

Report of the Committee on

Fire Hose

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Committee Scope: This Committee shall have primary responsibility for documents on the size and design of fire hose connections, and the performance, maintenance, and selection of all types of fire hose, couplings, nozzles, and accessory equipment.

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

This portion of the Technical Committee Report of the Committee on **Fire Hose** is presented for adoption.

This Report on Comments was prepared by the **Technical Committee on Fire Hose**, and documents its action on the comments received on its Report on Proposals on NFPA 1965, **Standard for Fire Hose Appliances**, as published in the Report on Proposals for the 2003 May Meeting.

This Report on Comments has been submitted to letter ballot of the **Technical Committee on Fire Hose**, which consists of 16 voting members. The results of the balloting, after circulation of any negative votes, can be found in the report.

(Log #1)

1965-1-(1-3) : Reject

SUBMITTER: Dave Kolacz, Task Force Tips, Inc.

COMMENT ON PROPOSAL NO:1965-15

RECOMMENDATION: Replace:

1.3 part (1) Portable valves, including gate valves, ball valves, piston valves, butterfly valves, clappered valves, and pressure relief valves.

With:

1.3 part (1) Portable valves, including gate valves, ball valves, piston valves, butterfly valves, clappered valves, pressure relief valves, and hydrant valves.

SUBSTANTIATION: The list is not intended to be all inclusive but hydrant valves are a major type of valve unique to the fire service and should be listed so that there is no doubt that NFPA 1965 applies to them.

COMMITTEE MEETING ACTION:Reject

COMMITTEE STATEMENT: The proposed change introduces the use of valves rather than the type of valves. There are many uses for valves, this statement is to identify the types of valves covered.

NUMBER OF COMMITTEE MEMBERS:16

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 15

NOT RETURNED: 1 Taylor

(Log #2)

1965-2-(3-3.9 Shutoff Valve) : Reject

SUBMITTER: Dave Kolacz, Task Force Tips, Inc.

COMMENT ON PROPOSAL NO:1965-15

RECOMMENDATION: Replace:

3.3.9 Shutoff Valve. A valve whose primary function is to operate in either a fully shutoff or fully open condition.

With:

3.3.9 Shutoff Valve. A valve whose primary function is to operate in either a fully shutoff or fully open condition. For each shut off valve the size of a shutoff valve is determined by the nominal size of the inlet or outlet connection whichever is smallest.

Clappered appliances such as siamese are not considered a shutoff valve since the clapper cannot completely shut off the flow through the device. Hydrant valves are considered shutoff valves if they are capable of fully shutting off flow from the hydrant.

SUBSTANTIATION: As originally written it was not specified how the size of a shut off valve is determined. It could be the size of the largest coupling on the whole appliance, it could be the smallest coupling, and it could also be the size of the waterway where the shutoff occurs.

Also added sentences about clappered valves and hydrant valves to aid in understanding what is covered by the term "shutoff valve".

COMMITTEE MEETING ACTION:Reject

COMMITTEE STATEMENT: This is a definition of a shutoff valve, not a whole description of what a shutoff valve is or is not. The committee does not think it is necessary to define how valves are sized as part of a definition.

NUMBER OF COMMITTEE MEMBERS:16

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 15

NOT RETURNED: 1 Taylor

(Log #3)

1965-3-(4-3.4) : Accept

SUBMITTER: Dave Kolacz, Task Force Tips, Inc.

COMMENT ON PROPOSAL NO:1965-15

RECOMMENDATION: Replace:

4.3.4 Operating a shut off valve shall require a force of no more than 133.4 N (30 lbf) and no less than 13.3 N (3 lbf) to open or close the valve when tested in accordance with Section 6.2.

With:

4.3.4 Operating a shut off valve shall require a force of no more than 180 N (40 lbf) and no less than 13 N (3 lbf) to open or close the valve when tested in accordance with Section 6.2.

SUBSTANTIATION: Need to replace "valves" with "valve" for correct grammar. Would like to replace 30 lbs with 40 lbs considering that the standard applies to valves up to 150 mm (6 in.) 40 lbs does not seem like an unreasonable amount of force. Consider further that Sections 4.7.8.1 and 4.7.8.2 give an acceptable torque to move the stream of a portable monitor at 40 lbf-ft. Since portable monitors are small the force a person has to apply to obtain 40 lbf-ft of torque is probably in excess of 40 lbs (less than one foot moment arm). If 40 lbs to redirect the stream of a monitor is acceptable (where precision and quickness are needed) than 40 lbs to open or close a valve should also be acceptable (where precision and quickness are not needed).

