

# Code requirements for visual inspections



## DAILY/WEEKLY

### Automatic Fire Alarm NFPA 72, ULC S536

Control equipment: fire alarm systems unmonitored for alarm, supervisory and trouble signals.

## MONTHLY

### Portable Fire Extinguishers NFPA 10

- Location in designated place
- Visibility of the extinguisher or means of indicating the extinguisher location
- Access to the extinguisher
- Pressure gauge reading or indicator in the operable range or position
- Fullness determined by weighing or hefting
- Condition of tires, wheels, carriage, hose and nozzle for wheeled extinguishers
- Indicator for non-rechargeable extinguishers using push-to-test pressure indicators

### E-Lights/ Exit Signs NFPA 101, 70

Functional test.

### Hood Suppression NFPA 17

On a monthly basis, inspections shall be conducted in accordance with NFPA 17A 7.2.2 and the owner's manual.

## QUARTERLY

### Automatic Fire Alarm NFPA 72, ULC S536

Control equipment: radiant energy fire detectors, supervisory signal devices, water flow devices.

## SEMIANNUALLY

### Hood Suppression NFPA 96, 17, 17A

Maintenance shall include the following:

1. A check to see that the hazard has not changed
2. An examination of all detectors, the expellant gas container(s), the agent container(s), releasing devices, piping, hose assemblies, nozzles, signals, all auxiliary equipment and the liquid level of all non-pressurized wet chemical containers
3. \*Verification that the agent distribution piping is not obstructed

NFPA 72: 2019 edition, NFPA 10: 2013 edition, NFPA 96: 2014 edition, NFPA 17: 2013 edition, NFPA 17A: 2013 edition, ULCS536: 2004 edition, NFPA 101: 2018 edition

## SEMIANNUALLY

### Automatic Fire Alarm NFPA 72, ULC S536

- Trouble signals: fuses, interfaced equipment, lamps and LEDs, primary (main) power supply
- Control equipment: fire alarm systems unmonitored for alarm, supervisory and trouble signals: nickel-cadmium, sealed lead-acid, transient suppressors
- Control equipment: fire alarm systems unmonitored for alarm, supervisory and trouble signals: control unit trouble signals, emergency voice/alarm communications equipment, remote annunciators
- Batteries: sealed lead-acid
- Initiating devices: air sampling smoke detectors, duct smoke detectors, electromechanical releasing devices, fire extinguishing system(s) or suppression system(s) switches, fire alarm boxes (pull stations), heat detectors, smoke detectors, interface equipment, alarm notification appliances – supervised

## ANNUALLY

### Hood Suppression NFPA 17, 17A

In addition to performing all the steps necessary for half-yearly maintenance, some pre-engineered fire suppression systems have additional parts that need to be replaced.

### Portable Fire Extinguishers NFPA 10

Yearly maintenance shall include the procedures detailed in the manufacturer's service manual and a thorough examination, including the following:

- Mechanical parts of all fire extinguishers
- Extinguishing agent
- Expelling means
- Physical condition
- Determination need of six-year or hydrostatic test

### Automatic Fire Alarm NFPA 72, ULC S536

- Control equipment: fire alarm systems monitored for alarm, supervisory and trouble signals
- ULC S536: fuses, interfaced equipment, lamps and LEDs, primary (main) power supply
- Supervising station fire alarm systems – transmitters DACT

### E-Lights/ Exit Signs NFPA 101, 70

90-minute drain test and inspection, verification of charge voltage, alignment of heads, hazard assessment, inspection sticker and required paperwork.

## 10-YEAR INTERVALS

### Hood Suppression NFPA 17, 17A

- Regulator test (where applicable)
- Tank cylinder (hydrostatic test)
- Cartridge (hydrostatic test/replacement)
- Actuation and expellant hose(s) (hydrostatic test/replacement)

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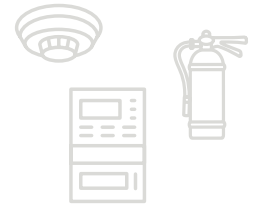


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# Code requirements for functional testing



## MONTHLY

**Portable Fire Extinguishers NFPA 10** Ensure proper operating condition, safety seals, tags, pressure gauge readings, HMIS Label.

