

Water-Based Fire Protection System Inspection Guidelines for Tagging - 2011 NFPA 25					
Inspection Deficiencies, Testing Deficiencies, Maintenance Deficiencies (Revised 12-5-2014)					
Item	Deficiency	Tag	NFPA	Action	Reference
<b>FOAM-WATER SPRINKLER SYSTEM</b>					
Alarm devices/water flow devices	Physical damage apparent	Red	Noncritical	30 day notice	11.1.4.1.1 11.1.4.1.2 11.1.4.1.3
Pipe and fittings	Mechanical damage, missing or damaged paint or coating, rusted or corroded, not properly aligned or trapped sections, low point drains not functioning, improper location or poor condition of rubber-gasketed fittings	Red	Critical	30 day notice	11.2.3
Hangers & seismic braces	Damaged or missing, not securely attached to structural or piping, missing or damaged paint or coating, rusted or corroded.	Red	Noncritical	30 day notice	11.2.4
Foam-water discharge devices	Discharge devices missing, not properly positioned or pointed in design direction, loaded or corroded	Red	Critical	24 hour notice	11.2.5.1
	Caps and plugs not free to operate as intended.	Red	Critical	30 day notice	11.2.5.2
	Missing caps or plugs	Red	Noncritical	30 day notice	11.2.5.2
	Discharge devices not listed for use with foam concentrate	Red	Critical	30 day notice	11.2.5.4
Mainline and/or discharge device strainers	Baskets or screens damaged or not clean	Red		30 day notice	11.2.7.1
Foam concentrate strainers	Blow-down valve open or not plugged	Red	Critical	24 hour notice	11.2.7.2
Drainage	Trap sumps and drainage trenches blocked, retention embankments or dikes in disrepair	Red	Noncritical	30 day notice	11.2.8
Proportioning systems (all)	Proportioning system valves not in correct open/closed position in accordance with specified operating conditions	Red	Impairment	24 hour notice	11.2.9.3
	Concentrate tank does not have correct quantity required by original design	Red	Critical	30 day notice (24 hour notice if no reserve supply)	11.2.9.4
Standard pressure proportioner	Automatic drains (ball drip valves) not free or open, external corrosion on foam concentrate tanks	Red	Noncritical	30 day notice	11.2.9.5.1
	Ball drip drain valves not cleaned within last 5 years	Red		30 day notice	11.4.3.1
	Foam liquid storage tank not flushed within last 10 years	Red		30 day notice	11.4.3.2
Bladder tank proportioner	Water control valve to foam concentrate in "closed" position	Red	Impairment	24 hour notice	11.2.9.5.2
Bladder tank proportioner	Foam in water surrounding bladder	Red	Critical	24 hour notice	11.2.9.5.2
Bladder tank proportioner	External corrosion on foam concentrate tank	Red	Noncritical	30 day notice	11.2.9.5.2
Bladder tank proportioner	Sight glass not cleaned within last 10 years	Red		30 day notice	11.4.4.1
Line proportioner	Strainer damaged, corroded, plugged or fouled, pressure vacuum vent not operating freely	Red	Critical	24 hour notice	11.2.9.5.3
Line proportioner	External corrosion on foam concentrate tank	Red	Noncritical	30 day notice	11.2.9.5.3
Line proportioner	Foam liquid storage tank not flushed within last 10 years	Red		30 day notice	11.4.5.2
	Foam liquid storage tank not internally inspected within last 10 years	Red		30 day notice	11.4.5.1
Standard balanced pressure proportioner	Sensing line valves not open, no power to foam liquid pump	Red	Impairment	24 hour notice	11.2.9.5.4
Standard balanced pressure proportioner	Strainer damaged, corroded, plugged, or fouled, pressure vacuum vent not operating freely, gauges damaged or not showing proper pressures	Red	Critical	24 hour notice	11.2.9.5.4
Standard balanced pressure proportioner	Foam concentrate pump not operated and foam circulated within the last 5 years	Red		30 day notice	11.4.6.1
Standard balanced pressure proportioner	Foam pumps, drive train and drivers not serviced within the last 5 years	Red		30 day notice	11.4.6.2
Standard balanced pressure proportioner	Diaphragm balancing valve not flushed within the last 5 years	Red		30 day notice	11.4.6.3
Standard balanced pressure proportioner	Foam concentrate tank not internally inspected for corrosion within the last 10 years	Red		30 day notice	11.4.6.4
In-Line balanced pressure proportioner	Sensing line valves at pump unit or individual proportioner stations not open, no power to foam liquid pump	Red	Impairment	24 hour notice	11.2.9.5.5
In-Line balanced pressure proportioner	Strainer damaged, corroded, plugged, or fouled, pressure vacuum vent not operating freely, gauges damaged or not showing proper pressures	Red	Critical	24 hour notice	11.2.9.5.5
In-Line balanced pressure proportioner	Foam concentrate pump not operated and foam circulated within the last 5 years	Red		30 day notice	11.4.7.1
In-Line balanced pressure proportioner	Foam pumps, drive train and drivers not serviced within the last 5 years	Red		30 day notice	11.4.7.2
In-Line balanced pressure proportioner	Diaphragm balancing valve not flushed within the last 5 years	Red		30 day notice	11.4.7.3
In-Line balanced pressure proportioner	Foam concentrate tank not internally inspected for corrosion within the last 10 years	Red		30 day notice	11.4.7.4
Pressure vacuum vents	Not flushed and serviced within the last 5 years	Red		30 day notice	11.4.8
Orifice plate proportioner	No power to foam liquid pump	Red	Impairment	24 hour notice	11.2.9.5.6
