

SERVICE REQUIREMENTS

Fire protection equipment requires care and maintenance at scheduled intervals to assure it will operate properly and safely when needed. Only personnel who are trained and qualified to maintain the equipment described below should do these services.

The following outlines the service requirements of the equipment described in this brochure. These requirements are minimum as contained in the National Fire Codes® published by the National Fire Protection Association. Contact one of our sales and service professionals for more information on your specific service needs.

EQUIPMENT TYPE	MTHLY	QTRLY	SEMI-ANNUAL	ANNUAL	OTHER	REF.	REQUIREMENT
Clean Agent Systems							NFPA 2001 - 2008 Edition
System Inspection				●		7.1.1	At least annually, all systems shall be thoroughly inspected and tested for proper operation by personnel qualified in the installation and testing of clean agent extinguishing systems. Discharge tests shall not be required.
System Test				●			(Same as above).
Weigh Cylinders			●			7.1.3	At least semiannually, the agent quantity and pressure of refillable containers shall be checked.
Container Test					●	7.2.1	U.S. Department of Transportation (DOT), Canadian Transport Commission (CTC), or similar design clean agent containers shall not be recharged without retesting if more than 5 years have elapsed since the date of the last test and inspection...
Hose Test					●	7.3.2.1	All hose shall be tested every 5 years.
Room Integrity				●		7.4	Other than as identified in 7.4.1, the enclosure protected by the clean agent shall be thoroughly inspected at least every 12 months to determine if penetrations have occurred that could lead to agent leakage or other changes have occurred that could change volume of hazard, or both...
Carbon Dioxide Systems							NFPA 12 - 2011 Edition
System Inspection	●					4.8.1	At least every 30 days, an inspection shall be conducted to assess the system's operational condition.
System Test				●		4.8.3.2	The following shall be verified by competent personnel at least annually using available documentation required in 4.4.2.14.
Weigh Cylinders			●			4.8.3.5.1	At least semiannually, all high-pressure cylinders shall be weighed and the date of the last hydrostatic test noted (see 4.6.5.2).
Container Test					●	4.6.5.2	High-pressure cylinders used in fire-extinguishing systems shall not be recharged without a hydrostatic test (and remarking) if more than 5 years have elapsed from the date of the last test. Cylinders continuously in service without discharging shall be permitted to be retained in service for a maximum of 12 years from the date of the last hydrostatic test. At the end of 12 years, they shall be discharged and retested before being returned to service.
Hose Test					●	4.8.2.3	All system hose including those used as flexible connectors shall be tested every 5 years in accordance with 4.8.2.
Halon 1301 Systems							NFPA 12A - 2009 Edition
System Inspection			●			6.1.1	At least semiannually, all systems shall be thoroughly inspected, tested, and documented for proper operation by trained competent personnel. Tests shall be in accordance with the appropriate NFPA or Canadian standards.
Container Test					●	6.2.1	DOT, CTC, or similar design Halon 1301 cylinders shall not be recharged without a retest if more than five years have elapsed since the date of the last test and inspection.

EQUIPMENT TYPE	MTHLY	QTRLY	SEMI-ANNUAL	ANNUAL	OTHER	REF.	REQUIREMENT
Hose Inspection				●		6.3	All system hoses shall be examined annually for damage.
Hose Test					●	6.3.2	All hoses shall be tested every 5 years in accordance with 6.3.1.
Room Integrity			●			6.4	At least every 6 months the Halon-protected enclosure shall be thoroughly inspected to determine if penetrations or other changes have occurred that could adversely affect Halon leakage.

Dry Chemical Systems

NFPA 17 - 2009 Edition

Maintenance			●			11.3.1	At least semiannually, maintenance shall be conducted in accordance with the manufacturer's listed installation and maintenance manual.
Container Test					●	11.5.1	The following parts of dry chemical extinguishing systems shall be subjected to a hydrostatic pressure test at intervals not exceeding 12 years: (1) Dry Chemical Containers.
Hose Test					●	11.5.1	The following parts of dry chemical extinguishing systems shall be subjected to a hydrostatic pressure test at intervals not exceeding 12 years: (3) Hose Assemblies.
Agent Examination			●			11.3.1.1	(4) Examination of the dry chemical(if there is any evidence of caking, the dry chemical shall be discarded and the system shall be recharged in accordance with the manufacturer's instructions).
Agent Replacement					●	11.5.3	Dry chemical agent removed from the containers prior to hydrostatic testing shall be discarded.

