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Since 1988



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Update

NFPA 1962 Update

Thursday, January 9, 14

1



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NFPA 1962 Update

NFPA 1962, 2013 Edition

Standard for the care, use, inspection, Service Testing and Replacement of Fire Hose, Couplings, Nozzles and Fire Hose Appliances.

Thursday, January 9, 14

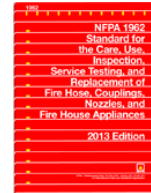
2



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Update

New edition contains the latest criteria for the inspection, care, use, service-testing and replacement of:

- Fire hose
- Fire hose couplings
- Fire-fighting nozzles
- Fire hose and foam appliance

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3



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Update

2013 Edition includes requirements for record-keeping as well as new requirements for a system test of each pre-connected hose or any attack line used for interior firefighting operations on a fire apparatus together with its connected nozzle or hose appliance it supplies.

The 2013 edition removed any reference to relay supply and unlined hose as well as requiring hose manufactured prior to July 1987 to be removed from service.

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4



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Update

Purchase the standard booklet and PDF

www.nfpa.org/catalog

<http://www.nfpa.org/catalog/product.asp?pid=196213&cookie%5Ftest=1>

1 800 344 3555

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5



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Update

How it affects you

In addition to service testing and maintaining records on hose. Fire departments will now need to service test and maintain records for nozzles and appliances.

Appliances: manifolds, intake valves, wyes, siameses, eductors, hydrant valves, etc.

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6



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Nozzle & Appliance Inspection

After each use wash and inspect, checking for:

- Damage (bent valve handles, bales, missing gaskets, teeth, etc.)
- Obstructions (hose gaskets, water main or drafting debris)
- Functions as designed (valves, bales and bumper cycle freely)
- Functions as designed (valves, bales and bumper cycle freely)
- Test and record the above functions annually

Repair or replace any nozzle or appliance that fails. If repaired, service test per the standard.

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7



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Update

Nozzle & Appliance Maintenance

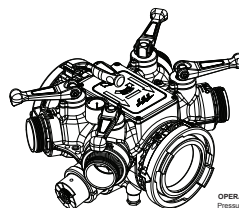
Maintain according to manufacturer's recommendations

See ch.5 NFPA 1962, 2013 edition



INSTRUCTIONS FOR SAFE OPERATION AND MAINTENANCE

WARNING Read instructions before using any equipment. Use this manual without understanding the manual and working proper safety can be dangerous and a violation of this manual can result in injury or death. Call the fire department for more information.
NOTICE This instruction manual is intended to familiarize firefighters and maintenance personnel with the operation, servicing, and safety procedures associated with the 5-Way Manifold.
NOTICE This manual should be kept available to all operating and maintenance personnel.



OPERATING RANGE
Pressure Max. 300 PSI
Pressure Min. 10 PSI



TASK FORCE TIPS, INC. 200 Innovation Way, Indianapolis, IN 46203-2227 (521) 880-546-2008 / 773-402-6700 / Fax 773-402-7700

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8

Online Maintenance Support

<http://www.tft.com/literature/literature.cfm?action=literature>

TASK FORCE TIPS
FIRE FIGHTING EQUIPMENT

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- Online Videos
- NFPA 1964 (1988 Edition) Reports
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- Technical Bulletins & Testing Reports
- Instructions For Installation, Safe Operation and Maintenance
- Service Procedures
- General Articles of Interest
- Certifications & Approvals
- Flow & Reaction Charts
- Especificaciones de Productos Mundial Catalogo

Most documentation is in Adobe PDF format.
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INSPECTION & MAINTENANCE

RECOMMENDED INSPECTION & MAINTENANCE SCHEDULE

NOTE: The following recommendations are based on normal operating conditions. Due to environmental or other conditions unique to your equipment, the frequency of some inspection and maintenance procedures may need to be adjusted. Additional inspection and maintenance procedures may also be required.

NOTE: When performing inspection and maintenance procedures which:

- require operation of the equipment or parts of the equipment,
- cause the equipment to be non-operational during the procedure,
- cause a trouble indication,
- the equipment should be taken out of service and the proper authorities should be notified.

