (u) Paint manufacturer and paint number(s)
  - (v) Company name and signature of responsible company representative
  - (w) Weight documents from a certified scale showing actual loading on the front axle, rear axle(s), and overall fire apparatus (with the water tank full but without personnel, equipment, and hose)
- (2) Certification of compliance of the optical warning system (see 13.8.16)
- (3) Siren manufacturer's certification of the siren (see 13.9.1.1)
- (4) Written load analysis and results of the electrical system performance tests (see 13.14.1 and Section 13.15)
- (5) Certification of slip resistance of all stepping, standing, and walking surfaces (see 15.7.4.5)
- (6) If the apparatus has a fire pump, the pump manufacturer's certification of suction capability (see 16.2.4.1)
- (7) If the apparatus is equipped with a fire pump and special conditions are specified by the purchaser, the pump manufacturer's certification of suction capacity under the special conditions (see 16.2.4.2)
- (8) If the apparatus has a fire pump, a copy of the apparatus manufacturer's approval for stationary pumping applications (see 16.3.1)
- (9) If the apparatus has a fire pump, the engine manufacturer's certified brake horsepower curve for the engine furnished, showing the maximum governed speed (see 16.3.2.2)

- (10) If the apparatus has a fire pump, the pump manufacturer's certification of the hydrostatic test (see 16.5.2.2)
- (11) If the apparatus has a fire pump with a maximum discharge pressure capability rating that exceeds the hydrostatic test pressure of 16.5.2.1, the pump manufacturer's certification of the hydrodynamic test
- (12) If the apparatus has a fire pump, the certification of inspection and test for the fire pump (see 16.13.1.1.5 or 16.13.1.2.4 as applicable)
- (13) If the apparatus is equipped with an auxiliary pump, the apparatus manufacturer's certification of the hydrostatic test (see Section 17.13)
- (14) When the apparatus is equipped with a water tank, the certification of water tank capacity (see Section 18.6)
- (15) If the apparatus has an aerial device, the certification of inspection and test for the aerial device (see Section 19.24)
- (16) If the apparatus has an aerial device, all the technical information required for inspections to comply with NFPA 1911
- (17) If the apparatus has a foam proportioning system, the foam proportioning system manufacturer's certification of accuracy (see 20.10.4.2) and the final installer's certification the foam proportioning system meets this standard (see 20.11.2)
- (18) If the system has a CAFS, the documentation of the manufacturer's predelivery tests (see Section 21.9)
- (19) If the apparatus has a line voltage power source, the certification of the test for the power source (see 22.15.7.2)
- (20) If the apparatus is equipped with an air system, air tank certificates (see 24.5.1.2), the SCBA fill station certification (see 24.9.6), and the results of the testing of the air system installation (see 24.14.5 and 24.15.4)
- (21) Any other required manufacturer test data or reports

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 10:21:11 EDT 2014

# **Committee Statement**

**Committee**New section 16.5.4 covers hydrodynamic test and provides requirements for when the pump manufacturer is required to provide a certification of completion for a hydrodynamic test.

Response Message:

Public Comment No. 115-NFPA 1901-2014 [New Section after 4.20.1]

# **Ballot Results**

This item has passed ballot

30 Eligible Voters

- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 12-NFPA 1901-2014 [ Section No. 4.20.2.1 ]

# 4.20.2.1

The contractor shall deliver with the fire apparatus at least two sets of complete operation and service documentation covering the completed apparatus as delivered and accepted.

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 14:19:41 EDT 2014

# **Committee Statement**

Committee Statement:

The statement currently in the standard seems appropriate for when documentation is in printed format. Additionally, the current requirement implies that two sets for each apparatus would be required. This creates a waste and undue burden for apparatus that are the same, or substantially similar (fleets). By making this change, it allows for various types of formats while still stating the

requirement of the information must be supplied.

Response Message:

Public Comment No. 65-NFPA 1901-2014 [Section No. 4.20.2.1]

#### **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NFPA

# Second Revision No. 16-NFPA 1901-2014 [ Section No. 4.20.2.3 ]

#### 4.20.2.3

The contractor shall also deliver with the fire apparatus the following documentation for the entire apparatus and each major operating system or major component of the apparatus:

- (1) Manufacturer's name and address
- (2) Country of manufacture
- (3) Source for service and technical information
- (4) Parts replacement information
- (5) Descriptions, specifications, and ratings of the chassis, pump (if applicable), and aerial device (if applicable)
- (6) Wiring diagrams for low-voltage low-voltage and line-voltage line-voltage systems to include the following information:
  - (a) Pictorial representations of circuit logic for all electrical components and wiring
  - (b) Circuit identification
  - (c) Connector pin identification
  - (d) Zone location of electrical components
  - (e) Safety interlocks
  - (f) Alternator-battery power distribution circuits
  - (g)\* Input/output assignment sheets or equivalent circuit logic implemented in multiplexing systems
- (7) Lubrication charts
- (8) Operating instructions for the chassis, any major components such as a pump or aerial device, and any auxiliary systems
- (9) Precautions related to multiple configurations of aerial devices, if applicable
- (10) Instructions regarding the frequency and procedure for recommended maintenance
- (11) Overall apparatus operating instructions
- (12) Safety considerations
- (13) Limitations of use
- (14) Inspection procedures
- (15) Recommended service procedures
- (16) Troubleshooting guide
- (17) Apparatus body, chassis, and other component manufacturer's warranties
- (18) Special data required by this standard
- (19) A material safety data sheet (MSDS) for any fluid that is specified for use on the apparatus
- (20) One copy of the latest edition of FAMA's Fire Apparatus Safety Guide

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City:

State:

Zip:

Submittal Date: Wed Jul 23 14:24:44 EDT 2014

#### **Committee Statement**

Committee Statement:

The Fire Apparatus Manufacturer's Association has recently published their Fire Apparatus

ent: Safety Guide. This

guide provides safety procedures essential to the safe operation of fire apparatus. It is

inexpensive, and sized to

be carried conveniently in any apparatus. As NFPA 1901 is all about apparatus safety, this

publication written for

anyone driving or using a fire apparatus should be provided with every apparatus. The FAMA

Fire Apparatus

Safety Guide includes further information on each of the hazards identified by the FAMA safety

signs that were

accepted as additions to the first draft of both NFPA 1901 and 1906. This guide can help

operators to more fully understand the risks pointed out by the FAMA safety signs.

# Response Message:

Public Comment No. 85-NFPA 1901-2014 [Section No. 4.20.2.3]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 14-NFPA 1901-2014 [ Section No. 4.21 [Excluding any

# Sub-Sections]]

The entity responsible for final assembly of the apparatus final-stage manufacturer shall deliver with the fire apparatus either a certification that the apparatus fully complies with all requirements of this standard or, alternatively, a Statement of Exceptions specifically describing each aspect of the completed apparatus that is not fully compliant with the requirements of this standard at the time of delivery.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 14:22:03 EDT 2014

# **Committee Statement**

Committee Statement: Clarifies the requirement

Response Message:

Public Comment No. 57-NFPA 1901-2014 [Section No. 4.21 [Excluding any Sub-Sections]]

#### **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 15-NFPA 1901-2014 [ Section No. 4.21.3 ]

#### 4.21.3

An apparatus that is delivered subject to a Statement of Exceptions other than a certification of full compliance shall not be placed in emergency service until the apparatus has been modified as necessary to accomplish full compliance with this standard.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 14:23:23 EDT 2014

# **Committee Statement**

Committee Statement:

This standard is to define the minimum requirements for design and performance of fire apparatus. It does not have the jurisdiction to determine when a vehicle can be placed into service. This is a

departmental decision which could be based on non-compliance to the standard but should not be

mandated by the standard itself.

Response Message:

Public Comment No. 58-NFPA 1901-2014 [Section No. 4.21.3]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 57-NFPA 1901-2014 [ Section No. 5.3 ]

#### 5.3 Aerial Device.

If the pumper is equipped with an aerial device, the requirements of 5.3.1 -through 5.3.4 -shall apply. 5.3.1

The aerial device shall meet the requirements of Chapter 19.

5.3.2

If the aerial device is equipped with a permanently mounted waterway, the fire pump shall be capable of supplying the flow requirements of 19.6.1 , 19.12.1 , or 19.16.1 with a maximum intake gauge pressure of 20 psi (138 kPa).

5.3.3

Provisions shall be made to ensure that the pump operator is not in contact with the ground.

5.3.4

Signs shall be placed to warn the pump operator of electrocution hazards.

5.3.1

If the Where a pumper <u>fire apparatus</u> is equipped with an aerial device, <u>the aerial device shall meet the requirements of Chapter 19</u>, the requirements of <u>5.3.1</u> through <u>5.3.4</u> shall apply.

5.3.2

Provisions shall be made to ensure that the pump operator is not in contact with the ground.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 10:37:04 EDT 2014

# **Committee Statement**

Committee Simplifying the document by referring to the appropriate/applicable chapter instead of

**Statement:** sections.

Response Message:

Public Comment No. 67-NFPA 1901-2014 [Chapter 5]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 18-NFPA 1901-2014 [ Section No. 8.2.2 ]

#### 8.2.2

Signs shall be placed to warn the pump operator of electrocution hazards.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 14:48:02 EDT 2014

#### **Committee Statement**

**Committee Statement:** The warning signs are detailed in other requirements.

**Response Message:** 

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 19-NFPA 1901-2014 [ Section No. 9.2.4 ]

#### 9.2.4

Signs shall be placed to warn the pump operator of electrocution hazards.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

**Organization:** National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 14:49:10 EDT 2014

#### **Committee Statement**

**Committee Statement:** The warning signs are detailed in other requirements.

**Response Message:** 

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 20-NFPA 1901-2014 [ Section No. 11.3.4 ]

11.3.4

Signs shall be placed to warn the pump operator of electrocution hazards.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 14:49:59 EDT 2014

#### **Committee Statement**

**Committee Statement:** The warning signs are detailed in other requirements.

**Response Message:** 

# **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NFPA

# Second Revision No. 21-NFPA 1901-2014 [ Section No. 12.1.5.1 ]

# 12.1.5.1\*

The label shall show the unladen height of the completed unequipped fire apparatus in feet and inches(meters), the length of the completed fire apparatus in feet and inches (meters), and the GVWR in tons (metric tons).

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 14:51:28 EDT 2014

# **Committee Statement**

Committee Statement: Saying both unladen and unequipped is repetitive

Response Message:

Public Comment No. 3-NFPA 1901-2014 [Section No. 12.1.5.1]

#### **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 22-NFPA 1901-2014 [ Section No. 12.2.6.7.1 ]

# 12.2.6.7.1

The regeneration process shall be activated by two methods: automatically by the engine system.

Automatically by the engine system but only when the transmission is in gear and the speedometer indicates a speed above 5 mph (8 km/hr), whether the apparatus is in motion or is operating in stationary pump mode with an engine rpm sufficient to register 5 mph (8 km/hr) on the speedometer

Manually when initiated by activation of a switch located in the driver's area of the driving compartment

#### 12.2.6.7.2

Apparatus having GVWR of 20,000 lb (9,000 kg) or greater shall be equipped with a switch located in the driver's area of the driving compartment to initiate the regeneration process manually.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 14:55:14 EDT 2014

# **Committee Statement**

Committee Statement: These changes are conforming to current design practices.

Response Message:

Public Comment No. 89-NFPA 1901-2014 [Section No. 12.2.6.7.1]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 29-NFPA 1901-2014 [ Section No. 12.2.6.7.3 ]

# 12.2.6.7.4\*

A <u>For apparatus over 20,000 lb (9,000 kg), a</u> switch shall be provided at the driver's area that will inhibit DPF regeneration until the switch is reset or the engine is shut down and restarted.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 15:29:16 EDT 2014

# **Committee Statement**

Committee Statement: Inhibitor switches are not available on smaller apparatus.

**Response Message:** 

# **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 23-NFPA 1901-2014 [ New Section after 12.3.1.5 ]

# 12.3.1.6

All fire apparatus, including those with an axle rated greater than 29,000 lb, shall comply with 49 CFR 571.121.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 15:14:19 EDT 2014

# **Committee Statement**

Committee Statement: This requirement clarifies that all fire apparatus shall comply with 49 C.F.R. 571.12.

**Response Message:** 

Public Comment No. 68-NFPA 1901-2014 [New Section after 12.3.1]

# **Ballot Results**

#### ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 107-NFPA 1901-2014 [ New Section after 12.3.2.1.1 ]

# 12.3.2.1.2\*

Safety sign FAMA12, which warns of the special requirements for fire service—rated tires, shall be visible to the driver entering the cab of any apparatus so equipped.

# **Supplemental Information**

File Name Description

A.12.3.2.1.2\_edited.docx

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 15:49:45 EDT 2014

#### **Committee Statement**

Committee Adding safety sign FAMA12 for those apparatus that use fire service rated tires. Add new

**Statement:** annex A material as seen in attachment A.12.3.2.1.2.

Response Message:

Public Comment No. 2-NFPA 1901-2014 [New Section after A.4.15.2]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 24-NFPA 1901-2014 [ Section No. 13.4.6.4 ]

#### 13.4.6.4\*

A green "battery master disconnect on" pilot indicator light that is visible from the driver's position shall be provided.

# **Supplemental Information**

File Name Description

A.13.4.6.4\_edited.docx

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 15:20:42 EDT 2014

#### **Committee Statement**

Committee Statement:

Per change to 13.4.6, both master LOAD disconnect and master BODY disconnect switches are now allowed, so this statement needs to be made more generic. Also adding annex A material as

seen in attachment that is consistent with changes in 1906.

Response Message:

Public Comment No. 5-NFPA 1901-2014 [Section No. 13.4.6.4]

# **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 25-NFPA 1901-2014 [ Section No. 13.4.6.5 ]

#### 13.4.6.5

Rechargeable handlights hand lights, radios, and other similar devices shall be permitted to be connected to the electrical system ahead of the master lead disconnect switch.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

**Organization:** National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 15:22:47 EDT 2014

# **Committee Statement**

Committee Per change to 13.4.6, both master LOAD disconnect and master BODY disconnect switches

**Statement:** are now allowed, so this statement needs to be made more generic.

Response Message:

Public Comment No. 4-NFPA 1901-2014 [Section No. 13.4.6.5]

#### **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 26-NFPA 1901-2014 [ Section No. 13.8.13.3.4 ]

#### 13.8.13.3.4

It shall be permitted for red zone C lower flashing lights to switch to steady-on lights when the service brakes are applied and the optical warning light system is on in the "Clearing Right-of-Way" mode.

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 15:25:26 EDT 2014

# **Committee Statement**

Committee Delete this section. This permits the emergency warning light system to become non compliant

**Statement:** with 13.8.11.1.

If the AHJ requires an auxiliary brake light, they should so specify.

If the committee feels that auxiliary brake lights are an improtant safety enhancement (as the text in the FR would seem to indicate) , we should require them, in addition to our required existing

emergeny lighting

Response Message:

Public Comment No. 92-NFPA 1901-2014 [Section No. 13.8.13.3.4]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 27-NFPA 1901-2014 [ Section No. 13.10.1.1.1 ]

# 13.10.1.1.1

The work area immediately behind the vehicle shall be illuminated to an average level of at least 3 fc (30 lx), measured at 25 equally spaced points on a 2.5 ft ( $762 \frac{750}{100}$  mm) grid within a 10 ft × 10 ft (3 m × 3 m) square to the rear of the vehicle.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Wed Jul 23 15:26:20 EDT 2014

# **Committee Statement**

Committee Arithmetic error (metric conversion error). 750 mm is 1/4 of 3 meters, just as 2.5 feet is 1/4

Statement: of 10 feet.

**Response Message:** 

Public Comment No. 6-NFPA 1901-2014 [Section No. 13.10.1.1.1]

#### **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 28-NFPA 1901-2014 [ Section No. 13.10.2.1 ]

#### 13.10.2.1

If a hose bed is provided, lighting on the hose bed floor shall be at an average level of 3 fc (30 lx) or higher measured at 30 in. equally spaced intervals along the center of the hose bed floor with all dividers and covers removed.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Wed Jul 23 15:27:19 EDT 2014

# **Committee Statement**

**Committee** As currently written in the standard available for public comment, this paragraph leaves

**Statement:** room for interpretation. It

is not uncommon to have hose bed dividers in the center of the hose bed which would make

it impossible to

measure the light intensity as identified. I

Response Message:

Public Comment No. 99-NFPA 1901-2014 [Section No. 13.10.2.1]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

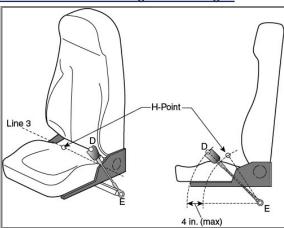
Yohn, William H.

## Second Revision No. 49-NFPA 1901-2014 [ Section No. 14.1.3.2.3 ]

#### 14.1.3.2.3\*

The In the case of a Type 2 seat belt, the distance from the buckle anchorage to (point E in Figure 14.1.3.2.3 ) to the buckle tip ( point D in Figure 14.1.3.1 Figure 14.1.3.2.3 (buckle tip) shall be no more than 24 in. (51 102 mm) longer than the perpendicular distance from the buckle anchorage to the seating reference point (H-Point) a lateral axis through the H point of the seat (line 3 in Figure 14.1.3.2.3 ) when the seat is adjusted to its lowest and most rearward position.

## Figure 14.1.3.2.3 Dimension Lines for Measuring Buckle Length.



## Supplemental Information

**File Name Description** 

Figure\_14.1.3.2.3.docx A.14.1.3.2.3\_edited.docx

G1901-75.jpg Figure 14.1.3.2.3

## Submitter Information Verification

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

Citv: State: Zip:

**Submittal Date:** Wed Jul 30 10:36:56 EDT 2014

#### Committee Statement

Committee Buckles of extreme length can compromise the position and fit of a type II seat belt and make it less Statement: effective in the event of a crash. First draft language aimed to limit buckle length in accordance with SAE recommended practice J1834. SAE J1834 states: "As a guide, the latch plate entry should be no higher than the H-Point of the seat." SAEJ1834 also states: "Specialty vehicles intended to be operated by personnel wearing heavy clothing (i.e. fire fighters, hazmat crews, etc...) should provide belt length sufficient to accommodate the extra bulk of the heavy clothing and protective gear". First draft language proposed a buckle length specification which strikes the necessary balance between ease of access and restraint effectiveness. First draft language allowed for multiple interpretations of the proposed buckle length specification. Second draft language, with illustration, seeks to reduce the

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possibility of misinterpretation. Add new annex A material as seen in attachment A.14.1.3.2.3 and new figure as seen in attachment Figure 14.1.3.2.3.

## Response

## Message:

Public Comment No. 80-NFPA 1901-2014 [Section No. 14.1.3.2.3]

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 26 Affirmative All
- 0 Affirmative with Comments
- 1 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

## **Negative with Comment**

Chestnut, Wesley D.

There is no quantitative evidence, relating to injury criteria, that suggests making this change improves or

reduces occupant protection. Making concessions to accomodate items such as turn out gear may put the 5th percentile individual at risk of injury. The committee needs to consider the implications to current product configurations if this change is accepted. A study should be conducted to understand impacts to occupants in today's configurations before accepting this change.



# Second Revision No. 30-NFPA 1901-2014 [ Section No. 14.1.3.2.4 ]

## 14.1.3.2.4

Alternatively, for ease of measurement, the distance CD in Figure 14.1.3.1 shall be no longer than 8 in. (203 mm) with the seat adjusted to its lowest and most rearward position.

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 15:51:39 EDT 2014

## **Committee Statement**

Committee Justification: Reference to Annex A.14.1.7.1 in the second draft proposal for section 14.1.3.2.3

Statement: gives the reader a means for estimating the H-Point from the location of the seat cushions. This

reference to A.14.1.7.1 makes section 14.1.3.2.4 unnecessary.

Response Message:

Public Comment No. 81-NFPA 1901-2014 [Section No. 14.1.3.2.4]

## **Ballot Results**

## This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 108-NFPA 1901-2014 [ Section No. 14.1.3.7 ]

## 14.1.3.7

Safety signs warning sign FAMA07, which warns of the importance of seat belt use-substantially similar to FAMA07 from FAMA TC010, Standard Product Safety Sign Catalog for Automotive Fire Apparatus, shall be visible from each seat that is intended to be occupied while the vehicle is in motion.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 15:57:59 EDT 2014

## **Committee Statement**

Committee Eliminates the use of the phrase "substantially similar", and cleans up the wording to avoid

**Statement:** repeating the source of the artwork for every instance.

Response Message:

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



## Second Revision No. 109-NFPA 1901-2014 [ Section No. 14.1.3.8 ]

#### 14.1.3.8

Safety signs substantially similar to FAMA06 from FAMA TC010, Standard Product Safety Sign Catalog for Automotive Fire Apparatus, sign FAMA06 shall be visible from each seat that is not equipped with occupant restraint and is therefore not intended to be occupied while the vehicle is in motion.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 16:01:13 EDT 2014

## **Committee Statement**

Committee Eliminates the use of the phrase "substantially similar", and cleans up the wording to avoid

**Statement:** repeating the source of the artwork for every instance.

Response Message:

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 110-NFPA 1901-2014 [ Section No. 14.1.7.4.3 ]

## 14.1.7.4.3

Safety signs warning sign FAMA15, which warns not to wear helmets while the vehicle is in motion-that are substantially similar to FAMA15 from FAMA TC010, Standard Product Safety Sign Catalog for Automotive Fire Apparatus, shall be visible from each seat that is intended to be occupied while the vehicle is in motion.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 16:02:56 EDT 2014

## **Committee Statement**

Committee Eliminates the use of the phrase "substantially similar", and cleans up the wording to avoid

**Statement:** repeating the source of the artwork for every instance.

Response Message:

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



## Second Revision No. 111-NFPA 1901-2014 [ Section No. 14.1.10.3 ]

## 14.1.10.3 Cab Equipment Mounting.

One-safety sign warning Safety sign FAMA10, which warns of the need to secure items in the cab-that is substantially similar to FAMA10 from FAMA TC010, Standard Product Safety Sign Catalog for Automotive Fire Apparatus, shall be visible inside the cab.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 16:06:24 EDT 2014

## **Committee Statement**

Committee Eliminates the use of the phrase "substantially similar", and cleans up the wording to avoid

**Statement:** repeating the source of the artwork for every instance.

Response Message:

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 31-NFPA 1901-2014 [ Section No. 15.7.1.2 ]

## 15.7.1.2\*

All steps shall have a minimum area of  $35 \text{ in.}^2$  (22,580 mm<sup>2</sup>), shall be of such a shape that a 5 in. (125 mm) diameter disk does not overlap any side when placed on the step, and shall be arranged to provide at least 8 in. (200 150 mm) of clearance between the leading edge of the step and any obstruction.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Wed Jul 23 16:20:18 EDT 2014

## **Committee Statement**

Committee Statement: This brings the standard in line with other established step standards.

**Response Message:** 

Public Comment No. 90-NFPA 1901-2014 [Section No. 15.7.1.2]

#### **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 112-NFPA 1901-2014 [ Section No. 15.7.1.5 ]

## 15.7.1.5 Climbing Method Instruction.

A safety sign warning Safety sign FAMA23, which warns of the proper climbing method that is substantially similar to FAMA23 from FAMA TC010, Standard Product Safety Sign Catalog for Automotive Fire Apparatus, shall be visible to personnel entering the cab and at each designated climbing location on the body.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 16:08:05 EDT 2014

## **Committee Statement**

**Committee** Eliminates the use of the phrase "substantially similar", and cleans up the wording to avoid

**Statement:** repeating the source of the artwork for every instance.

Response Message:

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

## Second Revision No. 32-NFPA 1901-2014 [ Section No. 15.7.1.6 ]

#### 15.7.1.6

Designated horizontal standing or walking surfaces higher than 48 in. (1220 mm) from the ground and not guarded by a railing, or structure at least 12 in. (300 mm) high when measured with the apparatus at curb weight, shall have a safety yellow line at least 1 in. (25 mm) wide marking at least a 1 in. (25 mm) wide safety yellow or orange line delineation that contrasts with the background to mark the outside perimeter of the-surface designated standing or walking surface area, excluding steps and ladders.

## Submitter Information Verification

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

Citv: State: Zip:

**Submittal Date:** Wed Jul 23 16:26:57 EDT 2014

#### Committee Statement

# Statement:

Committee The nature of fire apparatus in most cases precludes the use of railings or other features to guard against falls from the top of apparatus. The addition of a yellow line on the edge of the horizontal surfaces of the body may reduce the risk of operators inadvertently stepping off the edge. Clearly marking those areas where the manufacturer has designed the apparatus with the intention of allowing fire fighters to stand or walk will remove the ambiguity from the term "designated standing or walking surfaces" found in paragraph 15.7.4.

> The adjective "safety" in front of the word yellow may be more restrictive than necessary to meet the intent. Manufacturers may use tape, paint, anodizing, or another method to provide the color and requiring a specific color tone may restrict these methods.

Adding the option for an orange line will solve the problem where a yellow line on a yellow painted apparatus would not stand out. Adding the words "that provides contrast with the background" will ensure that the appropriate color is chosen.

Replacing the word "line" with "delineation" allows the manufacturer to use colored handrails, or other features when it may be more practical to do so rather than needing to always provide a "line".

Replacing the word "surface" with the phrase "designated standing or walking surface area" is more specific. A manufacturer may wish to designate a limited area for standing or walking than the surface would necessarily provide.

# Response

Message:

Public Comment No. 43-NFPA 1901-2014 [Section No. 15.7.1.6] Public Comment No. 101-NFPA 1901-2014 [Section No. 15.7.1.6] Public Comment No. 119-NFPA 1901-2014 [Section No. 15.7.1.6]

## **Ballot Results**

This item has passed ballot

1/5/2015 3:42 PM 89 of 297

- 30 Eligible Voters
- 3 Not Returned
- 26 Affirmative All
- 0 Affirmative with Comments
- 1 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

## **Negative with Comment**

Rice, Jr., Edward C.

I disagree with the purpose of this change. It does not seem to serve a purpose and it will need to be reflective or lighted so it can be seen at night time. This seems like it will unnecessarily add to the price of the already high priced fire apparatus. Plus it will be a nightmare for the manufacturers to accomplish on tread plate surfaces without mounting a smooth material on top of the tread plate for reflective tape to adhere to the walking areas possibly creating tripping hazard.



## Second Revision No. 113-NFPA 1901-2014 [ Section No. 15.7.5 ]

#### 15.7.5

Safety signs substantially similar to FAMA24 from FAMA TC010, Standard Product Safety Sign Catalog for Automotive Fire Apparatus sign FAMA24, which warns personnel not to ride on the vehicle, shall be located on the vehicle at the rear step areas and at any cross walkways to warn personnel that riding in or on these areas while the vehicle is in motion is prohibited.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 16:09:17 EDT 2014

## **Committee Statement**

**Committee** Eliminates the use of the phrase "substantially similar", and cleans up the wording to avoid

**Statement:** repeating the source of the artwork for every instance.

Response Message:

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 114-NFPA 1901-2014 [ Section No. 15.10.6 ]

15.10.6 Hose Restraint Safety Sign.

A safety sign warning Safety sign FAMA22, which warns of the need to secure hose that is substantially similar to FAMA22 from FAMA TC010, Standard Product Safety Sign Catalog for Automotive Fire Apparatus, shall be visible to personnel at each hose storage area.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 16:11:28 EDT 2014

## **Committee Statement**

Committee Eliminates the use of the phrase "substantially similar", and cleans up the wording to avoid

**Statement:** repeating the source of the artwork for every instance.

Response Message:

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 115-NFPA 1901-2014 [ Section No. 15.12.3 ]

#### 15.12.3

Safety signs substantially similar to FAMA28 from FAMA TC010, Standard Product Safety Sign Catalog for Automotive Fire Apparatus, sign FAMA28 shall be located on or near each receiver or anchor stating the maximum straight line pull rating.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 16:12:55 EDT 2014

## **Committee Statement**

Committee Eliminates the use of the phrase "substantially similar", and cleans up the wording to avoid

**Statement:** repeating the source of the artwork for every instance.

Response Message:

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 74-NFPA 1901-2014 [ Section No. 16.2.3.4.2 ]

#### 16.2.3.4.2

The requirement in 16.2.3.4.1 shall be met with all intake valves open, with all intakes capped or plugged, with all discharge caps removed <u>and valves closed</u>, and without the use of the pump primer during the 5-minute period.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 16:39:40 EDT 2014

## **Committee Statement**

**Committee Statement:** This language clarifies the procedure.

Response Message:

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

ı		16.2.4.1*	
		10.2.4.1	
	1		

The pump manufacturer shall certify that the fire pump is capable of pumping 100 percent of rated capacity at 150 psi (1000 kPa) net pump pressure for pumps rated at less than 3000 gpm (12,000 L/min) or at 100 psi (700 kPa) for pumps rated at 3000 gpm (12,000 L/min) or greater from draft through 20 ft (6 m) of suction hose with a strainer attached under the following conditions:

- (1) An altitude of 2000 ft (600 m) above sea level
- (2) Atmospheric pressure of 29.9 in. Hg (101 kPa) (corrected to sea level)
- (3) Water temperature of 60°F (15.6°C)
- (4) Suction hose size and number of hose not to exceed those indicated in Table 16.2.4.1(a)
- (5) Lift as indicated in Table 16.2.4.1(a)
- (6) Friction and entrance loss in suction hose, including strainer, as given in Table 16.2.4.1(b) or Table 16.2.4.1(c)

Table 16.2.4.1(a) Suction Hose Size, Number of Suction Lines, and Lift for Pump Manufacturer's Suction Capability Certification

Rate	d Capacity	Su	ction Hose Size				<u>Lift</u>
gpm	<u>L/min</u>	<u>in.</u>	<u>mm</u>		Number of Suction Lines	ft	<u>m</u>
250	1,000	3	75	1		10	3
300	1,100	3	75	1		10	3
350	1,300	4	100	1		10	3
500	2,000	41/2	<del>100</del> <u>110</u>	1		10	3
750	3,000	41/2	110	1		10	3
1000	4,000	6	150	1		10	3
1250	5,000	6	150	1		10	3
1500	6,000	6	150	2		10	3
1750	7,000	6	150	2		8	2.4
2000	8,000	6	150	2		6	1.8
2000	8,000	8	200	1		6	1.8
2250	9,000	6	150	3		6	1.8
2250	9,000	8	200	1		6	1.8
2500	10,000	6	150	3		6	1.8
2500	10,000	8	200	1		6	1.8
3000	12,000	6	150	4		6	1.8
3000	12,000	8	200	2		6	1.8
3500	14,000	6	150	4		6	1.8
3500	14,000	8	200	2		6	1.8
4000	16,000	6	150	4		6	1.8
4000	16,000	8	200	2		6	1.8

Table 16.2.4.1(b) Friction and Entrance Loss in 20 ft of Suction Hose, Including Strainer (inch-pound units)

	Number of Suction Hose and Size (inside diameter)									
	One 3 in.		in. One 4 in.		One 4½ in.		One 5	One 5 in.		<u>in.</u>
Flow Rate (gpm)	<u>ft</u> water	<u>in.</u> Hg	ft water	<u>in.</u> Hg	ft water	<u>in.</u> Hg	<u>ft</u> water	<u>in.</u> Hg	<u>ft</u> water	<u>in.</u> Hg
250	5.2 (1.2)	4.6								
175	2.6 (0.6)	2.3								
125	1.4 (0.3)	1.2								

	One 3	in.	One 4	in.	One 4 <sup>1</sup> /	⁄₂ in.	One 5 in	. One 6	in.
Flow Rate (gpm)	ft water	<u>in.</u> Hg	ft water	<u>in.</u> Hg	ft water	<u>in.</u> Hg	<u>ft i</u>	n. <u>ft</u> Ig water	<u>in.</u> Hg
300	7.5 (1.7)	6.6				_			
210	3.8 (0.8)	3.4							
150	1.9 (0.4)	1.7							
350			2.5 (0.7)	2.1					
245			1.2 (0.3)	1.1					
175			0.7 (0.1)	0.6					
500			5.0 (1.3)	4.4	3.6 (0.8)	3.2			
350			2.5 (0.7)	2.1	1.8 (0.4)	1.6			
250			1.3 (0.4)	1.1	0.9 (0.3)	8.0			
750			11.4 (2.9)	9.8	8.0 (1.6)	7.1	4.7 (0.9) 4.2	1.9 (0.4)	1.7
525			5.5 (1.5)	4.9	3.9 (0.8)	3.4	2.3 (0.5) 2.0	0.9 (0.2)	0.8
375			2.8 (0.7)	2.5	2.0 (0.4)	1.8	1.2 (0.2) 1.1	0.5 (0.1)	0.5
1000					14.5 (2.8)	12.5	8.4 (1.6) 7.4	3.4 (0.6)	3.0
700					7.0 (1.4)	6.2	4.1 (0.8) 3.7	1.7 (0.3)	1.5
500					3.6 (0.8)	3.2	2.1 (0.4) 1.9	0.9 (0.2)	0.8
	One 5	<u>in.</u>	One 6	<u>in.</u>	<u>Two 4</u> <sup>1</sup>	/2 <u>in.</u>	Two 5 in	<u>. Two 6</u>	<u>6 in.</u>
Flow Rate (L/min)	ft water	<u>in.</u> Hg	ft water	<u>in.</u> Hg	ft water	<u>in.</u> Hg		<u>n.</u> <u>ft</u> Ig water	<u>in.</u> Hg
1250	13.0 (2.4)	11.5	5.2 (0.9)	4.7	5.5 (1.2)	4.9			
875	6.5 (1.2)	5.7	2.6 (0.5)	2.3	2.8 (0.7)				
625	3.3 (0.7)	2.9	1.3 (0.3)	1.1	1.4 (0.3)	1.2			
1500			7.6 (1.4)	6.7	8.0 (1.6)	7.1	4.7 (0.9) 4.2	• •	1.7
1050			3.7 (0.7)		3.9 (0.8)		2.3 (0.5) 2.0		
			1.9 (0.4)	1.7	2.0 (0.4)	1.8	1.2 (0.2) 1.1	0.5 (0.1)	0.5
750			10.4		11.0	9.7	6.5 (1.2) 5.7	2.6 (0.5)	2.3
			(1.8)	9.3	(2.2)	9.7		, ,	
1750			(1.8) 5.0 (0.9)	9.3 4.6	(2.2) 5.3 (1.1)		3.1 (0.7) 2.7		1.1
1750 1225					(2.2)	4.7	3.1 (0.7) 2.7 1.6 (0.3) 1.4	1.2 (0.3)	1.1 0.6
1750 1225 875			5.0 (0.9)	4.6	5.3 (1.1) 2.8 (0.6)	4.7		1.2 (0.3) 0.7 (0.2)	
1750 1225 875 2000			5.0 (0.9)	4.6	5.3 (1.1) 2.8 (0.6) 14.5	4.7 2.5 12.5	1.6 (0.3) 1.4	1.2 (0.3) 0.7 (0.2) 3.4 (0.6)	0.6
1750 1225 875 2000			5.0 (0.9)	4.6	(2.2) 5.3 (1.1) 2.8 (0.6) 14.5 (2.8)	4.7 2.5 12.5 6.2	1.6 (0.3) 1.4 8.4 (1.6) 7.4	1.2 (0.3) 0.7 (0.2) 3.4 (0.6) 1.7 (0.3)	0.6 3.0
750 1750 1225 875 2000 1400 1000			5.0 (0.9)	4.6	(2.2) 5.3 (1.1) 2.8 (0.6) 14.5 (2.8) 7.0 (1.4)	4.7 2.5 12.5 6.2	1.6 (0.3) 1.4 8.4 (1.6) 7.4 4.1 (0.8) 3.7	1.2 (0.3) 0.7 (0.2) 3.4 (0.6) 1.7 (0.3) 0.9 (0.2)	0.6 3.0 1.5
1750 1225 875 2000 1400 1000			5.0 (0.9)	4.6	(2.2) 5.3 (1.1) 2.8 (0.6) 14.5 (2.8) 7.0 (1.4)	4.7 2.5 12.5 6.2	1.6 (0.3) 1.4 8.4 (1.6) 7.4 4.1 (0.8) 3.7 2.1 (0.4) 1.9	1.2 (0.3) 0.7 (0.2) 3.4 (0.6) 1.7 (0.3) 0.9 (0.2) 4.3 (0.8)	0.6 3.0 1.5 0.8
1750 1225 875 2000 1400 1000			5.0 (0.9)	4.6	(2.2) 5.3 (1.1) 2.8 (0.6) 14.5 (2.8) 7.0 (1.4)	4.7 2.5 12.5 6.2	1.6 (0.3) 1.4 8.4 (1.6) 7.4 4.1 (0.8) 3.7 2.1 (0.4) 1.9 10.8 (2.2) 9.5	1.2 (0.3) 0.7 (0.2) 3.4 (0.6) 1.7 (0.3) 0.9 (0.2) 4.3 (0.8) 2.2 (0.4)	0.6 3.0 1.5 0.8 3.8

	<u>One 5</u>	<u>in.</u>	<u>One 6</u>	<u>in.</u>	Two 4 <sup>1</sup> / <sub>2</sub>	<u>⁄₂ in.</u>	Two 5	<u>in.</u>	Two 6	<u>in.</u>
Flow Rate (L/min)	ft water	<u>in.</u> Hg	ft water	<u>in.</u> Hg	ft water	<u>in.</u> Hg	ft water	<u>in.</u> Hg	<u>ft</u> water	<u>in.</u> Hg
1750							6.5 (1.2)	5.7	2.6 (0.5)	2.3
1250							3.3 (0.7)	2.9	1.3 (0.3)	1.1
	Two 6	<u>in.</u>	Three	<u>6 in.</u>	Four 6	<u>in.</u>	One 8	in.	Two 8	in.
Flow Rate (L/min)	ft water	<u>in.</u> Hg	<u>ft</u> water	<u>in.</u> Hg	<u>ft</u> water	<u>in.</u> Hg	ft water	<u>in.</u> Hg	<u>ft</u> water	<u>in.</u> Hg
2000	3.4 (0.6)	3.0					4.3 (1.1)	3.8		
1400	1.7 (0.3)	1.5					2.0 (0.6)	1.8		
1000	0.9 (0.2)	8.0					1.0 (0.3)	0.9		
2250	4.3 (0.8)	3.8	2.0 (0.5)	1.8			5.6 (1.4)	5.0	1.2 (0.4)	1.1
1575	2.2 (0.4)	1.9	1.0 (0.2)	0.9			2.5 (0.9)	2.2	0.6 (0.2)	0.5
1125	1.1 (0.2)	1.0	0.5 (0.1)	0.5			1.2 (0.4)	1.1	0.3 (0.1)	0.3
2500	5.2 (0.9)	4.7	2.3 (0.6)	2.0			7.0 (1.7)	6.2	1.5 (0.4)	1.3
1750	2.6 (0.5)	2.3	1.2 (0.2)	1.1			3.2 (1.0)	2.8	0.8 (0.2)	0.7
1250	1.3 (0.3)	1.1	0.6 (0.1)	0.5			1.5 (0.4)	1.3	0.4 (0.1)	0.4
3000	7.6 (1.4)	6.9	3.4 (0.6)	3.0			10.1 (3.0)	9.0	2.3 (0.6)	2.1
2100	3.7 (0.7)	3.4	1.7 (0.3)	1.5			4.7 (1.3)	4.2	1.0 (0.3)	0.9
3500	10.4 (1.8)	9.3			2.6 (0.5)	2.3			3.2 (0.8)	2.8
2450	5.0 (0.9)	4.6			1.2 (0.3)	1.1			1.5 (0.4)	1.3
4000			4.8 (0.9)	4.3	3.4 (0.6)	3.0			4.3 (1.1)	3.8
2800			2.8 (0.5)	2.5	1.7 (0.3)	1.5			2.0 (0.6)	1.8

Note: Figures in parentheses indicate increment to be added or subtracted for each 10 ft of hose greater than or less than 20 ft.