COMMITTEE MEETING ACTION:Accept

NUMBER OF COMMITTEE MEMBERS:16

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 15

NOT RETURNED: 1 Taylor

(Log #4)

1965-4-(4-4) : Accept in Principle

SUBMITTER: Dave Kolacz, Task Force Tips, Inc.

COMMENT ON PROPOSAL NO:1965-15

RECOMMENDATION: Replace:

4.4 Relief Valve. Any appliance that has a 90-mm (3 1/2-in) or larger shutoff valve shall have a relief valve on the intake side of the shutoff valve.

With:

4.4 Relief Valve. Any appliance that that a 90-mm (3 1/2-in) or larger shutoff valve may have a relief valve on the intake side of the shutoff valve. The authority having jurisdiction shall be permitted to determine the best configuration and placement for relief valves.

SUBSTANTIATION: There are many cases where a relief valve on a shut off valve is of no benefit. Examples are:

- Valve on a gravity fed tanker.
- Valve is used in a hose line that already contains a relief valve.
- Valve used only for drafting.

There are currently many examples of 3 1/2 in. or larger shut off valves commercially available without relief valves. Examples are:

- Akron Brass's 4, 4 1/2, 5, and 6 in. butterfly valves with rocker lug couplings (models 7940, 7945, 7950, 7960) have no relief valve.
- Angus hydrant valve with full shut off (style HV) has no relief valve.
- Angus straight and angled LDH gate valves (styles 11 and 12) have no relief valve.

- AWG's 4 in. gate valve (model 60_71a) has no relief valve
- AWG offers a gate valve with elbow without relief valve (model 60_71b)

- Elkhart Brass's 5 and 6 in. butterfly valves with hose threads or Storz (models 2850 and 2860) have no relief valve.

- Harrington's hydrant valve (model H700-50-45NH) is capable of full shut off and has no relief valve.

- Harrington's straight and elbowed gate valves (models H800-50-50ST and H811-50-50ST) have no relief valve.

- Northline straight and angled 4 and 5 in. gate valves (models FSGV, FSGV 30 degree, SGV, SGV 30 degree) have no relief valve.

- Northline hydrant valve with full shut off (series FSHV) has no relief valve.

- Pok 4, 4 1/2, 5, and 6 in. butterfly valves (models 0879, 0879-4.5, 0879-5, and 0879-6) have no relief valve.

- Snaptite gate valves (model G) have no relief valve.
- Task Force Tips straight and angled gate valves (model series AE and AG) have no relief valve.

Since so many LDH valves are commercially available without a relief valve they must be desirable and of practical use. To make it a requirement for all LDH shut off valves to have a relief valve is over burdensome for expense, size, and weight.

Note: Supporting Material is available for review at NFPA headquarters.

COMMITTEE MEETING ACTION:Accept in Principle

Revise section 4.4 as follows:

4.4* Relief Valves. If the appliance has a relief valve, the relief valve shall meet the requirements of this section.

4.4.1 The relief valve shall be on the intake side of the shutoff valve.

4.4.2 The relief valve shall relieve to atmosphere.

4.4.3 The relief valve shall be field adjustable.

4.4.4 The manufacturer shall mark the range of pressure adjustment on the relief valve.

COMMITTEE STATEMENT: The committee realizes there are applications where a relief valve is not necessary or practical and is therefore defining some requirements for the relief valve if it is furnished as part of the appliance. However, to be effective, the relief valve does have to be on the intake side of a shutoff valve. The authority having jurisdiction can always request a specific arrangement for a relief valve.

NUMBER OF COMMITTEE MEMBERS:16

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 15

NOT RETURNED: 1 Taylor

(Log #5)

1965-5-(4-7.1) : Accept in Principle

SUBMITTER: Dave Kolacz, Task Force Tips, Inc.

COMMENT ON PROPOSAL NO:1965-15

RECOMMENDATION: Replace:

4.7.1 Portable monitors except portable ladder pipes shall attachments for tie downs.

With:

4.7.1 A portable monitor except portable ladder pipes shall have an attachment for a tie down.

SUBSTANTIATION: Since the current wording has monitors as plural it is unclear if the term "attachments" refers to a single attachment on multiple units or multiple attachments on a single unit. To change to using singular terms would remove this ambiguity.

COMMITTEE MEETING ACTION:Accept in Principle

Revise 4.7.1 to read as follows:

A portable monitor, except a portable ladder pipe, shall have an attachment for at least one tie down.

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COMMITTEE STATEMENT: The committee agrees with the submitter but wants the implication that there can be one or more tie downs.