	INITIAL START UP	AFTER OPERATION	WEEKLY	MONTHLY	SEMI-ANNUAL	ANNUAL	OTHER
1. Check all connections for tightness.	*	*					**

** AFTER ALL MAINTENANCE PROCEDURES

CLEANING THE FOAM JET ORIFICES

- Remove the (3) socket head screws from the nozzle outer sleeve. Do not lose the (2) lock washers on each of the socket head screws. These also act as spacers and are required for proper discharge pattern control.
- Remove the outer sleeve from the nozzle body.
- Remove any debris which is blocking the foam solution jet orifice(s). Take care not to damage the jet orifice(s) when removing debris.
- Make sure foam and waterways are clear. Replace outer sleeve and (3) socket head screws with lock washers (2 each).

NOZZLE DISCHARGE CONE REMOVED FOR CLARITY

National Foam Nozzle Maintenance & Specs.
www.cottrellassociates.com

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10



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Update

Nozzle Procedures

- Inspect, Maintain Repair
- Hydrostatic Test
- Hydraulic Performance

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11



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Update

Nozzle Hydrostatic Test

Applies to all nozzles equipped with a shut-off.

See ch.5 NFPA 1962, 2013 edition

- Test for leaks with bale in off position to 300 psi or 1.5 times mfg's. max. operating pressure, include smooth bore shut-offs.
- Raise to 300 psi at 50 psi increments; hold at each 50 psi increment for 30 seconds. Once at 300 psi, hold for one minute.
- *When testing TFT nozzles hold at 450 psi.*
- *Test all nozzles and appliances annually or after repair*

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12



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Nozzle Flow Test

See ch.5 NFPA 1962, 2013 edition

Applies to all adjustable pattern, fixed-flow, adjustable-flow or constant pressure automatic nozzles to include foam and master stream nozzles.



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Base pressure



Flow

Nozzle Flow Test

See ch.5 NFPA 1962, 2013 edition

Fixed-flow and adjustable-flow nozzle test criteria:

At +/- 2% of rated base nozzle pressure, flow can not be less than or more than 10% of nozzle's rated flow in both spray and straight stream patterns.

Example: nozzle rating is 150 gpm @ 100 psi...

Cannot flow less than 150 or more than 165 gpm at base pressure between 98 and 102 psi.

Recommendation: inspect, clean and lubricate per manufacturer's recommendation prior to testing.



Base pressure



Flow

Nozzle Flow Test

Constant Pressure Automatic Nozzle Criteria

See ch.5 NFPA 1962, 2013 edition

- Bleed air and take to minimum flow rate and record base pressure.
- Slowly increase flow to maximum rating.
- Record minimum and maximum base pressures throughout flow range
- Base pressure shall not be more or less than 15 psi of rated pressure.
- Example: Nozzle flow range, 70 - 150 gpm @ 100 psi.
- At 70 gpm, base nozzle pressure cannot be less than 85 psi or greater than 115 psi.
- At 150 gpm, base nozzle pressure cannot be less than 85 psi or greater than 115 psi.

Recommendation: inspect, clean and lubricate per manufacturer's recommendation prior to testing.



Two psi increments

Test Instrument Recommendations

Reliable (calibrated) pressure gauges are critical. Use gauges with two psi or less increments and a flow meter which has been calibrated against a smooth bore or a weight/time test. Test gauges should be tested against a known proven accurate pressure gauge at three points.

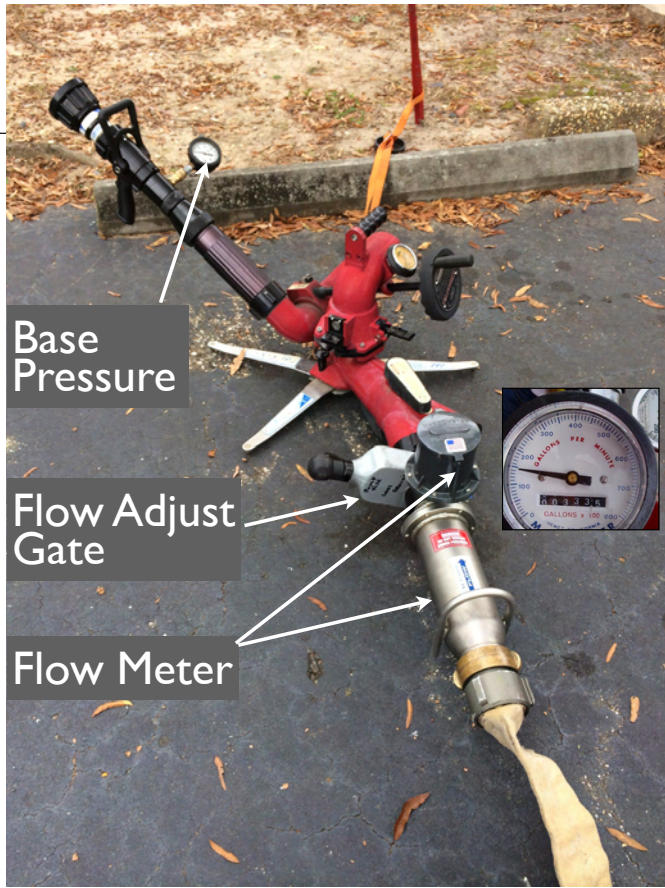
Flow meters should be calibrated against smooth bore nozzles within the flow range of the nozzles to be tested. This is particularly critical when going from hand-held nozzles to master stream nozzles.