Wet Chemical Systems

NFPA 17A - 2009 Edition

Maintenance			●			7.3.3	At least semiannually, maintenance shall be conducted in accordance with the manufacturer's listed installation and maintenance manual.
Container Test					●	7.5.1	The following parts of wet chemical extinguishing systems shall be subjected to a hydrostatic pressure test at intervals not exceeding 12 years: (1) Wet Chemical Containers.
Hose Test					●	7.5.1	The following parts of wet chemical extinguishing systems shall be subjected to a hydrostatic pressure test at intervals not exceeding 12 years: (3) Hose Assemblies
Agent Replacement					●	7.5.3	Wet chemical agent removed from the containers prior to hydrostatic testing shall be discarded.

Fire Alarm & Detection Systems

NFPA 72 - 2010 Edition

Visual Inspection						14.3.1	Unless otherwise permitted by 14.3.2 visual inspection shall be performed in
Control Panels				●			
Batteries			●				
Remote Annunciators			●				
Initiating Devices							
Air Sampling			●				
Duct Detectors			●				
Electromechanical Releasing Devices			●				
Suppression System Switches			●				
Manual Pull Stations			●				
Heat Detectors			●				
Radiant Energy Fire Detectors		●					
Smoke Detectors			●				
Supervisory Signal Devices		●					
Waterflow Devices		●					
Alarm Notification Appliances			●				

EQUIPMENT TYPE	MTHLY	QTRLY	SEMI-ANNUAL	ANNUAL	OTHER	REF.	REQUIREMENT
Interface Equipment			●				<p>Unless otherwise permitted by other sections of this Code, testing shall be performed in accordance with the schedules in Table 14.4.5 or more often if required by the authority having jurisdiction. If automatic testing is performed at least weekly by a remotely monitored fire alarm control unit specifically listed for the application, the manual testing shall be permitted to be extended to annually. Table 14.4.5 shall apply.</p>
Digital Alarm Communication Equipment			●				
Testing						14.4.5	
Control Panels				●			
Batteries			●				
Remote Annunciators				●			
Initiating Devices							
Air Sampling				●			
Duct Detectors				●			
Electromechanical Releasing Devices				●			
Suppression System Switches				●			
Manual Pull Stations				●			
Heat Detectors				●			
Radiant Energy Fire Detectors			●				
Smoke Detectors				●			
Supervisory Signal Devices		●					
Tamper Switches			●				
Waterflow Devices			●				
Alarm Notification Appliances				●			
Interface Equipment				●			
Digital Alarm Communication Equipment				●			

Fire Extinguishers

NFPA 10 - 2010 Edition

Inspection	●					7.2.1.1	Fire extinguishers shall be manually inspected when initially placed in service.
Maintenance				●		7.3.1.1.1	Fire extinguishers shall be subjected to maintenance at intervals of not more than 1 year, at the time of hydrostatic test, or when specifically indicated by an inspection or electronic notification.
6-year Maintenance					●	7.3.1.2.1	Every 6 years, stored-pressure fire extinguishers that require a 12-year hydrostatic test shall be emptied and subjected to the applicable internal examination procedures as detailed in the manufacturer's service manual and this standard.
Hydrostatic Test					●	8.3.1	Refer to Table 8.3.1.
Pressurized Water					●		5 Years
Wetting Agent(s)					●		5 Years
AFFF Foam					●		5 Years
FFFP Foam					●		5 Years
Carbon Dioxide (CO2)					●		5 Years
Dry Chemical(s)					●		12 Years
Halogenated Agent(s)					●		12 Years
Hose Conductivity Testing				●		7.3.1.3	A conductivity test shall be conducted annually on all carbon dioxide hose assemblies.

Fire Hose

NFPA 1962 - 2008 Edition

Hydrostatic Test							
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EQUIPMENT TYPE	MTHLY	QTRLY	SEMI-ANNUAL	ANNUAL	OTHER	REF.	REQUIREMENT
Hose				●		4.3.2	In-service hose designed for occupant use only shall be removed and service-tested as specified in Chapter 7 at intervals not exceeding 5 years after the date of manufacturer and every 3 years thereafter.
Couplings				●		6.2.1, 6.2.3	Couplings shall be kept in serviceable condition. After each use, and during each hose service test, they shall be visually inspected...
Gaskets & Seals				●		6.3.1	The thread gasket in couplings and nozzles shall be inspected for presence, tight fit, and lack of deterioration. Any gasket that is defective or misfits shall be replaced with a new gasket...
Nozzles				●		6.1.2	All nozzles shall be inspected after each use and at least annually.
Re-rack Hose				●		4.3.4	In-service hose shall be unracked, unreeled, or unrolled and physically inspected as specified in Section 4.6 at least annually. Hose shall be racked, reeled, or rerolled so that any folds do not occur at the same position on the hose.