Orifice plate proportioner	Strainer damaged, corroded, plugged, or fouled, pressure vacuum vent not operating freely, gauges damaged or not showing proper pressures	Red	Critical	24 hour notice	11.2.9.5.6
Foam concentrate	Samples not taken and submitted for test	Red	Critical	30 day notice	11.2.10
Automatic detection equipment	Missing detectors, loose, not protected from corrosion or weather, damaged, communication wiring, control panels or pneumatic tubing system non functional	Red		24 hour notice	NFPA #72
Alarm devices	Water motor and gong not functioning	Red	Critical	30 day notice	11.3.1.1
Alarm devices	Pressure switch or vane type switch not functioning or no alarm	Red	Critical	30 day notice	11.3.1.2
Operational Test	Fire detection system did not operate within requirements of NFPA #72	Red	Critical	24 hour notice	11.2.3.4
Operational Test	Test not done after 1 year	Red	Noncritical	30 day notice	Table 11.1
Operational Test	Nozzles are plugged	Red	Impairment	24 hour notice	11.3.2.6.1
Operational Test	Nozzles are not correctly positioned		Critical	30 day notice	11.3.2.6.1
Operational Test	Pressure readings are not comparable to original design requirements	Red	Critical	24 hour notice	11.3.2.7.3
Operational Test	Test not performed with maximum number of systems expected to operate	Red		30 day notice	11.3.3
Operational Test	Manual actuation devices did not work properly	Red	Impairment	24 hour notice	11.3.4
Operational Test	Foam sample did not pass concentration test	Red	Impairment	24 hour notice	11.3.5.3

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Item	Deficiency	Tag	NFPA	Action	Reference
Standard pressure proportioner	Foam liquid storage tank not internally inspected or hydrostatically tested within the last 10 years	Red		30 day notice	11.4.3.3
Bladder tank proportioner	Foam concentrate tank not hydrostatically tested within last 10 years	Red		30 day notice	11.4.4.2
Main drain	10% or more drop in full flow pressure or slow return to normal static pressure.	Red	Impairment	24 hour notice	13.2.5.2
Obstruction inspection	No inspection of main and branch line after 5 years or inspection revealed presence of MIC, zebra mussels, rust and scale	Red	Critical	30 day notice	14.2.1
<b>WATER SPRAY FIXED SYSTEMS</b>					<b>NFPA #25</b>
Pipe and fittings	Mechanical damage, missing or damaged paint or coating, rusted or corroded, not properly aligned or trapped sections, low point drains not functioning, improper location of rubber-gasketed fittings	Red	Critical	30 day notice	10.2.4.1
Hangers & seismic braces	Damaged or missing, not securely attached to structural or piping, missing or damaged paint or coating, rusted or corroded.	Red	Noncritical	30 day notice	10.2.4.2
Water spray nozzles	Discharge devices missing, not properly positioned or pointed in design direction, loaded or corroded	Red	Critical	24 hour notice	10.2.5.1
Water spray nozzles	Missing caps or plugs if required or not free to operate as intended.	Red	Critical	30 day notice	10.2.5.2
Mainline strainers and individual water spray nozzle strainer	Strainer plugged or fouled	Red	Impairment	24 hour notice	10.2.7
Mainline strainers and individual water spray nozzle strainer	Strainer damaged or corroded	Red	Noncritical	30 day notice	10.2.7
Drainage	Trap sumps and drainage trenches blocked, retention embankments or dikes in disrepair	Red	Noncritical	30 day notice	10.2.8
Automatic detection equipment	Missing detectors, loose, not protected from corrosion or weather, damaged, communication wiring, control panels or pneumatic tubing system non functional	Red		24 hour notice	NFPA #72
Ultra-High-Speed	Detectors have physical damage or deposits on lenses of optical detectors	Red	Critical	24 hour notice	10.4.2
Ultra-High-Speed	Controllers found to have faults	Red	Critical	24 hour notice	10.4.3
Operational test	Heat detection system did not operate within 40 seconds, flammable gas detection system did not operate within the time frame specified in system design	Red	Critical	24 hour notice	10.3.4.1
Operational test	Test not done after 1 year	Red	Noncritical	30 day notice	10.3.4.1
Operational test	Nozzles are plugged	Red	Impairment	24 hour notice	10.3.4.3.1
Operational test	Nozzles not correctly positioned	Red	Critical	30 day notice	10.3.4.3.1
Operational test	Pressure readings are not comparable to original design requirements	Red	Critical	24 hour notice	10.3.4.4
Operational test	Test not performed with maximum number of systems expected to operate	Red		30 day notice	10.3.5
Operational test	Manual actuation devices did not work properly	Red	Impairment	24 hour notice	10.3.6
Low point drains/weep holes	Piping not drained, weep holes not clear or obstructed	Red		30 day notice	10.3.7.2
Ultra-High-Speed Operational test	Response time was more than 100 milliseconds	Red	Impairment	24 hour notice	10.4.5
Ultra-High-Speed Operational test	Test not done after 1 year	Red	Noncritical	30 day notice	10.4.1
Main drain	10% or more drop in full flow pressure or slow return to normal static pressure.	Red	Impairment	24 hour notice	10.3.7.1
Obstruction inspection	No inspection of main and branch line after 5 years or inspection revealed presence of MIC, zebra mussels, rust and scale	Red	Critical	30 day notice	14.2.1