Table 16.2.4.1(c) Friction and Entrance Loss in 6 m of Suction Hose, Including Strainer (SI units)

	Number of Suction Hose and Size (inside diameter)								<u>r)</u>	
	One 75 mm		One 100	mm	One 110	One 110 mm		mm	One 150 m	
Flow Rate (L/min)	m water	<u>kPa</u>	m water	<u>kPa</u>	m water	<u>kPa</u>	m water	<u>kPa</u>	m water	<u>kPa</u>
1,000	1.6 (0.04)	16								
700	0.8 (0.02)	8								
500	0.4 (0.01)	4								
1,100	2.2 (0.05)	22								
770	1.1 (0.02)	12								
550	0.6 (0.01)	6								
1,300			0.7 (0.02)	7						
910			0.4 (0.01)	4						
650			0.2 (0.01)	2						
2,000			1.5 (0.04)	15	1.1 (0.02)	11				
1,400			0.7 (0.02)	7	0.5 (0.01)	5				
1,000			0.4 (0.01)	4	0.3 (0.01)	3				

		Number of Suction Hose and Size (inside diameter)										
	One 75 m	<u>ım</u>	One 100 r	<u>mm</u>	One 110	<u>mm</u>	One 125	mm	One 15	<u>0 m</u>		
Flow Rate (L/min)	m water	kPa	m water	<u>kPa</u>	m water	<u>kPa</u>	m water	<u>kPa</u>	m water	<u>kPa</u>		
3,000		3	3.5 (0.09) 3	33	2.4 (0.05)	24	1.4 (0.03)	14	0.6 (0.01)	6		
2,100		1	1.7 (0.05) 1	17	1.2 (0.02)	11	0.7 (0.01)	7	0.3 (0.01)	3		
1,500		C	0.9 (0.02) 8	3	0.6 (0.01)	6	0.4 (0.01)	4	0.2 (0.01)	2		
4,000					4.4 (0.08)	42	2.6 (0.05)	25	1.0 (0.02)	10		
2,800					2.1 (0.04)	21	1.2 (0.02)	13	0.5 (0.01)	5		
2,000					1.1 (0.02)	11	0.6 (0.01)	6	0.3 (0.01)	3		
_	One 125											
Flow Rate -	mm		One 15	<u>0 mm</u>	Two 110	<u>0 mm</u>	Two 12	<u>5 mm</u>	Two 150	<u>mm</u>		
(L/min)	m water	<u>kPa</u>	m water	r <u>kPa</u>	m water	r <u>kPa</u>	m water	<u>kPa</u>	m water	<u>kPa</u>		
5,000	4.0 (0.07)	39	1.6 (0.03)	16	1.7 (0.04)	17						
3,500	2.0 (0.04)	19	0.8 (0.02)	8	0.9 (0.02)	8						
2,500	1.0 (0.02)	10	0.4 (0.01)	4	0.4 (0.01)	4						
6,000			2.3 (0.04)	23	2.4 (0.05)	24	1.4 (0.03)	14	0.6 (0.01)	6		
4,200			1.1 (0.02)	11	1.2 (0.02)	12	0.7 (0.02)	7	0.3 (0.01)	3		
3,000			0.6 (0.01)	6	0.6 (0.01)	6	0.4 (0.01)	4	0.2 (0.01)	2		
7,000			3.2 (0.05)	31	3.6 (0.07)	33	2.0 (0.04)	19	0.8 (0.02)	8		
4,900			1.5 (0.03)	16	1.6 (0.03)	16	0.9 (0.02)	9	0.4 (0.01)	4		
3,500			0.8 (0.02)	8	0.9 (0.02)	8	0.5 (0.01)	5	0.2 (0.01)	2		
8,000					4.4 (0.08)	42	2.6 (0.05)	25	1.0 (0.02)	10		
5,600					2.1 (0.04)	21	1.2 (0.02)	13	0.5 (0.01)	5		
4,000					1.1 (0.02)	11	0.6 (0.01)	6	0.3 (0.01)	3		
9,000							3.3 (0.07)	32	1.3 (0.02)	13		
6,300							1.6 (0.03)	16	0.7 (0.01)	6		
4,500							0.9 (0.02)	8	0.3 (0.01)	3		
10,000							4.0 (0.07)	39	1.6 (0.03)	16		
7,000							2.0 (0.04)	19	0.8 (0.02)	8		
5,000							1.0 (0.02)	10	0.4 (0.01)	4		

	<u>Two 150 mm</u>	Three 150 mm	Four 150 mm	One 200 mm	Two 200 mm
Flow Rate (L/min)	m water kPa	m water kPa	m water kPa	m water kPa	m water kPa
8,000	1.0 (0.02) 10			1.3 (0.03) 13	
5,600	0.5 (0.01) 5			0.6 (0.02) 6	
4,000	0.3 (0.01) 3			0.3 (0.01) 3	
9,000	1.3 (0.02) 13	0.6 (0.01) 6		1.7 (0.05) 17	0.4 (0.01) 4
6,300	0.7 (0.01) 6	0.3 (0.01) 3		0.7 (0.03) 7	0.2 (0.01) 2
4,500	0.3 (0.01) 3	0.2 (0.01) 2		0.4 (0.01) 4	0.1 (0.01) 1
10,000	1.6 (0.03) 16	0.7 (0.02) 7		2.1 (0.05) 21	0.5 (0.01) 4
7,000	0.8 (0.02) 8	0.4 (0.01) 4		1.0 (0.03) 9	0.2 (0.01) 2
5,000	0.4 (0.01) 4	0.2 (0.01) 2		0.5 (0.01) 4	0.1 (0.01) 1
12,000	2.3 (0.04) 23	1.0 (0.02) 10		3.0 (0.09) 30	0.7 (0.02) 7
8,400	1.1 (0.02) 12	0.5 (0.01) 5		1.4 (0.04) 14	0.3 (0.01) 3
14,000	3.2 (0.05) 31		0.8 (0.2) 8		1.0 (0.2) 9
9,800	1.5 (0.03) 16		0.4 (0.1) 4		0.5 (0.1) 4
16,000		1.5 (0.3) 15	1.0 (0.2) 10		1.3 (0.3) 13
11,200		0.9 (0.2) 8	0.5 (0.1) 5		0.6 (0.2) 6

Note: Figures in parentheses indicate increment to be added or subtracted for each 3 m of hose greater than or less than 6 m.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Tue Aug 19 14:24:27 EDT 2014

## **Committee Statement**

Committee Statement: Fixing typo.

**Response Message:** 

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 58-NFPA 1901-2014 [ Section No. 16.2.5 ]

16.2.5 Fire Pump Maximum Discharge Pressure Capability Rating.

16.2.5.1

The fire pump manufacturer shall establish the maximum discharge gauge pressure capability rating of the pump.

16.2.5.2

The fire pump manufacturer shall certify the maximum discharge gauge pressure capability rating of the pump if it exceeds the hydrostatic test gauge pressure in 16.5.2.1.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 11:15:13 EDT 2014

## **Committee Statement**

Committee Statement: Removing the word "gauge" to be consistent with 16.2.5

**Response Message:** 

Public Comment No. 134-NFPA 1901-2014 [Section No. 16.2.5]

#### **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

### Second Revision No. 61-NFPA 1901-2014 [ Section No. 16.5.3 ]

#### 16.5.3 Plumbing Pressure Capacity.

The entire discharge and intake piping system, valves, drain cocks and lines, and intake and outlet closures, excluding the tank fill and tank-to-pump lines on the tank side of the valves in those lines, shall be capable of withstanding a minimum hydrostatic gauge pressure of 500 psi (3400 kPa).

#### 16.5.3.1

The entire discharge and intake piping system; valves; drain cocks; and lines, and intake and outlet closures, excluding the tank fill and tank-to-pump lines on the tank side of the valves in those lines, shall be capable of withstanding a minimum hydrostatic gauge pressure of 500 psi (3400 kPa). outlet closures, excluding the tank fill line on the tank side of the valve and CAF system piping and components that include valves that permit isolation from discharge pressure, shall be capable of withstanding a hydrodynamic discharge pressure of 500 psi (3400 kPa) or 100 psi (700 kPa) over the maximum discharge pressure capability rating of the pump, whichever is greater.

#### 16.5.3.2

The aerial waterway and master stream waterway on the discharge side of the valves in those lines and CAF system piping and components shall be capable of withstanding a hydrostatic pressure of 250 psi (1700 kPa).

#### 16.5.3.3

The entire discharge and intake piping system, valves, drain cocks and lines, bleeder valves, and intake and outlet closures, excluding the tank fill and tank-to-pump lines line on the tank side of the valves in those lines valve, shall be capable of withstanding a minimum hydrostatic gauge pressure of 500 250 psi (3400 1700 kPa).

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 11:28:34 EDT 2014

#### **Committee Statement**

Committee Clarifies pressure capability requirements of intake plumbing and discharge plumbing and discharge plumbing and identifies differences in their requirements. Also includes specific requirements for those components excluded from the discharge pressure capability requirements

Response Message:

Public Comment No. 152-NFPA 1901-2014 [Section No. 16.5.3]

#### **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments

- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



### Second Revision No. 59-NFPA 1901-2014 [ Section No. 16.5.4.1 ]

#### 16.5.4.1

If the maximum discharge gauge pressure capability rating of the pump identified in 16.2.5.1 exceeds the hydrostatic test pressure performed in 16.5.2.1, the pump shall be subjected to a hydrodynamic test during which the discharge pressure equals or exceeds the maximum discharge gauge pressure capability rating for a minimum of 5 minutes.

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 11:17:36 EDT 2014

#### **Committee Statement**

Committee Statement: Removing the word "gauge" to be consistent with 16.2.5

**Response Message:** 

#### **Ballot Results**

#### ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



## Second Revision No. 116-NFPA 1901-2014 [ Section No. 16.6.1.3 ]

#### 16.6.1.3\*

A safety sign warning <u>Safety sign FAMA25</u>, which warns of the need for training prior to operating the apparatus that is substantially similar to FAMA25 from FAMA TC010, <u>Standard Product Safety Sign Catalog for Automotive Fire Apparatus</u>, shall be located on the pump operator's panel.

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 16:14:26 EDT 2014

#### **Committee Statement**

Committee Eliminates the use of the phrase "substantially similar", and cleans up the wording to avoid

**Statement:** repeating the source of the artwork for every instance.

Response Message:

#### **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

## NEPA

## Second Revision No. 34-NFPA 1901-2014 [ Section No. 16.6.5 [Excluding any

#### Sub-Sections]]

Each valved intake shall be equipped with a bleeder valve having a minimum  $\frac{3}{4}$  in. (49  $\underline{20}$  mm) pipe thread connection to bleed off air or water.

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

**Organization:** National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 17:31:52 EDT 2014

#### **Committee Statement**

Committee There is no "19 mm pipe thread". The closest nominal size is 20 mm. All pipe sizes are

**Statement:** nominal (name) sizes and not an exact dimension.

Response Message:

Public Comment No. 17-NFPA 1901-2014 [Section No. 16.6.5 [Excluding any Sub-Sections]]

#### **Ballot Results**

#### ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

## NEPA

### Second Revision No. 63-NFPA 1901-2014 [ Section No. 16.7.5 [Excluding any

#### Sub-Sections]]

Each discharge outlet shall be equipped with a valve that can be opened and closed by the operator with a maximum force of 55 lbf (240 N) from full open to full closed or from full closed to full open with 250 psi (1700 kPa) pump discharge gauge pressure and at the flows smoothly at the discharge rates shown in Table 16.7.1 when the valve is in the full open position at a pump discharge gauge pressure of 250 psi (1700 kPa).

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 14:04:48 EDT 2014

#### **Committee Statement**

**Committee** Reverting to previous text as this issue has many variables and has not been reported as a

**Statement:** problem throughout the industry.

Response Message:

Public Comment No. 70-NFPA 1901-2014 [Section No. 16.7.5 [Excluding any Sub-Sections]]

Public Comment No. 83-NFPA 1901-2014 [Section No. 16.7.5 [Excluding any Sub-Sections]]

Public Comment No. 126-NFPA 1901-2014 [Section No. 16.7.5 [Excluding any Sub-Sections]]

#### **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D. Cranfill, Jeff Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



### Second Revision No. 64-NFPA 1901-2014 [ New Section after 16.10.1.3 ]

#### 16.10.1.4

Where the pump is driven by the chassis engine and automatic transmission through a split shaft PTO, an interlock system shall be provided to prevent the pump drive system from being shifted out of the "pump engaged" pumping mode of operation when the chassis transmission is in pump gear.

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

National Fire Protection Assoc Organization:

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 14:13:56 EDT 2014

#### **Committee Statement**

Committee

Statement:

This proposed new interlock requirement will compensate for the upcoming loss of speedometer registration during pump drive system engagement and will ensure that the intent of 16.10.1.2 is

met to prevent unintentional movement of the pump drive system

Control for apparatus with automatic transmissions. Additionally, extensive damage to pump drive system components will be

prevented.

## Response

Message:

Public Comment No. 122-NFPA 1901-2014 [New Section after 16.10.1.2]

#### **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



### Second Revision No. 76-NFPA 1901-2014 [ Sections 16.10.2, 16.10.3, 16.10.4, 16.10.5,

16.10.6, 16.10...]

**16.10.2** Stationary Pump Driven Through Split-Shaft PTO — Automatic Chassis Transmission. Where the apparatus is equipped with an automatic chassis transmission, the water pump is driven by the chassis engine through the transmission's main driveline, and the apparatus is to be used for stationary pumping only, an interlock system shall be provided to ensure that the pump drive system components are engaged in the pumping mode of operation so that the pumping system can be operated from the pump operator's position.

#### 16.10.2.1

A "Pump Engaged" indicator shall be provided in the driving compartment to indicate that the pump shift process has been successfully completed.

#### 16 10 2 2

An "OK to Pump" indicator shall be provided in the driving compartment to indicate that the pump is engaged, the chassis transmission is in pump gear, and the parking brake is engaged.

16.10.3 Stationary Pump Driven Through Split-Shaft PTO — Manual Chassis Transmission.

Where the apparatus is equipped with a manual chassis transmission, the water pump is driven by the chassis engine through the transmission's main driveline, and the apparatus is to be used for stationary pumping only, an interlock system shall be provided to ensure that the pump drive system components are engaged in the pumping mode of operation so that the pumping system can be operated from the pump operator's position.

#### 16.10.3.1

A "Pump Engaged" indicator shall be provided in the driving compartment to indicate that the pump shift has been successfully completed.

#### 16.10.3.2

An "OK to Pump" indicator shall be provided in the driving compartment to indicate that the pump is engaged and the parking brake is engaged.

**16.10.4** Stationary Pump Driven Through Transmission-Mounted PTO, Front-of-Engine Crankshaft PTO, or Engine Flywheel PTO — Automatic Chassis Transmission.

Where the apparatus is equipped with an automatic chassis transmission, the water pump is driven by a transmission-mounted (SAE) PTO, front-of-engine crankshaft PTO, or engine flywheel PTO, and the apparatus is to be used for stationary pumping only with the chassis transmission in neutral, an interlock system shall be provided to ensure that the pump drive system components are engaged in the pumping mode of operation so that the pump system can be operated from the pump operator's position.

#### 16.10.4.1

A "Pump Engaged" indicator shall be provided both in the driving compartment and on the pump operator's panel to indicate that the pump shift has been successfully completed.

#### 16.10.4.2

An "OK to Pump" indicator shall be provided in the driving compartment to indicate that the pump is engaged, the chassis transmission is in neutral, and the parking brake is engaged.

**16.10.5** Stationary Pump Driven Through Transmission-Mounted PTO, Front-of-Engine Crankshaft PTO, or Engine Flywheel PTO — Manual Chassis Transmissions.

Where the apparatus is equipped with a manual chassis transmission, the water pump is driven by a transmission-mounted (SAE) PTO, front-of-engine crankshaft PTO, or engine flywheel PTO, and the apparatus is to be used for stationary pumping only with the chassis transmission in neutral, an interlock system shall be provided to ensure that the pump drive system components are engaged in the pumping mode of operation so that the pump system can be operated from the pump operator's position.

#### 16.10.5.1

A "Pump Engaged" indicator shall be provided both in the driving compartment and on the pump operator's panel to indicate that the pump shift has been successfully completed.

#### 16.10.5.2

An "OK to Pump" indicator shall be provided in the driving compartment to indicate that the pump is engaged and the parking brake is engaged.

16.10.6 Stationary and "Pump-and-Roll" Pump — Automatic Chassis Transmissions.

Where the water pump is driven by a transmission-mounted (SAE) PTO, front-of-engine crankshaft PTO, or engine flywheel PTO, and the apparatus is designed to be used in both the stationary pumping mode and the "pump-and-roll" pumping mode with the automatic chassis transmission in neutral for stationary pumping and in a road gear for pump-and-roll pumping, an interlock system shall be provided to ensure that the pump drive system components are properly engaged in the pumping mode of operation so that the apparatus can be operated in either stationary or pump-and-roll pumping mode.

#### 16.10.6.1

A "Pump Engaged" indicator shall be provided both in the driving compartment and on the pump operator's panel to indicate that the pump shift has been successfully completed.

#### 16.10.6.2

An "OK to Pump" indicator shall be provided in the driving compartment to indicate that the pump is engaged, the chassis transmission is in neutral, and the parking brake is engaged.

#### 16.10.6.3

An "OK to Pump and Roll" indicator shall be provided in the driving compartment and shall be energized when the pump is engaged, the chassis transmission is in road gear, and the parking brake is released.

#### 16.10.6.4

When the "OK to Pump and Roll" indicator is energized, the "OK to Pump" indicator shall not be energized.

16.10.7 Stationary and "Pump-and-Roll" Pumps — Manual Chassis Transmissions.

Where the water pump is driven by a transmission-mounted (SAE) PTO, front-of-engine crankshaft PTO, or engine flywheel PTO, and the apparatus is designed to be used in both the stationary pumping mode and the pump-and-roll pumping mode with the chassis transmission in neutral for stationary pumping or in a road gear for pump-and-roll pumping, an interlock system shall be provided to ensure that the pump drive system components are properly engaged in the pumping mode of operation so that the apparatus can be operated in either stationary or pump-and-roll pumping mode.

#### 16.10.7.1

A "Pump Engaged" indicator shall be provided both in the driving compartment and on the pump operator's panel to indicate that the pump shift has been successfully completed.

#### 16.10.7.2

An "OK to Pump" indicator shall be provided in the driving compartment to indicate that the pump is engaged and the parking brake is engaged.

#### 16.10.7.3

An "OK to Pump and Roll" indicator shall be provided in the driving compartment and shall be energized when the pump is engaged and the parking brake is released.

#### 16.10.7.4

When the "OK to Pump and Roll" indicator is energized, the "OK to Pump" indicator shall not be energized.

**16.10.8** Stationary Pumps Driven Through Transfer Case PTOs — Automatic Chassis Transmissions. Where the apparatus is equipped with an automatic chassis transmission, the water pump is driven by the chassis engine through the transmission's main driveline and through a transfer case, and the apparatus is to be used for stationary pumping only, an interlock system shall be provided to ensure that the pump drive system components are engaged in the pumping mode of operation so that the pumping system can be operated from the pump operator's position.

#### 16.10.8.1

A "Pump Engaged" indicator shall be provided in the driving compartment to indicate that the pump shift has been successfully completed.

#### 16.10.8.2

An "OK to Pump" indicator shall be provided in the driving compartment to indicate that the pump is engaged, the chassis transmission is in pump gear, the transfer case drive to the chassis wheels is in neutral, and the parking brake is engaged.

16.10.9 Stationary Pumps Driven Through Transfer Case PTOs — Manual Chassis Transmissions.

Where the apparatus is equipped with a manual chassis transmission, the water pump is driven by the chassis engine through the transmission's main driveline and through a transfer case, and the apparatus is to be used for stationary pumping only, an interlock system shall be provided to ensure that the pump drive system components are engaged in the pumping mode of operation so that the pumping system can be operated from the pump operator's position.

#### 16.10.9.1

A "Pump Engaged" indicator shall be provided in the driving compartment to indicate that the pump shift has been successfully completed.

#### 16.10.9.2

An "OK to Pump" indicator shall be provided in the driving compartment to indicate that the pump is engaged, the transfer case drive to the chassis wheels is in neutral, and the parking brake is engaged.

16.10.10 Pump Operator's Panel Engine Speed Advancement — Automatic Chassis Transmission.

#### 16.10.10.1

An engine speed control shall be provided at the pump operator's panel.

#### 16.10.10.2

A "Throttle Ready" indicator that lights when the pump is in the "OK to Pump" mode shall be provided on the pump operator's panel.

#### 16.10.10.3

The "Throttle Ready" indicator at the pump operator's panel shall be permitted to light when the chassis transmission is in neutral and the parking brake is engaged.

#### 16 10 10 4

An interlock system shall be provided to prevent advancement of the engine speed at the pump operator's panel unless the apparatus has "Throttle Ready" indication.

#### 16.10.10.5

Loss of power to the interlock system in 16.10.10.4 -shall return the engine speed to idle and prevent advancement from the pump operator's panel.

16.10.11 Pump Operator's Panel Engine Speed Advancement — Manual Chassis Transmission.

#### 16.10.11.1

An engine speed control shall be provided on the pump operator's panel.

#### 16.10.11.2

A "Throttle Ready" indicator that lights when the pump is in the "OK to Pump" mode shall be provided on the pump operator's panel.

#### 16.10.11.3

The "Throttle Ready" indicator on the pump operator's panel shall be permitted to light when the parking brake is engaged.

#### 16.10.11.4

An interlock system shall be provided to prevent advancement of the engine speed at the pump operator's panel unless the apparatus has "Throttle Ready" indication.

#### 16.10.11.5

Loss of power to the interlock system in 16.10.11.3 -shall return the engine speed to idle and prevent advancement from the pump operator's panel.

#### 16.10.12

If a pump shift manual override device is provided, the "Pump Engaged," "OK to Pump," and "Throttle Ready" indicators and the pump operator's panel engine speed advancement interlock system shall be operationally functional when the manual override device is used to shift the pump.

#### 16.10.2\* Interlocks and Indicators.

Where the water pump is driven by the chassis engine, an interlock system shall be provided to ensure that the pump drive system components are engaged in the pumping mode of operation so that the pumping system can be operated from the pump operator's position, with indicators to inform the operators of the status of the controls.

#### 16.10.2.1 Required Indicators.

#### 16.10.2.1.1

All apparatus shall have "Pump Engaged" and "OK to Pump" indicators in the driver compartment.

#### <u>16.10.2.1.2</u>

All apparatus shall have "Throttle Ready" and "OK to Pump" indicators on the pump operator's panel.

#### 16.10.2.1.3

If the apparatus is designed to do pump-and-roll, an "OK to Pump-and-Roll" indicator shall also be in the driver compartment.

#### 16.10.2.2\* Pump Engaged.

A "Pump Engaged" indicator shall be provided in the driving compartment to indicate the pump shift has been successfully completed.

#### **16.10.2.3** OK to Pump.

An "OK to Pump" indicator shall be provided in the driving compartment and on the pump operator's panel to indicate that all of the following conditions have been met to safely operate the pump in stationary mode:

- The pump shift is engaged.
- (2) The parking brake is engaged.
- (3) If the pump is driven from a transfer case PTO or auxiliary transmission PTO, the drive to the wheels is in neutral.
- (4) If the apparatus is equipped with an automatic transmission, the chassis transmission is in the correct pump gear as identified in 16.10.1.3 as follows:
  - (a) If the pump is driven by a PTO after the chassis transmission gearing (e.g., split shaft PTO, transfer case PTO, etc.) the transmission is in the correct forward drive gear.
  - (b) If the pump is driven by a PTO ahead of the chassis transmission gearing (e.g., flywheel PTO, crankshaft PTO, etc.) the transmission is in neutral.
- (5) If the apparatus is equipped with a manual transmission, any gear, including neutral, will allow an "OK to Pump" indicator to come on provided all other conditions are met.

#### **16.10.2.4**\* OK to Pump-and-Roll.

If the apparatus is designed to be used in both stationary pumping mode and "pump-and-roll" pumping mode, an "OK to Pump-and-Roll" indicator shall be provided in the driving compartment to indicate that all of the following conditions have been met to safely operate the pump in pump-and-roll mode:

- (1) The pump shift is engaged.
- (2) The parking brake is released.

#### 16.10.2.5 Throttle Ready.

#### 16.10.2.5.1

A "Throttle Ready" indicator shall be provided on the pump operator's panel.

#### 16.10.2.5.2

The "Throttle Ready" indicator shall indicate when the pump is in "OK to Pump" mode.

#### 16.10.2.5.3\*

The "Throttle Ready" indicator at the pump operator's panel shall be permitted to indicate when the parking brake is engaged and, if the apparatus is equipped with an automatic transmission, when the chassis transmission is in neutral.

#### 16.10.2.6 Engine Speed Control.

#### 16.10.2.6.1

An engine speed control shall be provided at the pump operator's panel.

#### 16.10.2.6.2

An interlock system shall be provided to prevent advancement of the engine speed at the pump operator's panel unless the apparatus has a "Throttle Ready" indication.

#### 16.10.2.6.3

Loss of power to the interlock system shall return the engine speed to idle and prevent advancement from the pump operator's panel.

#### 16.10.2.7 Manual Override.

If a pump shift manual override device is provided, the "Pump Engaged," "OK to Pump," "OK to Pump-and-Roll," and "Throttle Ready" indicators and the pump operator's panel engine speed advancement interlock system shall be operationally functional when the manual override device is used to shift the pump.

#### **Supplemental Information**

#### **File Name**

#### **Description**

A.16.10.2.2.docx

edited - no changes

A.16.10.2.4.docx

edited - no changes

A.16.10.2.5.3 edited.docx

16.10.2\_through\_16.10.2.7\_edited.docx

A.16.10.2\_edited.docx

#### Submitter Information Verification

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 16:44:08 EDT 2014

#### **Committee Statement**

Committee Delete existing text in 16.10.2 through 16.10.12 and replace with attachment 16.10.2 through Statement: 16.10.7. Pump control requirements related to pump drive were reformatted to be based on requirements for pump drive interlocks, indicators and speed control rather than being formatted based on various types of chassis transmissions, pumping methods and pump drive type to avoid repetition of similar, common requirements within the body of the standard. The requirements based on chassis transmission, pumping method and pump drive type were moved to the annex to provide guidance when considering a particular configuration of these elements. Add new annex A material as seen in attachments A.16.10.2, A.16.10.2.2, A.16.10.2.4, and A.16.10.2.5.3.

Response Message:

#### **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

### Second Revision No. 62-NFPA 1901-2014 [ Section No. 16.12.1.1 ]

#### 16.12.1.1\*

The following controls and instruments shall be provided and installed as a group on the pump operator's panel:

- (1) Master pump intake pressure gauge
- (2) Master pump discharge pressure gauge
- (3) Pumping engine tachometer
- (4) Pumping engine coolant temperature gauge
- (5) Pumping engine oil pressure gauge
- (6) Voltmeter
- (7) Pump pressure control(s)
- (8) Pumping engine throttle
- (9) Primer control
- (10) Water tank-to-pump valve control
- (11) Water tank fill valve control
- (12) Water tank level gauge
- (13) CAF system isolation valve control (if so equipped)

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 11:36:46 EDT 2014

#### **Committee Statement**

**Committee** This language adds the CAF System isolation valve control in the event that the apparatus

**Statement:** is so equipped.

**Response Message:** 

#### **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

### Second Revision No. 77-NFPA 1901-2014 [ New Section after 16.12.2.3.3 ]

#### 16.12.2.3.4

If the apparatus is designed for pump-and-roll operations using the chassis engine—driven pump, a second discharge pressure gauge of the type required by 16.12.2.1.2 shall be mounted in the driving compartment in view of the driver.

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 17:00:23 EDT 2014

#### **Committee Statement**

Committee Statement:

Placing a pressure gauge in the cab provides important pump discharge pressure information to the pump operator/apparatus driver to know while in pump and roll operation with chassis engine

driven pumps.

Response Message:

#### **Ballot Results**

#### ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

## NEPA

## Second Revision No. 78-NFPA 1901-2014 [ Section No. 16.13.2.1.4.2 ]

#### 16.13.2.1.4.2

If the vehicle is equipped with a fixed power source driven by the same engine that drives the fire pump, it the fixed power source shall be running at a minimum of 50 percent of its rated capacity throughout the pumping portion of the pump test.

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 17:03:13 EDT 2014

#### **Committee Statement**

**Committee Statement:** This pertains to the fixed power source such as the generator. Clarifying language **Response Message:** 

#### **Ballot Results**

#### ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

## NEPA

## Second Revision No. 75-NFPA 1901-2014 [ Section No. 16.13.6 [Excluding any

#### Sub-Sections]]

The vacuum test shall consist of subjecting the interior of the pump, with all intake valves open, all intakes capped or plugged, and all discharge caps removed <u>and valves closed</u>, to a vacuum of 22 in. Hg (75 kPa) by means of the pump priming system.

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 16:41:19 EDT 2014

#### **Committee Statement**

**Committee Statement:** This language clarifies the procedure.

Response Message:

#### **Ballot Results**

#### ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

## ₩)

## Second Revision No. 65-NFPA 1901-2014 [ Section No. 16.13.8 ]

16.13.8\* Engine Speed Advancement Interlock Test.

The engine speed advancement interlock system shall be tested to verify that engine speed cannot be increased at the pump operator's panel unless there is throttle-ready indication the proper conditions are  $\underline{\text{met}}$ .

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	16.13.8.1		
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If the apparatus is equipped with a stationary pump driven through <u>a split-shaft split shaft</u> PTO, the test shall verify that the engine speed control at pump operator's panel cannot be advanced when either of the following conditions exists: for each of the conditions specified in the first four columns of <u>Table</u> 16.13.8.1, the indicators and engine speed controls operate as specified in the last four columns.

The chassis transmission is in neutral, the parking brake is off, and the pump shift in the driving compartment is in the road position.

The chassis transmission has been placed in the position for pumping as indicated on the label provided in the driving compartment, the parking brake is on, and the pump shift in the driving compartment is in the road position.

Table 16.13.8.1 Pump Driven Through Split Shaft PTO

<u>Test Conditions</u>				<u>Verifications</u>				
Transmission Type	Chassis Transmission Gear Selected	Parking Brake Status	Pump Shift Control Action Status (Driving Compartment) a	Pump Indicator Status (Driving Compartment)	Pump Indicator Status (Pump Operator's Panel)	Engine Speed Control in Cab	Engine Speed Control a Pump Operator' Panel	
Either	Neutral b	<u>On</u>	Road	None	None <sup>C</sup>	<u>Yes</u>	No C	
<u>Either</u>	<u>Neutral</u> <u>b</u>	<u>On</u>	Road	None	<u>"Throttle</u> Ready" <sup>C</sup>	Yes or No d	Yes <sup>C</sup>	
Either	Neutral <u>b</u>	Off	Road	None	None	<u>Yes</u>	<u>No</u>	
Automatic	<u>Neutral</u>	<u>On</u>	Engaged	<u>"Pump</u> Engaged" <u>e</u>	None <sup>C</sup>	<u>Yes</u>	<u>No</u> <sup>C</sup>	
Automatic	Neutral	<u>On</u>	Engaged	<u>"Pump</u>	"Throttle	Yes or	Yes C	
				Engaged" <sup>e</sup>	Ready" <sup>C</sup>	<u>No</u> d		
<u>Automatic</u>	<u>Neutral</u>	Off	Engaged	<u>"Pump</u> <u>Engaged"</u>	<u>None</u>	<u>Yes</u>	<u>No</u>	
Automatic	Pump gear <sup>f</sup>	<u>On</u>	Engaged	<u>"Pump</u> Engaged" and "OK to Pump"	"Throttle Ready" and "OK to Pump"	Yes or No <sup>d</sup>	<u>Yes</u>	
Automatic	Pump gear <sup>f</sup>	Off	<u>Engaged</u>	<u>"Pump</u> Engaged" <sup>e</sup>	None	Yes	<u>No</u>	
Automatic	Pump gear <sup>f</sup>	<u>On</u>	Road	<u>None</u>	None	Yes	<u>No</u>	
Automatic	Pump gear <sup>f</sup>	Off	Road	None	None	Yes	<u>No</u>	
Automatic	Any gear other than neutral and pump gear g	<u>On</u>	Road	<u>None</u>	<u>None</u>	<u>Yes</u>	<u>No</u>	
Automatic	Any gear other than neutral and pump gear g	<u>Off</u>	<u>Road</u>	<u>None</u>	<u>None</u>	<u>Yes</u>	<u>No</u>	
Automatic	Any gear other than neutral and pump gear g	<u>On</u>	Engaged	<u>"Pump</u> Engaged" <sup>e</sup>	None	<u>Yes</u>	<u>No</u>	

	Test Con	<u>Verifications</u>					
Transmission Type	Chassis Transmission Gear Selected	Parking Brake Status	Pump Shift Control Action Status (Driving Compartment) a	Pump Indicator Status (Driving Compartment)	Pump Indicator Status (Pump Operator's Panel)	Engine Speed Control in Cab	Engine Speed Control at Pump Operator's Panel
Automatic	Any gear other than neutral and pump gear g	<u>Off</u>	<u>Engaged</u>	<u>"Pump</u> Engaged" <sup>e</sup>	<u>None</u>	<u>Yes</u>	No
<u>Manual</u>	Any gear or neutral	<u>On</u>	Engaged	"Pump Engaged" and "OK to Pump"	"Throttle Ready" and "OK to Pump"	Yes or No <sup>d</sup>	Yes
<u>Manual</u>	Any gear or neutral	<u>Off</u>	Engaged	<u>"Pump</u> Engaged" <sup>e</sup>	None	<u>Yes</u>	No

<sup>&</sup>lt;sup>a</sup> Refers to the physical position of the pump shift control, or status of an electrical control action, in the driving compartment. The indicators associated with a particular pump shift control position might or might not provide indication of a particular status.

b A manual transmission can be in any gear or neutral.