Fire Department Connections

NFPA 25 - 2011 Edition

Inspection		●				13.7.1	Fire department connections shall be inspected quarterly...
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Pressure Reducing & Relief Valves

NFPA 25 - 2011 Edition

Inspection		●					Sprinkler pressure reducing control valves shall be inspected and tested as described in 13.5.5.1 and 13.5.5.2.
Sprinkler Systems		●				13.5.1.1	All valves shall be inspected quarterly.
Hose Connections				●		13.5.2.1	All valves shall be inspected annually.
Hose Racks				●		13.5.3.1	All valves shall be inspected annually.
Fire Pump Casing Relief Valves					●	13.5.7.1	All circulation relief valves shall be inspected weekly.
Fire Pump Pressure Relief Valves					●	13.5.7.2	All pressure relief valves shall be inspected weekly.

Sprinkler Systems

NFPA 25 - 2011 Edition

Inspection							
Gauges - Dry, PreAction & Deluge					●	5.2.4.2	Gauges on dry, preaction, and deluge systems shall be inspected weekly to ensure that normal air and water pressures are being maintained.
Gauges - Wet Pipe Systems	●					5.2.4.1	Gauges on wet pipe sprinkler systems shall be inspected monthly to ensure that they are in good condition and that normal water supply pressure is being maintained.
Control Valves	●				●	13.1	(See "Valves" below).
Alarm Devices		●				5.2.5	Waterflow alarm and supervisory alarm devices shall be inspected quarterly to verify that they are free of physical damage.
Hydraulic Nameplate		●				5.2.6	The hydraulic design information sign for hydraulically designed systems shall be inspected quarterly to verify that it is attached securely to the sprinkler riser and is legible.
Buildings				●		4.1.1.1	The building owner shall ensure that all areas of the building containing water-filled piping shall be maintained at a minimum temperature of 40°F (4.4°C) and not exposed to freezing conditions.
Hangers/Bracing				●		5.2.3	Sprinkler pipe hangers and seismic braces shall be inspected annually from the floor level.
Pipes & Fittings				●		5.2.2	Sprinkler pipe and fittings shall be inspected annually from the floor level.
Sprinkler Heads				●		5.2.1.1	Sprinklers shall be inspected from the floor level annually.
Spare Sprinkler Heads				●		5.2.1.4	The supply of spare sprinklers shall be inspected annually...
Valves (All Types)							(See "Valves" below)