**Emergency Lights NFPA 101** 30-second quick check and battery check.

## SEMIANNUALLY

**Hood Suppression NFPA 17A**

- All kitchen suppression systems
- Valve supervisory devices

**Automatic Fire Alarm NFPA 72** Batteries: temperature test, charger test, cell/unit and voltage test.

## ANNUALLY

**Portable Fire Extinguishers NFPA 10** Conductivity test of all carbon dioxide hose assemblies. Ensure in proper operating condition. Safety seals, tags, pressure gauge reading, HMIS table. Empty and recharge all stored pressure loaded stream fire extinguishers.

**Automatic Fire Alarm NFPA 72, ULC S536**

- Control equipment: building systems connected to supervising station functions, fuses, interface equipment, lamps & LEDs, primary (main) power supply
- Batteries – fire alarm systems
- Control unit trouble signs
- Emergency voice/alarm communications equipment
- Remote annunciators
- Initiating devices: duct smoke detectors, electromechanical releasing devices, fire extinguishing system(s) or suppression system(s) switches, fire alarm boxes (pull stations), fire phones, heat detectors, all smoke detectors – functional, fire – gas and other detectors
- Interface equipment
- Special hazard equipment
- Alarm notification devices: audible devices, audible textual notification appliances, visible devices
- Supervising station fire alarm system – transmitters DACT, DART
- Special procedures

## 3-YEAR INTERVALS

**Automatic Fire Alarm NFPA 72** Load voltage test.

## 5-YEAR INTERVALS

**Portable Fire Extinguishers NFPA 10**

- Hydrostatic testing of carbon dioxide, wet chemical and foam
- Fire extinguishers
- Hydrostatic testing of cartridges associated with portable fire extinguishers and wheeled units
- Hydrostatic testing of carbon dioxide hoses equipped with a shut-off valve

## 6-YEAR INTERVALS

**Portable Fire Extinguishers NFPA 10** Stored-pressure extinguishers requiring 12-year hydrostatic tests shall be emptied and subjected to applicable maintenance procedures.

## 12-YEAR INTERVALS

**Portable Fire Extinguishers NFPA 10**

- Hydrotest of dry chemical and clean agent extinguishers
- Hydrotest of dry chemical hose equipped with a shut-off valve

**Hood Suppression NFPA 17A**

- Hydrostatic testing
- Cylinder
- Replacement of cartridge
- Regulator test
- Wet chemical containers
- Auxiliary pressure containers
- Hose assemblies

NFPA 72: 2019 edition, NFPA 10: 2013 edition, NFPA 96: 2014 edition, NFPA 17: 2013 edition, NFPA 17A: 2013 edition, ULCS536: 2004 edition, NFPA 101: 2018 edition

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# Code requirements for visual inspections



## DAILY/WEEKLY

### Sprinklers NFPA 25

- Fire pumps: pump house conditions, pump system conditions, electrical system conditions, diesel engine conditions, steam system conditions, circulation relief valve, main pressure relief valve
- Water storage tanks (during the heating season): automatic tank fill valve enclosure, heating system (without a supervised alarm – daily), water temperature (with alarm to isolated location – weekly)
- Common components and valves: control valves (sealed), backflow prevention assemblies (reduced pressure), control valves (locked/supervised), enclosures (during the heating season for dry pipe valves, deluge valves, and pre-action valves), master pressure – regulating devices

## MONTHLY

### Sprinklers NFPA 25

- Water storage tanks: air pressure (without supervision), temperature alarms (supervised), water level (without a supervised alarm)
- Foam-water sprinkler systems: discharge device (spray nozzle) location and position, proportioning system
- Common components and valves: air compressors, backflow prevention assemblies (double check), control valves (locked/supervised), the exterior (of alarm valves, dry pipe valves, deluge valves, pre-action valves), gauges

## QUARTERLY

### Sprinklers NFPA 25

- Private fire service mains: hose houses
- Water storage tanks: air pressure (source supervised), catwalks and ladders, heating system (with a supervised alarm), support structure, surrounding area, tank exterior, water level (with supervised alarm)
- Water spray fixed systems: drainage
- Foam-water sprinkler systems: drainage in the system area, foam concentrate strainers
- Common components and valves: fire department connections, gauges (monitoring water pressure and supervised air pressure), hose valves, pressure reducing and relief valves, supervisory signal initiating devices, water flow alarm devices

## SEMIANNUALLY

### Sprinklers NFPA 25

Private fire service mains: monitor nozzles.