<sup>&</sup>lt;sup>C</sup> Engine speed control at the pump operator's panel is permitted for those apparatus that have "Throttle Ready" indication on the pump operator's panel when the chassis transmission is in neutral and the parking brake is engaged. If there is no "Throttle Ready" indication, there is no engine speed control at the pump operator's panel.

d Some apparatus can be designed such that the throttle in the cab is disabled when the throttle control on the pump panel is enabled. The preferred arrangement is that the throttle in the cab not be disabled when the throttle control on the pump operator's panel is enabled.

<sup>&</sup>lt;sup>e</sup> Some apparatus can be designed with additional interlocks that prevent pump engagement and the "Pump Engaged" indicator, or disengage the pump when additional interlock conditions are not met.

The chassis transmission shift selector is placed in position for pumping as indicated on the label provided in the driving compartment.

<sup>&</sup>lt;sup>9</sup> The chassis transmission shift selector is placed in some position other than neutral or the position for pumping as indicated on the label provided in the driving compartment.

	16.13.8.2	

If the apparatus is equipped with a stationary pump driven through a transmission mounted transmission-mounted PTO, front-of-engine crankshaft PTO, or engine flywheel PTO that is designed for stationary pumping only, the test shall verify that the engine-speed control on the pump operator's panel cannot be advanced when either of the following conditions exists: for each of the conditions specified in the first four columns of Table 16.13.8.2, the indicators and engine speed controls operate as specified in the last four columns.

The chassis transmission is in neutral, the parking brake is off, and the pump shift status in the driving compartment is disengaged.

The chassis transmission is in any gear other than neutral, the parking brake is on, and the pump shift in the driving compartment is in the "Pump Engaged" position.

<u>Table 16.13.8.2 Pump Driven Through Transmission-Mounted PTO, Front-of-Engine Crankshaft PTO, or Engine Flywheel PTO Designed for Stationary Pumping Only</u>

	Test Condi		<u>Verifications</u>				
Transmission Type	Chassis Transmission Gear Selected	Parking Brake Status	Pump Shift Control Action Status (Driving Compartment) a	Indicator Status (Driving Compartment)	Indicator Status (Pump Operator's Panel)	Engine Speed Control in Cab	Engine Speed Control at Pump Operator's Panel
<u>Either</u>	<u>Neutral</u> <u>b</u>	<u>On</u>	<u>Disengaged</u>	<u>None</u>	None <sup>C</sup>	<u>Yes</u>	No C
<u>Either</u>	Neutral b	<u>On</u>	<u>Disengaged</u>	None	<u>"Throttle</u> Ready" <sup>C</sup>	<u>Yes or</u> <u>No</u> <u>d</u>	Yes <sup>C</sup>
Either	Neutral b	Off	<u>Disengaged</u>	None	None	<u>Yes</u>	No
Automatic	<u>Neutral</u>	<u>On</u>	<u>Engaged</u>	"Pump Engaged" and "OK to Pump"	"Throttle Ready" and "OK to Pump"	Yes or No <sup>d</sup>	<u>Yes</u>
Automatic	Neutral	Off	Engaged	<u>"Pump</u> Engaged"_ <sup>e</sup>	None	<u>Yes</u>	<u>No</u>
Automatic	Any gear other than neutral	<u>On</u>	Engaged	"Pump Engaged" e	None	<u>Yes</u>	<u>No</u>
<u>Automatic</u>	Any gear other than neutral	Off	<u>Engaged</u>	<u>"Pump</u> <u>Engaged"</u> <u>e</u>	None	<u>Yes</u>	No
Automatic	Any gear other than neutral	<u>On</u>	<u>Disengaged</u>	None	<u>None</u>	<u>Yes</u>	<u>No</u>
<u>Automatic</u>	Any gear other than neutral	<u>Off</u>	<u>Disengaged</u>	None	<u>None</u>	<u>Yes</u>	<u>No</u>
<u>Manual</u>	Any gear or neutral	<u>On</u>	<u>Engaged</u>	<u>"Pump</u> Engaged" and <u>"OK to Pump"</u>	"Throttle Ready" and "OK to Pump"	Yes or No <sup>d</sup>	<u>Yes</u>
<u>Manual</u>	Any gear or neutral	Off	<u>Engaged</u>	<u>"Pump</u> Engaged" <sup>e</sup>	None	<u>Yes</u>	<u>No</u>

a Refers to the physical position of the pump shift control, or status of an electrical control action, in the driving compartment. The indicators associated with a particular pump shift control position might or might not provide indication of a particular status.

b A manual transmission can be in any gear or neutral.

Engine speed control at the pump operator's panel is permitted for those apparatus that have "Throttle Ready" indication on the pump operator's panel when the chassis transmission is in neutral and the

parking brake is engaged. If there is no "Throttle Ready" indication, there is no engine speed control at the pump operator's panel.

- $\frac{d}{d}$  Some apparatus can be designed such that the throttle in the cab is disabled when the throttle control on the pump panel is enabled. The preferred arrangement is that the throttle in the cab not be disabled when the throttle control on the pump operator's panel is enabled.
- $\frac{e}{e}$  Some apparatus can be designed with additional interlocks that prevent pump engagement and the "Pump Engaged" indicator, or disengage the pump when additional interlock conditions are not met.

16.13.8.3	

If the apparatus is equipped with a pump driven by the chassis engine designed for both stationary pumping and pump-and-roll, the test shall verify that the engine speed control at pump operator's panel cannot be advanced when any of the following conditions exists: for each of the conditions specified in the first four columns of Table 16.13.8.3, the indicators and engine speed controls operate as specified in the last four columns.

The chassis transmission is in neutral, the parking brake is off, and the pump shift status in the driving compartment is disengaged.

The chassis transmission is in any gear other than neutral, the parking brake is on, and the pump shift in the driving compartment is in the pump engaged position.

The chassis transmission is in any gear other than neutral, the parking brake is off, the pump shift in the driving compartment is in the pump engaged position and the "OK to Pump-and-Roll" indicator is on.

Table 16.13.8.3 Stationary Pumping and Pump-and-Roll

	Test Condi		<u>Verifications</u>				
Transmission Type	Chassis Transmission Gear Selected	Parking Brake Status	Pump Shift Control Action Status (Driving Compartment) a	Indicator Status (Driving Compartment)	Indicator Status (Pump Operator's Panel)	Engine Speed Control in Cab	Engine Speed Control at Pump Operator's Panel
Either	Neutral C	<u>On</u>	Disengaged	<u>None</u>	None d	<u>Yes</u>	No d
<u>Either</u>	Neutral C	<u>On</u>	Disengaged	None	<u>"Throttle</u> Ready" <u>d</u>	Yes or No e	Yes d
<u>Either</u>	Neutral <u>C</u>	Off	Disengaged	None	None	<u>Yes</u>	<u>No</u>
<u>Automatic</u>	<u>Neutral</u>	<u>On</u>	<u>Engaged</u>	"Pump Engaged" and "OK to Pump"	"Throttle Ready" and "OK to Pump"	Yes or No <sup>e</sup>	<u>Yes</u>
Automatic	<u>Neutral</u>	Off	Engaged	"Pump Engaged" and "OK to Pump-and-Roll" f	<u>None</u>	<u>Yes</u>	<u>No</u>
<u>Automatic</u>	Any gear other than neutral	<u>On</u>	<u>Engaged</u>	"Pump Engaged" b	None	<u>Yes</u>	<u>No</u>
Automatic	Any gear other than neutral	Off	<u>Engaged</u>	"Pump Engaged" and "OK to Pump-and-Roll"	<u>None</u>	<u>Yes</u>	<u>No</u>
<u>Automatic</u>	Any gear other than neutral	<u>On</u>	<u>Disengaged</u>	<u>None</u>	<u>None</u>	<u>Yes</u>	<u>No</u>
<u>Automatic</u>	Any gear other than neutral	Off	<u>Disengaged</u>	<u>None</u>	<u>None</u>	<u>Yes</u>	<u>No</u>
<u>Manual</u>	Any gear or neutral	<u>On</u>	<u>Engaged</u>	"Pump Engaged" and "OK to Pump"	"Throttle Ready" and "OK to Pump"	Yes or No <sup>e</sup>	<u>Yes</u>
<u>Manual</u>	Any gear or neutral	Off	Engaged	"Pump Engaged" and "OK to Pump-and-Roll"	<u>None</u>	<u>Yes</u>	<u>No</u>

<sup>&</sup>lt;sup>a</sup> Refers to the physical position of the pump shift control, or status of an electrical control action, in the driving compartment. The indicators associated with a particular pump shift control position might or might not provide indication of a particular status.

- b Some apparatus can be designed with additional interlocks that prevent pump engagement and the "Pump Engaged" indicator, or disengage the pump when additional interlock conditions are not met.
- <sup>C</sup> A manual transmission can be in any gear or neutral.
- d Engine speed control at the pump operator's panel is permitted for those apparatus that have "Throttle Ready" indication on the pump operator's panel when the chassis transmission is in neutral and the parking brake is engaged. If there is no "Throttle Ready" indication, there is no engine speed control at the pump operator's panel.
- <sup>e</sup> Some apparatus can be designed such that the throttle in the cab is disabled when the throttle control on the pump panel is enabled. The preferred arrangement is that the throttle in the cab not be disabled when the throttle control on the pump operator's panel is enabled.
- f "OK to Pump-and-Roll" stays on in neutral to allow shifting to neutral when temporarily stopped with the foot brake applied. This allows additional throttle to be applied for greater pump speed. Do not shift to neutral while the vehicle is moving; this is a prohibited operation in at least 17 states.

-	16.13.8.4	$\neg$

If the apparatus is equipped with a stationary pump driven through <u>a</u> transfer case PTO <u>or auxiliary</u> <u>transmission PTO designed for stationary pumping only</u>, the test shall verify that the <u>engine speed control</u> on the pump operator's panel cannot be advanced when one of the following conditions exists: <u>for each of the conditions specified in the first five columns of Table 16.13.8.4</u>, the indicators and engine speed controls operate as specified in the last four columns.

The chassis transmission is in neutral, the transfer case is in neutral, the parking brake is off, and the pump shift in the driving compartment is in the road position.

The chassis transmission is in neutral, the transfer case is engaged, the parking brake is off, and the pump shift in the driving compartment is in the road position.

The chassis transmission has been placed in the position for pumping as indicated on the label provided in the driving compartment, the parking brake is on, and the pump shift in the driving compartment is in the road position.

<u>Table 16.13.8.4 Pump Driven Through Transfer Case PTO or Auxiliary Transmission PTO Designed for Stationary Pumping Only</u>

	Test	Conditions						
Transmission Type	Chassis Transmission Gear Selected	Transfer Case	Parking Brake Status	Pump Shift Control Action Status (Driving Compartment) a	Indicator Status (Driving Compartment)	Indicator Status (Pump Operator's Panel)	Engine Speed Control in Cab	Engine Speed Control at Pump Operator's Panel
Either	<u>Neutral</u> <u>b</u>	Neutral	<u>On</u>	Disengaged	None	None <sup>C</sup>	<u>Yes</u>	No C
<u>Either</u>	<u>Neutral</u> <u>b</u>	<u>Engaged</u>	<u>On</u>	<u>Disengaged</u>	<u>None</u>	None <sup>C</sup>	<u>Yes</u>	No C
<u>Either</u>	<u>Neutral</u> <u>b</u>	<u>Neutral</u>	<u>On</u>	Disengaged	<u>None</u>	<u>"Throttle</u> Ready" <sup>C</sup>	Yes or No d	Yes C
<u>Either</u>	<u>Neutral</u> <u>b</u>	Engaged	<u>On</u>	<u>Disengaged</u>	<u>None</u>	<u>"Throttle</u> <u>Ready"</u> <sup>C</sup>	Yes or No d	Yes C
<u>Either</u>	Neutral b	<u>Neutral</u>	Off	Disengaged	<u>None</u>	None	<u>Yes</u>	No I
<u>Either</u>	Neutral b	Engaged	<u>Off</u>	<u>Disengaged</u>	None	None	<u>Yes</u>	No
Automatic	<u>Neutral</u>	<u>Neutral</u>	<u>On</u>	<u>Engaged</u>	<u>"Pump</u> Engaged" <sup>e</sup>	<u>"Throttle</u> Ready" <sup>C</sup>	Yes or No d	Yes C
<u>Automatic</u>	<u>Neutral</u>	Engaged	<u>On</u>	<u>Engaged</u>	<u>"Pump</u> <u>Engaged"</u> <u>e</u>	<u>"Throttle</u> <u>Ready"</u> <sup>C</sup>	Yes or No d	Yes C
<u>Automatic</u>	<u>Neutral</u>	<u>Neutral</u>	Off	<u>Engaged</u>	<u>"Pump</u> Engaged" <sup>e</sup>	None C	<u>Yes</u>	No C
<u>Automatic</u>	<u>Neutral</u>	Engaged	<u>Off</u>	Engaged	<u>"Pump</u> Engaged" <sup>e</sup>	None C	<u>Yes</u>	No C
Automatic	Pump gear f	Neutral	<u>On</u>	Engaged	"Pump Engaged" and "OK to Pump"	"Throttle Ready" and "OK to Pump"	Yes or No d	<u>Yes</u>
Automatic	Pump gear <sup>f</sup>	Engaged	<u>On</u>	<u>Engaged</u>	<u>"Pump</u> <u>Engaged"</u> <u>e</u>	None	<u>Yes</u>	No 
Automatic	Pump gear f	Neutral	Off	<u>Engaged</u>	<u>"Pump</u> Engaged" <sup>e</sup>	None	Yes	No 
Automatic	Pump gear <sup>f</sup>	Engaged	Off	<u>Engaged</u>	<u>"Pump</u> Engaged" <sup>e</sup>	None	<u>Yes</u>	

	<u>Test</u>	Conditions	<u>Verifications</u>					
Transmission Type	Chassis Transmission Gear Selected	Transfer Case	Parking Brake Status	Pump Shift Control Action Status (Driving Compartment)  a	Indicator Status (Driving Compartment)	Indicator Status (Pump Operator's Panel)	Engine Speed Control in Cab	Engine Speed Control a Pump Operator's Panel
Automatic	Pump gear f	Neutral	<u>On</u>	= <u>Disengaged</u>	None	None	Yes	No
Automatic	Pump gear <sup>f</sup>	Engaged	<u>On</u>	Disengaged	None	None	Yes	<u>No</u>
<u>Automatic</u>	Pump gear f	<u>Neutral</u>	Off	<u>Disengaged</u>	<u>None</u>	<u>None</u>	<u>Yes</u>	<u> </u> <u>No</u>
<u>Automatic</u>	Pump gear f	Engaged	Off	Disengaged	<u>None</u>	<u>None</u>	<u>Yes</u>	No No
Automatic	Any gear other than neutral and pump gear <sup>g</sup>	Neutral	<u>On</u>	<u>Disengaged</u>	<u>None</u>	<u>None</u>	<u>Yes</u>	<u>No</u>
Automatic	Any gear other than neutral and pump	<u>Neutral</u>	Off	Disengaged	<u>None</u>	<u>None</u>	<u>Yes</u>	No
Automatic	gear <sup>g</sup> Any gear other than neutral and pump gear <sup>g</sup>	Engaged	<u>On</u>	<u>Disengaged</u>	<u>None</u>	<u>None</u>	<u>Yes</u>	<u>No</u>
Automatic	Any gear other than neutral and pump gear g	Engaged	<u>Off</u>	<u>Disengaged</u>	<u>None</u>	<u>None</u>	<u>Yes</u>	<u>No</u>
Automatic	Any gear other than neutral and pump gear g	<u>Neutral</u>	<u>On</u>	<u>Engaged</u>	<u>"Pump</u> Engaged <u>"</u> <sup>e</sup>	None	<u>Yes</u>	No
Automatic	Any gear other than neutral and pump gear g	Neutral	<u>Off</u>	<u>Engaged</u>	<u>"Pump</u> Engaged" <sup>E</sup>	<u>None</u>	<u>Yes</u>	No
Automatic	Any gear other than neutral and pump gear g	Engaged	<u>On</u>	<u>Engaged</u>	<u>"Pump</u> Engaged <u>"</u> <sup>e</sup>	<u>None</u>	<u>Yes</u>	No
<u>Automatic</u>	Any gear other than neutral and pump gear g	Engaged	<u>Off</u>	<u>Engaged</u>	<u>"Pump</u> <u>Engaged"</u> <sup>e</sup>	None	<u>Yes</u>	No
<u>Manual</u>	Any gear or neutral	<u>Neutral</u>	<u>On</u>	Engaged	"Pump Engaged" and "OK to Pump"	"Throttle Ready" and "OK to Pump"	Yes or No <sup>d</sup>	Yes
<u>Manual</u>	Any gear or neutral	Engaged	<u>On</u>	Engaged	<u>"Pump</u> Engaged" <sup><u>e</u></sup>	<u>"Throttle</u> Ready" <sup>C</sup>	Yes or No <sup>d</sup>	Yes C

	Test (	Conditions						
	Chassis			Pump Shift Control Action Status	Indicator	Indicator Status	<b>Engine</b>	Engine Speed Control at
Transmission Type	Transmission Gear Selected	Transfer	Parking Brake Status	(Driving Compartment)	Status (Driving Compartment)	(Pump Operator's Panel)	Speed Control in Cab	Pump Operator's Panel
<u>Manual</u>	Any gear or neutral	<u>Case</u> <u>Neutral</u>	Off	<u>a</u> _ Engaged	"Pump Engaged" e	None None	Yes Yes	No
<u>Manual</u>	Any gear or neutral	Engaged	Off	<u>Engaged</u>	<u>"Pump</u> <u>Engaged"</u>	<u>None</u>	<u>Yes</u>	

<sup>&</sup>lt;sup>a</sup> Refers to the physical position of the pump shift control, or status of an electrical control action, in the driving compartment. The indicators associated with a particular pump shift control position might or might not provide indication of a particular status.

- <sup>C</sup> Engine speed control at the pump operator's panel is permitted for those apparatus that have "Throttle Ready" indication on the pump operator's panel when the chassis transmission is in neutral and the parking brake is engaged. If there is no "Throttle Ready" indication, there is no engine speed control at the pump operator's panel.
- d Some apparatus can be designed such that the throttle in the cab is disabled when the throttle control on the pump panel is enabled. The preferred arrangement is that the throttle in the cab not be disabled when the throttle control on the pump operator's panel is enabled.
- <sup>e</sup> Some apparatus can be designed with additional interlocks that prevent pump engagement and the "Pump Engaged" indicator, or disengage the pump when additional interlock conditions are not met.
- $\frac{f}{f}$  Chassis transmission shift selector is placed in position for pumping as indicated on the label provided in the driving compartment.
- <sup>9</sup> Chassis transmission shift selector is placed in some position other than neutral or the position for pumping as indicated on the label provided in the driving compartment.

# **Supplemental Information**

## **File Name**

# **Description**

Table\_16.13.8.1\_through\_Table\_16.13.8.4\_edited.docx

A.16.13.8\_edited.docx

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 14:23:30 EDT 2014

# **Committee Statement**

Committee Revise text as shown and add new tables as seen in attachment for new Table 16.13.8.1 through

 $<sup>\</sup>frac{b}{a}$  A manual transmission can be in any gear or neutral.

# Statement:

Table 16.13.8.4. The old tables were deleted from the annex, and recreated to be added to the body of the standard to require testing of each apparatus according to all the possible combinations of pump drive controls to ensure that the engine speed control interlocks are operating correctly and that the indicators and controls meet the requirements of the standard.

Revise annex A text as seen in attachment A.16.13.8 and delete existing annex A tables Table 16.13.8(a), Table 16.13.8(b), Table 16.13.8(c), and Table 16.13.8(d).

# Response Message:

Public Comment No. 7-NFPA 1901-2014 [Section No. A.16.13.8]

Public Comment No. 8-NFPA 1901-2014 [Section No. A.16.13.8]

Public Comment No. 142-NFPA 1901-2014 [Section No. A.16.13.8]

Public Comment No. 146-NFPA 1901-2014 [Section No. 16.13.8 [Excluding any Sub-Sections]]

Public Comment No. 147-NFPA 1901-2014 [Section No. 16.13.8.1]

Public Comment No. 148-NFPA 1901-2014 [Section No. 16.13.8.2]

Public Comment No. 150-NFPA 1901-2014 [Section No. 16.13.8.4]

Public Comment No. 149-NFPA 1901-2014 [Section No. 16.13.8.3]

# **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NFPA

# Second Revision No. 66-NFPA 1901-2014 [ Section No. 16.13.10 ]

16.13.10\* Manufacturer's Predelivery Test.

#### 16.13.10.1

The manufacturer shall conduct a piping hydrostatic <u>in accordance with 16.13.10.2</u> and a piping hydrodynamic test in accordance with 16.13.10.3 test prior to delivery of the apparatus.

#### 16.13.10.2

The <u>hydrostatic</u> test shall be conducted as follows:

- (1) The pump and its connected piping system shall be <u>are</u> hydrostatically tested to a gauge pressure of 500 250 psi (3400 1700 kPa).
- (2) The hydrostatic test shall be is conducted with the tank fill line valve, the bypass line valve if so equipped, and the tank-to-pump valve closed.
- (3) All discharge valves shall be are open and the outlets capped.
- (4) All intake valves shall be are closed with intakes uncapped, and nonvalved intakes shall be are capped.
- (5) This hydrostatic test pressure shall be is maintained for 3 minutes.

#### 16.13.10.3

If the maximum discharge gauge pressure capability rating of the pump is greater than 500 psi, either a hydrostatic test in accordance with 16.13.10.3.1 or hydrodynamic test in accordance with 16.13.10.3.2 shall be conducted. The hydrodynamic test shall be conducted as follows:

- (1) The pump and its connected piping system are hydrodynamically tested at the prescribed maximum discharge pressure capability rating pressure of the pump or the maximum pump close-off pressure, whichever is less.
- (2) Water is permitted to be supplied to the pump from either a pump intake connection or from the apparatus water tank if so equipped.
- (3) The hydrodynamic test is conducted with the following valves closed: tank fill line valve, the aerial waterway valve if so equipped, CAFS component supply line valve if so equipped, and the master stream valve if so equipped.
- (4) The hydrodynamic test is permitted to be conducted with a bypass valve or discharge valve opened as necessary to maintain pump temperature during the test.
- (5) All other discharge valves are open and the outlets capped.
- (6) The hydrodynamic test pressure is maintained for 3 minutes.

#### 16.13.10.3.1

If a hydrostatic test is conducted, the hydrostatic test in 16.13.10.3.2 shall be performed at the prescribed maximum discharge gauge pressure rating.

#### 16.13.10.3.2

If a hydrodynamic test is conducted, the pump and its connected piping system shall be hydrodynamically tested at the prescribed maximum discharge gauge pressure capability rating pressure for a minimum of 3 minutes.

#### 16.13.10.3.3\*

The tests in 16.13.10.3.1 or 16.13.10.3.2 shall be permitted to be omitted if the pumping system is provided with a pressure control system that limits the maximum discharge gauge pressure to 500 psi (3400 kPa) or less.

## 16.13.10.3.4

The test in 16.13.10.3.2 -shall be permitted to be performed in conjunction with the pumping test performed in 16.13.2 -

#### 16.13.10.4

The <u>hydrodynamic</u> test in <u>16.13.10.3</u> <u>16.13.10.3</u> <u>16.13.10.3</u> <u>16.13.10.3</u> shall be permitted to be performed in conjunction with the pumping test performed in 16.13.2.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 15:04:02 EDT 2014

# **Committee Statement**

Committee Statement:

Clarifies and provides specific requirements to ensure that all apparatus will be both hydrostatically

tested and hydrodynamically tested with the hydrodynamic test performed at the maximum

discharge pressure capability rating of the pump or maximum pump close-off pressure. Clarifies test procedure with respect to water supply, valve positioning and maintenance of pump temperature

during test.

# Response Message:

Public Comment No. 121-NFPA 1901-2014 [Section No. 16.13.10.3 [Excluding any Sub-Sections]]

Public Comment No. 123-NFPA 1901-2014 [Section No. 16.13.10.2]

Public Comment No. 132-NFPA 1901-2014 [Section No. 16.13.10.2]

Public Comment No. 153-NFPA 1901-2014 [Section No. 16.13.10]

Public Comment No. 120-NFPA 1901-2014 [Section No. 16.13.10.2]

# **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NFPA

# Second Revision No. 68-NFPA 1901-2014 [ Section No. 17.2 ]

# 17.2 Pump Performance.

#### 17.2.1

Auxiliary pumps shall be rated as either high pressure or medium normal pressure.

# 17.2.2 High-Pressure Pumps.

The performance of a high pressure auxiliary pump shall be a minimum of 66 gpm (250 L/min) at 600 psi (4000 kPa) discharge pressure for each high pressure hose reel connected to it that can be operated simultaneously with other high pressure hose reels.

#### 17.2.2.1

The performance of a high-pressure high-pressure auxiliary pump shall be a minimum of 66 gpm (250 L/min) at 600 psi (4000 kPa) discharge pressure for each high-pressure high-pressure hose reel connected to it that can be operated simultaneously with other high-pressure high-pressure hose reels.

## 17.2.2.2

The fire apparatus manufacturer shall establish the maximum discharge pressure capability rating.

17.2.3 Medium Normal- Pressure Auxiliary Pumps.

#### 17.2.3.1

The pump shall have one of the following rated capacities: 30 gpm (115 L/min), 60 gpm (230 L/min), 90 gpm (345 L/min), 120 gpm (460 L/min), 250 gpm (1000 L/min), or 350 gpm (1300 L/min).

#### 17.2.3.2

The pump shall be capable of pumping 100 percent of its rated capacity at 150 psi (1000 kPa) discharge pressure, 70 percent of its rated capacity at 200 psi (1400 kPa) discharge pressure, and 50 percent of its rated capacity at 250 psi (1700 kPa) discharge pressure.

#### 17.2.4

The rating for auxiliary pumps shall be based on the pump taking water from the apparatus water tank.

# 17.2.5

Where an auxiliary pump is provided in combination with a fire pump and the pumps are interconnected so that pressure from one pump can be transmitted to the other pump, check valves, intake or discharge relief valves, pump drive gear ratios, or other automatic means shall be provided to avoid pressurizing either pump beyond its maximum hydrostatic test pressure.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 15:50:14 EDT 2014

# **Committee Statement**

Committee These changes are consistent with terminology utilized in Chapter 28 UHP, Chapter 16, and

**Statement:** annex material.

**Response Message:** 

### **Ballot Results**

✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 67-NFPA 1901-2014 [ New Section after 17.2.5 ]

# 17.3 Pump Rating Label.

A rating label showing the rated flow and pressure capacities of the auxiliary pump system shall be supplied at the pump operator's location.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 15:39:42 EDT 2014

# **Committee Statement**

Committee Many auxiliary medium and high pressure pump systems installed on apparatus either separate or

**Statement:** chassis engine drive do not have rating labels on the pump operators panel. The only way to

know the capacity of the auxiliary system without looking at the specifications.

Response Message:

Public Comment No. 47-NFPA 1901-2014 [New Section after 17.1]

# **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 71-NFPA 1901-2014 [ New Section after 17.6.5 ]

# **17.7.6**

If the pump is a high-pressure pump system, the pump shall be equipped with a means that will limit the pump discharge pressure at the maximum discharge pressure capability rating.

#### 17.7.7

If a relief valve is provided that discharges to atmosphere, it shall be directed away from the pump operator's position.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 16:28:25 EDT 2014

# **Committee Statement**

Committee High pressure pump systems need a means to prevent accidental over pressure of the

**Statement:** pump system.

**Response Message:** 

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# Second Revision No. 72-NFPA 1901-2014 [ Section No. 17.8.7 ]

# 17.9.7 Pump Cooling.

A bypass line of not less than 1/4 in. (6.4 mm) diameter that has a valve that can be controlled from the pump operator's position or an automatic-type control shall be installed from the discharge manifold directly to the water tank or ground.

# 17.9.7.1

A bypass line of not less than ¼ in. (6.4 mm) diameter that has a valve that can be controlled from the pump operator's position or an automatic-type control shall be installed from the discharge manifold directly to the water tank or ground.

# 17.9.7.2

If the pump is a high-pressure pump, the pump shall be equipped with an automatic thermal relief valve to protect the pump that releases away from the pump operator or into the tank.

#### Submitter Information Verification

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 16:32:14 EDT 2014

# **Committee Statement**

The chance exists for rapid pump overheating in small capacity/high pressure pumps due to Committee Statement:

the size of the pump and pressures at which it operates.

Response Message:

# **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 73-NFPA 1901-2014 [ Section No. 17.11.1 [Excluding any

# Sub-Sections]]

A master discharge pressure gauge shall be provided for the auxiliary pump.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

**Organization:** National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 31 16:37:23 EDT 2014

### **Committee Statement**

Committee Statement: This clarifies that the pressure gauge is for the auxiliary pump.

**Response Message:** 

Public Comment No. 46-NFPA 1901-2014 [Section No. 17.11.1 [Excluding any Sub-Sections]]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 1-NFPA 1901-2014 [ Section No. 19.2.11 [Excluding any

# Sub-Sections]]

The apparatus shall be equipped with steps that meet the skid resistance requirements of 15.7.4 and/ or with rungs, either of which provides that provide a path at any degree of elevation from the bottom rung of the aerial ladder to the ground.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Wed Jul 23 13:08:27 EDT 2014

# **Committee Statement**

Committee The path could be a all rungs, all steps, or a combination of both. The suggested language is

**Statement:** more accurate if there are some of each.

Response Message:

Public Comment No. 9-NFPA 1901-2014 [Section No. 19.2.11 [Excluding any Sub-Sections]]

# **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 26 Affirmative All
- 0 Affirmative with Comments
- 1 Negative with Comments
- 0 Abstention

### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# **Negative with Comment**

Chestnut, Wesley D.

The standard needs to state either and or, or not and/or. It must be one or the other.



# Second Revision No. 3-NFPA 1901-2014 [ Section No. 19.15.3.1 ]

19.15.3.1\*

The turntable rotation bearing shall be accessible for lubrication and retorquing torque verification of bolts.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Wed Jul 23 13:21:14 EDT 2014

#### **Committee Statement**

**Committee** Changing the text to be consistent with other sections on bolt torque by using this

Statement: language

**Response Message:** 

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 26 Affirmative All
- 0 Affirmative with Comments
- 1 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# **Negative with Comment**

Chestnut, Wesley D.

Tightening of bolts on a critical item needs to be reconsidered. Tightening of bolts should not be considered a maintenance item. A provision to access the fasteners could be allowed for either purposes but this implies the bolts could or will come loose if not maintained.



# Second Revision No. 50-NFPA 1901-2014 [ Section No. 19.18.6 ]

#### 19.18.6

A spotlight of not less than 75,000 beam cp (75,000 lumens per steradian) or a floodlight with a total luminous flux of not less than 10,500 4,000 lumens shall be provided on the apparatus by which the operator shall be able to observe the effect of the stream from the ladder pipe or monitor nozzle.

#### <u>19.18.6.1</u>\*

Light output of the complete fixture, including the light source, shall be measured with the light source and fixture at a steady-state temperature.

#### 19.18.6.2

Measurements for a floodlight shall be made with a goniophotometer or other instrument that measures actual light output from the fixture in relation to positions around the fixture.

Optical test data shall be certified by the device manufacturer, and the data shall be available from the device manufacturer upon request.

# Supplemental Information

**File Name Description** 

A.19.18.6.1\_edited.docx

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

Street Address:

City: State: Zip:

**Submittal Date:** Thu Jul 31 08:36:49 EDT 2014

# **Committee Statement**

Statement:

Committee 4000 lumens is typical for 500 watt floodlight. Reducing minimum to 4,000 based on testing allows for less risk of an acceptable light failing the testing of a specific sample. There are apparently problems with the actual light output of some lights. Defining the testing process and making the data available levels the playing field for all manufacturers and defines the numbers being published. Generally light manufacturers have the capability to do this testing internally at minimal cost. Revise text and add new annex A material as seen in attachment A.19.18.6.1.

Response Message:

Public Comment No. 131-NFPA 1901-2014 [Section No. 19.18.6]

# **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments

- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 51-NFPA 1901-2014 [ Section No. 19.23.1.2 ]

#### 19.23.1.2

Safety signs warning of hazards that are substantially similar to the following found in FAMA TC010, Standard Product Safety Sign Catalog for Automotive Fire Apparatus, shall be provided where applicable: The following safety signs shall be provided where applicable:

- (1) FAMA 25 (Training Required): One sign visible to the operator at the main aerial controls
- (2) FAMA 30 (Stabilizer Crush): One sign visible to personnel near each stabilizer and one sign at the stabilizer deployment control(s)
- (3) FAMA 31 (Stabilizers with Pins) or FAMA 32 (Stabilizers without Pins): One sign in a location visible to personnel at the stabilizer deployment control(s)
- (4) FAMA 34 (Fall Restraint Required): One sign in a location visible to personnel at the base of any aerial device with a ladder capable of being climbed and one sign visible to personnel in any aerial platform
- (5) FAMA 35 (Electrocution): One sign in a location visible to the aerial operator and one sign in a location visible to the pump operator
- (6) FAMA 36 (Electrocution): One sign on each side of the vehicle and one sign on the back
- (7) FAMA 37 (Aerial Device Load Capacity): One sign visible to operators at any location where the aerial can be controlled
- (8) FAMA 38 (Aerial Ladder Rung Pinch): One sign visible to operators at any location where the aerial can be controlled
- (9) FAMA 38 39 (Aerial Inspection and Maintenance): One sign visible to the operator at the main aerial controls
- (10) FAMA 46 (Aerial Device Pinch): One sign on aerial device visible to personnel on the turntable at the foot of the device
- (11) FAMA 47 (Aerial Operator Attention Required): Visible to aerial operator at turntable, in the platform, and at tip controls

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 08:45:04 EDT 2014

# Committee Statement

Committee Eliminates the use of the phrase "substantially similar", and cleans up the wording to avoid repeating Statement: the source of the artwork for every instance. Also adding FAMA 46 and FAMA 47. FAMA 46: There are significant pinch hazards created between the ladder sections when the device is first extended and again when the device is nearing complete retraction. The FAMA 46 sign is intended to remind personnel of these hazards who may be standing on the turntable while the device is being operated. FAMA 47: A recent fatal LODD reinforced the need to always have an operator at the primary controls of a device any time it is in operation or any time personnel are climbing or riding on the device. The primary operator must be ready to remove personnel from danger if the secondary operator become

1/5/2015 3:42 PM 170 of 297

incapacitated or there are dangers present. FAMA 47 is intended to remind operators of this essential element of aerial device safety.

# Response

# Message:

Public Comment No. 31-NFPA 1901-2014 [Section No. 19.23.1.2]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 2-NFPA 1901-2014 [ Section No. 19.24.3 ]

# 19.24.3 Horizontal Rotation Load Test.

#### 19.24.3.1

With the aerial device out of the cradle in the fully extended position at zero degrees elevation, a test load shall be applied in a horizontal direction normal to the centerline of the ladder or boom.