EQUIPMENT TYPE	MTHLY	QTRLY	SEMI-ANNUAL	ANNUAL	OTHER	REF.	REQUIREMENT
Testing							
Alarm Devices		●					Waterflow alarm devices including, but not limited to, mechanical water motor gongs, vane-type waterflow devices, and pressure switches that provide audible or visual signals shall be tested quarterly.
Main Drain		●				13.1	(See "Valves" below)
Antifreeze Solution				●		5.3.4	The freezing point of solutions in antifreeze shall be tested annually by measuring the specific gravity with a hydrometer or refractometer and adjusting the solutions if necessary.
Gauges					●	5.3.2	Gauges shall be replaced every 5 years or tested every 5 years by comparison with a calibrated gauge. Gauges not accurate to within 3 percent of the full scale shall be recalibrated or replaced
Sprinkler Heads					●	5.3.1.1.1	Where sprinklers have been in service for 50 years, they shall be replaced or representative samples from one or more sample areas shall be submitted to a recognized testing laboratory acceptable to the authority having jurisdiction for field service testing. Test procedures shall be repeated at 10-year intervals.
Sprinkler Heads - Extra High Temp					●	5.3.1.1.1.4	Exception No. 3*: Representative samples of solder type sprinklers with a temperature classification of extra high [325°F (163°C)] or greater that are exposed to semicontinuous to continuous maximum allowable ambient temperature conditions shall be tested at 5-year intervals.
Sprinkler Heads - Fast Response					●	5.3.1.1.1.3	Exception No. 2: Sprinklers manufactured using fast response elements that have been in service for 20 years shall be tested. They shall be retested at 10-year intervals.
Maintenance							
Valves (All Types)				●	●		See "Valves" below)
Obstruction Investigation					●	14.3	Systems shall be examined internally for obstructions where conditions exist that could cause obstructed piping. If the condition has not been corrected or the condition is one that could result in obstruction of piping despite any previous flushing procedures that have been performed, the system shall be examined internally for obstructions every 5 years.
Valves							NFPA 25 - 2011 Edition
Inspection							
Control Valves					●	13.3.2.1	All valves shall be inspected weekly.
Alarm Valves	●					13.4.1.1	Alarm valves and system riser check valves shall be externally inspected monthly...
Check Valves					●	13.4.2.1	Valves shall be inspected internally every 5 years to verify that all components operate properly, move freely, and are in good condition.
Preaction/Deluge Valves				●		13.4.3.1.7	The interior of the preaction or deluge valve and the condition of detection devices shall be inspected annually when the trip test is conducted.
Dry Pipe Valves/Quick Opening Devices				●		13.4.4.1.5	The interior of the dry pipe valve shall be inspected annually when the trip test is conducted.
Valves							NFPA 25 - 2011 Edition
Testing							
Main Drain		●				13.2.5	A main drain test shall be conducted quarterly at each water-based fire protection system riser to determine whether there has been a change in the condition of the water supply piping and control valves.

EQUIPMENT TYPE	MTHLY	QTRLY	SEMI-ANNUAL	ANNUAL	OTHER	REF.	REQUIREMENT
Waterflow Alarm		●				13.2.6	All waterflow alarms shall be tested quarterly in accordance with the manufacturer's instructions.
Control Valves					●	13.3.3.1	Each control valve shall be operated annually through its full range and returned to its normal position.
Preaction/Deluge Valves					●	13.4.3.2.2	Each deluge or preaction valve shall be trip tested annually at full flow in warm weather and in accordance with the manufacturer's instructions.
Dry Pipe Valves/Quick Opening Devices					●	13.4.4.2.2	Each dry pipe valve shall be trip tested annually during warm weather.
Backflow Prevention Assemblies					●	13.6.2	All backflow preventers installed in fire protection system piping shall be tested annually...
Maintenance							
Control Valves					●	13.3.4	The operating stems of outside screw and yoke valves shall be lubricated annually.
Preaction/Deluge Valves					●	13.4.3.3.2	During the annual trip test, the interior of the preaction or deluge valve shall be cleaned thoroughly and the parts replaced or repaired as necessary.
Dry Pipe Valves/Quick Opening Devices					●	13.4.4.3	During the annual trip test, the interior of the dry pipe valve shall be cleaned thoroughly and parts replaced or repaired as necessary.
Emergency Lighting						NFPA 101	
Testing	●					7.9.3	Functional testing shall be conducted monthly with a minimum of 3 weeks and a maximum of 5 weeks between tests, for not less than 30 seconds...
Annual Test				●		7.9.3	Functional testing shall be conducted annually for a minimum of 1-1/2 hours of the emergency lighting system is battery powered.
Exit Signs/Lighting						NFPA 101	
Visual Inspection	●					7.10.9.1	Exit signs shall be visually inspected for operation of the illumination sources at intervals not to exceed 30 days.
Annual Test				●		7.10.9.2	Exit signs connected to or provided with a battery-operated emergency illumination source, where required in 7.10.4, shall be tested and maintained in accordance with 7.9.3.

National Fire Code Standards Referenced:

- NFPA 2001 - Clean Agent Fire Extinguishing Systems
- NFPA 10 - Portable Fire Extinguishers
- NFPA 12 - Carbon Dioxide Extinguishing Systems
- NFPA 1962 - Care, Use and Service Testing of Fire Hose
- NFPA 12A - Halon 1301 Fire Extinguishing Systems Hose including Connections and Nozzles
- NFPA 17 - Dry Chemical Extinguishing Systems
- NFPA 25 - Water-Based Fire Protection Systems
- NFPA 17A - Wet Chemical Extinguishing Systems
- NFPA 101® - Safety to Life from Fire in Building
- NFPA 72 - National Fire Alarm Code and Structures

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