

Inspection, Testing and Maintenance of Foam-Water Sprinkler Systems

Service Company	Date of Service	Time	Last Service Date
	<input type="checkbox"/> Weekly <input type="checkbox"/> Monthly	<input type="checkbox"/> Quarterly <input type="checkbox"/> Annual	<input type="checkbox"/> Fifth year <input type="checkbox"/> Tenth year
	Owner:		Phone: Fax:
	Contact Person:		Phone: Fax:
Building Name:	Address:	City:	Postal Code:

“√“ Yes - Satisfactory “X” No - Unsatisfactory N/A Not applicable (Explain “X” No answers in comments)

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| <p>Daily Items (Weekly if low temperature alarms are installed)</p> <p>_____ Enclosures around preaction/deluge valves are maintained min 4C/40F?</p> <p>Weekly</p> <p>_____ Relief port on reduced pressure backflow prevention assemblies is not continuously discharging?</p> <p>Weekly Items (monthly if electrically supervised or locked)</p> <p>_____ Gauges on preaction/deluge systems are in good condition an showing normal air and water pressure?</p> <p>Control and isolation valves on backflow prevention devices:</p> <p>_____ Normal position?</p> <p>_____ Sealed, locked or supervised and accessible?</p> <p>Monthly</p> <p>_____ Sprinklers are not damaged or impaired?</p> <p>_____ Alarm devices are free from damage and electrical connections secures?</p> <p>Preaction and Deluge valves.</p> <p>_____ Free from physical damage?</p> <p>_____ Trim valves in appropriate (open or closed) position?</p> <p>_____ Trim valves have no leakage from seat?</p> <p>_____ Electrical components in service?</p> <p>_____ Control valves are in normal position?</p> <p>Foam-Water Discharge Spray Nozzles.</p> <p>_____ In place and aimed in proper direction?</p> <p>_____ Free from obstruction and corrosion?</p> <p>_____ Caps or plugs (if required) in place?</p> <p>Proportioning Systems</p> <p>_____ All valves positions verified?</p> <p>_____ Adequate foam concentrate for original design?</p> <p>Standard pressure Proportioners:</p> <p>_____ Ball drip valves are free and open?</p> <p>_____ Foam concentrate tank is free of corrosion?</p> <p>Bladder Tank Proportioners</p> <p>_____ Water control valves to tank in proper position?</p> <p>_____ Foam concentrate tank free of corrosion?</p> <p>Line Proportioners</p> <p>_____ Strainers clear per manufacturer’s instructions?</p> <p>_____ Pressure vacuum vent is operational?</p> <p>_____ Foam concentrate tank free of corrosion?</p> <p>Standard Balanced Pressure Proportioners</p> <p>_____ Strainers clear per manufacturer’s instructions?</p> <p>_____ Pressure vacuum vent is operational?</p> <p>_____ Gauges are in good condition?</p> | <p>_____ Sensing line valves are open?</p> <p>_____ Power available to foam liquid pump?</p> <p>In-Line Balanced Pressure Proportioner</p> <p>_____ Strainers clear per manufacturer’s instructions?</p> <p>_____ Gauges at pump in good condition?</p> <p>_____ Gauges at proportioners in good condition?</p> <p>_____ Sensing line valves at pump open?</p> <p>_____ Sensing line valves at proportioner open?</p> <p>_____ Power available to foam liquid pump?</p> <p>Orifice Plate Proportioners</p> <p>_____ Strainers clear per manufacturers instructions?</p> <p>_____ Pressure vacuum vent is operational?</p> <p>_____ Power available to foam liquid pump?</p> <p>_____ Gauges are in good condition?</p> <p>Quarterly</p> <p>_____ Piping and fittings are free of damage, corrosion and misalignment?</p> <p>_____ Low point drains are in good condition?</p> <p>_____ Rubber gasketed fittings are in proper location and condition?</p> <p>_____ Hangers and supports are in good condition, secured to structural members and are not missing?</p> <p>Fire Department Connections?</p> <p>_____ Visible, accessible and identified?</p> <p>_____ Couplings and swivels not damages and rotate smoothly?</p> <p>_____ Plugs or caps in place and undamaged?</p> <p>_____ Gaskets in place and in good condition?</p> <p>_____ Check valves not leaking?</p> <p>_____ Automatic drain valves in place and operating properly?</p> <p>_____ Blow-down valve(s) on foam concentrate strainer(s) closed & plugged?</p> <p>_____ Drainage system in good condition?</p> <p>Annual Items</p> <p>_____ Check for foam in water around the bladder</p> <p>_____ Interior of preaction/deluge valves which cannot be reset without opening are in good condition?</p> <p>_____ Gauges are in good condition and normal supply pressure?</p> <p>_____ Piping is in good condition & free from mechanical damage?</p> <p>Foam Water Discharge Sprinklers.</p> <p>_____ In place and aimed in the proper direction?</p> <p>_____ Free from obstruction and corrosion?</p> <p>_____ Caps or plugs if required are in place?</p> <p>Fire Year Items.</p> <p>_____ Check valves - internally inspect every 5 years?</p> <p>_____ Strainers, filter, restricted orifices and diaphragm chambers on preaction/deluge valves passed internal inspection?</p> <p>_____ Interior of preaction/deluge valves that can be reset without opening are in good condition?</p> |
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Testing