#### 19.24.3.1.1

For aerial devices with a prepiped waterway, a 350 lb (160 kg) test load shall be applied at the tip of the ladder or boom.

# 19.24.3.1.2

For aerial ladders without a prepiped waterway, a 220 lb (100 kg) test load shall be applied at the tip of the ladder or boom.

#### 19.24.3.2

The turntable shall not rotate, and the ladder or boom shall not deflect beyond what the manufacturer's specification allows.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Jul 23 13:17:42 EDT 2014

# **Committee Statement**

Committee Statement: This change clarifies the intent of the test to eliminate confusion.

**Response Message:** 

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 26 Affirmative All
- 0 Affirmative with Comments
- 1 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# **Negative with Comment**

Chestnut, Wesley D.

As written, the statements do not flow. The first sentence states a test load must be applied but makes no reference to the following requirements. The last sentence does not conclude the section in a manner such as stating, "the turn table may not... when the aforementioned loads are applied."



# Second Revision No. 104-NFPA 1901-2014 [ Section No. 20.3.7 ]

# 20.3.7\*

A means shall be provided to prevent water backflow into the foam proportioning system and the foam concentrate storage tank.

# **Supplemental Information**

File Name Description

A.20.3.7\_edited.docx

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 15:00:23 EDT 2014

#### **Committee Statement**

**Committee** New annex language provides guidance on the potential for contaminating external water

**Statement:** sources with the foam. Add new annex A material as seen in attachment A.20.3.7.

Response Message:

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 26 Affirmative All
- 0 Affirmative with Comments
- 1 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# **Negative with Comment**

Chestnut, Wesley D.

This does not identify the performance requirements for the "means." In other words, the means shall do its function under what conditions and for how long? If it's the life of the vehicle, what maintenance is required to ensure the entigrity of the system is upheld?



# Second Revision No. 35-NFPA 1901-2014 [ Section No. 20.6.3.4 ]

# 20.6.3.4

The fill tower shall be arranged so that foam concentrate from a standard container [5 gal (19 L)-up to 6.6 gal (25 L)] can be poured directly into the tank without the use of funnels or other special devices.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

**Organization:** National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 24 07:38:18 EDT 2014

# **Committee Statement**

Committee Statement: These changes provide enough information for the purpose of pouring buckets of foam.

**Response Message:** 

Public Comment No. 10-NFPA 1901-2014 [Section No. 20.6.3.4]

# **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NFPA

# Second Revision No. 36-NFPA 1901-2014 [ Section No. 21.9.1.1.1 ]

# 21.9.1.1.1\*

The compressed air system shall be operated at its flow capacity at a minimum gauge pressure of 125 psi (862 kPa), and the water pump shall discharge a minimum of 2 gpm (7.6 L/min) of water at 125 psi (862 kPa) net pump pressure for every 1 SCFM [28.3 L/min at standard temperature and pressure] (250 L/min of water at 862 kPa net pump pressure for every 1 SCMM) of compressed air discharge.

# **Supplemental Information**

File Name Description

A.21.9.1.1.1\_edited.docx

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 24 07:41:03 EDT 2014

# **Committee Statement**

**Committee** Separating English and metric statements since they are not equivalent and to make easily **Statement:** understood. Revise annex A material as seen in attachment A.21.9.1.1.1 to be consistent.

Response Message:

Public Comment No. 11-NFPA 1901-2014 [Section No. 21.9.1.1.1]
Public Comment No. 12-NFPA 1901-2014 [Section No. A.21.9.1.1.1]

## **Ballot Results**

## This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 117-NFPA 1901-2014 [ Section No. 23.7.3 ]

#### 23.7.3

Safety signs substantially similar to FAMA06 from FAMA TC010, Standard Product Safety Sign Catalog for Automotive Fire Apparatus, sign FAMA06 shall be visible from each seat that is not equipped with occupant restraint and is therefore not intended to be occupied while the vehicle is in motion.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 16:16:51 EDT 2014

## **Committee Statement**

Committee Eliminates the use of the phrase "substantially similar", and cleans up the wording to avoid

**Statement:** repeating the source of the artwork for every instance.

Response Message:

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 37-NFPA 1901-2014 [ Section No. 23.11.3 ]

## 23.11.3 Computer Electrical Outlets.

Electrical outlets specifically for computer use, whether low voltage or line voltage, shall be marked with a label for their intended usage and power output.

#### 23.11.3.1

Electrical outlets specifically for computer use, whether low voltage or line voltage, shall be marked with a label for their intended usage and power output.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 24 07:43:41 EDT 2014

## **Committee Statement**

Committee Statement: Manual of style update.

Response Message:

Public Comment No. 13-NFPA 1901-2014 [Section No. 23.11.3]

## **Ballot Results**

## This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

## Second Revision No. 38-NFPA 1901-2014 [ Section No. 24.2.7.9 [Excluding any

## Sub-Sections]]

All exposed piping compressed air lines shall be clamped to a rigid body or chassis component at a minimum of every 24 in. (610 mm) and within 6 in. (452 150 mm) on each side of a coupling or elbow.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

**Organization:** National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 24 07:45:53 EDT 2014

## **Committee Statement**

Committee Statement: Correct the precision of SI conversion consistent with the NFPA Manual of Style.

Response Message:

Public Comment No. 14-NFPA 1901-2014 [Section No. 24.2.7.9 [Excluding any Sub-Sections]]

## **Ballot Results**

### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 39-NFPA 1901-2014 [ Section No. 24.5.3 ]

#### 24.5.3

Air tanks shall be permanently stamped or identified in accordance with DOT or ASME regulations.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 24 07:46:53 EDT 2014

#### **Committee Statement**

**Committee** This paragraph appears to duplicate the information included in 24.5.1.2. If there is in fact a

**Statement:** difference between the two, it should be made more clear.

Response Message:

Public Comment No. 93-NFPA 1901-2014 [Section No. 24.5.3]

#### **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 40-NFPA 1901-2014 [ Section No. 26.10.4.5 ]

#### 26.10.4.5

For trailers using electric or hydraulic brakeser brakes, or small trailers without brakes, the umbilical cable for the federally required lighting and brake system shall be connected using a seven-wire heavy\_duty cable and a seven-way flat\_blade recreational vehicle connector meeting SAE J2863, Automotive Trailer Tow Connector.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 24 07:50:27 EDT 2014

## **Committee Statement**

Committee The standard for the seven-way flat blade recreational connector was released as under SAE

Statement: document J2863 in 2010. Since this standard references it without the SAE designation, it should

be updated accordingly.

Response Message:

Public Comment No. 125-NFPA 1901-2014 [Section No. 26.10.4.5]

#### **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen

Pietsch, W. Michael

### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

# Second Revision No. 80-NFPA 1901-2014 [ Section No. 28.2.3 ]

#### 28.2.3

If the completed pumping system is capable of taking suction, it shall do so within 30 seconds under the following conditions:

- (1) At an altitude of 2000 ft (600 m) above sea level
- (2) Through 10 ft (3 m) of suction hose of the size specified in Table 28.2.3 and equipped with a suction hose strainer
- (3) With a lift of 3 ft (1 m)
- (4) At 29.9 in. Hg (101 kPa) atmospheric pressure (corrected to sea level)
- (5) At a water temperature of 60°F (16°C)

Table 28.2.3 Suction Hose Size by Pump Rated Capacity Rating

Flow Rate		Minimum Suction Hose Size	
<u>gpm</u>	<u>L/min</u>	<u>in.</u>	<u>mm</u>
20 and less	75 <u>80 or less</u>	1	25
30	<del>115</del> <u>120</u>	11/2	38
50	<del>190</del> <u>200</u>	2	<del>5</del> 1 <u>52</u>
100	<del>375</del> <u>400</u>	21/2	65
150	<del>568</del> <u>600</u>	21/2	65
200	<del>750</del> <u>800</u>	21/2	<del>75</del> <u>65</u>
250	950 <u>1000</u>	3	75
300	<del>1100</del> <u>1200</u>	3	75

## **Supplemental Information**

File Name Description

Table\_28.2.3.docx edited - no additional copyedit changes

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 08:44:36 EDT 2014

## **Committee Statement**

**Committee** Throughout this document, the equivalency of 1 gpm to 4 Lpm is used, and the same should be

**Statement:** used here. Revise Table 28.2.3 as seen in attachment Table 28.2.3.

Response Message:

Public Comment No. 15-NFPA 1901-2014 [Section No. 28.2.3]

## Public Comment No. 156-NFPA 1901-2014 [Section No. 28.2.3]

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

 $\label{eq:mcCullough} \mbox{McCullough, II, Thomas H.}$ 

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 81-NFPA 1901-2014 [ Section No. 28.2.4 ]

## 28.2.4\*

The pump manufacturer shall certify for each ultra-high pressure fire pump the rated capacity in gpm (L/min), rated discharge pressure in psi (kPa)-and Net Positive-Suction Head Required , and net positive suction head required (NPSHR) in ft (m) of water at  $60^{\circ}$ F ( $16^{\circ}$ C) and 29.9 in. Hg (101 kPa) atmospheric pressure (corrected to sea level) for an elevation up to 2000 feet (600 m).

### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 09:01:01 EDT 2014

## **Committee Statement**

Committee Statement: Without defining elevation, NPSHR cannot be defined.

**Response Message:** 

Public Comment No. 157-NFPA 1901-2014 [Section No. 28.2.4]

### **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 41-NFPA 1901-2014 [ Section No. 28.2.5.2 ]

#### 28.2.5.2

The requirements of 28.2.5.1 shall be met with all intake valves open, with all intakes capped or plugged, with all discharge caps removed and valves closed, and without the use of the pump primer during the 5-minute period.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 24 08:05:17 EDT 2014

## **Committee Statement**

Committee Statement: Clarification.

Response Message:

Public Comment No. 158-NFPA 1901-2014 [Section No. 28.2.5.2]

#### **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



## Second Revision No. 82-NFPA 1901-2014 [ Section No. 28.4.1 ]

#### 28.4.1

The pump body, discharge piping, and valves, excluding the tank fill line, and valves on the tank side of the valve, shall be capable of withstanding a minimum hydrostatic pressure of 1.4 times the rated discharge pressure.

## 28.4.2

The pump intake, tank fill line on the tank side of the valve, and associated plumbing and valves, excluding the tank-to-pump line on the tank side of the valve, shall be capable of withstanding a minimum hydrostatic pressure of 250 psi (1700 kPa).

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Fri Aug 01 09:09:16 EDT 2014

## **Committee Statement**

Committee The addition of this section provides criteria for the pump intake and associated plumbing and Statement:

valves so that they are not withstanding 1.4 times the discharge pressure. Revise text as shown,

add new section, and renumber accordingly.

Response Message:

Public Comment No. 130-NFPA 1901-2014 [Section No. 28.4.1]

## **Ballot Results**

## This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D. Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 83-NFPA 1901-2014 [ Section No. 28.4.2 ]

#### 28.4.3

The pump, piping, and valves shall be capable of delivering the rated capacity at  $\underline{\text{the}}$  rated discharge pressure of the pump and withstanding closure of all discharges within 3 to 7 seconds.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 09:16:50 EDT 2014

## **Committee Statement**

Committee Nozzle appliances designed to operate with UHP systems can close faster than 3 to 7

Statement: seconds.

**Response Message:** 

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 42-NFPA 1901-2014 [ Section No. 28.5.3.2 ]

## 28.5.3.2

Each external valved intake <u>larger than 1  $\frac{1}{2}$  in.</u> shall be equipped with a bleeder valve to bleed off air or water from a hose connected to the intake.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 24 08:18:14 EDT 2014

## **Committee Statement**

Committee This will match the intake requirements for regular pumps. Only larger intakes require

Statement: bleeder valves.

**Response Message:** 

Public Comment No. 104-NFPA 1901-2014 [Section No. 28.5.3.2]

#### **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 84-NFPA 1901-2014 [ New Section after 28.5.3.4 ]

## 28.5.4

The pump shall have a means to restrict debris that is too large to pass through the pump.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 09:20:19 EDT 2014

#### **Committee Statement**

Committee Statement: This requirement helps to prevent debris from entering the pump.

**Response Message:** 

Public Comment No. 34-NFPA 1901-2014 [New Section after 28.5.3]

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 86-NFPA 1901-2014 [ Section No. 28.6.1 ]

#### 28.6.1\*

Each pump discharge shall be equipped with a valve that can be controlled from the  $\underline{a}$  pump operator's position.

## **Supplemental Information**

File Name Description

A.28.6.1\_edited.docx

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 09:36:39 EDT 2014

#### **Committee Statement**

**Committee**The addition of this language clarifies that discharges such as turrets can be operated from the cab pump operator's position only. Revise annex A material as seen in attachment A.28.6.1.

Response Message:

Public Comment No. 138-NFPA 1901-2014 [Section No. 28.6.1]

#### **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 99-NFPA 1901-2014 [ Section No. 28.6.4.1 ]

## 28.6.4.1

If the apparatus has more than one discharge, the caps or closures shall be capable of withstanding closure of all discharges when initial pump controls are set to deliver rated capacity at rated discharge pressure.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 14:12:21 EDT 2014

## **Committee Statement**

Committee Statement: Remove superfluous word

Response Message:

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 43-NFPA 1901-2014 [ Section No. 28.6.5 ]

#### 28.6.5

All preconnected hose connections and preconnected hoses shall be capable of withstanding a hydrostatic gauge pressure of 1.4 times the maximum pump-close-off discharge pressure.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

**Organization:** National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 24 08:23:32 EDT 2014

## **Committee Statement**

Committee The system should be able to hold up to the maximum discharge pressure, which is value

**Statement:** that will be known.

**Response Message:** 

Public Comment No. 139-NFPA 1901-2014 [Section No. 28.6.5]

#### **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 100-NFPA 1901-2014 [ Section No. 28.6.6 ]

#### 28.6.6

All preconnected hose connections and preconnected hoses shall be capable of withstanding closure of all discharges when initial pump controls are set to deliver rated capacity at rated discharge pressure.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

**Organization:** National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 14:14:57 EDT 2014

## **Committee Statement**

Committee Statement: Remove superfluous word

**Response Message:** 

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NFPA

# Second Revision No. 44-NFPA 1901-2014 [ Section No. 28.6.7 ]

#### 28.6.7

All 1 ½ in. (38 mm) or larger discharge outlets shall be equipped with a drain or bleeder valve having a minimum ¾ in. (19 mm) pipe thread connection for draining or bleeding off pressure from a hose connected to the outlet.

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 24 08:24:21 EDT 2014

## **Committee Statement**

**Committee**UHP systems do not have handline outlets larger than 1" because the flow rates at high pressure would be too large to control. These hoses are more like hydraulic lines than traditional fire hoses,

so bleeder valves are not recommended.

Response Message:

Public Comment No. 107-NFPA 1901-2014 [Section No. 28.6.7]
Public Comment No. 16-NFPA 1901-2014 [Section No. 28.6.7]
Public Comment No. 128-NFPA 1901-2014 [Section No. 28.6.7]

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D. Cranfill, Jeff Darley, Peter F.

3,

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 87-NFPA 1901-2014 [ Section No. 28.6.10 ]

#### 28.6.10

All 1 in. (25 mm) or larger discharge outlets, except outlets to which a hose will be preconnected, shall be equipped with a drain or bleeder valve for draining or bleeding off pressure connected to the outlet.

## **Supplemental Information**

File Name Description

A.28.8.6.1\_edited.docx

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 09:55:22 EDT 2014

#### Committee Statement

Committee

Delete section. UHP hose is more like hydraulic hose and must be preconnected to for a tight

Statement:

connection. Bleeder valves are prone to leakage and are not recommended.

Annex A material associated with 28.6.10 will now be associated with 28.8.6.1.

Renumber annex A material accordingly and edit as shown in attachment A.28.6.1.

# Response Message:

Public Comment No. 27-NFPA 1901-2014 [Section No. A.28.6.10]

Public Comment No. 39-NFPA 1901-2014 [New Section after 28.8.7]

Public Comment No. 41-NFPA 1901-2014 [New Section after 28.6.10]

Public Comment No. 108-NFPA 1901-2014 [Section No. 28.6.10]

Public Comment No. 159-NFPA 1901-2014 [Section No. 28.6.10]

## **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# Second Revision No. 88-NFPA 1901-2014 [ Section No. 28.7.3 ]

#### 28.7.3

One safety sign warning Safety sign FAMA25, which warns of the need for training prior to operating the apparatus, that is substantially similar to FAMA2 from FAMA TC010, Standard Product Safety Sign Catalog for Automotive Fire Apparatus, shall be located on the pump operator's panel.

# 28.7.4

Safety sign FAMA20, which warns of the hazards of ultra-high pressure, shall be located in a visible location adjacent to any discharge outlet.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 10:29:21 EDT 2014

# **Committee Statement**

Committee Statement: Clarifies unenforceable language and incorporates correct FAMA symbol reference.

Response Message:

Public Comment No. 28-NFPA 1901-2014 [Section No. 28.7.3]

# **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D. Cranfill, Jeff Darley, Peter F. Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 85-NFPA 1901-2014 [ Section No. 28.8.1 ]

28.8.1\*

Controls shall be provided for placing the pump in operation.

# **Supplemental Information**

**File Name Description** 

A.28.8.1\_edited.docx

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

National Fire Protection Assoc Organization:

**Street Address:** 

City: State: Zip:

**Submittal Date:** Fri Aug 01 09:30:23 EDT 2014

#### Committee Statement

Most smalll UHP systems provide a valve on the control panel to allow starting without building Committee Statement:

discharge pressure in the pump system. Add new annex A material as seen in attachment

A.28.8.1

Response Message:

Public Comment No. 37-NFPA 1901-2014 [New Section after 28.6]

# **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 45-NFPA 1901-2014 [ Section No. 28.8.3 ]

#### 28.8.3 Parallel/Series Control.

28.8.3.1

With parallel/series pumps, the positions for parallel operation (volume) and series operation (pressure) shall be indicated.

28.8.3.2

The control for changing the pump from series to parallel and vice versa shall be located on the pump

# Submitter Information Verification

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 24 08:39:50 EDT 2014

#### **Committee Statement**

Committee Delete section. This section is not relevant to an Ultra High Pressure pump. For positive Statement: displacement pump (most UHP systems), series connection would not help, although parallel systems are occasionally used for increased volume capacity. For centrifugal UHP pumps, series connections are often used to achieve UHP, but a parallel connection of these same pumps would no longer be a UHP pump. Series connections of 2 centrifugal UHP pumps would produce such a high

pressure that a completely different system would be required and would not be practical.

Response Message:

Public Comment No. 29-NFPA 1901-2014 [Section No. 28.8.3]

#### **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# Second Revision No. 89-NFPA 1901-2014 [ Section No. 28.8.7 ]

# 28.8.6 Pump Cooling.

A pump cooling/recirculation line of sufficient size to prevent the pump from overheating when no discharge lines are open shall be provided between the pump discharge and the water tank.

See SR-87

#### 28.8.6.1\*

A pump cooling/recirculation line of sufficient size to prevent the pump from overheating when no discharge lines are open shall be provided between the pump discharge and the water tank.

# 28.8.6.2

Where the pump is of a positive displacement type an automatic bypass relief valve shall be permitted to be provided in place of the recirculation line.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 10:39:52 EDT 2014

# **Committee Statement**

**Committee** A recirculation line is good for centrifugal pumps, for positive displacement pumps an

**Statement:** automatic bypass relief valve is required.

Response Message:

Public Comment No. 129-NFPA 1901-2014 [Section No. 28.8.7]

## **Ballot Results**

## This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

## **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# Second Revision No. 46-NFPA 1901-2014 [ Section No. 28.9.3 ]

#### 28.9.3

If a separate pumping engine is provided, it shall meet the requirements of 12.2.1.1, 12.2.1.2, 12.2.1.7, 12.2.2, 12.2.3.1, 12.2.3.2, 12.2.4, 12.2.5, 12.2.6, Section 13.2, 13.4.3, 13.4.4, 13.4.4.1, 13.4.4.3, 13.4.4.4, 13.4.5, and Section 13.5.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Thu Jul 24 08:46:18 EDT 2014

# **Committee Statement**

Committee 12.2.6 Exhaust Systems is included in the requirements in chapter 17 for separate pumping

**Statement:** engines and is applicable here as well.

Response Message:

Public Comment No. 18-NFPA 1901-2014 [Section No. 28.9.3]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# Affirmative All

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# Second Revision No. 90-NFPA 1901-2014 [ Section No. 28.10 ]

28.10\* Engine Controls.

28.10.1

A throttle control shall be provided to control the engine speed.

28 10 2

This throttle control shall be permitted to be the same throttle control that is used for the main fire pump.

# **Supplemental Information**

File Name Description

A.28.10\_edited.docx

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 10:48:07 EDT 2014

# **Committee Statement**

**Committee**Add new annex A material as seen in attachment A.28.10. The new annex material provides **Statement:**useful guidance to avoid issues caused by the UHP system operating outside of established

parameters.

Response Message:

Public Comment No. 40-NFPA 1901-2014 [New Section after 28.9.3]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

## **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

**Affirmative All** 

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# Second Revision No. 91-NFPA 1901-2014 [ Section No. 28.11 ]

# 28.11 Gauges and Instruments.

### 28.11.1 Master Pump Discharge Pressure Gauge.

A master discharge pressure gauge shall be provided.

#### 28 11 1 1

The master discharge pressure gauge shall read from a gauge pressure of 0 to not less than 500 psi (3500 kPa) higher than the maximum pressure that can be developed by the pump when it is operating with zero intake pressure.

#### 28.11.1.2

Where an analog pressure gauge is used, it shall have a minimum accuracy of Grade 1A as defined in ASME B40.100, *Pressure Gauges and Gauge Attachments*.

#### 28.11.1.2.1

Numerals for master gauges shall be a minimum 0.25 in. (6.4 mm) high.

## 28.11.1.2.2

There shall be graduation lines showing at least every 50 psi (350 200 kPa), with major and intermediate graduation lines emphasized and figures at least every 500 psi (700 2000 kPa).

#### 28.11.1.2.3

Analog pressure gauges shall be vibration and pressure pulsation dampened; be resistant to corrosion, condensation, and shock; and have internal mechanisms that are factory lubricated for the life of the gauge.

#### 28.11.1.3

If a digital pressure gauge is used, the digits shall be at least 0.25 in. (6.4 mm) high.

#### 28.11.1.3.1

Digital pressure gauges shall display pressure in increments of not more than 40 50 psi (70 200 kPa).

#### 28.11.1.3.2

Digital master pressure gauges shall have an accuracy of ±3 percent over the full scale.

# 28.11.2 Discharge Outlet Instrumentation.

If the apparatus is equipped with two or more discharge outlets that are 1 ½ in. (38 mm) or larger and that can be supplied only by the ultra-high pressure fire pump, these discharge outlets shall be equipped with pressure gauges or flowmeters.

# 28.11.2.1

The pressure gauge or flowmeter display shall be located adjacent to the corresponding valve control with no more than 6 in. (150 mm) separating the pressure gauge or flowmeter bezel and the valve control centerline.

#### 28.11.2.2

Pressure gauges shall be connected to the outlet side of the valve.

#### 28.11.2.3

Flowmeters shall display flow in increments not greater than 5 gpm (19 L/min).

# <del>28.11.2.4</del>

Where an analog pressure gauge is used, the gauge shall have a minimum accuracy of Grade B as defined in ASME B40.100, Pressure Gauges and Gauge Attachments.

# 28.11.2.4.1

Numerals for gauges shall be a minimum 5/32 -in. (4 mm) high.

#### 28.11.2.4.2

There shall be graduation lines showing at least every 50 psi (70 kPa), with major and intermediate graduation lines emphasized and figures at least every 500 psi (3500 kPa).

#### 28.11.2.4.3

Analog pressure gauges shall be vibration and pressure pulsation dampened; be resistant to corrosion, condensation, and shock; and have internal mechanisms that are factory lubricated for the life of the gauge.

#### 28.11.2.5

If a digital pressure gauge is used, the digits shall be at least 0.25 in. (6.4 mm) high.

28.11.2.5.1

Digital pressure gauges shall display pressure in increments of not more than 10 psi (70 kPa).

28.11.2.5.2

Digital pressure gauges shall have an accuracy of ±3 percent over the full scale.

28.11.2 Protection of Gauges and Instruments.

Each pressure gauge or flowmeter and its respective display shall be mounted and attached so it is protected from accidental damage and excessive vibration.

28.11.3\* Cab Gauges.

If the pump on the apparatus is driven by the chassis engine through a PTO, and the apparatus is designed for pump-and-roll operations using that chassis engine-driven pump, a second gauge that meets the same requirements as the discharge pressure gauge required by 28.11.1 shall be mounted in the driving compartment in view of the driver.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 10:58:18 EDT 2014

# **Committee Statement**

Committee Statement:

Reason for change in 28.11.1.3.1, when working at pressures over 1000 psi, resolution to 10 psi is not needed. Delete 28.11.2 and subsets, UHP discharges are not throttled, so there is no need for individual line gauges. In addition, it is unlikely there would be a UHP handline larger than 1" because it would be very difficult to handle or control. Additional edits to 28.11.4, the driver should know what the pump is doing for any pump and roll operations. Delete 28.11.2 and subsets and renumber accordingly.

# Response

Message:

Public Comment No. 19-NFPA 1901-2014 [Section No. 28.11]

Public Comment No. 109-NFPA 1901-2014 [Section No. 28.11.2 [Excluding any Sub-Sections]]

Public Comment No. 141-NFPA 1901-2014 [Section No. 28.11.2.2]

Public Comment No. 160-NFPA 1901-2014 [Section No. 28.11.1.3.1]

Public Comment No. 161-NFPA 1901-2014 [Section No. 28.11.2.3]

Public Comment No. 162-NFPA 1901-2014 [Section No. 28.11.2.5.1]

Public Comment No. 163-NFPA 1901-2014 [Section No. 28.11.4]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# Second Revision No. 92-NFPA 1901-2014 [ Section No. 28.12.1.1 ]

#### 28.12.1.1 General.

The <u>UHP</u> pump shall be tested after the pump and all its associated piping and equipment have been installed on the fire apparatus.

#### 28.12.1.1.1

The testing shall include at least the water tank-to-pump flow 30-minute pumping test in 28.12.5, the 30-minute pumping the pressure control test in 28.12.728.12.7 28.12.6, priming system the gauge and flowmeter test in 28.12.1128.12.11 28.12.8, the vacuum manufacturer's predelivery test in 28.12.1228.12.12 28.12.9, the gauge and flowmeter and the water tank capacity test in 28.12.1328.12.13 28.12.11, the piping integrity test in 28.12.12.1, and the water tank capacity test in 28.12.13.

# 28.12.1.1.2

If the 30-minute pumping test is not performed from the apparatus water tank, the water tank-to-pump flow test in 28.12.6 shall be included.

# 28.12.1.1.3

If the pumping system is equipped with a priming system, the priming system test in 28.12.8 and the vacuum test in 28.12.9 shall be included.

#### 28.12.1.1.4

If the fire <u>UHP</u> pump is driven by the chassis engine, the engine speed advancement interlock test in 28.12.10 shall be included.

#### 28.12.1.1.5

The test results shall be certified by the manufacturer.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 11:24:33 EDT 2014

#### **Committee Statement**

Committee Most UHP system are low volume systems < 300 gpm. Since they will be supplied from the

**Statement:** tank, measuring the

rating of the pump is the same as measuring the flow rate from the tank, and a separate

tank-to-pump flow test is not required.

# Response Message:

Public Comment No. 21-NFPA 1901-2014 [Section No. 28.12]

# **Ballot Results**

This item has passed ballot

30 Eligible Voters

- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 93-NFPA 1901-2014 [ Section No. 28.12.1.2.1 ]

# 28.12.1.2.1

A test label shall be provided at the pump operator's position that gives the rated discharges and pressures and, if so equipped, the position of the parallel/series pump control.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 11:37:05 EDT 2014

# **Committee Statement**

Committee Statement: Parallel/Series pump control not relevant to UHP pumps (See Public Comment 29).

**Response Message:** 

Public Comment No. 30-NFPA 1901-2014 [Section No. 28.12.1.2.1]

# **Ballot Results**

# This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 118-NFPA 1901-2014 [ Section No. 28.12.2.3.1 ]

#### 28.12.2.3.1

If the chassis engine drives the  $\underline{\mathsf{UHP}}$  pump, the total continuous electrical loads, excluding those loads associated with the equipment defined in 28.12.2.3.3, shall be applied for the entire pumping portion of this test.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 16:21:13 EDT 2014

# **Committee Statement**

Committee Statement: Clarifying language.

Response Message:

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# Affirmative All

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 94-NFPA 1901-2014 [ Section No. 28.12.2.3.2 ]

#### 28.12.2.3.2

If the vehicle is equipped with a fixed power source driven by the same engine that drives the ultra-high pressure fire pump, it the fixed power source shall be running at a minimum of 50 percent of its rated capacity throughout the pumping portion of the pump test.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 11:40:45 EDT 2014

# **Committee Statement**

**Committee Statement:** This pertains to the fixed power source such as the generator. Clarifying language **Response Message:** 

Public Comment No. 164-NFPA 1901-2014 [Section No. 28.12.2.3.2]

### **Ballot Results**

### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NFPA

# Second Revision No. 47-NFPA 1901-2014 [ Section No. 28.12.3.1 ]

# 28.12.3.1

One or more lines of fire <u>UHP</u> hose of sufficient diameter shall be provided to allow discharge of the rated capacity of the pump without exceeding a flow velocity of 35 ft/sec (10.7 m/sec) through the hose.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 24 09:23:17 EDT 2014

# **Committee Statement**

Committee Fire hose (per NFPA 1961) does not include the hoses typically used with UHP systems, so

**Statement:** the term Fire Hose should not be used here.

Response Message:

Public Comment No. 22-NFPA 1901-2014 [Section No. 28.12.3.1]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 95-NFPA 1901-2014 [ Sections 28.12.5, 28.12.6 ]

# 28.12.5 Water Tank-to-Pump Flow Test.

# 28.12.5.1

The water tank—to—pump flow test shall be performed with water being supplied from the apparatus water tank to verify the rated capacity and rated discharge pressure capability of the apparatus.

#### 28.12.5.2

The water tank-to-pump flow test shall be conducted as follows:

The apparatus shall be placed on level ground and the water tank filled until it overflows.

All intakes to the pump shall be closed.

The tank fill line shall be closed.

A hose line(s) and nozzle(s) for discharging water at the rated pump capacity flow rate shall be connected to one or more discharge outlets.

The water tank—to—pump valve(s) and the discharge valve(s) leading to the hose line(s) and nozzle(s) shall be opened.

The pumping system shall be operated and adjusted as required until the rated pump capacity flow rate, -0/+5 percent, at the rated discharge pressure is established.

The discharge pressure shall be recorded.

The discharge valves shall be closed and the water tank refilled.

The bypass cooling line shall be permitted to be opened temporarily, if needed, to keep the water temperature in the pump within acceptable limits.

The discharge valves shall be reopened and the time noted.

If necessary, the pumping system shall be adjusted to maintain the discharge pressure recorded as noted in 28.12.5.2(6) -

The pumping system shall be operated at these conditions for 30 minutes or the discharge pressure drops by 100 psi (700 kPa) or more, at which time the time shall be noted and the elapsed time from the opening of the discharge valves shall be calculated and recorded.

# 28.12.5.3 Volume Discharge Calculation.

# 28.12.5.3.1

The volume discharged shall be calculated by multiplying the rate of discharge in gallons per minute (liters per minute) by the time in minutes elapsed from the opening of the discharge valves until the discharge pressure drops by at least 100 psi (700 kPa).

#### 28.12.5.3.2

Other means shall be permitted to be used to determine the volume of water pumped from the tank such as a totalizing flowmeter, weighing the truck before and after, or refilling the tank using a totalizing flowmeter.

## 28.12.5.3.3

The flow rate shall be maintained for 30 minutes or until 80 percent of the rated capacity of the tank has been discharged.

# 28.12.5 Thirty-Minute Pumping Test.

# 28.12.5.1

The UHP pump shall be subjected to a 30-minute pumping test consisting of continuous pumping at rated capacity at rated pump discharge pressure.

### 28.12.5.2

The 30-minute pumping test shall be permitted to be performed from the apparatus water tank with provisions to maintain tank level during the duration of the test.

#### 28.12.5.3

The 30-minute pumping test shall be permitted to be performed with water supplied to the pump intake from a separate water supply that provides positive pressure to the pump intake.

#### 28.12.5.4

If the 30-minute pumping test is performed with water supplied to the pump that provides positive pressure at the pump intake, the net pump pressure shall be equal to the rated pump discharge pressure.

#### 28.12.5.5

The 30-minute pumping test shall be permitted to be run at a test site that provides a supply of clear water and is close enough to allow the suction strainer to be submerged at least 2 ft (0.6 m) below the surface of the water when connected to the pump by a minimum of 10 ft (3 m) of suction hose.

#### 28.12.5.6

If the pump is stopped before the test is completed, the entire pump test shall be repeated.

#### 28.12.5.7\*

The flow discharge pressure, intake pressure, and engine speed shall be recorded at least every 15 minutes but not fewer than three times for each test sequence.

#### 28.12.5.8

The average net pump pressure shall be calculated and recorded based on the average values for discharge and intake pressure.

28.12.6 30-Minute Pumping Test.

### 28.12.6.1

The pump shall be subjected to a 30-minute pumping test consisting of continuous pumping at rated capacity at rated pump discharge pressure.

#### 28.12.6.2

The 30-minute pumping test shall be permitted to be performed from the apparatus water tank with provisions to maintain tank level during the duration of the test.

#### 28.12.6.3

The 30-minute pumping test shall be permitted to be performed with water supplied to the pump intake from separate water supply that provides a positive pressure to the pump intake.

# 28.12.6.4

If the 30-minute pumping test is performed with water supplied to the pump that provides a positive pressure at the pump intake, the net pump pressure shall be equal to the rated pump discharge pressure.

# 28.12.6.5

The 30-minute pumping test shall be permitted to be run at a test site that provides a supply of clear water and close enough to allow the suction strainer to be submerged at least 2 ft (0.6 m) below the surface of the water, when connected to the pump by a minimum of 10 ft (3 m) of suction hose.

# 28.12.6.6

If the pump is stopped before the test is completed, the entire pump test shall be repeated.

# 28.12.6.7

The flow discharge pressure, intake pressure, and engine speed shall be recorded at least every 15 minutes but not fewer than three times for each test sequence.

#### 28.12.6.8

The average net pump pressure shall be calculated and recorded based on the average values for discharge and intake pressure.

# 28.12.6 Water Tank-to-Pump Flow Test.

# <u>28.12.6.1</u>

If the 30-minute pumping test in <u>28.12.5</u> is not performed from the apparatus water tank, a water tank—to—pump flow test shall be performed with water supplied from the apparatus water tank to verify the tank to pump flow capability.

#### 28.12.6.2

The test shall consist of 5 minutes of continuous pumping at rated capacity at rated pump pressure taking water from the apparatus water tank.

# 28.12.6.3

The flow, discharge pressure, and engine speed shall be recorded at the beginning and end of the test.

# **Supplemental Information**

<u>File Name</u> <u>Description</u>

28.12.5\_through\_28.12.6\_edited.docx

A.28.12.5.7\_edited.docx

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 11:48:25 EDT 2014

# **Committee Statement**

**Committee** Delete existing 28.12.5 and 28.12.6 and replace text as seen in attachment 28.12.5 through

**Statement:** 28.12.6.

Most UHP system are low volume systems < 300 gpm. Since they will be supplied from the tank, measuring the rating of the pump is the same as measuring the flow rate from the tank, and a separate tank to pump flow test is not required.

separate tank-to-pump flow test is not required.