## ANNUALLY

### Sprinklers NFPA 25

- All systems (from the floor): pipe, fittings, hangers, seismic bracing
- Sprinkler systems: hydraulic design information sign, information sign, spare sprinklers
- Standpipe and hose systems: hose racks, hose/valve cabinets, hose connections/hose valves, hose/hose nozzles
- Private fire service mains: hydrants, main line strainers
- Fire pumps: alignment, cable/wire insulation, engine crankcase breather, exhaust system and drain condensate trap, flexible hoses and connections, fuel tank vents and overflow, plumbing parts outside of panels, shaft movement or end-play while running, suction screens
- Water storage tanks: expansion joints, hoops and grillage, painted/coated surfaces
- Water spray fixed systems: nozzles
- Foam-water sprinkler systems: discharge sprinkler location and position, proportioning system
- Common components and valves: interior (of dry pipe valves, deluge valves, pre-action valves)

## 3-YEAR INTERVALS

### Sprinklers NFPA 25

Water storage tanks: interior (of tanks without corrosion protection).

## 5-YEAR INTERVALS

### Sprinklers NFPA 25

- All systems: internal pipe inspection/assessment
- Water storage tanks: interior (of tanks with corrosion protection, automatic tank fill valves)
- Common components and valves: interior (of strainers - trim and mainline, filters, orifices, check valves, alarm valves, deluge valve, pre-action valve, backflow prevention devices)

NFPA 25: 2017 edition

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# Code requirements for functional testing



## WEEKLY

### Sprinklers NFPA 25

Fire pumps (no flow/churn test): diesel fire pumps (for 30 minutes), electric fire pumps (in buildings higher than fire department pumping capacity, or with limited service controllers, or vertical turbine type, or with limited pressure water supply, for 10 minutes), steam fire pumps.

## MONTHLY

### Sprinklers NFPA 25

Fire pumps (no flow/churn test): electric fire pumps (all other pumps not required to be tested weekly and redundant fire pumps for 10 minutes).

## QUARTERLY

### Sprinklers NFPA 25

- Fire pumps: diesel fire pump fuel tank supervisory switches
- Common components and valves: low air pressure alarm (pre-action), main drain (downstream of backflow device and pressure-reducing valve), master pressure regulating devices, mechanical water flow alarm devices, priming water (dry and pre-action), quick opening devices

## SEMIANNUALLY

### Sprinklers NFPA 25

Common components and valves: electric water flow alarm devices, valve supervisory switches.

## ANNUALLY

### Sprinklers NFPA 25

- Sprinkler systems: antifreeze solution
- Private fire service mains: monitor nozzles (flow, range, operation), hydrants (operation, flow)
- Fire pumps: diesel fuel, alarm signals, circulation relief valve, main relief valve, power transfer switch, pump operation (no flow), pump performance (full flow)
- Water storage tanks (before the heating season): tank heating system, low water temperature signals, high water temperature limit switches, water level alarms, automatic tank fill valve
- Water spray fixed systems: operational test, manual release, nozzles, strainers
- Foam-water sprinkler systems: operational test, discharge device location/obstruction/position, foam sample, manual actuation devices

## ANNUALLY

### Sprinklers NFPA 25

- Common components and valves: air compressors, air maintenance devices, backflow prevention assemblies (forward flow), control valves (operational), deluge valve (full flow), dry pipe valves (partial trip), hose valves, low air pressure alarms (dry pipe), main drain, master pressure-regulating devices, pre-action valve (partial trip), supervisory signal devices

## 3-YEAR INTERVALS

### Sprinklers NFPA 25

Common components and valves: air leakage (dry pipe and pre-action systems), full flow (dry pipe, pre-action and deluge systems).

## 5-YEAR INTERVALS

### Sprinklers NFPA 25

- Sprinkler systems: sprinklers (extra high-temperature solder type and those in corrosive atmospheres)
- Standpipe and hose systems: full flow test (automatic standpipe systems), hydrostatic test (manual and semi-automatic dry standpipes)
- Private fire service mains: flow test
- Water storage tanks: water level indicators
- Common components and valves: fire department connection piping (hydrostatic test), gauges (test or replace), hose connection pressure regulating valves, hose rack assembly pressure regulating devices, pressure reducing valves, sprinkler pressure-reducing valves

## 10-YEAR AND GREATER INTERVALS

### Sprinklers NFPA 25

- Sprinkler systems: dry type sprinklers (10 years and every 10 years after that)
- Fast response sprinklers (20 years and every 10 years after that)
- Standard sprinklers (50 years and every 10 years after that)
- Standard sprinklers (75 years and every five years after that)

NFPA 25: 2017 edition

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