Quarterly Testing

- _____ Control valves opened until spring or torsion rod is felt in the rod then closed back ¼ turn. (except OS & Y and gear operated indicating valves)?
- _____ Priming water level and low air pressure signal in preaction systems passed test?
- _____ Valve supervisory devices indicate movement?
- _____ Waterflow alarms tested?
- _____ Conduct main drain flow test?
- _____ Static pressure _____ psi/kpa
- _____ Residual water supply pressure _____ psi/kpa

Annual

- _____ Operational Test:(Test all systems together which will operate simultaneously)?
- _____ Discharge devices properly located & unobstructed?
- _____ Discharge patterns unimpeded?
- _____ Foam concentrate strainers baskets and screens are cleaned after each test?
- _____ **Proportioning System(s)**
- _____ Record response time _____?
- _____ Record discharge time _____?
- _____ Record pressure at most remote device _____ kpa/psi?
- _____ Record pressure at main control valve _____ kpa/psi?
- _____ Multiple systems tested simultaneously?
- _____ Are above pressures and times acceptable?
- _____ Manual actuation devices operated properly?
- _____ Connection to riser flushed?
- _____ Preaction and deluge valves passed test?
- _____ Manual actuation devices passed test?
- _____ System returned to service?
- _____ Control valves operated through full range and returned to normal?

- _____ Backflow prevention devices passed backflow test?
- _____ Backflow prevention devices passed full flow test?
- _____ Foam-water concentrate shall be tested to verify concentration of solution?
- _____ Piping exposed and underground flow test every 5 yrs?
- _____ Deluge/preaction valves shall be trip tested annually at full flow?(exceptions)
- _____ Detection systems operates within the requirements of NFPA 72?
- _____ Record response time _____ sec?
- _____ Water supply tanks?(see form for Tests for Water Storage Tanks)
- _____ Water supply flow test?(see Private Fire Service Main inspection and test)

Maintenance

Monthly

- _____ Foam concentrate pump (if present) run?

Quarterly

- _____ Strainers cleaned per manufacturers instructions?

Annual

- _____ Foam concentrate samples submitted per manufacturers instructions?
- _____ Operating stem of all OS&Y valves lubricated, completely open and closed?
- _____ Interior of preaction valves cleaned?

Fifth Year

Standard Pressure Proportioner?

- _____ Automatic ball drip valve disassembled and cleaned?
- _____ **Standard Balanced Pressure Proportioner**
- _____ Foam pumps, drive trains and drivers serviced?
- _____ Balancing valve diaphragm flushed?
- _____ No internal corrosion in foam concentrate tank?

In-Line Balanced Pressure Type

- _____ Foam pumps, drive trains and drivers serviced?
- _____ Pressure Vacuum Vents are cleaned and maintained?
- _____ Diaphragm balancing valve shall be flushed
- _____ Pressure vacuum vents are cleaned and maintained

Tenth Year

Standard Pressure Proportioner

- _____ Foam concentrate tank drained and flushed?
- _____ Foam liquid tank inspected for internal and external corrosion?
- _____ Foam liquid tank hydrostatically tested to working pressure?

Bladder Type Tank

- _____ Sight glass removed and cleaned?
- _____ Foam concentrate tank hydrostatically?

Line Type Proportioner

- _____ Inspected for internal corrosion?
- _____ Tank drained and flushed?

Standard Balanced Pressure Proportioner inspected internally for corrosion and sediment?

- _____ **In-Line Balanced Pressure Proportioner** is inspected internally for corrosion and sediment?

Obstruction Investigation

- _____ If any of the following were discovered, was an obstruction investigation conducted and the systems flushed?
- _____ Defective intake screed for pumps taking suction from open sources?
- _____ Obstructive material discharged during waterflow tests?
- _____ Foreign materials found in check valves or pumps?
- _____ Heavy discoloration of water during drain test or plugging of inspectors test connection?
- _____ Plugging of sprinklers or nozzles found during activation?
- _____ Failure to flush yard piping or surrounding public mains following new installations or repairs?
- _____ Record of broken mains in the vicinity?
- _____ Abnormally frequent false-tripping of valves?
- _____ System is returned to service after an extended period of out of service (greater than one year)
- _____ There is reason to believe there is sodium silicate (stop leak) or its derivatives?