Add new annex A material as seen in attachment A.28.12.5.7

# Response Message:

Public Comment No. 110-NFPA 1901-2014 [Section No. 28.12.3.3.2]
Public Comment No. 111-NFPA 1901-2014 [Section No. 28.12.5]

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 96-NFPA 1901-2014 [ Section No. 28.12.7 ]

# 28.12.7 Pressure Control Test.

At the <u>pump-rated pump-rated</u> flow and pressure for pumps with two or more discharges, the pump system shall be tested for pressure rise as follows:

- (1) The pump shall be operated at rated capacity and rated discharge gauge pressure.
- (2) If a pressure control system is supplied, it shall maintain the rated discharge gauge pressure within ±5 10 percent, or if it is adjustable, it shall be set in accordance with the manufacturer's instructions to maintain the rated discharge gauge pressure within ±5 10 percent.
- (3) All discharge valves shall be closed not more rapidly than in 3 seconds and not more slowly than in 7 seconds.
- (4) The rise in discharge pressure shall not exceed 10 percent of the rated discharge pressure and shall be recorded.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Fri Aug 01 13:19:03 EDT 2014

# **Committee Statement**

Committee Statement: This figure matches 28.8.4.1

Response Message:

Public Comment No. 165-NFPA 1901-2014 [Section No. 28.12.7]

# **Ballot Results**

## This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# Second Revision No. 119-NFPA 1901-2014 [ Section No. 28.12.8 [Excluding any

# Sub-Sections]]

If the <u>UHP</u> pumping system is equipped with a priming system, it shall be operated in accordance with the manufacturer's instructions until the pump has been primed and is discharging water.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

**Organization:** National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 16:23:58 EDT 2014

# **Committee Statement**

Committee Statement: Clarifying language.

**Response Message:** 

# **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

# **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



# Second Revision No. 97-NFPA 1901-2014 [ Section No. 28.12.8.1 ]

#### 28.12.8.1\*

This test shall be run at a test site that provides a supply of clear water and <u>is</u> close enough to allow 10 ft (3 m) of suction hose of the size specified in Table 28.2.3 and equipped with a suction hose strainer to be connected to the pump intake to be submerged at least 2 ft (0.6 m) below the surface of the water, with the water level <u>at least</u> 3 ft (0.91 m) below the center of the pump intake corrected for the following conditions:

- (1) At an altitude of 2000 ft (600 m) above sea level
- (2) At 29.9 in. Hg (101 kPa) atmospheric pressure (corrected to sea level)
- (3) At a water temperature of 60°F (16°C) 60°F (16°C)

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 13:26:43 EDT 2014

# **Committee Statement**

Committee Statement:

The words "at least: are needed in many cases. If the pump were on a flat bed with the intake 48" above the ground, as written the truck would have to be partially (12") submersed in the water supply to run the test as written. The other requirements in the sentence include "at least".

Response Message:

Public Comment No. 23-NFPA 1901-2014 [Section No. 28.12.8.1]

# **Ballot Results**

## This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

**Affirmative All** 

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

rtantz, rtoviii i .

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# Second Revision No. 105-NFPA 1901-2014 [ Section No. 28.12.9 [Excluding any

# Sub-Sections]]

If the <u>UHP</u> pumping system is equipped with a priming system, a vacuum test shall be performed that consists of subjecting the interior of the pump, with all intake valves open, <u>with</u> all intakes capped or plugged, and <u>with</u> all discharge caps removed, to a vacuum of 17 in. Hg (57.6 kPa) by means of the pump priming system.

# **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 15:14:54 EDT 2014

# **Committee Statement**

**Committee** Grammar correction. As written, the caps have to be removed to a vacuum. With the semicolon, **Statement:** the interior of the pump has to be subjected to a vacuum (with further subordinate conditions).

Response Message:

Public Comment No. 26-NFPA 1901-2014 [Section No. 28.12.9 [Excluding any Sub-Sections]]

#### **Ballot Results**

# ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

# **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

# Affirmative All

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

# NEPA

### Second Revision No. 120-NFPA 1901-2014 [ Section No. 28.12.10 ]

#### **28.12.10**\* Engine Speed Advancement Interlock Test.

If the <u>UHP</u> pump is driven by the chassis engine, the engine speed advancement interlock system shall be tested to verify that engine speed cannot be increased at the pump operator's panel unless there is throttle-ready indication.

#### 28.12.10.1

If the apparatus is equipped with a stationary <u>UHP</u> pump driven through <u>a</u> <u>split-shaft</u> <u>split shaft</u> PTO, the test shall verify that the engine speed control at the pump operator's panel cannot be advanced when either of the following conditions exists:

- (1) The chassis transmission is in neutral, the parking brake is off, and the <u>UHP</u> pump shift in the driving compartment is in the road position.
- (2) The chassis transmission has been placed in the position for pumping as indicated on the label provided in the driving compartment, the parking brake is on, and the <u>UHP</u> pump shift in the driving compartment is in the road position.

#### 28.12.10.2

If the apparatus is equipped with a stationary <u>UHP</u> pump driven through a transmission-mounted PTO, front-of-engine crankshaft PTO, or engine flywheel PTO, the test shall verify that the engine speed control on the pump operator's panel cannot be advanced when either of the following conditions exists:

- (1) The chassis transmission is in neutral, the parking brake is off, and the <u>UHP</u> pump shift status in the driving compartment is disengaged.
- (2) The chassis transmission is in any gear other than neutral, the parking brake is on, and the <u>UHP</u> pump shift in the driving compartment is in the "Pump Engaged" position.

#### 28.12.10.3

If the apparatus is equipped with a <u>UHP</u> pump driven by the chassis engine designed for both stationary pumping and pump-and-roll, the test shall verify that the engine speed control at the pump operator's panel cannot be advanced when any of the following conditions exists:

- (1) The chassis transmission is in neutral, the parking brake is off, and the <u>UHP</u> pump shift status in the driving compartment is disengaged.
- (2) The chassis transmission is in any gear other than neutral, the parking brake is on, and the <u>UHP</u> pump shift in the driving compartment is in the "Pump Engaged" position.
- (3) The chassis transmission is in any gear other than neutral, the parking brake is off, the <u>UHP</u> pump shift in the driving compartment is in the "Pump Engaged" position, and the "OK to Pump-and-Roll" indicator is on.

#### 28.12.10.4

If the apparatus is equipped with a stationary <u>UHP</u> pump driven through <u>a</u> transfer case PTO, the test shall verify that the engine speed control on the pump operator's panel cannot be advanced when one of the following conditions exists:

- (1) The chassis transmission is in neutral, the transfer case is in neutral, the parking brake is off, and the <u>UHP</u> pump shift in the driving compartment is in the road position.
- (2) The chassis transmission is in neutral, the transfer case is engaged, the parking brake is off, and the <a href="UHP"><u>UHP</u></a> pump shift in the driving compartment is in the road position.
- (3) The chassis transmission has been placed in the position for pumping as indicated on the label provided in the driving compartment, the parking brake is on, and the <u>UHP</u> pump shift in the driving compartment is in the road position.

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 16:26:19 EDT 2014

#### **Committee Statement**

Committee Statement: Clarifying language.

**Response Message:** 

#### **Ballot Results**

## ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G. Terefinko, John M. Tull, Richard Wilde, Stephen Yohn, William H.

# NEPA

## Second Revision No. 98-NFPA 1901-2014 [ Sections 28.12.12.1, 28.12.12.2, 28.12.12.3,

#### 28.12.12.4]

#### 28.12.12.1 Piping Integrity Test.

The <u>UHP</u> pump and its connected piping system shall be subjected to either <u>both</u> a hydrostatic test per 28.12.12.2er <u>and a</u> hydrodynamic test per 28.12.12.3.

#### 28.12.12.2 Hydrostatic Test.

All system plumbing that will be exposed to rated pump discharge pressure shall be hydrostatically tested to at least 1.4 times the rated pump discharge pressure.

#### 28.12.12.2.1

The following system components shall not be required to be hydrostatically tested under this section:

- (1) Pump intake plumbing
- (2) Portions of a discharge path that vent to atmosphere
- (3) The pump body and any permanently mounted plumbing supplied by the pump manufacturer

#### 28.12.12.2.2

If the complete plumbing system is capable of withstanding the hydrostatic test pressure, or if the items listed in 28.12.12.21 can be isolated from hydrostatic test pressure through the use of permanently installed valves, the test procedure shall be as follows:

- (1) Establish the system boundaries by shutting all valves to components listed in 28.12.12.2.1 . All other valves must be open with the discharge outlet capped, plugged, flanged, or otherwise sealed.
- (2) Fill the system with water and bleed all air from the system.
- (3) <u>Use a hydrostatic test pump to establish a test pressure of at least 1.4 times the rated pump discharge pressure.</u>
- (4) Maintain the hydrostatic test pressure for at least 3 minutes.

#### 28.12.12.2.3

If the design of the system will not allow the components listed in 28.12.12.2.1 to be isolated from hydrostatic test pressure when installed on the completed apparatus, and such components are not designed to withstand hydrostatic test pressure, the hydrostatic test shall be permitted to be performed on the discharge plumbing prior to installation on the apparatus.

#### <u>28.12.12.2.3.1</u>

The plumbing connections that connect to the components listed in <u>28.12.12.2.1</u> shall be capped or plugged during the hydrostatic test.

#### 28.12.12.2.3.2

Once the section is isolated, the test procedure shall be as listed in 28.12.12.2.2(2) through 28.12.12.2.2(4) .

#### 28.12.12.3

As installed on the apparatus, all piping that will be exposed to rated pump discharge pressure shall be hydrodynamically tested.

#### 28.12.12.3.1

The test procedure shall be as follows:

- (1) Establish the system boundaries by shutting all discharge valves
- (2) Establish a water supply to the UHP pump, either from the tank or from an external source
- (3) Fill the system with water and bleed all air from the system
- (4) <u>Use the UHP pump to establish the maximum pump discharge pressure without disabling relief</u> valves, governors, or automatic shutdown systems
- (5)\* Conduct the hydrodynamic test, which can be conducted with a bypass valve, relief valve, or discharge valve open as necessary to maintain pump temperature during the test
- (6) Maintain the hydrodynamic test pressure for a minimum of 5 minutes
- (7) Verify there is no leakage in any of the plumbing

#### 28.12.12.3.2

The hydrodynamic test in 28.12.12.3.1 shall be permitted to be performed in conjunction with the 30-minute pumping test in 28.12.5.

#### 28.12.12.2

If the pump and its connected piping system are subjected to a hydrostatic test, they shall be hydrostatically tested to a gauge pressure of 1.4 times the rated pump discharge pressure.

#### 28.12.12.2.1

The hydrostatic test shall be conducted with the tank fill line valve, the tank–to–pump valve closed, and the pump bypass line return to the water tank disconnected and capped.

#### 28.12.12.2.2

The hydrostatic test shall be conducted with all discharge valves open and the outlets capped.

#### 28.12.12.2.3

The hydrostatic test shall be conducted with all external intakes capped and intake valves left open in external intakes equipped with valves.

#### 28.12.12.2.4

The hydrostatic test pressure shall be maintained for 3 minutes.

#### 28.12.12.4

If the pump and its connected piping system are subjected to a hydrodynamic test, they shall be hydrodynamically tested to a gauge pressure of 1.4 times the rated pump discharge pressure.

#### 28.12.12.5

The hydrodynamic test pressure shall be maintained for 3 minutes.

#### Supplemental Information

#### File Name

#### **Description**

A.28.12.12.3.1\_5\_edited.docx

28.12.12.1\_through\_28.12.12.3.2\_edited.docx

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 13:49:38 EDT 2014

#### **Committee Statement**

Committee Statement:

Delete text and replace as seen in attachment 28.12.12.1 through 28.12.12.3.2. Original procedure could not be accomplished on all pumps depending on the type of pump and the configuration of the intake and discharge plumbing. The test durations are deemed adequate.

Add new annex A material as seen in attachment A.28.12.12.3.1(5)

## Response Message:

Public Comment No. 25-NFPA 1901-2014 [Section No. 28.12.12.2.1]

Public Comment No. 112-NFPA 1901-2014 [Section No. 28.12.12.2.4]

Public Comment No. 166-NFPA 1901-2014 [Section No. 28.12.12.3]

Public Comment No. 113-NFPA 1901-2014 [Section No. 28.12.12.4]

#### **Ballot Results**

#### ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Vational	Fire	Protection	Association	Report
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Tull, Richard	
Wilde, Stephen	
Yohn, William H.	



## Second Revision No. 48-NFPA 1901-2014 [ Section No. 28.12.13.3.1 ]

#### 28.12.13.3.1

If the totalizing flowmeter is connected to a discharge valve, the valve shall be opened and the unit run at between 25 50 and 35 100 percent of the pump's rated flow until it automatically shuts down or the pressure drops below 1000 psi (7000 kPa).

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

National Fire Protection Assoc Organization:

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 24 10:23:06 EDT 2014

#### **Committee Statement**

Committee Statement: Many UHP systems run a single line and a nozzle that is matched to the pump. 25%-35% is both difficult to achieve and very slow. A typical NFPA 1901 test corresponding to this test takes 1-3 minutes. At written this test for a 8gpm pump x 25% with 100 gal. tank would take 50 minutes. At typical UHP system flows, discharging even 100% of the rated flow should not create significant turbulence or air suction in the tank, and virtually none at 50%.

Response Message:

Public Comment No. 24-NFPA 1901-2014 [Section No. 28.12.13.3.1] Public Comment No. 143-NFPA 1901-2014 [Section No. 28.12.13.4.1]

Public Comment No. 144-NFPA 1901-2014 [Section No. 28.12.13.4.1]

#### **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C. Chestnut, Wesley D. Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



## Second Revision No. 102-NFPA 1901-2014 [ Section No. A.3.3.166 ]

A.3.3.169 Standard Cubic Feet per Minute (SCFM).

Standard temperature is 60°F (15°C), and standard pressure is 14.696 psi (101.33 kPa) or 29.92 in. Hg (760 mm Hg).

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

**Organization:** National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 14:40:59 EDT 2014

#### **Committee Statement**

Committee Statement: Information already provided in definition.

**Response Message:** 

#### **Ballot Results**

#### ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



## Second Revision No. 124-NFPA 1901-2014 [ Section No. A.4.17.5 ]

#### A.4.17.5

The variations in the brake performance testing requirements reflect the differences between Federal Motor Vehicle Safety Standard 49 CFR 571. 105 -105, "Hydraulic and Electric Brake Systems," and Federal Motor Vehicle Safety Standard 49 CFR 571. 121 -121, "Air Brake Systems."

#### **Submitter Information Verification**

Submitter Full Name: Michael Beady
Organization: [ Not Specified ]

**Street Address:** 

City: State: Zip:

Submittal Date: Mon Sep 08 09:57:18 EDT 2014

#### **Committee Statement**

Committee Statement: Reference update

Response Message:

#### **Ballot Results**

#### ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



## Second Revision No. 103-NFPA 1901-2014 [ Section No. A.14.1.7.1 ]

#### A.14.1.7.1

The H point is the mechanically hinged hip point of the torso and thigh on the devices used in defining and measuring vehicle seating accommodation in SAE J826, *Devices for Use in Defining and Measuring Vehicle Seating Accommodation*. It is an imaginary point located in two-dimensional space above the seat cushion. The H point is measured using a tool that simulates human hips and torso of a specific size and weight. The H point will vary with the size, shape, and material of the seat back, seat frame, and seat cushion. If the H point measurement is not available, it can be approximated by measuring 5 in. (130 mm) ahead of the seat back and 3 in. (75 mm) up from the nondepressed seat cushion surface.

Suspension-style seats have been developed for long-haul truck operations where the operator is driving for many hours at a time. Acceleration and braking are controlled, with an eye to fuel economy. The suspension-style seat in this duty profile provides a smoother ride and reduces fatigue from long hours in the seats. In contrast, the operator of a fire apparatus typically is making short runs with fast acceleration, quick maneuvers, and sudden braking. The bouncing motion of the suspension seat could hinder the driver's ability to maintain precise control of the throttle, brake, steering wheel, and other driving controls.

Selection of seating options should be made with consideration to the frequency of time that the driver will spend in the vehicle each day, and whether the fire department standard operating procedure (SOP) requires or encourages the occupant of the seat to be equipped with strictly enforces not wearing head gear during travel. The use of headgear reduces headroom and increases the chance of injury should the vehicle encounter unexpected road undulation or speed bumps. The effect of such road conditions during high-speed operation might be intensified by the action of a seat suspension. Potential for injury is greatly increased by failure to use or properly adjust the seat belt.

Proper seat adjustment is another issue that should be addressed by the fire department SOPs if apparatus are equipped with suspension seats. Too much pressure in a suspension seat air bag will reduce static headroom height and will negate the potential benefits of the suspension. Too little pressure will cause the seat to bounce excessively. The proper amount of pressure is dependent on the weight of the occupant. Departments where multiple drivers share an apparatus should recognize that adjustments need to be made between each shift. Seat adjustment should not be postponed until the driver is exiting the station on the way to a call.

#### Submitter Information Verification

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Fri Aug 01 14:45:36 EDT 2014

#### **Committee Statement**

Committee Statement:

Both NFPA 1901 and NFPA 1500 say that headgear should not be worn. The wording here should be based on the assumption that this s correct but might not be followed in all departments. The existing wording is obsolete and contradicts these other statements in 1901 and 1500.

This was originally submitted as Public Input No. 93-NFPA 1901-2013. It was not processed and so was published as Committee Input 252.

so was published as Committee input 25

Response Message:

Public Comment No. 95-NFPA 1901-2014 [Section No. A.14.1.7.1]

#### **Ballot Results**

#### ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.



## Second Revision No. 69-NFPA 1901-2014 [ Section No. A.28.2.1 ]

#### A.28.2.1

For the purposes of this standard, classifications of pump discharge pressures are as follows:

Normal Pressure: Up to 500 psi (3500 kPa)

High Pressure: 500 psi (3500 kPa) to 1100 psi (7600 kPa)

Ultra-High Pressure: 1100 psi (7600 kPa) and greater

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

**Submittal Date:** Thu Jul 31 16:03:56 EDT 2014

#### **Committee Statement**

Committee Statement: Delete annex A material in A.28.2.1. Moving definition of terms into Chapter 3.

Response Message:

#### **Ballot Results**

#### ✓ This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L. Metheny, Sr., J. Allen Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Tull, Richard

Wilde, Stephen

Yohn, William H.

<b>-</b> ⊼			

I	B.2.12	$\neg$

The form in Figure B.2.12 Figure B.2.12 Figure B.2.12(a) is a good way to document the specifications. Completion of the form should assist the purchaser in developing the specifications and provide the information required in the various sections of this document. The purchaser should fill in only the required sections (marked with \*) and only those other sections where there are specific requirements over and above the standard. All the items of information marked with an asterisk (\*) generally are required for the manufacturer to bid on and build the apparatus. The other items are details about which the purchaser might want to specify special requirements. In many cases, the purchaser should specify additional details only if the purchaser is experienced in that area and has specific, unusual requirements. Consult with manufacturers or others with experience in apparatus architecture and specifications if necessary. Care must be taken not to specify incompatible requirements, such as a 3000 gal (11,400 L) water tank, which weighs approximately 30,000 lb (13,600 kg), and a 10,000 lb (4500 kg) GVWR chassis. When more restrictive details are specified, fewer manufacturers will be able to bid, and the cost of the apparatus might be higher.

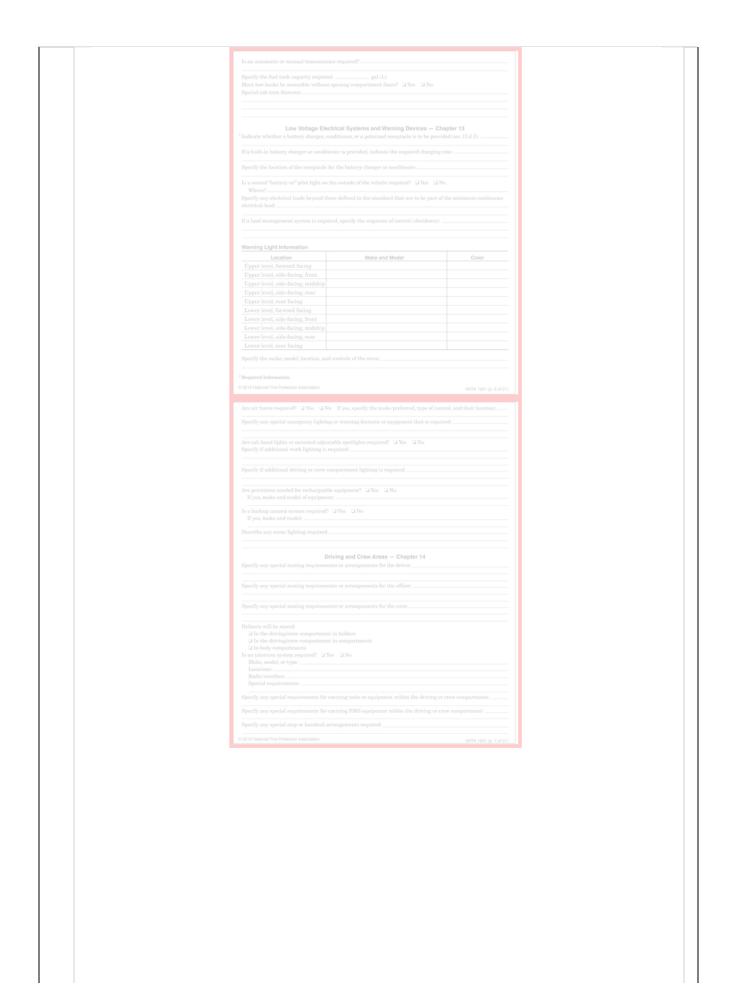
Figure B.2.12 A Sample Apparatus Purchasing Specification Form.



National	Fire	Protection	Association	Report

Is anyone to witness the manufacturer's predelivery tests?	
Where are the road tests to be conducted?	
*What tests will the contractor be required to perform on delivery?	
Apparatus Type — Chapters 5 through 11	
*This apparatus is to be used as a(n):	
☐ Pumper (see Chapter 5)	
☐ Initial attack apparatus (see Chapter 6)	
☐ Mobile water supply apparatus (see Chapter 7)	
☐ Aerial fire apparatus (see Chapter 8)	
□ Quint fire apparatus (see Chapter 9)	
☐ Special service apparatus (see Chapter 10)	
☐ Mobile foam fire apparatus (see Chapter 11)	
Other  *What functions or services is this apparatus to perform?	
what functions of services is this apparatus to perform:	
*Suction Hose (See 5.8.2, 6.8.2, 7.8.2, 9.8.2, 10.8.2, and 11.8.2.)	
*Is suction hose required?   Yes   No	
*Soft or hard:	
*Size and length:	
<sup>®</sup> Connection type and size:	
Mounting arrangement, bracket style, and location:	
*Required information	
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Number	Length	Type	Mou	nting Location and Braci
Breathing Appar				
Quantity		Make/Model		Mounting Loca
		oplied by the 🔾 conti ng apparatus or its i		
		that might be carrie		
Required informati	ion			
		sis and Vehicle Co	mponents -	Chapter 12
			mponents —	Chapter 12
			mponents —	Chapter 12
				Chapter 12
		style: ugine: g pump required?		Chapter 12
		style: ugine: g pump required?		Chapter 12
		gine: gpump required?		Chapter 12
		gine: gpump required?	Yes 🗆 No	Chapter 12
		gine: gine: pump required? m requirements:	Yes 🗆 No	Chapter 12
		gine:  pump required?  prequirements:  quirements:  town required?	Yes 🗆 No	Chapter 12
		gine:  pump required?  prequirements:  quirements:  town required?	Yes 🗆 No	Chapter 12
		gine:  g pump required?   quirements:  quirements:  fown required?   Ye  atter requirements:	Yes 🗆 No	Chapter 12
		gine:  g pump required?   quirements:  quirements:  fown required?   Ye  atter requirements:	Yes 🗆 No	Chapter 12
		gine:  r pump required?  r pump requirements:  squirements:  lown required?  You  ator requirements:  haust system:  uired:	Yes 🗆 No	Chapter 12
		gine:  r pump required?  r pump requirements:  squirements:  lown required?  You  ator requirements:  haust system:  uired:	Yes 🗆 No	Chapter 12
		gine:  pump required?   requirements:  guirements:  flown required?   Ye  stor requirements:  direction requirements:  di	Yes 🗆 No	Chapter 12
		gine:  pump required?   pump requirements:  quirements:  lown required?   Yu  stor requirements:  ator requirements:  dr   Ver   Ver   Ver    guired:	Yes O No	minum wheels are requir
		gine:  pump required?   pump requirements:  quirements:  flown required?   Y  stor requirements:  atter requirements:  d?   Y  d?   No  guired:  oted, stud piloted, st	Yes O No	
	ake and model or a  thocation of the er a engine: pump or repriming if lubrication syste  I cooling system ra gency engine shute required: nance ember separa glocation of the ex Chrake system require e and control: and type of tires re cast spoke, hub pi chains required?  chains required?	gine:  pump required?   pump requirements:  quirements:  lown requirements:  stor requirements:  dr \( \text{Y} \text{N} \)  quired:  dr \( \text{Y} \text{N} \)  quired:  view \( \text{N} \)  quired:  \( \text{Y} \)  \( \text{N} \)  \( \text{N} \)  \( \text{N} \)  \( \text{Y} \)  \( \text{N} \)	Yes □ No	
	ake and model or i  di location of the er  s engine: pump or repriming Il lubrication syste Il cooling system re gency engine shute required: required: plocation of the ex for brake system required and control: and type of tires re cast spoke, hub pil ners required?	gine:  pump required?   pump requirements:  squirements:  town required?   Yes  after requirements:  d?   Yes   No  puired:  toted, stud piloted, stu  Yes   No  Yes   No  Yes   No  Operate  No	Yes □ No	
	ake and model or i  di location of the er  s engine: pump or repriming Il lubrication syste Il cooling system re gency engine shute required: required: plocation of the ex for brake system required and control: and type of tires re cast spoke, hub pil ners required?	gine:  pump required?   pump requirements:  quirements:  lown requirements:  stor requirements:  dr \( \text{Y} \text{N} \)  quired:  dr \( \text{Y} \text{N} \)  quired:  view \( \text{N} \)  quired:  \( \text{Y} \)  \( \text{N} \)  \( \text{N} \)  \( \text{N} \)  \( \text{Y} \)  \( \text{N} \)	Yes □ No	
	ake and model or a disconnection of the extended of the extend	spine:  r pump required?  r pump required?  rquirements:  squirements:  stor requirements:  stor requirements:  down required?  Yes  ator required:  yes  No  yes  No  yes  No  yes  No  yes  required:  is required:	Yes □ No  ss □ No  sel dise, or alus  pade?* □ Yes	ninum wheels are requir
	ake and model or a state of the end of the e	gine:  pump required?   pump requirements:  quirements:  iown requirements:  iown requirements:  atter requirements:  dater requirements:  dater requirements:  dater requirements:  dater requirements:  dater requirements:  dater requirements:  atter requirements:  dater requirements:  atter requirement	Yes □ No  18 □ No  19 □ No  19 □ No  20 □ No  20 □ No	ninum wheels are requir
	ake and model or a state of the end of the e	spine:  r pump required?  r pump required?  rquirements:  squirements:  stor requirements:  stor requirements:  down required?  Yes  ator required:  yes  No  yes  No  yes  No  yes  No  yes  required:  is required:	Yes □ No  18 □ No  19 □ No  19 □ No  20 □ No  20 □ No	ninum wheels are requir
	ake and model or a  thocation of the er a engine: pump or repriming il lubrication syste  Il cooling system ra gency engine shute required: nance ember separa g location of the ex Chrake system require e and control: and type of tires re crast spoke, hub pil c chaine required; the system require e and control: and type of tires re crast spoke, hub pil c chaine required; the system required or angle of departure er angle of departure er angle of departure graystem rangel of departure graystem cranp a	gine:  pump required?   pump requirements:  quirements:  iown requirements:  iown requirements:  atter requirements:  dater requirements:  dater requirements:  dater requirements:  dater requirements:  dater requirements:  dater requirements:  atter requirements:  dater requirements:  atter requirement	Yes □ No  ss □ No  sel disc, or alum  ands?" □ Yes  standard's mi	minum wheels are requir
	ake and model or a  di location of the en engine: pump or repriming il lubrication syste  Il cooling system re gency engine shute required: nance ember separ g location of the ex fbrake system require e and control: and type of tires re cast spoke, hub pl e chains required?  et as spoke and et ye et and order  et and  et and	gine:  pump required?  pump requirements:  cquirements:  lown requirements:  lown requirements:  down required?  Value  down required  Value  down required  Value  down required  for yes \( \text{No} \)  operator of paved reparate is required:  to be requi	Yes □ No  ss □ No  sel disc, or alum  ands?" □ Yes  standard's mi	minum wheels are requir
	ake and model or i  di location of the er  s engine: pump or reprimin Il lubrication syste Il cooling system re gency engine shute required:  cance ember separ, g location of the ex face system required:  annee ember separ, g location of the ex face system required:  and control: and type of tires re cast spake, hub pil sers required?  It is be designed to assed underbody el- et angle of departu ug system cramp a  excle traction contro-  el steering is reque	gine:  pump required?   pump requirements:  quirements:  flown requirements:  flown requirements:  flown requirements:  flown required?   Yu  after requirements:  flown required   No  guired:  flow   No  operate "off paved re  paranace is required:  n of reason   for no-spin differentired:	Yes □ No  ss □ No  sel disc, or alum  ands?" □ Yes  standard's mi	minum wheels are requir
	ake and model or a  di location of the en engine: pump or repriming il lubrication syste  Il cooling system re gency engine shute required: nance ember separ g location of the ex fbrake system require e and control: and type of tires re cast spoke, hub pl e chains required?  et as spoke and et ye et and order  et and  et and	gine:  pump required?   pump requirements:  quirements:  flown requirements:  flown requirements:  flown requirements:  flown required?   Yu  after requirements:  flown required   No  guired:  flow   No  operate "off paved re  paranace is required:  n of reason   for no-spin differentired:	Yes □ No  ss □ No  sel disc, or alum  ands?" □ Yes  standard's mi	minum wheels are requir
	ake and model or a  di location of the en engine: pump or repriming il lubrication syste  di cooling system re gency engine shute required: nance ember separ glocation of the ex fbrake system required: annee ember separ glocation of the ex fbrake system required: annee ember separ glocation of the ex fbrake system required and type of tires re east spake, hub pit e hains required? the besigned to save the system cramp a system cramp a system cramp a system cramp a system traction contre led traction c	gine:  pump required?   pump requirements:  quirements:  flown requirements:  flown requirements:  flown requirements:  flown required?   Yu  after requirements:  flown required   No  guired:  flow   No  operate "off paved re  paranace is required:  n of reason   for no-spin differentired:	Yes □ No  ss □ No  sel disc, or alum  ands?" □ Yes  standard's mi	minum wheels are requir



apparatus is to be provided, specify the type of communication system required between the d the apparatus driver:  ping steering column required?  driving compartment instrument panel features required:  and style of driving compartment mirrors:  Body, Compartments, and Equipment Mounting — Chapter 15  pacity required:  10	
ping steering column required? driving compartment instrument panel features required: and style of driving compartment mirrors:  Body, Compartments, and Equipment Mounting — Chapter 15  Body, Compartments, and Equipment Mounting — Chapter 15  parity required:  al compartment features and finish required: al compartment floor material or covering is required: al compartment floor material or covering is required: af door latches, locks, or stays required: af compartment lighting required:  to be used: currer to provide the radio? □ Yes □ No teurer to install the radio? □ Yes □ No teurer to install the radio? □ Yes □ No tel: tion for ronfor. tion for control(s) and speaker(s):  and plate material required:  Protection Association  MFFA 1501 (p. 8 of	
driving compartment instrument panel features required:  and style of driving compartment mirrors:  Body, Compartments, and Equipment Mounting — Chapter 15  Body, Compartments, and Equipment Mounting — Chapter 15  parity required:  ft (m*)  al compartment features and finish required:  al compartment floor material or covering is required:  and style of compartment doors required:  of door latches, locks, or stays required:  of compartment lighting required:  to be used:  currer to provide the radio? □ Yes □ No  currer to install the radio? □ Yes □ No  delt into fior radio:  cition for control(s) and speaker(s):  od for computer equipment or electronics:  del plate material required:  Prosection Association  MFFA 1501 (p. 8 of platform material required:	
Body, Compartments, and Equipment Mounting — Chapter 15  parity required:	
parity required:	
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al compartment floor material or covering is required:  and style of compartment doors required:  and style of compartment doors required:  of door latches, locks, or stays required:  of compartment lighting required:  to be used:  to be used:  curver to invited the radio? □ Yes □ No  curver to invited the radio? □ Yes □ No  del:  tion for control(s) and speaker(s):  tion for control(s) and speaker(s):  def plate material required:  Protection Association  MFFA 1001 (p. 8 of platform material required:	
and style of compartment doors required:  of door latches, locks, or stays required:  of compartment lighting required:  to be used:  turer to provide the radio? □ Yes □ No  turer to install the radio? □ Yes □ No  tel:  tion for ronfor.  tion for control(s) and speaker(s):  ed for computer equipment or electronics:  diplate material required:	420
and style of compartment doors required:  of door latches, locks, or stays required:  of compartment lighting required:  to be used:  turer to provide the radio? □ Yes □ No  turer to install the radio? □ Yes □ No  tel:  tion for ronfor.  tion for control(s) and speaker(s):  ed for computer equipment or electronics:  diplate material required:	420
of door latches, locks, or stays required:  of compartment lighting required:  to be used:  to be used:  turner to provide the radio? □ Yes □ No currer to install the radio? □ Yes □ No belt- tion for radio:  of for computer equipment or electronice:  d plate material required:	# # # # # # # # # # # # # # # # # # #
to be used: cturer to provide the radio? □ Yes □ No cturer to install the radio? □ Yes □ No bel: ction for radio: tion for radio: tion for control(s) and speaker(s): ted for computer equipment or electronics:  d plate material required:  Protection Association  MFPA 1001 (p. 8 of	420
to be used:  cturer to provide the radio? □ Yes □ No  cturer to install the radio? □ Yes □ No  fel:  tion for radio:  tion for control(s) and speaker(s):  red for computer equipment or electronics:  ad plate material required:  Protection Association  MFPA 1001 (p. 8 of	#20)
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cturer to provide the radio? □ Yes □ No tel:  cturer to install the radio? □ Yes □ No fel:  ction for radio:  definition for control(s) and speaker(s):  ed for computer equipment or electronics:  definition for control(s) and speaker(s):  ed for computer equipment or electronics:  AFFA 1501 (p. 8 of platform material required:	#20
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et to be painted:	
ment required?  Yes  No Provide details of locations to be treated:	
ried for Preconnected Lines (See Sections 5.7.6.7.77.8.7.9.7. and 11.7.)	
Size Location Bed or Reel	
ried in Hose Bed or on Reels (See Sections 5.7, 6.7, 7.7, 8.7, 9.7, and 11.7.)	
Size Location Bed or Reel	
	_
g system to be a slip-on unit? □ Yes □ No	
	=
tion	
	and I
	ried in Hose Bed or on Reefs (See Sections 6.7, 6.7, 7.7, 8.7, 9.7, and 11.7.)  Size Location Bed or Reef  er(s) is desired, specify type:  ng system to be a silp-on unit? □ Yes □ No garrangement required:  sering system required:

			Fire Pump —	Chapter 16		
* Pump rated ca * Number of pun * Pump type: Pump location: How is the pun Type of engine Pump testing a If pump-and-re Flow Vehicle spee				Chapter 16		
* Pump rated ca * Number of pun * Pump type: Pump location: How is the pun Type of engine Pump testing a If pump-and-re Flow Vehicle spee						
Number of pun Pump type: Pump location: How is the pun Type of engine Pump testing a If pump-and-re Flow Vehicle spee						
Pump location: How is the pun Type of engine Pump testing a If pump-and-re Flow Vehicle spee						
How is the pun Type of engine Pump testing a If pump-and-re Flow Vehicle spee						
Pump testing a  If pump-and-ro Flow Vehicle spee						
If pump-and-ro Flow Vehicle spee						
If pump-and-ro Flow Vehicle spee						
Flow Vehicle spee						
			Yes □ No			
			tem to be provided			
			e at the panel?	Yes 🗆 No		
Pump Intake C	onnections					
Size		ection	Location	Valv	red (Y/N)	Control Location
Pump Dischar	ge Outlets Wit	hout Prec	onnected Hose L	ines		
Quantity	Size	Туре о	f Connection	Local		Flow Requirement
Pume Dis-			cted Mass I I			
						Flow Province
	9710					Flow Requirement
Required inform	ation where equ	ipment/syst	tem to be provided			
- 2015 National Fire	overceon Associa	mari .				NFPA 1901 (p. 11 of 21)
2010 (4800)	P TONGOO TABACCO					NPPA 1901 (p. 11 of 21)
	Do local water.  Location of pur Pump parel an Type of Intake Specify the size Are individual If yes, are the Are appeared in the Are individual If yes, are the Are appeared but no Are special purpose is parked but no Are special purpose in the Intake reliable in th	Do local water conditions requ  Location of pump operator's p Pump panel and gauge panel i Type of intake and discharge v Specify the size of the master, Are individual line pressure g If yes, are there any special Are any special gauges, instru Should the engine speed contr is parked but not in pump mo Are special gauges, instru Should the engine speed contr is parked but not in pump mo Are special pump and piping f Required information where equ 2018 National Fre Protection Associate Is the intake relief system to b If no, where: Is a pump pressure governor of It no, where:  Is a pump pressure governor of Type of Conn  Are special adapters required Will a valve, siamees, or adapta If yes, specify where, make, Pump Discharge Outlets Wit List the 2th in. (65 mm) or larg Ouantity  Size  Pump Discharge Outlets for Ouantity Size  Required information where equ  Required information where equ  Required information where equ	Do local water conditions require special  Location of pump operator's passel:  Pump panel and gauge panel material:  Type of intake and discharge valve contr  Specify the size of the mater gauges:  Are individual line pressure gauges required  If yes, are there any special requirem  Are individual line flow meters required  If yes, are there any special requirem  Are any special gauges, instruments, or  Should the engine speed control at the pis parked but not in pump mode? △ Yes  Are special pump and piping features re  Pequired information where equipmentitys  2015 Vational Fire Protection Association  Is the infake relief system to be adjustable  If no, where:  Is a pump pressure governor or a relief valve or the pump littake Connections  Size Type of Connection  Are special adapters required on the pum  Will a valve, siamenes, or adapter be carrie  If yes, specify where, make, and model  Pump Discharge Outlets Without Prec  List the 25% in (65 mm) or larger discharg  Quantity Size Type of  Pump Discharge Outlets for Preconne  Quantity Size Type of	Do local water conditions require special materials for pur  Location of pump operator's panet Pump panel and gauge panel materials. Type of intake and discharge valve controls desired: Specify the size of the master gauges: Are individual line pressure gauges required?  Ves  No If yes, are there any special requirements?  Are individual line flow meters required?  Ves  No If yes, are there any special requirements?  Are any special gauges, instruments, or other features requ Should the engine speed control at the pump operator's pai is parked but not in pump mode?  Ves  No Are special pump and piping features required to deal with Required information where equipmenticystem to be previded 2015 Vational Fea Protection Association  Is the intake relief system to be adjustable at the panel?  If no, where:  Is a pump pressure governor or a relief valve to be supplied  Pump Intake Connections  Size  Type of Connection Location  Are special adapters required on the pump intakes?  Will a valve, stamese, or adapter be carried on any intakes?  Will a valve, stamese, or adapter be carried on any intakes?  Pump Discharge Outlets Without Preconnected Hose Lines  Quantity  Size  Type of Connection  Pump Discharge Outlets Type of Connection  Required information where equipmenticystem to be previded  Required information where equipmenticystem to be previded  Required information where equipmenticystem to be previded	Do local water conditions require special materials for pump construction  Location of pump operator's panel: Pump panel and gauge panel material: Type of intake and discharge valve controls desired: Specify the size of the master gauges:  Are individual line pressure gauges required?  Yes  No If yes, are there any special requirements?  Are individual line flow meters required?  Yes  No If yes, are there any special requirements?  Are any special gauges, instruments, or other features required at the pu Should the engine speed control at the pump operator's panel be enabled is parked but not in pump mode?  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Yes  No If yes, specify where, make, and model con any intakes?  Yes  No If yes, specify where, make, and model con any intakes?  Yes  No If yes, specify where, make, and model con any intakes?  Yes  No If yes, specify where, make, and model con any intakes?  Yes  No If yes, specify where, make, and model con any intakes?  Yes  No If yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes	Do local water conditions require special materials for pump construction and piping  Location of pump operator's panel:  Pump panel and gauge panel material:  Type of intake and discharge valve controls desired:  Specify the size of the master gauges:  Are individual line pressure gauges required?