NUMBER OF COMMITTEE MEMBERS:16

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 15

NOT RETURNED: 1 Taylor

(Log #6)

1965-6-(4-7.4 and 4.7.5) : Reject

SUBMITTER: Dave Kolacz, Task Force Tips, Inc.

COMMENT ON PROPOSAL NO:1965-15

RECOMMENDATION: Omit:

4.7.4 A locking method(s) shall be provided that will hold the elevation of the monitor in any position allowed by the manufacturer.

4.7.5 A locking method shall be provided that will hold the rotation of the monitor in any position allowed by the manufacturer.

SUBSTANTIATION: Sections 4.7.4 and 4.7.5 do not make it clear if the locking method is a separate dedicated mechanism or an attribute inherent to a particular design. An example is a worm gear driven, which inherently holds position, but is not a dedicated locking mechanism. Another example is simply having sufficient drag on a joint so that it retains its position. If what is desired is that the monitor not move by itself, than Sections 4.7.8.1 and 4.7.8.2 address this. These Sections lists minimum and maximum forces to redirect the stream coming from a monitor. Since a minimum force is listed then the stream is obviously not moving by itself. Current Sections 4.7.4 and 4.7.5 do not give criteria for how much locking force is required. Having a requirement for a dedicated locking mechanism (if that is what is intended) may hinder rapid redirection of the stream.

COMMITTEE MEETING ACTION:Reject

COMMITTEE STATEMENT: The locking mechanism/method is designed to prevent the elevation or rotation of the monitor from being moved accidentally. For example, if someone is adjusting the nozzle, they should not accidentally change the direction of the stream, it should stay in place. This requirement is not exclusively addressing movement due to water flow/vibration. However, this is a safety issue as drag will diminish with time and the monitor discharge direction will move unintentionally. Having a locking mechanism doesn't mean the operator would always engage it if rapid redirection is needed.

NUMBER OF COMMITTEE MEMBERS:16

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 15

NOT RETURNED: 1 Taylor

(Log #7)

1965-7-(4-7.8.2) : Accept in Principle

SUBMITTER: Dave Kolacz, Task Force Tips, Inc.

COMMENT ON PROPOSAL NO:1965-15

RECOMMENDATION: Replace:

4.7.8.2 The torque to elevate the stream of a monitor shall not be less than 4 N m (3 lbf ft), nor more than 54 N m (40 lbf ft) when measured as defined in Section 6.6.

With:

4.7.8.2 For a monitor without a mechanism to change elevation the torque to elevate the stream of a monitor shall not be less than 4 N m (3 lbf ft), nor more than 54 N m (40 lbf ft) when measured as defined in Section 6.6. For a monitor with handwheel elevation control the torque on the handwheel to elevate the stream of a monitor shall not be greater than 2 N m (1 1/2 lbf ft) when measured as defined in Section 6.6.

SUBSTANTIATION: The current wording for Section 4.7.8.2 does not address monitors with handwheels to control the elevation. Since there is a lot of mechanical advantage with a handwheel using screw threads or a worm gear the torque to change a monitor's elevation is greatly reduced. Since a handwheel mechanism's screw threads or worm gear inherently lock the elevation in place no minimum torque requirement is needed.

COMMITTEE MEETING ACTION:Accept in Principle

Revise 4.7.8.2 to read as follows:

4.7.8.2 The ~~force torque~~ to elevate the stream of a monitor shall be not less than 4 N·m (3 lbf·ft), nor more than 54 N·m (40 lbf·ft) when measured as defined in Section 6.6.

Change the title of 6.6 to read: "Force to Elevate Test"

Delete 6.6.4.

Change the title of 4.7.8 to read "Force to Operate"

Change 4.7.8.1 to read: "The ~~force torque~~ to rotate a monitor shall not be less than 4 N·m (3 lbf·ft), nor more than 54 N·m (40 lbf·ft) when measured as defined in Section 6.5.

Change the title of 6.5 to read: "Force to Rotate Test".

Delete 6.5.4.

COMMITTEE STATEMENT: The committee has reviewed the issue of measuring torque versus force and now feels that a measurement of force is a better measurement as it more directly related to real world conditions. It has changed the torque to elevate and the torque to rotate to forces to elevate and rotate.

NUMBER OF COMMITTEE MEMBERS:16

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 15

NOT RETURNED: 1 Taylor

(Log #9)

1965-8-(6-2.2) : Accept in Principle

SUBMITTER: Dave Kolacz, Task Force Tips, Inc.