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17



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Corrective Action

Remove any nozzle from service which fails any part of the test. Repair and replace as necessary.

Retest to the standard after corrective action.

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18



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Update

Keeping Records

Nozzles And Appliances

See ch.5 NFPA 1962, 2013 edition

- Permanent ID #
- Manufacturer
- Model
- Vendor
- Warranty limit
- Coupling size
- Max. operating pressure
- GPM rate or flow range
- Date received / in service
- Date of svc. test / results
- Damage / Repairs
- Reason removed from service



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Update

TFT Nozzle & Appliance Spec. Look Up

Appliance Care and Use

ch.6 NFPA 1962 - 2013 edition



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21

Appliance Inspection

ch.6 NFPA 1962 - 2013 edition

- Inspect quarterly for:
- Damage / cracks or suspect marks.
- Waterway obstructions
- Components function as designed
- Repair and service test any appliance that fails



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22



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Update

Appliance Hydrostatic Test

Applies to all appliances except elbows

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- Place appliance in a protective device or cover it with a blast blanket.
- Bleed all air.
- Appliances with valves shall have the intake side tested to manufacturer's maximum operating pressure with valve in closed position.
- Pressure relief valve (PRV) to be removed and tested

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23



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Update

Appliance Hydrostatic Test

To be conducted annually

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- PRV's to be closed or removed and blanked off.
- Bleed all air.
- Test appliance to 300 psi.
- Raise in 50 psi increments for 30 seconds each.
- Hold for one minute at max test pressure.

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24



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Appliance Hydrostatic Test

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Appliances with check valves (ie., siamese) which can be pressurized by a valve being closed downstream shall have the outlet side of the check valve tested to manufacturer's maximum operating pressure.



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Update

Appliance Hydrostatic Test Appliance PRV Test

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- Mount PRV to test fixture.
- Bleed all air.
- Set to lowest setting and pressurize.
- PRV should open at or below a pressure 10% higher than the setting.



TFT PRV Test Blanks





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Appliance Records

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- Permanent ID #
- Manufacturer
- Model
- Vendor
- Warranty
- Coupling size
- Max. operating pressure
- GPM rate or range
- Date received / in service
- Date of svc. test / results
- Damage / Repairs
- Reason removed from service.



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System Tests

ch.8 NFPA 1962, 2013 edition

Any attack line used for interior firefighting shall be tested as a system.

- Hose nozzles, or appliances being supplied by attack apparatus.
- Using an in line flow meter, increase pump pressure (PDP) until target flow is reached.
- Verify PDP and flow is consistent with department SOG's.
- If the nozzle/appliance, hose size or length is changed, the system needs to be tested again.



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Related Standards

Standards provide manufacturers with performance specifications assuring users that equipment manufactured in accordance with the standard(s) are suitable for firefighter use.

NFPA 1961 - Standard for manufacture of fire hose

NFPA 1964 - Standard for spray nozzles

NFPA 1965 - Standard for fire hose appliances

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29



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Update

NFPA 1964 - Standard for Spray Nozzles

Operational Design Requirements - chapter 4 / flow rates, pattern, controls.

Construction Materials - chapter 5 / hydrostatic strength.

Test Methods - chapter 6 / flow test, hydrostatic test, flush test.

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30



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Update

NFPA 1965 - Standard for Fire Hose Appliances

Operational Design Requirements - chapter 4 / max. operating pressures / relief valves.

Construction Materials - chapter 5 hydrostatic strength

Test Methods - chapter 6 / hydrostatic test and force requirements.

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31



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32