The and one promption? John John Type: Herming banders: Herming banders: Herming banders: Type para and and engined? John John Type of datable.  In bander and registed? John John Herming and stagether? John John Herming and stagether? John John Herming and stagether. Herming and stagether. Herming and stagether. Herming and stagether. Type of an another proper septime? John John Type of an another proper septime? John John Type of another proper personne.  Another proper personne.  Another proper personne.  Another proper personne.  Type of another proper septime?  Type of another proper personne.  Another proper personne.  Type of another proper personne.  Another proper personne.  The ten another proper personne.  Another proper personne.  The ten another personne personne another ten personne another ten personne another personne personne.  The ten another personne another personne personne and personne.  The ten another personne another personne personne and personne.  The ten another personne another personne personne and personne.  The ten another personne anoth	Types (Control of Control of Cont			
Type: Minimized positions of entire prepared: "Use "Dise "Proper for Acade Segretary Segretary Acade Segretary S	Types (Control of Control of Cont			
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By proposed maker medical experience — UNIS — 2006  Figurally decided.  The Allowater and regulated. — UNIS — 2006  Fire control of the proposed — UNIS — 2006  Fire control of the proposed — UNIS — 2006  Fire control of the proposed — UNIS — 2006  Fire control of the proposed — UNIS — 2006  Fire control of the proposed — UNIS — 2006  Fire control of the proposed — UNIS — 2006  Fire control of the proposed — UNIS — 2006  Fire control of the proposed — UNIS — UN	It is a humber and transplant? "Jim "Dis "Dis "Dis "Dis "Dis "Dis "Dis "Dis			
By a bounder and required? UNES 2016 Has a bounder and required? Has a bounder and required.  Audillary Pump — Chapter 17  * In an actifuty pump reportation.  Audillary pump propertation.  Audillary pump pump reportation.  Type of actifutory pump questions.  Audillary pump pump reportation.  Type of actifutory pump questions.  Audillary pump pump reportation.  Audillary pump pump reportation.  *Audillary pump pump reportation.  *Audillary pump pump reportation.  *Audillary pump pump reportation.  *Audillary Pump brain Connections.  Size Type of Connections.  Size Type of Connections.  Size Type of Connections.  *Audillary Pump Districts Audillary Connections.  *Audillary Pump Districts Connections.  *Audillary Pump Districts Audillary Connections.  *Audillary Pump Districts Connections.  *A	Bendy detailed.  It is bounter out required? "O'to: 12 to:			
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Country   Size   Type of Connection   Location   Flow Requirement	Cauntity   Size   Type of Connection   Flow Requirement	* Auxiliary Pump Discharge Outlet Connections		
Where are the auxiliary pump controls to be located?  Is a booster reel required? □ Ves □ No How many reels?  Location: Hose size and length: Reel reveiled type: Piging to reel:  **Water Tank — Chapter 18  **Is a water tank required? □ Ves □ No **Water tank capacity (one Sections 5.6, 6.5, 7.5, 8.6, and 9.5): Tank construction material:  Is an internal coating required? □ Ves □ No Is a removable tank life required? □ Ves □ No Is a removable tank life required? □ Ves □ No Type of tank level indistortes!  Location of additional tank level indistortes:  Tank to pump for rate required: Pump to tank Id trade required: Pump to tank Id trade required: Size: Performance required: Location: Type of connector: Is a direct tank Ill required? □ Ves □ No Style of valve: Size: Performance required?  Location: Type of connector: Is a direct tank Ill required? □ Ves □ No Style of valve: Size: Performance required: Location: Type of connector: Is a direct tank Ill required? □ Ves □ No Style of valve: Size: Performance required: Location: Type of connector:  *Required information where equipmentity steen to be provided  © 2015 Intone Protention Association  **NOTA 1501 (a. 13 of 21)**	Where are the auxiliary pump controls to be located?  Is a booster reel required? □ Yes □ No How many reels?  Location. Hose size and length: Red reveiled type: Piging to reel:  Water Tank — Chapter 18  *Is a water tank required? □ Yes □ No *Water tank capacity fore Sections 5.6, 6.5, 7.5, 8.6, and 8.5): Tank construction material:  Is an internal coating required? □ Yes □ No Is a removable tank lid required? □ Yes □ No Type of tank level indistortes:  Location of additional tank level indistortes:  Tank to pump for rate required.  Pump to tank (if trade required. Pump to tank (if trade required.  Size: Prefirmance required: Location: Type of connector: Is a direct tank fill required? □ Yes □ No Style of valve: Size: Prefirmance required: Location: Type of connector: Is a direct tank fill required? □ Yes □ No Style of valve: Size: Prefirmance required: Location: Type of connector: Is a direct tank fill required? □ Yes □ No Style of valve: Size: Prefirmance required: Location: Type of connector:		Location	Flow Requirement
Is a booster reel required?    Yes    No     How many reels?  Location:  Hose size and length:  Red rewind type:	Is a booster reel required?  Yes  No How many reels? Location: Hose size and length: Reel rewind type: Piping to reel:  Water Tank — Chapter 18 *Is a water tank required?  Yes  No *Water tank required?  Yes  No Tank construction material:  Is an internal coating required?  Yes  No Is a removable tank lid required?  Yes  No Type of tank here Indicatoris?  Location of additional tank level indicatoris!  Tank to pump flow rate required: Pump to tank fill rate required?  No Siyle of valve: Size: Performance required?  Yes  No Siyle of valve: Size: Performance required?  Yes  No Siyle of valve:  Size: Performance required?  No Siyle of founcetor;  Is a direct tank fill required?  Yes  No Siyle of founcetor: Type of connector:  *Required information where equipmentivystem to be provided  © 2015 National Performance means and the provided  © 2015 National Performance means and provided			
Is a booster red required?	Is a booster red required?			
Is a booster real required?  \[ \text{Yes} \] No How many reels? Location: Hose size and length: Reel rewind type: Piping to reel: Water Tank — Chapter 18  *Is a water tank required?  \[ \text{Yes} \] No *Water tank capacity fore Sections 6.5, 6.5, 7.5, 8.5, and 9.5): Thak construction material:  Is an internal coating required?  \[ \text{Yes} \] No Is a removable tank lift required?  \[ \text{Yes} \] No Type of tank level indicatoris. Location of additional tank level indicatoris.  Tank to pump flow rate required: Pump to tank fill rate required: Is a tank dump valve required: Is a tank dump valve required: Size: Performance required: Location: Type of connector: Is a direct tank fill required?  \[ \text{Yes} \] No Style of valve: Size: Performance required: Location: Type of connector: Is a direct tank fill required?  \[ \text{Yes} \] No Style of valve: Size: Performance required: Location: Type of connector:  Required information where equipmentitystem to be provided  0.2015 Material Per Potention Association	Is a booster red required? □ Yes □ No How many rede? Location: Hose size and length: Red rewind type: Piping to red:  Water Tank — Chapter 18  *Is a water tank required? □ Yes □ No *Water tank capacity (see Sections 5.5, 6.5, 7.5, 8.5, and 9.5):  Thak coastruction material:  Is an internal coating required? □ Yes □ No Is a removable tank lif required? □ Yes □ No Type of cank level indicator(s):  Location of additional tank level indicator(s):  Tank to pump flow rate required: Pump to tank fill rate required: Is a tank dump valve required: □ Yes □ No Style of valve: Size: Performance required: Location: Type of connector: Is a direct tank fill required? □ Yes □ No Style of valve: Size: Performance required: Location: Type of connector: Is a direct tank fill required? □ Yes □ No Style of valve: Size: Performance required: Location: Type of connector:  Is a direct tank fill required? □ Yes □ No Style of valve: Size: Performance required: Location: Type of connector:  Is a firect tank fill required? □ Yes □ No Style of valve: Size: Performance required: Location: Type of connector:  *Required information where equipment/system to be provided □ 2015 National Fire Function Association			
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Water Tank — Chapter 18  "Is a water tank required? □ Yes □ No  "Water tank capacity (see Sections 5.5, 6.5, 7.5, 8.5, and 9.5):  Tank construction material:  Is an internal coating required? □ Yes □ No Is a removable tank lid required? □ Yes □ No Type of tank feet indicatorics:  Location of additional tank level indicatorics:  Tank to pump flow rate required:  Pump to tank fill rate required:  Is a tank dump valve required? □ Yes □ No Sylve of valve:  Size:  Performance required:  Location:  Type of connector:  Is a direct tank fill required? □ Yes □ No Sylve of valve:  Size:  Performance required:  Location:  Type of connector:  "Required information where equipmentizystem to be provided  © 2015 National Fee Postetion Association	Water Tank — Chapter 18  "Is a water tank capacity (see Sections 5.5, 6.5, 7.5, 8.5, and 9.5):  Tank construction material:  Is an internal coating required? ② Yes ③ No Is a removable tank lid required? ② Yes ③ No Type of tank level indicatoris:  Location of additional tank level indicatoris):  Tank to pump flow rate required: Pump to tank fill rate required: Is a tank dump valve required? ② Yes ③ No Sylve of valve: Since: Performance required: Location: Type of connector: Is a direct tank fill required? ② Yes ⑤ No Sylve of valve: Since: Performance required: Location: Type of connector:  *Required information where equipment(system to be provided)  © 2015 National Fine Production Association			
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Pump to tank fill rate required:  Is a tank dump valve required?	Pump to tank fill rate required:  Is a tank dump valve required?			
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Location: Type of connector: Is a direct tank fill required? \( \text{Yes} \) \( \text{No} \)  Size: Size: Performance required: Location: Type of connector:  **Required information where equipment/system to be provided  0.0055 fatomat Per Potention Association  NIFFA 1901 (p. 13 or 21)	Location: Type of connector: Is a direct tank fill required?  Yes  No Style of valve: Size: Performance required: Location: Type of connector:  *Required information where equipmently stem to be provided  © 2015 fational Per Potention Association    Performance   Perf	Type of tank level indicatoris):  Location of additional tank level indicatoris):  Tank to pump flow rate required:  Pump to tank fill rate required:  Is a tank dump valve required? □ Yes □ No  Style of valve.		
Type of connector:  Is a direct tank fill required? □ Yes □ No Style of valve:  Size:  Performance required:  Location:  Type of connector:  *Required Information where equipment/system to be provided  □ 2016 Mattors   Per Petention Association   Nappa 1901 (p. 13 of 21)	Type of connector:  Is a direct tank fill required?	Type of tank level indicator(s):  Location of additional tank level indicator(s):  Tank to pump flow rate required:  Pump to tank fill rate required:  Is a tank dump valve required?   Style of valve:  Size:		
Style of valve:  Size:  Performance required: Location:  Type of connector:  "Required information where equipment/system to be provided  0 2015 National Fee Protection Association  NUFA 1501 (p. 13 or 21)	Style of valve:  Size:  Performance required:  Location:  Type of connector:  *Required information where equipment/system to be provided  0.2015 National Fee Protection Association  Apple 1901 (p. 13 of 21)	Type of tank level indicatoris):  Location of additional tank level indicatoris):  Tank to pump flow rate required:  Is a tank dump valve required?  Style of valve:  Stree:  Performance required: Location:		
Nize: Performance required: Location: Type of connector:  "Required information where equipmenticystem to be provided  0 2015 National Fee Princetion Association NPPA 1901 (p. 13 of 21)	Size: Performance required: Loration: Type of connector:  *Required information where equipment/system to be provided  © 2015 National Fine Potestion Association  **Department**  **Departmen	Type of tank level indicator(s):  Location of additional tank level indicator(s):  Tank to pump flow rate required:  Pump to tank fill rate required:  Is a tank dump valve required?   Style of valve:  Size:  Performance required:  Location:  Type of connector:		
Performance required:  Location: Type of connector:  "Required information where equipment/system to be provided  © 2015 National Fire Protection Association  NPPA 1901 (p. 13 of 21)	Performance required:  Location: Type of connector:  *Required information where equipment/system to be provided  0 2015 National Fee Protection Association  NFRA 1901 (p. 13 of 21)	Type of tank level indicatorish:  Location of additional tank level indicatorish:  Tank to pump flow rate required:  Pump to tank fill rate required:  Is a tank dump valve required?  Yes \( \text{No} \) No  Style of "valve.  Stree:  Performance required!  Location:  Type of connector:  Is a direct tank fill required? \( \text{Yes} \) \( \text{No} \)		
Location: Type of connector:  "Required information where equipmentinystem to be provided  © 2015 National Fire Protection Association NEPA 1901 (p. 13 of 21)	Location: Type of connector:  *Required information where equipmenthystem to be provided  © 2015 National Fire Protection Association  NFPA 1001 (p. 13 of 21)	Type of tank level indicatorish:  Location of additional tank level indicatorish:  Tank to pump flow rate required:  Pump to tank fill rate required:  Is a tank dump valve required?   Style of "valve"  Style:  Performance required:  Location:  Type of connector:  Is a direct tank fill required?   Style of valve:  Stiee:		
Type of connector:  *Required information where equipment/system to be provided.  © 2015 Statonal Fre-Protection Association  \$1,000 to 11 of 211	Type of connector:  *Required information where equipment/system to be provided  © 2015 National Fire Potention Association  3/PPA 1001 (p. 13 of 21)	Type of tank level indicatorish:  Location of additional tank level indicatorish:  Tank to pump flow rate required:  Is a tank dump valve required?  Style of valve:  Stree:  Performance required:  Location:  Type of connector:  Is a direct tank fill required? "Yes "No Style of valve:  Size:  Performance required:  Style of valve:  Size:  Performance required: "Yes "No		
© 2015 National Fire Protection Association NFPA 1901 (p. 15 of 21)	© 2015 National Fire Protection Association NFFIA 1901 (p. 13 of 21)	Type of tank level indicatorisi:  Location of additional tank level indicatorisi:  Tank to pump flow rate required:  Pump to tank fill rate required:  Is a tank dump valve required? □ Yes □ No Style of valve.  Size:  Ferformance required:  Location:  Type of connector:  Is a direct tank fill required? □ Yes □ No Style of valve  Size:  Performance required:  Location:  Location:  Type of connector:  Location:  Locat		
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	Aerial Devices — Chapter 19 "Is an aerial device required? □ Yes □ No
	Indicate whether the aerial device is to be an aerial ladder, elevating platform, or water tower:
:	Aerial Ladder  *Rated vertical beight required:
	Is a prepiped waterway required? □ Yes □ No If yes, to what ladder section is the pipe to be extended?
	Should the prepiped waterway be pinnable to multiple sections? $\square$ Yes $\square$ No What make and model of monitor are required [minimum flow 1000 gpm (4000 L/min) at 100 psi (700 kPu)]?
	If the monitor is power operated, are additional sets of controls beyond those required at the ladder operator's position required? "O'res O'No If yes, describe arrangement and location:
	What make and model of nozzle are required?
	Is a hose connection required at the ladder tip?   Yes  No If yes, describe size and arrangement:
	Required information where equipment/system to be provided
	Elevating Platform Rated vertical height required:ft (m)
ı	
	If yes, specify details:  Is a hreathing air system to be supplied to the platform? □ Yes □ No  Is a hreathing air system to be supplied to the lower control station? □ Yes □ No  If a breathing air system is to be supplied, are there any special requirements, makes, or models for the components of the breathing air system desired?  Specify the number of monitors to be supplied on the platform:
	If yes, specify details:  Is a breathing air system to be supplied to the platform? □ Yes □ No  Is a breathing air system to be supplied to the lower control station? □ Yes □ No  If a breathing air system is to be supplied, are there any special requirements, makes, or models for the components of the breathing air system desired?
	If yes, specify details:  Is a breathing air system to be supplied to the platform?   Yes   No  Is a breathing air system to be supplied to the lower control station?   Yes   No  If a breathing air system is to be supplied, are there any special requirements, makes, or models for the components of the breathing air system desired?  Specify the number of monitors to be supplied on the platform:  What make and model of monitor are required (minimum flow 1000 gpm (4000 L/min) at 100 psi (700 kPa)?).
	If yes, specify details:  Is a breathing air system to be supplied to the platform?   Yes  No  Is a breathing air system to be supplied to the lower control station?  Yes  No  If a breathing air system is to be supplied, are there any special requirements, makes, or models for the components of the breathing air system desired?  Specify the number of monitors to be supplied on the platform:  What make and model of monitor are required (minimum flow 1000 gym (4000 L/min) at 100 psi (700 kPai)?  What make and model of nozzle are required?
	If yes, specify details:  Is a breathing air system to be supplied to the platform? ② Yes ② No  Is a breathing air system to be supplied to the lower control station? ② Yes ③ No  If a breathing air system is to be supplied, are there any special requirements, makes, or models for the components of the breathing air system desired?  Specify the number of monitors to be supplied on the platform:  What make and model of monitor are required [minimum flow 1000 gpm (4000 L/min) at 100 psi (700 kPa)]?  What make and model of nozzle are required?  Is a hose connection to be provided on the platform from the water delivery system? ② Yes ③ No  If yes, describe number, size, and arrangement:  Are any special arrangements to be provided for bose lines from the platform water delivery system?
	If yes, specify details:  Is a breathing air system to be supplied to the platform? □ Yes □ No  Is a breathing air system to be supplied to the lower control station? □ Yes □ No  If a breathing air system is to be supplied, are there any special requirements, makes, or models for the components of the breathing air system desired?  Specify the number of monitors to be supplied on the platform:  What make and model of monitor are required (minimum flow 1000 gpm (4000 L/min) at 100 psi (700 kPai)?  What make and model of nozzle are required?  Is a hour connection to be provided on the platform from the water delivery system? □ Yes □ No  If yes, describe number, size, and arrangement:
	If yes, specify details:  Is a breathing air system to be supplied to the platform? □ Yes □ No  Is a breathing air system to be supplied to the lower control station? □ Yes □ No  If a breathing air system is to be supplied, are there any special requirements, makes, or models for the components of the breathing air system desired?  Specify the number of monitors to be supplied on the platform:  What make and model of monitor are required [minimum flow 1000 gpm (4000 L/min) at 100 psi (700 k/Pai)]?  What make and model of nonzle are required?  Is a hose connection to be provided on the platform from the water delivery system? □ Yes □ No  If yes, describe number, size, and arrangement:  Are any special arrangements to be provided for hose lines from the platform water delivery system?  Indicate the external inlet arrangement required, including the size, type, and number of inlets and the valving arrangement:

Location Specify Details  Location Specify Details  Location Specify Details  Line Voltage Lighting Requirement  Ouantity Spot/Flood Vattage Location Specify Details  Line Voltage Lighting Requirement  Ouantity Spot/Flood Vattage Location Specify Details  List any elevating platform equipment or features required:  It is the water tower to be telescoping, articulating, or both?  Rated vertical height required:  Rated vertical height required:  Rated vertical height required:  Rated water or required if in excess of 1000 gpm (4000 Limin):  What make and model of monitor are required (minimum flow 1000 gpm (4000 Limin) at 100 psi (100 kPu))?  What make and model of nozzle controls to be located?  Where are the monitor and nozzle controls to be located?  Indicate the external labet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever central system required?  *Required information where equipment or features required?  *Required information where equipment or features required:  *Type of floors system required? *Q Yes Q No  *Type of floors system required? *Q Yes Q No  *Type of floors system required? *Q Yes Q No  *Type of floors system required? *Q Yes Q No  *Type of floors system inlet or pickup required? *Q Yes Q No  *Type of floors system inlet or pickup required? *Q Yes Q No  *Is a noutside floor system inlet or pickup required? *Q Yes Q No  *Is a noutside floor system inlet or pickup required? *Q Yes Q No  *Is a noutside floor system inlet or pickup required? *Q Yes Q No  *Is a floor that take refill system required? *Q Yes Q No  *Is a floor that take refill system required? *Q Yes Q No  *Is a floor take that take refill system required? *Q Yes Q No  *Is a floor take that take refill system required? *Q Yes Q No	Country	Country   Spot/Flood   Location   Specify Details	Countity   Spot/Flood   Location   Specify Details	Cuantity   Spot/Flood   Location   Specify Details	Countity   Spot/Flood   Location   Specify Detail	talls
Cuantity Spot/Flood Location Specify Details  Line Voltage Lighting Requirement  Cuantity Spot/Flood Wattage Location Specify Details  List any elevating platform equipment or features required:  List any elevating platform equipment or features required:  List any elevating platform equipment or features required:  **List any elevating platform equipment if in any elevation in the state of the sta	Country	Country   Spot/Flood   Location   Specify Details	Countity   Spot/Flood   Location   Specify Details	Cuantity   Spot/Flood   Location   Specify Details	Countity   Spot/Flood   Location   Specify Detail	talls
Une Voltage Lighting Requirement  Quantity   Spot/Flood   Wattage   Location   Specify Details    List any elevating platform equipment or features required:	List any elevating platform equipment or features required:    List any elevating platform equipment or features required:	Line Voltage Lighting Requirement    Quantity   Spot/Flood   Westage   Location   Specify Details	Line Voltage Lightling Requirement  Countity   Spot/Flood   Waitage   Location   Specify Details    List any elevating platform equipment or features required:  "Is the water tower to be telescoping, articulating, or both?"  *Rated vertical height required:  "Rated vertical selection of fire in excess of 1000 gpm (4000 L/min):  What make and model of morale are required (minimum flow 1000 gpm (4000 L/min) at 100 ps (700 k/bx).  What make and model of morale are required?  Where are the monitor and norale controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valarrangement:  Is a three-lever, two-lever, or single-lever control system required?  "Required information where equipmenticystem to be provided.  **Discharge-lever, two-lever, or single-lever control system required?  "Type of foam system required? "I've "No  "Type of foam(s) to be used:  "Type of foam(s) to be	List any elevating platform equipment or features required:  List the water tower to be telescoping, articulating, or both?  Rated vertical height required:  Rated vertical height required if in excess of 1000 gpm (4000 L/min):  What make and model of mostile are required?  What make and model of noztile are required?  What make and model of noztile are required?  What make and model of noztile are required?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valvarrangement:  Is a three-lever, twe-lever, twe-lever, or single-lever control system required?  *Lequired information where equipment or features required:  List any water tower equipment or features required:  *Lequired information where equipment or features required:  *List any water tower equipment or features required:  *Poam System required?   Yes   No  *Type of foam(s) to be used:  *Type of foam(s) to be used:  *Type of foam(s) to be used:  *Poam concentrate storage capacity:  ———————————————————————————————————	Line Voltage Lighting Requirement  Quantity Spot/Flood Wattage Location Specify Detail  List any elevating platform equipment or features required:  Water Tower  Is the water tower to be telescoping, articulating, or both?  Rated vertical height required:  Rit (m)  Rated vertical height required:  Rit (m)  Waterway capacity required if in excess of 1000 gpm (4000 L/min);  What make and model of monitor are required (minimum flow 1000 gpm (4000 L/min) at 100 psi (70)  What make and model of nonzie are required?  What make and model of nonzie are required?  Where are the monitor and nozzle controls to be located?	talls
Countily   Spot/Fiood   Wattage	Countily   Spot/Flood   Wattage	Countity   Spot/Flood   Wattage   Location   Specify Details	Countity   Spot/Flood   Wattage   Location   Specify Details	Countity   Spot/Flood   Wattage   Location   Spotify Details	Countity   Spot/Flood   Wattage   Location   Specify Detal	
Countily   Spot/Fiood   Wattage	Countily   Spot/Flood   Wattage	Countity   Spot/Flood   Waitage   Location   Specify Details	Countity   Spot/Flood   Wattage   Location   Specify Details	Countity   Spot/Flood   Wattage   Location   Spotify Details	Countity   Spot/Flood   Wattage   Location   Specify Detal	
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Countity   Spot/Flood   Wattage   Location   Specify Details	Countily   Spot/Flood   Wattage	Countily   Spot/Flood   Wattage   Location   Specify Details	Countity   Spot/Flood   Wattage   Location   Specify Details	Countity   Spot/Flood   Wattage   Location   Spotify Details	Countity   Spot/Flood   Wattage   Location   Specify Detal	
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*Rated vertical height required:	*Rated vertical height required:	*Rated vertical height required:	* Bated vertical height required:	*Rated vertical height required:	*Rated vertical height required:ft (m)  *Rated horizontal reach required:ft (m)  Waterway capacity required if in excess of 1000 gpm (4000 L/min):	
What make and model of monitor are required [minimum flow 1000 gpm (4000 L/min) at 100 psi (700 kPu)]?  What make and model of monitor are required?  Where are the monitor and nozzle controls to be located?  Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be provided  0.2015 National Fie Protection Association  NFFA 1901 to No.  List any water tower equipment or features required:  Foam System — Chapter 20  *Is a foam system required? □ Yes □ No.  *Type of foam(s) to be used:  *Type of foam(s) to be used:  *Poam concentrate storage capacity: gal (L)  *Discharge Outlets to Be Used with Foam and Their Performance  Discharge Location  Required  Proportioning Nose Hose  Length  Chapter  *Is an outside feam system inlet or pickup required? □ Yes □ No.  Type:  *Is an outside feam system inlet or pickup required? □ Yes □ No.  Type:  *Is a no autside feam system inlet or pickup required? □ Yes □ No.  Type:  *Is a feam tank refill system required? □ Yes □ No.	What make and model of monitor are required [minimum flow 1000 gpm (4000 L/min) at 100 psi (700 kPa)]?  What make and model of monitor are required?  What make and model of nozzle are required?  Where are the monitor and nezzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipmently stem to be provided  © 2015 National Fee Protection Association  *It is a foam system required? ② Yes ③ No  *Type of foam(s) to be used:  *Foam System — Chapter 20  *Is a foam system required? ② Yes ③ No  *Type of foam(s) to be used:  *Discharge Outlets to Be Used with Foam and Their Performance  *Discharge Location   Fow   Proportioning   Hose   Rate   Hose   Hose   Hose   Type   Typ	What make and model of monitor are required [minimum flow 1000 gpm (4000 L/min) at 100 psi (700 kPu)]?  What make and model of monitor are required?  Where are the monitor and nozzle controls to be located?  Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be provided  2 2015 National Fire Protection Association  *The protection of the size of the si	What make and model of monitor are required (minimum flow 1000 gpm (4000 L/min))  What make and model of monitor are required?  What make and model of monitor are required?  Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valurangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipmently system to be provided.  2015 National Fire Protection Association  NFFA 1001 to  Foam System — Chapter 20  *Is a foam system required? □ Yes □ No  *Type of foam(s) to be used:  *Type of foam(s) to be used:  *Poam concentrate storage capacity	What make and model of monitor are required [minimum flow 1000 gpm (4000 L/min)]  What make and model of monitor are required [minimum flow 1000 gpm (4000 L/min)] at 100 psi (700 kPa)  What make and model of monitor are required?  Where are the monitor and nezale controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valvarrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be provided.  2016 National Five Principles of Sancoston  NFFA 1901 (n)  List any water tower equipment or features required:  *Type of foam system required?	Waterway capacity required if in excess of 1000 gpm (4000 L/min):  What make and model of monitor are required (minimum flow 1000 gpm (4000 L/min) at 100 psi (700 Mat make and model of nozzle are required?  What make and model of nozzle are required?  Where are the monitor and nozzle controls to be located?	
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What make and model of nozzle are required?  Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipmentizystem to be provided  © 2015 National Fire Protection Association  **NPA 1001 (p. 16 c*)  List any water tower equipment or features required:  **Foam System — Chapter 20  **Type of features tower equipment or features required:  **Type of features to Be Used with Foam and Their Performance  **Discharge Outlets to Be Used with Foam and Their Performance  Discharge Location  **Poam Ontied Proportioning Hose Hose  Discharge Location  **Foam outside features required?   Yes   No Type:  **Is an outside features system inlet or pickup required?   Yes   Ono Type:  **Is an outside features system required?   Yes   Ono Type:  **Is a feature thank redill system required?   Yes   Ono Type:  **Is a feature thank redill system required?   One No	What make and model of nozzle are required?  Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be provided  0.2015 National Fire Protection Association  APPA 1901 to 16.  List any water tower equipment or features required:  *Foam System — Chapter 20  *Is a foam system required:  *Type of foam(s) to be used:  *Foam concentrate storage capacity:  *Discharge Outlets to Be Used with Foam and Their Performance  Discharge Location  *Required Proportioning Mose Discharge Length  Discharge Location  *Required Proportioning Hose Discharge Length  *Is an outside foam system inlet or pickup required? □ Yes □ No  Type:  Is a foam tank refill system required? □ Yes □ No  If yes, performance requirements:  *Compressed Air Foam System — Chapter 21  *Is a CAPS required? □ Yes □ No  *What is the total SCPM required?  Uses □ No  *What type of compressor and driver is required?  What type of compressor and driver is required?  What type of compressor and driver is required?  What type of compressor and driver is required?	What make and model of nozzle are required?  Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipmently stem to be provided  0.0015 National Fee President Association  **Nova 1901 (p. No.**  **List any water tower equipment or features required:  **Foam System — Chapter 20  **Is a foam system required? **Q Yes	What make and model of nozzle are required?  Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valuarrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be previded  © 2015 National Five Protection Association  *NFPA 1901 (p)  *List any water tower equipment or features required:  *Type of foam(s) to be used:  *Type of foam(s) to be used:  *Poam system required? □ Yes □ No  *Type of foam(s) to be used:  *Poam oncentrate sterage capacity: gal (L)  *Discharge Location	What make and model of nezzle are required?	What make and model of nozzle are required?  Where are the monitor and nozzle controls to be located?	
What make and model of nozzle are required?  Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Regulated information where equipmently stem to be provided  © 2015 National Five Prosection Association  *NFFA 1001 to 16 c  List any water tower equipment or features required:  Foam System — Chapter 20  *Type of fisam system required? □ Yes □ No  *Type of fisams to be used:  *Foam concentrate storage capacity:	What make and model of nozzle are required?  Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be provided  2016 National File Protection Association  APPA 1901 (b. 16:  List any water tower equipment or features required:  *Is a foam system required? ② Yes ② No  *Type of foam system required:  *Foam concentrate storage capacity: gal (L)  *Discharge Outlets to Be Used with Foam and Their Performance  Discharge Location Required Proportioning Hose Discharge Length Discharge Location Flow Rate Cangh Discharge Location  *Is an outside foam system required? ② Yes ② No  Type:  Is a foam tank refill system required? ② Yes ② No  If yes, performance requirements:  Compressed Air Foam System — Chapter 21  *Is a CAPS required? ② Yes ② No  *What is the total SCPM required?	What make and model of norzle are required?  Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be previded.  2016 National File Prescion Association  NPPA 1901 (p. 16 of New Year System required?  *List any water tower equipment or features required:  *Foam System required:  *Type of foam/system required:  *Type of foam/system required:  *Discharge Outlets to Be Used with Foam and Their Performance  Discharge Location  Discharge Location  *Required Proportioning Mose Diameter  Flow Rate  *Is an outside foam system inlet or pickup required?  *Is an outside foam system required? ② Yes ② No  Type:  Is a foam tank refill system required? ② Yes ② No  If yes, performance requirements:  *Compressed Air Foam System — Chapter 21  *Is a CAPS required? ② Yes ③ No  *What is the total SCPM required?  What is the total water pump capacity required?	What make and model of nozzle are required?  Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valuarrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be previded  © 2015 National Fire Protection Association  *Infinity Protection Association  *Infinity Water tower equipment or features required:  *Type of foam(s) to be used:  *Type of foam(s) to be used:  *Poam system required:  *Discharge Location  *Required  Proportioning  Discharge Location  *Required  Proportioning  Plose  Hose  Diane  *Is an outside foam system inlet or pickup required? ② Yes ② No  Type:  *Is an outside foam system inlet or pickup required? ② Yes ② No  Type:  *Is a foam tank refill system required? ② Yes ② No	What make and model of nezzle are required?	What make and model of nozzle are required?  Where are the monitor and nozzle controls to be located?	
Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be previded  0.2015 National Five Protection Association  **NPPA 1801 (p. 16 of National Five Protection Association   NPPA 1801 (p. 16 of National Five Protection Association   NPPA 1801 (p. 16 of National Five Protection Association   NPPA 1801 (p. 16 of National Five Protection Association   NPPA 1801 (p. 16 of National Five Protection Association   NPPA 1801 (p. 16 of National Five Protection   NPPA 1801 (p. 16 of National Five Protection   National Five Protection	Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be provided  © 2015 National Fie Princision Association  *Discharge Princision Association  *Poarm System — Chapter 20  *Is a foam system required? □ Yes □ No  *Type of foam's to be used:  *Poarm concentrate storage capacity:	Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipmentizystem to be provided  © 2015 National File Presiden Association  *NPPA 1901 (p. 16: 0. 20: 0.	Where are the monitor and nozzle controls to be located?	Where are the monitor and nozzle controls to be located?	Where are the monitor and nozzle controls to be located?	
Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be previded  0.2015 National Fee Protection Association  **NPPA 1801 (p. 16 of National Fee Protection Association NATPA 1801 (p. 16 of National Fee Protection Association NATPA 1801 (p. 16 of National Fee Protection Association NATPA 1801 (p. 16 of National Fee Protection Association NATPA 1801 (p. 16 of National Fee Protection Association NATPA 1801 (p. 16 of National Fee Protection Association NATPA 1801 (p. 16 of National Fee Protection National Fee National Nationa	Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be provided  © 2015 National Fie Presiden Association  *Description of Fourier Control System — Chapter 20  *Is a foam system required? □ Yes □ No  *Type of foam's) to be used:  *Pour concentrate storage capacity:	Where are the monitor and nozzle controls to be located?  Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipmentizystem to be previded  © 2015 National File Presiden Association  *In France of Presiden Association  *In France of President Association  *In System — Chapter 20  *Is a foam system required? □ Yes □ No  *Type of foam/s to be used:  *Poam concentrate storage capacity:	Where are the monitor and nozzle controls to be located?	Where are the monitor and nozzle controls to be located?	Where are the monitor and nozzle controls to be located?	
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Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever central system required?  "Required information where equipment/system to be provided  © 2015 National Fee Protection Association  ANFWA 1801 (p. 16 of 2015 National Fee Protection Association  NAFWA 1801 (p. 16 of 2015 National Fee Protection Association  NAFWA 1801 (p. 16 of 2015 National Fee Protection Association  Foam System — Chapter 20  "It is a foam system required? " 'Yes " No  "Type of foam(s) to be used:  "Foam concentrate storage capacity: gal (L)  "Discharge Location	Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever control system required?  "Required information where equipmenticystem to be provided  © 2015 National Fee Pretection Association  NFFA 1001 (p. 16  **Coam System — Chapter 20  **Is a foam system required:	Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valving arrangement:  Is a three-lever, two-lever, or single-lever central system required?  *Required information where equipment by the provided cost in th	Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valurrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be previded  © 2015 National Fee Protection Association  *NFPA 1501 ID  *List any water tower equipment or features required:  *Type of foam system required? ② Yes ② No  *Type of foam(s) to be used:  *Poam concentrate storage capacity:  *Discharge Outlets to Be Used with Foam and Their Performance  *Discharge Location  *Required Proportioning Hose Length Diame  *Is an outside foam system inlet or pickup required? ② Yes ② No  Type:  *Is an outside foam system inlet or pickup required? ② Yes ② No  Type:  *Is an outside foam system inlet or pickup required? ② Yes ② No  Type:  *Is a foam tank refill system required? ② Yes ② No	Indicate the external inlet arrangement desired, including the size, type, and number of inlets and the valvarrangement:  Is a three-lever, two-lever, or single-lever control system required?  *Required information where equipment/system to be provided  © 2015 National Five Protection Association  **NFPA 1901 (p. 190		
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* Discharge Outlets to Be Used with Foam and Their Performance  **Discharge Location   Required   Proportioning   Hose   Hose   Clarette   Clar	* Boam concentrate storage capacity:	*Boam concentrate storage capacity:	* Plasm concentrate storage capacity: gal (L)  * Discharge Outlets to Be Used with Foam and Their Performance  * Discharge Location   Required   Proportioning   Hose   Length   Diame    * Is an outside foam system inlet or pickup required? □ Yes □ No   Type:   La foam tank refill system required? □ Yes □ No	* Floam concentrate storage capacity:		
* Discharge Outlets to Be Used with Foam and Their Performance    Discharge Location   Required Flow   Proportioning Rate   Hose Diameter	* Discharge Outlets to Be Used with Foam and Their Performance    Discharge Location   Required Flow   Proportioning Hose Diameter	* Discharge Outlets to Be Used with Foarn and Their Performance    Discharge Location   Required   Proportioning   Hose   Dismeter	* Discharge Outlets to Be Used with Foam and Their Performance    Proportioning   Hose   Hose   Discharge Location   Proportioning   Hose   Hose   Discharge Length   Discharge   Length   Discharge   Length   Discharge   Length	*Discharge Outlets to Be Used with Foam and Their Performance    Required   Proportioning   Hose   Rate   Length   Discharge Location   Rate   Length   Leng		
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Type: Is a foam tank refill system required? □ Yes □ No	Type:  Is a foam tank refill system required?  Yes  No  If yes, performance requirements:  Compressed Air Foam System — Chapter 21  *Is a CAFS required?  Yes  No  *What is the total SCFM required?.  What type of compressor and driver is required?	Type:  Is a foam tank refill system required?  Yes  No If yes, performance requirements:  Compressed Air Foam System — Chapter 21  * Is a CAFS required?  Yes  No  *What is the total SCFM required?.  What type of compressor and driver is required?  What is the total water pump capacity required?	Type:  Is a foam tank refill system required?   Yes   No	Type: Is a foam tank refill system required? □ Yes □ No		
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Type: Is a foam tank refill system required? □ Yes □ No	Type:  Is a foam tank refill system required?  Yes  No  If yes, performance requirements:  Compressed Air Foam System — Chapter 21  *Is a CAFS required?  Yes  No  *What is the total SCFM required?.  What type of compressor and driver is required?	Type:  Is a foam tank refill system required?  Yes  No If yes, performance requirements:  Compressed Air Foam System — Chapter 21  * Is a CAFS required?  Yes  No  *What is the total SCFM required?.  What type of compressor and driver is required?  What is the total water pump capacity required?	Type:  Is a foam tank refill system required? □ Yes □ No	Type: Is a foam tank refill system required? □ Yes □ No		
Type:	Type: Is a foam tank refill system required?  \( \text{Yes} \) No  If yes, performance requirements:  Compressed Air Foam System — Chapter 21  * Is a CAPS required?  \( \text{Yes} \) No  *What is the total SCFM required?  What type of compressor and driver is required?	Type: Is a float tank refill system required?  Yes No If yes, performance requirements:  Compressed Air Foam System — Chapter 21  * Is a CAFS required?  Yes No  *What is the total SCPM required?.  What type of compressor and driver is required?  What is the total water pump capacity required?	Type:  Is a foam tank refill system required? □ Yes □ No	Type: Is a foam tank refill system required? □ Yes □ No		
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Type:	Type:  Is a foam tank refill system required?  \( \text{Yes} \) No  If yes, performance requirements:  Compressed Air Foam System — Chapter 21  *Is a CAPS required?  \( \text{Yes} \) No  *What is the total SCFM required?  What type of compressor and driver is required?	Type:  Is a foam tank refill system required?  Yes  No If yes, performance requirements:  Compressed Air Foam System — Chapter 21  *Is a CAFS required?  Yes  No  *What is the total SCFM required?  What type of compressor and driver is required?  What is the total water pump capacity required?	Type:  Is a foam tank refill system required? □ Yes □ No	Type: Is a foam tank refill system required? □ Yes □ No		
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		What type of compressor and driver is required?  What is the total water pump capacity required?				
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				*Is a CAFS required? □ Yes □ No *What is the total SCFM required? What type of compressor and driver is required?		
			What is the total water pump capacity required?	* Is a CAPS required?    What is the total SCFM required?  What type of compressor and driver is required?  What is the total water pump capacity required?		
	Specify the type of system controls and interlocks required:		What is the total water pump capacity required?	* Is a CAPS required?    What is the total SCFM required?  What type of compressor and driver is required?  What is the total water pump capacity required?		
	Specify the type of system controls and interlocks required:		What is the total water pump capacity required?	* Is a CAPS required?    What is the total SCFM required?  What type of compressor and driver is required?  What is the total water pump capacity required?		
			What is the total water pump capacity required?  Specify the type of system controls and interlocks required:	* Is a CAPS required?VecNo *What is the total SCFM required? What is the total of driver is required?  What is the total water pump capacity required?  Specify the type of system controls and interlocks required:	- nequired information where equipment/system to be provided	
$^\circ$ Required information where equipment system to be provided	$^\circ$ Required information where equipmenticy stem to be provided		What is the total water pump capacity required?  Specify the type of system controls and interlocks required:  "Required information where equipment/system to be provided	* Is a CAFS required? Ves No *What is the total SCFM required? *What is the total SCFM required?  What is the total water pump capacity required?  What is the total water pump capacity required?  *Specify the type of system controls and interlocks required:  *Required information where equipmenticystem to be provided		
			What is the total water pump capacity required?	* Is a CAPS required?    What is the total SCFM required?  What type of compressor and driver is required?  What is the total water pump capacity required?		
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<sup>3</sup> Required information where equipment/system to be provided			What is the total water pump capacity required?  Specify the type of system controls and interlocks required:	* Is a CAPS required?VecNo *What is the total SCFM required? What is the total of driver is required?  What is the total water pump capacity required?  Specify the type of system controls and interlocks required:		
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Compressed Air Ecom Sustam - Chapter 24	Is a CAFS required? \(\to\) Yes \(\to\) No  What is the total SCFM required?  What type of compressor and driver is required?	Is a CAPS required? \(\to\) Yes \(\to\) No  What is the total SCFM required?  What type of compressor and driver is required?  What is the total water pump capacity required?	Compressor Air Enem Sustam — Chanter 94		Compressed Air Enam Queters - Chapter 24	
		"What is the total SCPM required?" What type of compressor and driver is required? What is the total water pump capacity required?		Commenced No Form Content Charles Of		
*Is a CAFS required? □ Yes □ No		What type of compressor and driver is required?  What is the total water pump capacity required?	*Is a CAFS required? □ Yes □ No		° Is a CAFS required? □ Yes □ No	
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				*Is a CAFS required? □ Yes □ No *What is the total SCFM required? What type of compressor and driver is required?		
				*Is a CAFS required? □ Yes □ No *What is the total SCFM required? What type of compressor and driver is required?		
			What is the total water pump capacity required?	* Is a CAPS required?    What is the total SCFM required?  What type of compressor and driver is required?  What is the total water pump capacity required?		
			What is the total water pump capacity required?	* Is a CAPS required?    What is the total SCFM required?  What type of compressor and driver is required?  What is the total water pump capacity required?		
	Specify the type of system controls and interlocks required:		What is the total water pump capacity required?	* Is a CAPS required?    What is the total SCFM required?  What type of compressor and driver is required?  What is the total water pump capacity required?		
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* Discharge Outlets to	Be Used wit	h the CAFS an	d Their P	Performano	0		
	irge Locatio			lequired Flow	Hose	e th	Hose Diameter
-							
Specify if an airflow m Specify the type of wet							
° Is a line voltage electri		Voltage Elec		stem — CI	apter 22		
° Continuous rated watt							
<sup>o</sup> Voltage of power source:							
☐ Portable generate ☐ Hydraulically dri							
☐ Direct drive gene ☐ Auxiliary engine							
☐ Belt driven gener ☐ Derived from app	ator or alter	nator					
Other:							
Make, model, or other							
Location of power sour							
Mounting of power sou							
Panelboard location:							
<sup>6</sup> Required information w	ere equipme	nt/system to be p	rovided				
© 2015 National Fire Protection							
Receptacle Information	n nps/Volts	Style	of Recep	ptacle		Loc	ation
* Circuit Remote Contr	ol Informati				Switch		
120/240 Volt Lighting	Information						
Style/Make		Location		Wattage	/Bulb	7	ype Mounting
Cord Real Information							
*Cord Reel Informatio		Reel #	Ree	el#	Reel #		Reel #
Mounting location Amperage							
Voltage Length of cord in fee							
Receptacle style Distribution box							
Rewind system							
"Is a power-operated lig If yes, specify the m							
List any equipment to							
<sup>0</sup> Required information w		nt/system to be p	rovided				
© 2015 National Fire Protection							