COMMENT ON PROPOSAL NO:1965-15

RECOMMENDATION: Replace:

6.2.2 A dynamometer, which records the maximum force reading, shall be attached to the lever 76 mm (3 in.) from the end of the lever.

With:

6.2.2 A dynamometer, which records the maximum force reading, shall apply force to the lever at the center of the grab point.

SUBSTANTIATION: Some commercially available valves have lever operated shut off valves where the lever is only a little greater than 3 in.

• Reference: Several Elkhart Brass Valved wyes with handles approximately 4 1/2 in. long.

Some commercially available lever operated shut off valves have a ball or knob on the end that places the actual load point for moving the lever close to the end of the lever.

• Reference: Akron 1 1/2 in. wye (model 1480) with lever approximately 5 in. long with ball on end.

If the intent of the standard is to determine the force a person has to apply when using the lever then the dynamometer should be applied where a person is most likely to actually hold the lever. When the load is applied 3 in. from the end of short levers an artificially high reading would result.

COMMITTEE MEETING ACTION:Accept in Principle

Revise 6.2.2 to read as follows:

"A dynamometer, which records the maximum force reading, shall be attached to the ~~outermost point of the actuating device lever 76 mm (3 in.)~~ from the end of the lever.

COMMITTEE STATEMENT: The committee feels that the center of the grab point is not consistently measurable but does realize there are a variety of arrangements and therefore is changing the measurement point to the outermost point of the actuating device, which is closer to the typical center of the grab point while being a point that can be consistently measured.

NUMBER OF COMMITTEE MEMBERS:16

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 15

NOT RETURNED: 1 Taylor

(Log #10)

1965-9-(6-7.1.1) : Accept in Principle in Part

SUBMITTER: Dave Kolacz, Task Force Tips, Inc.

COMMENT ON PROPOSAL NO:1965-15

RECOMMENDATION: Replace:

6.7.1.1 The monitor shall be set up on a concrete surface with a broom finish in accordance with manufacturer's instructions.

With:

6.7.1.1 The monitor shall be set up on a concrete surface with a broom finish in accordance with manufacturer's instructions except that slack shall be allowed in the tie down in accordance with 6.7.1.3. Note: This is not an endorsement to have slack in the tie down or omit tying down the monitor if the manufacturer recommends it.

SUBSTANTIATION: The manufacturer's instructions for the Akron Apollo and Task Force Tips Crossfire monitors call for setting up the monitor with no slack in the tie down. Section 6.7.1.1 and 6.7.1.3 are currently in conflict.

• From Akron Apollo Operating Instructions:

"Connect the hook to a rigid stationary object such as a parking meter, manhole, car wheel, etc. in front of the unit and pull the chain tight. DO NOT OPERATE THE UNIT IN THE PORTABLE BASE WITHOUT THE SAFETY CHAIN SECURED."

• From Task Force Tips Operating Instructions:

"Whenever the monitor is operated on the portable base, the base must be anchored to a substantial immovable object"

• "Warning: A sliding monitor can cause injury. Remove all slack between the anchor and the base before flowing water."

COMMITTEE MEETING ACTION:Accept in Principle in Part

Revise 6.7.1.1 to read as follows:

"The monitor shall be set up in accordance with the manufacturer's instructions on a concrete surface with a broom finish in accordance with the manufacturer's instructions.

Do not add the suggested second sentence.

COMMITTEE STATEMENT: The change to the existing sentence is editorial to emphasize that the monitor is to be set up in accordance with the manufacturers instruction. The second sentence is not being added as this is a test procedure in a document essentially used by manufacturers, not a user document so the committee does not feel its endorsing a setup procedure that is contrary to the manufacturers instructions.

NUMBER OF COMMITTEE MEMBERS:16

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 15
NOT RETURNED: 1 Taylor

(Log #11)

1965-10-(6-10.7.1) : Reject

SUBMITTER: Dave Kolacz, Task Force Tips, Inc.

COMMENT ON PROPOSAL NO:1965-15

RECOMMENDATION: Replace:

6.10.7.1 All appliances other than portable monitors shall be tested in accordance with Section 6.4.

With:

6.10.7.1 All appliances other than portable monitors shall meet the requirements of Section 4.6.

SUBSTANTIATION: Section 6.4 gives the procedure for performing the rough usage test. It does not give criteria for passing or rejecting a tested unit.

Section 4.6 gives criteria for passing or rejecting a unit subjected to the rough usage test of Section 6.4.

COMMITTEE MEETING ACTION:Reject

COMMITTEE STATEMENT: Paragraph 6.10.7 is part of a string of tests and checks that together comprise the High- Low-Temperature test. This test is called from Section 5.2 which defines the pass/fail criteria.