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	IG SPECIFICATION FORM
*Date of bid opening:	ent issues
*Purchaser's name and address:	
*Contact name and telephone number:	
*Contact name and telephone number:	
*Sealed bid envelope information, address, and identifie	ation marking:
*The bidder is to honor the bid price for	days.
*If an interim inspection trip(s) to the assembly plant is	to be provided, indicate:
number of trips number of	participants
who will pay expenses  How many service and operation manuals are to be pr	oxided?
*Where is the delivery of the apparatus to occur?	
*Where and when is the acceptance to occur?	
*The operation and service instruction and demonstrati	on are to be conducted at
for persons for days.	
Specify the details of any special payment plan or sche	dule required:
Is an approval drawing required? ☐ Yes ☐ No	
Is a bid bond required? ☐ Yes ☐ No	
What percent of the bid price?  Is a performance bond required? □ Yes □ No	
What percent of the bid price?	
If an extended warranty on specific components is required the warranty:	aired, indicate which components and the length
of the warranty.	
Is a warranty bond required? □ Yes □ No	
In what amount?	
*Required information	
© 2015 National Fire Protection Association	NFPA 1901 (p.1 of 22)
	HETH (BOT (LT OF 22)
General Requirem	ents — Chapter 4
General Requiren Special design features required on this apparatus:	eents — Chapter 4
	eents — Chapter 4
	eents — Chapter 4
Special design features required on this apparatus:	
Special design features required on this apparatus:  What are the maximum allowable dimensions of the a	oparatus?
Special design features required on this apparatus:  What are the maximum allowable dimensions of the a Overall height in inches (millimeters): (m	oparatus? easured at the highest projection)
Special design features required on this apparatus:  What are the maximum allowable dimensions of the a Overall height in inches (millimeters): (m Overall length in inches (millimeters): (mean	oparatus?
Special design features required on this apparatus:  What are the maximum allowable dimensions of the a Overall height in inches (millimeters):  (Wheelbase in inches (millimeters): (Meest the rear axle)	opparatus? easured at the highest projection) easured at the front and rearmost projections) red from the center of the front axle to the center of
Special design features required on this apparatus:  What are the maximum allowable dimensions of the a Overall height in inches (millimeters): (m Wheelbase in inches (millimeters): (meast the rear axle) Width in inches (millimeters): (measured.	pparatus?  resurved at the highest projection)  resurved at the front and rearmost projections)
Special design features required on this apparatus:  What are the maximum allowable dimensions of the a Overall height in inches (millimeters):  (Wheelbase in inches (millimeters): (Meest the rear axle)	pparatus? easured at the highest projection) easured at the front and rearmost projections) eared from the center of the front axle to the center of at the outside of the mirrors)
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Special design features required on this apparatus:  What are the maximum allowable dimensions of the a Overall height in inches (millimeters): (m Overall length in inches (millimeters): (meas the rear axle) Width in inches (millimeters): (measured Gross vehicle weight in pounds (kilograms): Maximum weight on the front axle in pounds (kilogr Maximum weight on the rear axle in pounds (kilogr	pparatus?  easured at the highest projection)  easured at the front and rearmost projections)  rearmost projections of the center of the throat axle to the center of the the outside of the mirrors)  rams):  ams):  wable?  ft (m)  te if over 2000 ft (600 m):
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ational	Fire	Protection	Association	Report

	at independent tes	ting organization is	to certify t	
s anyone to witn	ess the manufactur	er's predelivery test	s?	
Where are the roo	nd tests to be condu	cted?		
What toots will th	a contractor ha ran	uired to perform on	daliyan/?	
what tests will th	e contractor oe req	unred to periorin on	delivery	
This apparatus is	Ap to be used as a(n):	paratus Type — C	hapters 5	through 11
□ Pumper (se				
	k apparatus (see C	hapter 6)		
	r supply apparatus			
	pparatus (see Chap pparatus (see Chap			
	ice apparatus (see			
	fire apparatus (se	e Chapter 11)		
Other		paratus to perform?		
what functions of	services is this app	paratus to periorm:		
		2, 9.8.2, 10.8.2, and 1	1.8.2.)	
s suction hose re *Soft or hard:	quired? Yes	1.00		
*Sort or nard: _ *Size and lengtl	h:			
*Connection typ				
Mounting arrang	ement, bracket style	e, and location:		
Required informat				
2015 National Fire Pr	rotection Association			NFPA 1901 (p. 3 of 2
2015 National Fire Pr	to Be Carried (Se	pe 5.8.1, 6.8.1, 8.8.1, Type	_	10.8.1.)
2015 National Fire Pr Ground Ladders	rotection Association	ee 5.8.1, 6.8.1, 8.8.1, Type	_	
2015 National Fire Pr Ground Ladders	to Be Carried (Se		_	10.8.1.)
2015 National Fire Pr Ground Ladders	to Be Carried (Se		_	10.8.1.)
2015 National Fire Pr Ground Ladders	to Be Carried (Se		_	10.8.1.)
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ndicate if a speci Sreathing Appar Quantity	to Be Carried (Se Length Length fic type or make of length  atus	Type  Indder is desired:	ractor 🔾 p	Mounting Location and Bracket Type  Mounting Location  Mounting Location
ndicate if a special requirement of the control of	to Be Carried (Se Length  Length  fic type or make of latus  atus  paratus is to be supports for the breathing	Type  Indder is desired:  Make/Model  Make/Model  pulled by the contain a apparatus or its i	ractor Dpmounting,	Mounting Location and Bracket Type  Mounting Location  Mounting Location  Mounting Location  purchaser.  including diameters of SCBA cylinders
costs Nasonal Fire Prizound Ladders Number  Indicate if a special aspecial aspecial aspecial aspecial requirements of the breathing apparature	to Be Carried (Se  Length  Length  fic type or make of least of le	Type  Indder is desired:	ractor Opmounting.	Mounting Location and Bracket Type  Mounting Location  Mounting Location  Mounting Location  Surchaser: Including diameters of SCBA cylinders
2015 National Fire P  Ground Ladders  Number  Indicate if a special  Greathing Appar  Guantity  The breathing ap  Special requirems  to be utilized:	to Be Carried (Se Length  Length  fic type or make of latus  atus  paratus is to be superits for the breathin lend on Apparatus (signment allowance)	Type  ladder is desired:  Make/Model  splied by the conting apparatus or its in the continuation of the contin	ractor 🔾 j. mounting.	Mounting Location and Bracket Type  Mounting Location  Mounting Location  Mounting Location  Jurchaser.  Including diameters of SCBA cylinders  1.9, 10.9, and 11.9.)
2015 Nasonal Fire Pr Ground Ladders Number Indicate if a special indicate if a special requirement of the property of the prop	to Be Carried (Se Length  Length  fic type or make of latus  atus	Type  ladder is desired:	reactor 3 mounting.	Mounting Location and Bracket Type  Mounting Location  Mounting Location  Mounting Location  Surchaser.  Including diameters of SCBA cylinders
ndicate if a speci ndicate if a	to Be Carried (Se  Length  Length  fic type or make of length  atus  atu	Indder is desired:	reactor 3, 7.9, 8.9, 6.  The first department of each time to the each time time time to the each time time time time time time time time	Mounting Location and Bracket Type  Mounting Location  Mounting Location  Mounting Location  Mounting Location  Mounting Location  Jurchaser.  Including diameters of SCBA cylinders  19, 10.9, and 11.9.)  Jurchaser.  Including diameters of SCBA cylinders  The supervised of the super
ndicate if a speci ndicate if a	to Be Carried (Se  Length  Length  fic type or make of length  atus  atu	Indder is desired:	reactor 3, 7.9, 8.9, 6, 19. The department of each fit	Mounting Location and Bracket Type  Mounting Location  Mounting Location  Mounting Location  Mounting Location  Jurchaser.  Including diameters of SCBA cylinders  L9, 10.9, and 11.9.)  Jumum weight:  The with the apparatus, stating the item,  m, and its dimensions (L. e. W x D).  The work of the carried on the apparatus, stating responsibility for mounting, the weight of responsibility for mounting, the weight of mounting, the weight of mounting, the weight of mounting the programments in the fitters stations the item.

	sis and Vehicle Components — Chapter 12	
Desired chassis make and model or	style:	
Specify the desired location of the er	and a co	
Type of propulsion engine:	iguie:	
Is an electric fuel pump or reprimin	g pump required?    Yes    No	
Specify any special lubrication syste	m requirements:	
Specify any special cooling system re	equirements:	
Is a manual emergency engine shute	down required?   Yes   No	
Type of fuel filters required:		
Type of air filters required:		
Enhanced performance ember separ	ator requirements:	
Specify the exiting location of the ex	haust system:	
Specify the type of brake system req		
Is an auxiliary brake system require	od? □Yes □No	
Specify the type and control:		
Specify the style and type of tires re	quirea:	
Indicate whether cast spoke, hub pil	oted, stud piloted, steel disc, or aluminum wheels ar	e required:
Are rear fender liners required?		
Are automatic tire chains required? Should the apparatus be designed to	o operate "off paved roads?"  Yes No	
Specify if an increased underbody cl	earance is required:	
Specify if a greater angle of approach	h is required:	
Specify if a greater angle of departu		
Specify the steering system cramp a	ngle if it exceeds the standard's minimum:	
Specify if a drive axle traction contro	ol or no-spin differential is required:	
Specify if rear wheel steering is requ		
Specify if a special suspension syste	m is required:	
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O 2013 Hallorial File Filological Association		
Is an automatic or manual transmis	sion required?	
Is an automatic or manual transmis		
Is an automatic or manual transmis Specify the fuel tank capacity requir Must tow hooks be accessible withou		
Is an automatic or manual transmis	red: gal (L)	
Is an automatic or manual transmis Specify the fuel tank capacity requir Must tow hooks be accessible withou	red: gal (L)	
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Are air horns required?    Yes    No If yes, specify the make preferred, type of control, and their location:
Specify any special emergency lighting or warning features or equipment that is required:
Are cab hand lights or mounted adjustable spotlights required? ☐ Yes ☐ No
Specify if additional work lighting is required:
Specify if additional driving or crew compartment lighting is required:
openy it anunous driving or crew comparement ngining is required.
Are provisions needed for rechargeable equipment? □ Yes □ No
If yes, make and model of equipment:
Is a backup camera system required? □ Yes □ No
If yes, make and model:
Describe any scene lighting required:
Driving and Crew Areas — Chapter 14
Specify any special seating requirements or arrangements for the driver:
Specify any special seating requirements or arrangements for the officer:
Specify any special seating requirements or arrangements for the crew:
W
Helmets will be stored:  ☐ In the driving/crew compartment in holders
☐ In the driving/crew compartment in compartments
☐ In body compartments Is an intercom system required? ☐ Yes ☐ No
Make, model, or type:
Locations:
Special requirements:
Specify any special requirements for carrying tools or equipment within the driving or crew compartment:
Specify any special requirements for carrying EMS equipment within the driving or crew compartment:
Specify any special step or handrail arrangements required:
© 2015 National Fire Protection Association NFPA 1901 (p. 7 of 22
If a tiller steamed apparatus is to be arrayided specify the turn of communication system required between the
If a tiller-steered apparatus is to be provided, specify the type of communication system required between the tiller operator and the apparatus driver:
tiller operator and the apparatus driver:
If a tiller-steered apparatus is to be provided, specify the type of communication system required between the tiller operator and the apparatus driver:  Is a tilt or telescoping steering column required?  Specify any extra driving compartment instrument panel features required:
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Type of step and	platform material	l required:	
*Color of apparatu	16'		
Paint number an	d manufacturer, i		
Striping, decorati	on, and lettering	required:	
List any areas no	t to be painted: _		
Miscellaneous bo	dy trim:		
Is rustproof treat	ment required?	☐ Yes ☐ No Provide details of locations to be treated: _	
		ected Lines (See Sections 5.7, 6.7, 7.7, 8.7, 9.7, and 11.7.)	
Length	Size	Location	Bed or Reel
*Hose to Be Carr	ied in Hose Bed	or on Reels (See Sections 5.7, 6.7, 7.7, 8.7, 9.7, and 11.7	9
Length	Size	Location	Bed or Reel
If a hose bed cove	r(s) is desired, sp	ecify type:	
Is the fire-fightin	g system to be a s	slip-on unit?  Yes  No	
Specify the lifting	g arrangement re-	quired:	
Specify the anchy	ring system requ	ind:	
opecity the ancie	ang system requ	area.	
*Required informat			
	Protection Association		
	TORCION ASSOCIATION		NFPA 1901 (p. 9 of 22)
• Is a fire pump re • Pump rated cape • Number of pump	equired? • Yes	Fire Pump — Chapter 16  D No gpm (L/min)	NFPA 1901 (p. 9 of 22)
• Is a fire pump re • Pump rated cape • Number of pump • Pump type:	equired? • Yes	Fire Pump — Chapter 16  D No gpm (L/min)	NFPA 1901 (p. 9 of 22)
* Is a fire pump re * Pump rated cape * Number of pump * Pump type: Pump location: How is the pum	equired? • Yes scity:  o stages required: to be driven?	Fire Pump — Chapter 16  No gpm (L/min)	NFPA 1901 (p. 9 of 22)
* Is a fire pump re * Pump rated cape * Number of pump * Pump type: Pump location: How is the pum	equired? • Yes scity:  o stages required: to be driven?	Fire Pump — Chapter 16  D No gpm (L/min)	NFPA 1901 (p. 9 of 22)
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*Is a fire pump re *Pump rated opam *Pump type: Pump location: How is the pump Type of engine to Pump testing au If pump-and-roll Flow Vehicle speed	equired?   Yes scity: stages required: to be driven? odrive pump if of thority: is required, speci gpm (L/min) a	Fire Pump — Chapter 16  I No gpm (L/min)  her than the chassis propulsion engine:  ify: t psi (kPn)	NFPA 1501 (p. 9 of 22)
* Is a fire pump re * Pump rated cape * Number of pump type: Pump location: How is the pump. Type of engine to Pump testing au If pump-and-roll Flow	equired?   Yes scity: stages required: to be driven? odrive pump if of thority: is required, speci gpm (L/min) a	Fire Pump — Chapter 16  I No gpm (L/min)  her than the chassis propulsion engine:  ify: t psi (kPn)	NFPA 1501 (p. 9 of 22)
* Is a fire pump re  * Pump rated cape  * Number of pump  * Pump type:  How is the pump  Type of engine t  Pump testing au  If pump-and-roll  Flow  Vehicle speed  Special pump ps	equired? • Yes stity: stages required: to be driven? drive pump if ot thority: is required, speci gpm (L/min) a mph system:	Fire Pump — Chapter 16  No gpm (L/min)  her than the chassis propulsion engine:  ify:  it psi (kPa)  (kmph)	NFPA 1501 (p. 9 of 22)
* Is a fire pump re- Pump rated cap * Number of pump * Pump type: Pump location: How is the pum Type of engine to Pump testing au  If pump-and-roll Flow Vehicle speed Type of primer a Special pump pe If altitude ow	equired?  Yes  verity:  ytages required:  of tive pump if ot  thority:  is required, speci  gpm (L/min) a  mph  ystem:  rformance requirer  rformance requirer  rformance requirer	Fire Pump — Chapter 16  Nogpm (L/min)  her than the chassis propulsion engine:  ify: it psi (kPa)  (kmph)  ements: , specify altitude:	NFPA 1501 (p. 0 of 22)
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* Is a fire pump re *Pump rated cap *Number of pump *Pump type: How is the pum Type of engine to Pump location: How is the pum Type of engine to Flow Vehicle speed Type of primer a Special pump pe If altitude ove If through Do local water oc Location of pum Pump panel and	quired? Yes stages required:  to be driven?  o drive pump if ot thority:  is required, specify is required, specify in formance require rformance require rrformance require re than 20 ft (600 m) ft (3 m), specify li gauge panel mat gauge panel mat gauge panel mat	Fire Pump — Chapter 16  Nogpm (L/min)  her than the chassis propulsion engine:  ify:  it psi (kPa)  (kmph)  ements: .specify altitude: .ft: .j of suction hose, specify length: .special materials for pump construction and piping?	NFPA 1501 (p. 0 of 22)
* Is a fire pump re *Pump rated cap *Number of pump *Pump type: How is the pum Type of engine to Pump location: How is the pum Type of engine to Flow Vehicle speed Type of primer a Special pump pe If altitude ove If through Do local water oc Location of pum Pump panel and	quired? Yes stages required:  to be driven?  o drive pump if ot thority:  is required, specify is required, specify in formance require rformance require rrformance require re than 20 ft (600 m) ft (3 m), specify li gauge panel mat gauge panel mat gauge panel mat	Fire Pump — Chapter 16  I No gpm (L/min)  her than the chassis propulsion engine:  idy: tt psi (kPa) (kmph)  ements: , specify altitude: this of suction hose, specify length: special materials for pump construction and piping?	NFPA 1501 (p. 0 of 22)
* Is a fire pump re * Pump rated cape * Number of pump * Pump type: * How we see the pump * Type of engine to * Pump leasting au  If pump-and-roll * Flow * Vehicle speed * Type of primer as * Special pump pe * If altitude ove * If it over 10 * If through autor * Do local water co * Location of pum * Pump panel and * Type of intake au * Type of	quired? Yes stages required:  to be driven?  o drive pump if ot thority:  is required, specify is required, specify in formance require rformance require rrformance require re than 20 ft (600 m) ft (3 m), specify li gauge panel mat gauge panel mat gauge panel mat	Fire Pump — Chapter 16  No gpm (L/min)  her than the chassis propulsion engine:  ify:  it	NFPA 1501 (p. 0 of 22)
* Is a fire pump re * Pump rated cape * Number of pump * Pump type: * How is the pump Type of engine to * Pump location: How is the pump Type of engine to * Pump testing au  If pump-and-roll * Flow * Vehicle speed Type of primer s * Special pump pe If altitude ove * If it now It * If the man bo * Do local water co * Location of pum * Pump panel and Type of intake au  Specify the size of	quired? Yes statges required:  to be driven?  of the brity:  theority:  gen (L'min) a  mph system:  fromance require  from ance require  from to (800 m)  from to (800 m)  from to make the master squage  po operator's panel mat  discharge valv  of the master gauge	Fire Pump — Chapter 16  No gpm (L/min)  her than the chassis propulsion engine:  idy:  it	NFPA 1501 (p. 9 of 22)
* Is a fire pump re * Pump rated cape * Number of pump * Pump type: * Pump location: How is the pump Type of engine to * Pump testing au  If pump-and-roll Flow * Vehicle speed Type of primer s * Special pump pe If altitude ove If the over If the over If the over Location of pum Pump panel and Type of intake au  Specify the size  Are individual li  Are individual li	quired? Yes statges required:  to be driven?  of the brity:  theority:  gen (L'min) a  mph system:  fromance require  from ance require  from to (800 m)  from to (800 m)  from to make the master squage  po operator's panel mat  discharge valv  of the master gauge	Fire Pump — Chapter 16  Nogpm (L/min)  her than the chassis propulsion engine:  ify:  ttpsi (kPa) (kmph)  ements:specify altitude:ft:of suction hose, specify length:special materials for pump construction and piping?i:i:i:i:econtrols desired:ges:es required?	NFPA 1501 (p. 9 of 22)
* Is a fire pump re * Pump rated cape * Number of pump * Pump type: * Pump location: How is the pump Type of engine to * Pump testing au  If pump-and-roll Flow Vehicle speed Type of primer s  Special pump pe If altitude over 10 If through mo Do local water co Location of pum Pump panel and Type of intake a  Specify the size e  Are individual li If yes, are the	quired? Yes scitly: stages required: b to be driven? drive pump if of thority: is required, speci gpm (L/min) a mph yatem: rformance requir rformance requir rformance requir rformance requir rformance requir rformance requir graph yatem: poperator's panel gaupe panel main ddischarge valv of the master gau ne pressure gaupe re any special requ	Fire Pump — Chapter 16  Nogpm (L/min)  her than the chassis propulsion engine:  ify:  tt	NFPA 1501 (p. 0 of 22)
* Is a fire pump re * Pump rated cape * Number of pump * Pump type: How is the pump Type of engine to Type of engine to Flow Vehicle speed Type of primer s Special pump pe If altitude over 10 If through mo Do local water ce Location of pum Pump panel and Type of intake a Type of priner s Special pump pe Are individual li If yes, are the	quired? Yes scitly: stages required: b to be driven? drive pump if of thority: is required, speci gpm (L/min) a mph yatem: rformance requir rformance requir rformance requir rformance requir rformance requir rformance requir graph yatem: poperator's panel gaupe panel main ddischarge valv of the master gau ne pressure gaupe re any special requ	Fire Pump — Chapter 16  No gpm (L/min)  her than the chassis propulsion engine:  ify: tt psi (kPa) (kmph)  ements: , specify altitude: tt: ges: ements: control of suction hose, specify length: psi of suction hose, specify length: control of suction hose, specify length: ges: ements: controls desired: ges: es required? Yes No quirements!	NFPA 1501 (p. 0 of 22)
* Is a fire pump re * Pump rated cape * Number of pump * Pump type: How is the pump Type of engine to Type of engine to Flow Vehicle speed Type of primer a Special pump pe If altitude own If the over 10 If through mo Do local water co Location of pum Pump panel and Type of intake a Specify the size Are individual li If yes, are the	quired? Yes scitly: stages required: thority: drive pump if of thority: is required, spec gpm (L'min) a mph ystem: rformance require rromance require rromance require gpm (B (600 m) ft (60 m) ft (	Fire Pump — Chapter 16  No gpm (L/min)  her than the chassis propulsion engine:  idy: tt psi (kPn) (kmph)  ements: , specify altitude:	
* Is a fire pump re * Pump rated cape * Number of pump * Pump type: How is the pump Type of engine to Type of engine to Flow Vehicle speed Type of primer a Special pump pe If altitude own If the over 10 If through mo Do local water co Location of pum Pump panel and Type of intake a Specify the size Are individual li If yes, are the	quired? Yes scitly: stages required: thority: drive pump if of thority: is required, spec gpm (L'min) a mph ystem: rformance require rromance require rromance require gpm (B (600 m) ft (60 m) ft (	Fire Pump — Chapter 16  No gpm (L/min)  her than the chassis propulsion engine:  idy: tt psi (kPa) (kmph)  ements: , specify altitude: tt: ges: ements: control of suction hose, specify length: psi of suction hose, specify length: control of suction hose, specify length: ges: ements: controls desired: ges: es required? Yes No quirements!	
* Is a fire pump re * Pump rated cape * Number of pump * Pump type: * How is the pump Type of engine to * Pump beating au  If pump-and-roll Flow * Vehicle speed Type of primer a * Special pump pe * If altitude ow * If the over 10 * If through mo * Do local water co * Location of pum * Pump panel and * Type of intake a * Specify the size * Are individual li * If yes, are the * Are and yspecial pump * Are any special pump * Are any sp	quired? Yes scity: stages required: thority: drive pump if of thority: is required, spec gpm (L'min) a mph system: rformance require rromance require rromance require rromance require gauge panel mat discharge value of the master gaug re any special re ne flow meters re re any special re re re any special re re re any special re re	Fire Pump — Chapter 16  No gpm (L/min)  her than the chassis propulsion engine:  idy: tt psi (kPn) (kmph)  ements: , specify altitude: fit: i) of suction hose, specify length: psecial materials for pump construction and piping?  i: erial: es required? Yes No quirements? quired? Yes No quirements?  nts, or other features required at the pump operator's pans,	el?
* Is a fire pump re * Pump rated cape * Number of pump * Pump type: * Pump location: How is the pump Type of engine to Pump location: Pump testing au  If pump-and-roll Flow Vehicle speed Type of primer s Special pump pe If altitude ove If the over If the over If the over If the over Location of pum Pump panel and Type of Intake as Specify the size  Are individual li If yes, are the Are any special; Should the engin sis parked but no	quired? Yes scitly: stages required: b to be driven? driven pump if of thority: is required, specie gpm (L/min) a mph system: rformance requir rrormance requir rrormance requir rrormance requir rrormance requir rrormance requir rrormance requir ar 2000 ft (600 m) mph system: properties and discharge value of operator's panel gauge panel mat discharge value of the master gaug ne pressure gauge re any special req ne flow meters re re any special req gauges, instrumen gauges instrumen se speed control a to pump mode?	Fire Pump — Chapter 16  Nogpm (L/min)  her than the chassis propulsion engine:  ify: ttpsi (kPa) (kmph)  ements: , specify latitude: fit: ) of suction hose, specify length:special materials for pump construction and piping?  iffered: e controls desired: ges: es required?  Yes  Nouirements?  quired?  Yes  Nouirements?  nts, or other features required at the pump operator's panel the pump operator's panel be enabled when the apparat  Yes  No	el?
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Intional	Fire	Protection	Association	Panort
tauonar	гпе	Protection	Association	Kebon

	sure governor o	r a relief valve to be sup	olied?		
*Pump Intake C	connections				
Size	Type of Conr	ection Loc	ation	Valved (Y/N)	Control Location
	Type or com	200		Tarres (1714)	Control Economic
-					
-					
Are special adap	nters required a	on the pump intakes?			
		er be carried on any inta	O TO W	D.M.	
ram a vaive, sa	ancec, or amapo	er be carried on any mis	Acc. 2 100	2110	
If yes, specify	y wnere, make,	and model (see 16.6.11):			
Pump Dischar	ge Outlets Wit	hout Preconnected Ho	se Lines		
		er discharge outlets req			
Quantity	Size	Type of Connection		Location	Flow Requirement
			_		
			_		+
			_		
Dump Diseber	no Outlete for	Draconnacted Harry	nee		
		Preconnected Hose Li			
Quantity	Size	Type of Connection		Location	Flow Requirement
			_		
			_		
			_		
		ipment/system to be prov			
Is a deck gun re	squired: 🖵 res	□ No			
Type:		□ No			
		No			
Type: Mounting loo	ration:				
Type: Mounting los Piping size a	ration: ind arrangemen	ıt:			
Type: Mounting loc Piping size a Is pump panel o	ration: 				
Type: Mounting los Piping size a	ration: 	ıt:			
Type: Mounting loc Piping size a Is pump panel o	ration: 	ıt:			
Type: Mounting loc Piping size a Is pump panel o	ration: 	ıt:			
Type: Mounting los Piping size a Is pump panel o Specify detai	cation: and arrangement color coding req als:	st:uired? □ Yes □ No			
Type: Mounting los Piping size a Is pump panel o Specify detai	cation: and arrangement color coding req als:	st:uired? □ Yes □ No			
Type:  Mounting los Piping size a Is pump panel o Specify detai	ration:	st:uired? □ Yes □ No			
Type:  Mounting los Piping size a Is pump panel o Specify detai	ration:	st:uired? □ Yes □ No			
Type:  Mounting loc Piping size a Is pump panel o Specify detai  Is a booster reel How many re Location:	ration:	st:uired? □ Yes □ No			
Type:  Mounting los Piping size a Is pump panel o Specify detai	ration:	st:uired? □ Yes □ No			
Type:  Mounting los Piping size a Is pump panel o Specify detai  a booster reel How many r Location: Hose size an	ration:	st:uired? □ Yes □ No			
Type: Mounting los Piping size a Is pump panel o Specify detai  Is a booster reel How many re Location: Lose size an Reel rewind	ration: und arrangemen color coding req ls: l required?	st:uired? □ Yes □ No			
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Type: Mounting los Piping size a Is pump panel o Specify detai  Is a booster reel How many re Location: Lose size an Reel rewind	ration: und arrangemen color coding req ls: l required?	st:			
Type: Mounting los Piping size a Is pump panel o Specify detai  Is a booster reel How many re Location: Lose size an Reel rewind	ration: und arrangemen color coding req ls: l required?  d length: type:	st:uired? □ Yes □ No	np — Chapt	er 17	
Type:	ration: und arrangemen rolor coding req lls:  I required?   I required?   I dength: type:	uired? □ Yes □ No  Yes □ No  Auxillary Pur	np — Chapt	er 17	
Type:	ration: und arrangemen color coding req lls: l required?  l required? d length: type: l: pump required	Auxiliary Pur	np — Chapt	er 17	
Type:	ration: und arrangemen color coding req lls: l required?  l required? d length: type: l: pump required	Auxiliary Pur	np — Chapt	er 17	
Type:	ration: und arrangemen color coding req lls: l required?  l required? d length: type: l: pump required	Auxiliary Pur	np — Chapt	er 17	
Type: Mounting loc Piping size a Is pump panel of Specify detai  Is a booster reel How many re Location: Hose size an Reel rewind Piping to ree  Is an auxiliary of It is an aux	ration: und arrangement color coding req ls: l required?  d length: type: l: lpump required upy pump operations	at:  Lit:  L	np — Chapt	er 17	
Type: Mounting loc Piping size a Is pump panel of Specify detai  Is a booster reel How many re Location: Hose size an Reel rewind Piping to ree  Is an auxiliary of It is an aux	ration: und arrangement color coding req ls: l required?  d length: type: l: lpump required upy pump operations	at:  Lit:  L	np — Chapt	er 17	
Type: Mounting log Mounting log Piping size a Is pump panel c Specify detai  Is a booster reel How many re Location: Location: Hose size an Reel rewind Piping to ree  Is an auxiliary pump Auxiliary pump	ration: and arrangement arrang	at:  Lit:  L	np — Chapt	er 17	
Type: Mounting log Mounting log Piping size a Is pump panel c Specify detai  Is a booster reel How many ru Location: Hoes size an Reel rewind Piping to ree  Is an auxiliary Type of auxiliar  Auxiliary pump Type of auxiliar	ration: and arrangement and arrangement arrangement lise.  I required?   d length: type: b:  pump required y y pump operati performance: yp pump:	at:  Ves No  Auxiliary Pur  Auxiliary Pur  Ones:	np — Chapt	er 17	
Type: Mounting log Mounting log Piping size a Is pump panel c Specify detai  Is a booster reel How many ru Location: Hoes size an Reel rewind Piping to ree  Is an auxiliary Type of auxiliar  Auxiliary pump Type of auxiliar	ration: and arrangement and arrangement arrangement lise.  I required?   d length: type: b:  pump required y y pump operati performance: yp pump:	at:  Ves No  Auxiliary Pur  Auxiliary Pur  Ones:	np — Chapt	er 17	
Type: Mounting los Piping size a Is pump panel o Specify detai  Is a booster reel How many r Location: Hose size an Reel rewind	ration: nd arrangemen color coding req lice licels?  I required?  I required?  I length: type: licels?  I pump required y pump operation y pump up operation y pump up operation y pump up operation y pump;	at:  Ves No  Auxiliary Pur  Auxiliary Pur  Ones:	np — Chapt	er 17	
Type: Mounting to Mounting to Piping size a Is pump panel class pump panel	ration: India arrangement of a color of the	tt:  fes No  Auxiliary Pui  Auxiliary Pui  de driven?  ee driven?	' • Yes • N	ío	
Type: Mounting to Mounting to Piping size a Is pump panel class pump panel	ration: India arrangement of a color of the	at:  It:  It:  Auxiliary Put  Auxiliary Put  Ones:  de driven?	' • Yes • N	ío	
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Type: Mounting to Mounting to Mounting to Specify detail Is a booster reel Is a booster reel Is a booster reel How many re Location: Hose size an Reel rewind Piping to ree Is an auxiliary proper of auxiliar Mype of auxiliar How is the auxi Auxiliary pump Type of auxiliar How is the auxi Location: It is an auxiliary pump Type of auxiliar Location: It is a auxiliary pump Type of auxiliar Location: It is a auxiliary pump Type of auxiliar Location: It is a auxiliary pump Type of auxiliar Location: It is a auxiliary pump Is the auxiliary pump Location Is a auxiliary	ration: and arrangement of a color of the co	tt:  Auxiliary Put  Auxiliary Put  Ges No  Auxiliary Put  Ges No  Ges No  Auxiliary Put  Ges No  Ges N	' • Yes • N	ío	, Valved (Y/N)
Type:  Mounting loo  Piping size as spump panel el si pump panel el sa poster reel  Is a booster reel  How many re Location:  Hose size an Reel rewind  Piping to ree  Is an auxiliary pump  Type of auxiliary  Hose size an Auxiliary pump  Type of auxiliary  Location:  Location:  Auxiliary pump  Location:  Location:  Location:  Location:  Auxiliary pump  Location:  Location:	ration: and arrangement of a color of the co	tt:  dread?	' • Yes • N	io ction and piping	
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Type: Mounting to Mounting to Piping size as is pump panel of Specify detail as a booster reel How many re Location: Hose size an Reel rewind Piping to ree  Is an auxiliary pump Type of auxiliar Auxiliary pump Type of auxiliar How is the auxiliary pump Is the auxiliary pump Liste a	ration: and arrangement of a color of the co	tt:  dread?	' • Yes • N	io ction and piping	
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Type: Mounting to Mounting to Piping size as is pump panel of Specify detail as a booster reel How many re Location: Hose size an Reel rewind Piping to ree  Is an auxiliary pump Type of auxiliar Auxiliary pump Type of auxiliar How is the auxiliary pump Is the auxiliary pump Liste a	ration: and arrangement of a color of the co	tt:  dread?	' • Yes • N	io ction and piping	

+ Auxiliary Pum	p Discharge	Outlet Connections		
Quantity	Size	Type of Connection	Location	Flow Requirement
Where are the	uxiliary pum	p controls to be located?	•	
Is a booster ree				
How many r				
Location:				
Hose size an Reel rewind				
Piping to ree				
		WaterTank	- Chapter 18	
*Is a water tank	required?		— Chapter 18	
*Water tank cap	acity (see Sec	tions 5.5, 6.5, 7.5, 8.5, and 5	1.5):	
Tank constructi	on material:			
Is an internal o	oating recuir	ed? • Yes • No		
Is a removable	tank lid requi	red? • Yes • No		
Type of tank le	vel indicator(s	):		
Location of add	itional tank le	evel indicator(s):		
Tank to pump f	low rate recu	ind		
Pump to tank fi				
Is a tank dump	valve require	d? □ Yes □ No		
Style of valv	e:			
Size: Performance	required:			
Location:	required.			
Type of conn				
Is a direct tank		☐ Yes ☐ No		
Style of valve Size:	0:			
Performance	required:			
Location:				
Type of conn	ector:			
*Required inform	ation where e	quipment/system to be provid	ed	
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		Aerial Device	s — Chapter 19	
*Is an aerial dev	ice required?	Aerial Device	s — Chapter 19	
	ice required?	Aerial Device		r tower:
*Indicate wheth	ice required? er the aerial d	Aerial Device	s — Chapter 19 er, elevating platform, or wate	
*Indicate whether	ice required? er the aerial d	Aerial Device:  Yes No levice is to be an aerial ladd	s — Chapter 19 er, elevating platform, or wate	
*Indicate whether	ice required? er the aerial d	Aerial Device	s — Chapter 19 er, elevating platform, or wate	
*Indicate whether	ice required? er the aerial d	Aerial Device:  Yes No levice is to be an aerial ladd	s — Chapter 19 er, elevating platform, or wate	
*Indicate wheth	ice required? er the aerial d	Aerial Device:  Yes No levice is to be an aerial ladd	s — Chapter 19 er, elevating platform, or wate	
*Indicate wheth  Indicate maxim  Communication	ice required? er the aerial d um slope for a system type,	Aerial Device:  Yes No levice is to be an aerial ladd aerial device operation if it locations, radio interface, h	s — Chapter 19 er, elevating platform, or wate	
*Indicate wheth  Indicate maxim  Communication  Aerial Ladder  *Rated vertical is Rated horizonta	ice required? er the aerial d um slope for a system type, neight require al reach require	Aerial Device  Yes No No evice is to be an aerial ladd aerial device operation if it. locations, radio interface, h  d:ft (m) red:ft (m)	s — Chapter 19  er, elevating platform, or water executes 6 degrees (8.7 percent ead set connections:	
*Indicate wheth  Indicate maxim Communication  Aerial Ladder *Rated vertical * *Rated horizonta *Capacity rating	ice required? er the aerial d um slope for a system type, neight require al reach require (tip load) req	Aerial Device:  'Yes 'No evice is to be an aerial ladd aerial device operation if it locations, radio interface, h  d: ft (m) red: ft (m) interd: ft (m)	s — Chapter 19  er, elevating platform, or water exceeds 5 degrees (8.7 percent ead set connections:  Ib (114 kg) minimum]	
*Indicate wheth  Indicate maxim Communication  Aerial Ladder  *Rated vertical it  *Rated horizonta  *Capacity rating Is a breathing a	ice required?  or the aerial d  num slope for a  n system type,  neight require  (tip load) requir  (tip load) require	Aerial Device  Yes No levice is to be an aerial ladd aerial device operation if it locations, radio interface, h  d: ft (m) red: ft (m) uired: h (25)	s — Chapter 19  er, elevating platform, or water exceeds 5 degrees (8.7 percent ead set connections:	
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Is a three-l	ever, tw	o-lever	or single-le	ver control system required?					
List any aerial ladder equipment or features required:									
Elevating I				0(-)					
* Rated verti * Rated horiz				ft (m)					
*Capacity ra	ting (ti	p load)	required:	lb (kg) [750 lb (340 kg) mir	nimum]				
and the tur	ntable?	☐ Yes	No No	ed with a ladder that provides continu	ous access between the platform				
If yes, sp	еспу а	stans:							
Is a breath	ing air	vstem	to be supplie	ed to the platform? Yes No					
Is a breath	ing air	system	to be supplie	ed to the lower control station?					
If a brea	thing a nts of t	ir syste he brea	m is to be su wthing air sy	applied, are there any special requiren stem desired?	nents, makes, or models for the				
Specify the What make	numbe and m	r of mo odel of	nitors to be monitor are	supplied on the platform: required [minimum flow 1000 gpm (40	000 L/min) at 100 psi (700 kPa)]?				
What make	and m	odel of	nozzle are re	equired?					
Is a hose co	nnectio	n to be	provided on	the platform from the water delivery	system? • Yes • No				
If yes, de	escribe	number	r, size, and a	rrangement:					
Are any spe	ecial ar	rangem	ents to be p	rovided for hose lines from the platforn	n water delivery system?				
Indicate th		al inle	t arrangeme	nt required, including the size, type, a	nd number of inlets and the valving				
arrangeme	nt:								
Is a three-l	ever tw	o-lever	or single-le	ver control system required?					
	,	0-10-101	or single-re	rea commo system requires:					
*Required in	formati	on wher	e equipment	system to be provided					
© 2015 Nation	al Fire Pro	otection A	Association		NFPA 1901 (p. 15 of 22)				
Low Voltag	ge Ligh	ting Re	quirement						
Low Voltag			equirement ot/Flood	Location	Specify Details				
				Location	Specify Details				
				Location	Specify Details				
Quant	ity	Sp	ot/Flood	Location	Specify Details				
Quant	ity ge Ligh	Sp ting R	ot/Flood						
Quant	ity ge Ligh	Sp ting R	ot/Flood	Location  Location	Specify Details  Specify Details				
Quant	ity ge Ligh	Sp ting R	ot/Flood						
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Quant Line Voltag Quantity	ge Ligh	Sp ting R	equirement Wattage						
Quant Line Voltag Quantity	ge Ligh	Sp ting R	equirement Wattage	Location					
Quant Line Voltag Quantity	ge Ligh	Sp ting R	equirement Wattage	Location					
Line Voltag	ge Ligh Spot/	Sp ting R	equirement Wattage	Location					
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Line Volta Guantity  List any ele  Water Tow  * Is the wate  * Rated verti	Spot/ Spot/ Spot/ er er cal heig	Sp	equirement Wattage m equipmen elescoping, a	Location  tor features required:  rticulating, or both?  ft (m)  ft (m)					
Line Voltag  Quantity  List any ele  Water Tow  * Is the wate  Rated verti  Waterway 4	Spot/ Spot/ Spot/ Per r tower  cal height	Specification Sp	equirement Wattage m equipmen aired: quired: ed if in exce	Location  tor features required:  rticulating, or both?  ft (m)  ft (m)  grad (4000 L/min):	Specify Details				
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Line Voltag  Guantity  List any ele  Water Tow  * Is the wate  * Rated verti  * Rated wort  * Rated water  Waterway of	Spot/ Spot/ Spot/ Per r tower cal height	Sp S	equirement Wattage m equipmen aired: quired: ed if in exce	Location  t or features required:  rticulating, or both?  ft (m)  ft (m)  so of 1000 gpm (4000 L/min):  required [minimum flow 1000 gpm (400 L/min)]	Specify Details				
Line Voltag Guantity  List any ele  Water Tow  Is the wate  Rated herin  Waterway of  What make	Spot/ Spot/ Spot/ ervating  recal height contain rapacity and me	Sp	m equipmen  elescoping, a  irred: quired: ed if in exce monitor are	Location  tor features required:  rticulating, or both?  ft (m)  ft (m)  se of 1000 gpm (4000 L/min):  required [minimum flow 1000 gpm (4000 L/min)]	Specify Details				
Line Voltag  Guantity  List any ele  Water Tow  *Is the wate  *Rated verti  *Rated horis  Waterway &  What make  What make	spot// spot// spot// er r tower r tower cal height	Sp S	m equipmen  wattage  m equipmen  aired: quired: quired: are re  mozzle are re  ad nozzle con	Location  Location  tor features required:  rticulating, or both?  ft (m)  ft (m)  group (4000 L/min):  required [minimum flow 1000 gpm (4000 L/min)]  required?  trols to be located?	Specify Details  Specify Details  One of the specific of the s				
Line Voltag  Guantity  List any ele  Water Tow  *Is the wate  *Rated verti  *Rated horis  Waterway &  What make  What make	Spot/ Spot/ Spot/ Spot/ Frapacity and m	Sp S	m equipmen  wattage  m equipmen  aired: quired: quired: are re  mozzle are re  ad nozzle con	Location  tor features required:  rticulating, or both?  ft (m)  ft (m)  se of 1000 gpm (4000 L/min):  required [minimum flow 1000 gpm (4000 L/min)]	Specify Details  Specify Details  One of the specific of the s				
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Line Voltag  Guantity  List any ele  *Is the wate  *Rated heris  Waterway  What make  What make  What make	Spot/ Spot/ Spot/ Pervating  For tower  and height to the promain representative and me and m	splatfor to be to the require active require todel of	populirement Wattage  m equipmen  elescoping, a  xired: quired: ed if in exce- monitor are nozzle are re nozzle con t. arrangeme	Location  Location  tor features required:  rticulating, or both?  ft (m)  ft (m)  group (4000 L/min):  required [minimum flow 1000 gpm (4000 L/min)]  required?  trols to be located?	Specify Details  Specify Details  One of the specific of the s				
Line Voltag Guantity  List any ele  Water Tow  Is the wate  Rated verti  Rated verti  Waterway e  What make  What make  Where are  Indicate th arrangeme	system of the more and me and	Sp  tting Re  Flood  to be to  to be tre  the require  re	m equipmen  wattage  m equipmen  aired: quired: ed if in exce monitor are  nozzle are re ad nozzle con t arrangeme	Location  tor features required:  rticulating, or both?  ft (m)  ft (m)  se of 1000 gpm (4000 L/min):  required f minimum flow 1000 gpm (4000 L/min) trols to be located?  nt desired, including the size, type, an ever control system required?	Specify Details  Specify Details  One of the specific of the s				
Line Voltag Guantity  List any ele  Water Tow  Is the wate  Rated verti  Rated verti  Waterway e  What make  What make  Where are  Indicate th arrangeme	spot/	Sp S	m equipmen  wattage  m equipmen  elescoping, a  irred: quired: di in exce  monitor are  nozzle are r  d nozzle con  t arrangeme  or single-le	Location  tor features required:  rticulating, or both?	Specify Details  Specify Details  One of the specific of the s				

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Is a foam system required?  Yes Type of foam system required:		— Chapter 20		
Type of foam(s) to be used:				
Foam concentrate storage capacity: Discharge Outlets to Be Used wit				
	Required Flow	Proportioning Rate	Hose Length	Hose Diameter
Discharge Location	Flow	Rate	Length	Diameter
				_
Is an outside foam system inlet or p	islam recovired?	les DNe		
Type:	ickup required: 3	es JAO		
Is a foam tank refill system require				
If yes, performance requirements	:			
Cor Is a CAFS required? □ Yes □ No	npressed Air Foan	n System — Cha	pter 21	
What is the total SCFM required?_				
What type of compressor and driver	is required?			
What is the total water pump capac	ity required?			
Specify the type of system controls :	and the second and the second are	od:		
openy me type or system contrars	ind interiocks requir	eu.		
Required information where equipme	nt/system to be provid	ed		NFPA 1901 (p. 17 o
Required information where equipme D 2015 National Fire Protection Association Discharge Outlets to Be Used with	nt/system to be provid	eir Performance	Hose Length	
Required information where equipme	nt/system to be provid	ed	Hose Length	NFPA 1901 (p. 17 o Hose Diameter
Required information where equipme D 2015 National Fire Protection Association Discharge Outlets to Be Used with	nt/system to be provid	eir Performance	Hose Length	
Required information where equipme © 2015 National Fire Protection Association Discharge Outlets to Be Used with	nt/system to be provid	eir Performance	Hose Length	
Required information where equipme D 2015 National Fire Protection Association Discharge Outlets to Be Used with	nt/system to be provid	eir Performance	Hose Length	
Required information where equipme D 2015 National Fire Protection Association Discharge Outlets to Be Used with	nt/system to be provid	eir Performance	Hose Length	
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Required information where equipme 0 2015 National Fire Protection Association Discharge Outlets to Be Used will Discharge Location Specify if an airflow meter is requir Specify the type of wet/dry control r Lin Is a line voltage electrical system re Continuous rated wattage of power Voltage of power source: "Type of power source: "Pytage of power source: "Pytage of power source: "Pytage of power source: "Pytage of power outled penetate Direct drive generator Auxiliary engine driven generate Belt driven generator or alter Derived from apparatus low Other: Make, model, or other details of pow Location of power source:	h the CAFS and Th  n  ed (SCPM): ed (SCPM): eviltage Electrica quired?	eir Performance Required Flow  I System — Cha		

*Circuit Remote Control Information  *Circuit Remote Control Information  *Controlled Circuit	*Receptacle Info	rmation								
*120240 Volt Lighting Information  *2 Cord Real Information  *3 Real # R				Style of Receptacle			Location			
*120240 Volt Lighting Information  *2 Cord Real Information  *3 Real # R										
*120240 Volt Lighting Information  *2 Cord Real Information  *3 Real # R			_				_			
*120240 Volt Lighting Information  *2 Cord Real Information  *3 Real # R										
*120240 Volt Lighting Information  *2 Cord Real Information  *3 Real # R										
*Izo2240 Volt Lighting Information  StyleMake Location Wattage/Bulb Type Mounting  *Cord Real Information  Real #  Mounting location Real # Real # Real # Real # Real #  Mounting location Recy   Real # Real	*Circuit Remote	Control Info	rmation							
*Cord Reel Information  *Cord Reel Information    Reel #   Reel #   Reel #   Reel #						Switch Location				
*Cord Reel Information  *Cord Reel Information    Reel #   Reel #   Reel #   Reel #										
*Cord Reel Information  *Cord Reel Information    Reel #   Reel #   Reel #   Reel #										
*Cord Reel Information  *Cord Reel Information    Reel #   Reel #   Reel #   Reel #										
*Cord Reel Information  *Cord Reel Information    Reel #   Reel #   Reel #   Reel #										
**Cord Real Information    Real #   Real #   Real #   Real #   Real #	* 120/240 Volt Lig	hting Inform	ation							
Mounting location	Style/Ma	ike		Location		Wattag	e/Bulb		Type Mounting	
Mounting location										
Mounting location										
Mounting location										
Mounting location										
Mounting location Amperage Voltage Length of cord in feet Receptack style Distribution box Rewind system  *Is a power-operated light mast required?  Yes  No If yes, specify the make and model required:  List any equipment to be powered from a shorepower inlet:  *Required information where equipmenticystem to be previded 0 2015 National Five Protection Association  *The 1901 (p. 19 of 22)  *Command and Communications — Chapter 23  *Is a separate command area required?  Yes  No  *Is the area to be enclosed by walls and doors?  *Size of the area:  ft (m) or  ft² (m²)  *Number of persons to be seated and able to work in the area:  Is special lighting required?  Yes  No Describe  List the make and model for each piece of communication equipment to be in the command and communications area and whether the contractor or the purchaser is to provide and install the equipment:  List the make and model for each piece of computer equipment to be in the command and communications area and whether the contractor or the purchaser is to provide and install the equipment:  List the make and model for each other piece of equipment to be in the command and communications area and whether the contractor or the purchaser is to provide and install the equipment:  List the make and model for each other piece of equipment to be in the command and communications area and whether the contractor or the purchaser is to provide and install the equipment:    List the make and model for each other piece of equipment to be in the command and communications area and whether the contractor or the purchaser is to provide and install the equipment:    Air Systems — Chapter 24  *Is an air system required?  Yes  No  *What is the function of the air system?  No   Supply tender Persone breathing air   Supply thigh pressure bre	* Cord Reel Inform	mation								
Amperage			R	eel#		Reel #	Reel #		Reel #	
Length of cord in feet		tion								
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Bis a power-operated light mast required?   Yes   No   If yes, specify the make and model required:	Length of cord									
*Is a power-operated light mast required?										
*Is a power-operated light mast required?   Yes   No   If yes, specify the make and model required:    List any equipment to be powered from a shorepower inlet:    *Required information where equipmentitystem to be previded    *O 2015 National Fae Protection Association   NFPA 1901 (p. 19 of 22)    *Command and Communications — Chapter 23  *Is a separate command area required?   Yes   No    *Is the area to be enclosed by walls and doors?    *Size of the area:   fl (m) ×   fl (m) or   fl (m) =   fl (m)										
List any equipment to be powered from a shorepower inlet:    Required information where equipmentitystem to be previded				10 O.W.	- N-					
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Command and Communications — Chapter 23  *Is a separate command area required?	List any equipme	ent to be pow	ered fror	n a shorepov	ver inle	t:				
Command and Communications — Chapter 23  *Is a separate command area required?										
Command and Communications — Chapter 23  * Is a separate command area required?	*Required informa	tion where eq	uipment/	system to be	provide	d				
*Is a separate command area required?	© 2015 National Fire F	Protection Associ	iation						NFPA 1901 (p. 19 of 22)	
*Is a separate command area required?										
*Is the area to be enclosed by walls and doors?  *Size of the area:						nications — 0	Chapter 23			
*Size of the area:	* Is a separate com	imand area r enclosed by v	equired? valls and	l doors?	No					
*Number of persons to be seated and able to work in the area:  Is special lighting required?  Yes  No Describe  List the make and model for each piece of communication equipment to be in the command and communications area and whether the contractor or the purchaser is to provide and install the equipment:  List the make and model for each piece of computer equipment to be in the command and communications area and whether the contractor or the purchaser is to provide and install the equipment:  List the make and model for each piece of computer equipment to be in the command and communications area and whether the contractor or the purchaser is to provide and install the equipment:  List the make and model for each other piece of equipment to be in the command and communications area and whether the contractor or the purchaser is to provide and install the equipment:  "Is external video equipment to be used on the apparatus? Yes No  "If yes, where is it to be mounted?  Air Systems — Chapter 24  "Is an air system required? Yes No  "What is the function of the air system?  Refull SCBA cylinders  Supply high pressure breathing air nose  Supply utility air  "Required information where equipment/system to be previded										
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*Is external video equipment to be used on the apparatus?		d model for e contractor or	each piec	e of compute chaser is to	r equip provide	oment to be in t and install the	he command e equipment:	and cor	nmunications area	
*If yes, where is it to be mounted?  Air Systems — Chapter 24  *Is an air system required?	List the make an	contractor or	the pur	chaser is to	uipmer	and install the	equipment:			
*If yes, where is it to be mounted?  Air Systems — Chapter 24  *Is an air system required?	List the make an	contractor or	the pur	chaser is to	uipmer	and install the	equipment:			
*If yes, where is it to be mounted?  Air Systems — Chapter 24  *Is an air system required?	List the make an	contractor or	the pur	chaser is to	uipmer	and install the	equipment:			
Air Systems — Chapter 24  * Is an air system required?	List the make an	contractor or	the pur	chaser is to	uipmer	and install the	equipment:			
*Is an air system required?  Yes  No *What is the function of the air system?   Refall SCBA cylinders   Supply remote breathing air   Supply high pressure breathing air hose   Supply utility air  *Required information where equipment/system to be provided	List the make an whether the cont	contractor or ad model for e ractor or the	each other	er piece of eq er is to prov	provide uipmer ide and	and install the	equipment:_ command and sipment:			
*Is an air system required?  Yes  No *What is the function of the air system?   Refall SCBA cylinders   Supply remote breathing air   Supply high pressure breathing air hose   Supply utility air  *Required information where equipment/system to be provided	List the make an whether the cont	equipment to	each othe purchas	er piece of eq er is to prov	provide uipmer ide and	and install the	equipment:_ command and sipment:			
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*What is the function of the air system?  Refill SCRA cylinders  Supply remote breathing air Supply high pressure breathing air hose Supply utility air  *Required information where equipment/system to be provided	List the make an whether the cont	equipment to	each othe purchas	er piece of eq er is to prov	uipmer ide and	and install the	equipment:			
Supply remote breathing air Supply high pressure breathing air hose Supply utility air  *Required information where equipment/system to be previded	List the make an whether the cont whether the cont size of the cont size of the control of the c	ad model for e ractor or the equipment ts sit to be mou	sach othe purchas o be used inted?	chaser is to prove or piece of equeris to prove is to prove is to prove id on the appearance.	uipmer ide and	and install the	equipment:			
□ Supply high pressure breathing air hose □ Supply utility air  *Required information where equipment/system to be provided	List the make an whether the cont  "Is external videe "If yes, where i  "Is an air system is "What is the function of the func	and model for exactor or the equipment to sit to be most required?	each othe purchas o be used inted?	er piece of eq er is to prov	uipmer ide and	and install the	equipment:			
Supply utility air  *Required information where equipmenticystem to be provided	List the make an whether the cont  "Is external video  "If yes, where i  "Is an air system :  "What is the func	ontractor or  ad model for e ractor or the  equipment te s it to be mot  required? — tion of the air A cylinders	each other purchase obe used inted?	er piece of eq er is to prov	uipmer ide and	and install the	equipment:			
	List the make an whether the cont whether the cont "Is external video "If yes, where i "Is an air system "What is the funct O Refill SCB O Supply to	ad model for e ractor or the equipment to sit to be most required?	each other purchase o be used inted?	chaser is to prove or piece of equer is to prove it is to pr	uipmer ide and	and install the	equipment:			
	List the make an whether the cont whether the cont "Is external video "If yes, where i "Is an air system "What is the funct O Refill SCIR O Supply rea	ad model for e ractor or the equipment to sit to be mon required? — tion of the air A cylinders note breathin, b pressure by	each other purchase o be used inted?	chaser is to prove or piece of equer is to prove it is to pr	uipmer ide and	and install the	equipment:			
© 2015 National Fire Protection Association NFPA 1901 (p. 20 of 22)	List the make an whether the cont whether the cont "Is external video "If yes, where i "Is an air system "What is the funct O Refill SCIR O Supply rea	ad model for e ractor or the equipment to sit to be mon required? — tion of the air A cylinders note breathin, b pressure by	each other purchase o be used inted?	chaser is to prove or piece of equer is to prove it is to pr	uipmer ide and	and install the	equipment:			
	List the make an whether the cont  "Is external video  "If yes, where i  "Is an air system  "What is the full SCE  C Refill SCE  Supply ree  Supply high  Supply util	equipment to sit to be more titon of the air A cylinders obte breathin, he pressure brity air	the purchase ob used of the purchase ob used?	chaser is to be provided in the appearance of each on the appearance of the appearan	uipmer ide and aratus?	and install the at to be in the cuinstall the equinstall the equin	equipment:			

* Is a cascade system to be supplied?
*How many SCBA cylinders are to be filled?
*How many SCBA cylinders are to be filled?
*What is the size of the cylinders to be filled? ft <sup>3</sup> (m <sup>3</sup> )
*Is a compressor required? □ Yes □ No
* If yes, what free air delivery (FAD) rating is required? ft <sup>3</sup> (m <sup>9</sup> ) at psi (kPa)
*Is a SCBA refill station required? □ Yes □ No
If yes, what is the location of the refill station?
Number of refill lines:
* Parach six has received asserts the Gillerian
*For each air hose required, specify the following:
(a) Discharge flow required in CFM
(b) Discharge pressure required in psi
(c) Whether breathing air or utility air is to be supplied
(d) Length of hose in feet
(e) Whether hose is to be stored on a reel
(f) Mounting location of reel, if applicable
(g) Fitting or device at the end of the hose
What ambient temperatures will be expected if beyond 32°F (0°C) to 110°F (43°C)?
what amoient temperatures will be expected if beyond 32 F (0 C) to 110 F (43 C):
Winches — Chapter 25
* Is a winch required?
*What is the single line pull rating required?
What is the wire rope length required?
Is the power source for the winch to be electric or hydraulic?
Specify the winch location:
Type of control required:
Location of control:
and the second of the second o
Trailers — Chapter 26
*Classification of trailer:
☐ Type I (remain connected)
☐ Type II (operate at scene with independent power)
□ Type III (transport only)
*What will the purpose/function of the trailer be?
*What will the trailer carry? List equipment or total weight:
Am 10.11 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
*Tow hitch type and size preferred/required:
Other requirements should be specified in the appropriate sections above.
The state of the s
*Bounded information where emission to be exceeded
<sup>6</sup> Required information where equipment/system to be provided
*Required information where equipment/system to be provided  © 2015 National Fre Protection Association NFPA 1901 (p. 21 of 22)
© 2015 National Fire Protection Association NFPA 1901 (p. 21 of 22)
© 2015 National Fire Protection Association NFPA 1901 (p. 21 of 22)
© 2015 National Fire Protection Association NFPA 1901 (p. 21 of 22)
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## **Supplemental Information**

File Name Description

Figure\_B.2.12\_pg\_22\_edited.docx

G1901-76.jpg Figure B.2.12\_22

## **Submitter Information Verification**

Submitter Full Name: Ryan Depew

**Organization:** National Fire Protection Assoc

**Street Address:** 

City:

State:

Zip:

Submittal Date: Fri Aug 01 14:31:22 EDT 2014

#### **Committee Statement**

**Committee** Add new page to Figure B.2.12 as seen in attachment Figure B.2.12 pg 22. Previous editions

**Statement:** of the standard did not address UHP.

Response Message:

#### **Ballot Results**

#### This item has passed ballot

- 30 Eligible Voters
- 3 Not Returned
- 27 Affirmative All
- 0 Affirmative with Comments
- 0 Negative with Comments
- 0 Abstention

#### **Not Returned**

Kelker, James L.

Metheny, Sr., J. Allen

Pietsch, W. Michael

#### **Affirmative All**

Caldwell, Walter C.

Chestnut, Wesley D.

Cranfill, Jeff

Darley, Peter F.

Durstine, David

Fenwick, Clayton W.

Frazeur, Donald

Haston, David V.

Hillenbrand, Thomas

Juneau, James J.

Kuntz, Kevin P.

Lackore, J. Roger

McCullough, II, Thomas H.

McDonald, John W.

Mettler, Tom

Peters, William C.

Piechura, Jeff

Pope, Gary R.

Rice, Jr., Edward C.

Salmi, James A.

Shivers, Jason

Stalnaker, Thomas A.

Stites, Thomas G.

Terefinko, John M.

Vational	Fire	Protection	Association	Report
National	LIIC	FIOUCCHOIL	Association	Kepon

ull, Richard	
Vilde, Stephen	
ohn, William H.	

# NEPA

## Second Revision No. 122-NFPA 1901-2014 [ Section No. F.1.2.8 ]

F.1.2.9 U.S. Government Publications.

U.S. Government Printing Office, Washington, DC 20402, www.gpo.gov.

Department of Transportation (DOT), Emergency Response Guidebook, current edition.

Title 49, Code of Federal Regulations, Part 541, "Federal Theft Prevention Standards." 49 CFR 541.

Title 49, Code of Federal Regulations, Part 567, "Certification." 49 CFR 567.

Title 49, Code of Federal Regulations, Part 571, "Federal Motor Vehicle Safety Standards." 49 CFR 571.

Title 49, Code of Federal Regulations, Part 571.105, "Hydraulic and Electric Brake Systems." 49 CFR 571.105.

Title 49, Code of Federal Regulations, Part 571.121, "Air Brake Systems." 49 CFR 571.121.

#### **Submitter Information Verification**

Submitter Full Name: Ryan Depew

Organization: National Fire Protection Assoc

**Street Address:** 

City: State: Zip:

Submittal Date: Wed Aug 27 08:35:28 EDT 2014

#### Committee Statement

Committee Statement: Reference update

Response Message:

#### **Ballot Results**

#### ✓ This item has passed ballot

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