NUMBER OF COMMITTEE MEMBERS:16

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 15
NOT RETURNED: 1 Taylor

(Log #8)

1965-11-(6-12) : Accept in Principle

SUBMITTER: Michael Mayer, Task Force Tips

COMMENT ON PROPOSAL NO:1965-15

RECOMMENDATION: Replace:

All of Section 6.12 Ultraviolet Light and Water Test

With:

Modern testing procedures and equipment that complies with ASTM G 155 - 00a. The NFPA technical for NFPA 1965 should contact the ASTM Committee G3 on Weathering and Durability to determine the exact process and equipment that should be used to perform a modern Ultraviolet Light and Water that would provide a consistent, repeatable, and reliable test.

SUBSTANTIATION: 1. Most testing laboratories have replaced their Carbon-Arc lamp testing apparatus with a Xenon Arc lamp testing apparatus.

2. Standards for Carbon Arc testing are already being discontinued.

3. Xenon-arc lamps provide the best correlation to the full spectrum of sunlight.

4. The carbon arc light spectrum cannot compare to the xenon arc light spectrum for matching the spectral power distribution of actual sunlight. The carbon arc does not contain much short wavelength UV output, only two very large spikes of energy around 350 and 350 nms.

5. Carbon arcs are becoming obsolete. There is no longer a U.S. manufacturer of carbon arcs. To our knowledge, there is only 1 carbon arc manufacturer in existence (Suga in Japan).

6. Carbon arcs are difficult to maintain and require daily cleaning.

Note: Supporting Material is available for review at NFPA headquarters.

COMMITTEE MEETING ACTION:Accept in Principle

Revise Section 6.12 to read as follows:

6.12 Ultraviolet Light and Water Test.

6.12.1 The test components shall be exposed to ultraviolet light and water for 720 hours using either the process described in 6.12.2 or 6.12.3.

6.12.1.1 The test components shall be inspected for cracking and crazing after 360 hours.

6.12.1.2 If no cracking or crazing is apparent, the exposure shall continue for the full 720 hours.

6.12.2 Carbon-Arc Lamp Source.

6.12.2.1 Ultraviolet light shall be obtained from two stationary enclosed carbon-arc lamps.

6.12.2.2 The arc of each lamp shall be formed between two vertical carbon electrodes, 12.7 mm (1/2 in.) in diameter, located at the center of a revolving vertical metal cylinder 787 mm (31 in.) in diameter and 451 mm (17 3/4 in.) in height.

6.12.2.3 Each arc shall be enclosed with a number 9200-PX clear Pyrex™ glass globe.

6.12.2.4 The test components shall be mounted vertically on the inside of the metal cylinder and revolved continuously around the stationary arcing lamps at 1 rpm.

6.12.2.5 A system of nozzles shall be provided so that, during each operating cycle, the samples shall be exposed to the light and water spray for 3 minutes and to only light for 17 minutes (total 20 minutes).

6.12.2.6 The air temperature within the revolving cylinder of the apparatus during the test shall be 63°C ± 5°C (145°F ± 9°F).

6.12.3 Xenon-Arc Lamp Source.

6.12.3.1 The ultraviolet light exposure shall be obtained in accordance with ASTM D2565, Standard Practice for Operating Xenon Arc-Type (Water-Cooled) Light-Exposure Apparatus With and Without Water for Exposure of Plastics.

6.12.3.2 The source of radiation shall be a 6500 Watt, water-cooled xenon-arc lamp with borosilicate inner and outer optical filters.

6.12.3.3 The wattage to the lamp shall be controlled automatically to provide spectral irradiance of 0.35 W/m² (0.0325 W/ft²) at 340 nm (0.000014 in).

6.12.3.4 The samples shall be mounted vertically on the inside of a 97 cm (38 in) diameter cylinder, facing the arc, and the cylinder shall be rotated about the arc at one revolution per minute.

6.12.3.5 During each operating cycle of 120 minutes, each sample shall be exposed to light for 102 minutes and to light and water spray for 18 minutes.

6.12.3.6 The black-panel temperature during the dry portion of the light-on cycle shall be regulated to 63 ± 5°C (145 ± 9°F).

6.12.4 At the conclusion of the test, the components shall be inspected for cracking or crazing.

COMMITTEE STATEMENT: The committee agrees to allow the use of Xenon-arc as a light source for the ultraviolet light and has added wording to Section 6.12 to accommodate testing using that light source.

NUMBER OF COMMITTEE MEMBERS:16

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 15
NOT RETURNED: 1 Taylor