



Emergency Lights/Exit Signs



Fire Pumps



Sprinklers



Clean Agent Suppression



Hood Suppression System



Fire Alarm Systems



Portable Fire Extinguishers

INSPECTION, TESTING & MAINTENANCE

# GUIDEBOOK

## CODE REQUIREMENTS

VISUAL INSPECTIONS

FUNCTIONAL TESTING



This is not an official National Fire Protection Association publication.

# CANTON

## DAILY/WEEKLY



**Fire Alarm Systems** ..... NFPA 72  
Control panel normal



**Fire Pump** ..... NFPA 25  
Pump system – valves open, no leaks, pressure gauges at normal readings  
Electrical system or diesel system normal  
Pump house heat working and above 40°F  
Circulation relief and pressure relief valves



**Sprinklers and Standpipes** ..... NFPA 25  
Gauges on dry, preaction and deluge systems – Inspect for condition and normal pressures  
Temperatures maintained above 40°F on any cold weather enclosures

### Valves, Valve Components, Trim Inspections

Control valves – Normal position, tamper switches or locks, accessible, leak-free, signage  
Master pressure reducing valves

### Backflow Prevention Assemblies

Control valves – Tamper switches or locks

### Standpipes

Sealed control valves

## MONTHLY



**Automatic Fire Alarm Systems** ..... NFPA 72  
Unmonitored control panels – Check for alarm, supervisory, and trouble signals



**Hood Suppression System** ..... NFPA 17A  
Owner's inspection – Extinguishing system in proper location, manual actuators unobstructed, tamper seals intact, system tag in place, no obvious physical damage, pressure gauge in operable range, nozzle blow-off caps intact, no modifications to protected equipment



**Portable Fire Extinguishers** ..... NFPA 10  
Location in designated place  
No obvious physical damage, corrosion, or clogged nozzle  
No obstruction to access or visibility – Nameplate facing outward  
Safety seals or tamper indicators not broken or missing  
Pressure gauge reading in the operable range  
Test for agent fullness by lifting or “hefting”  
Wheeled units - Condition of wheels, hose, and nozzle  
Non-rechargeable units - Check pressure indicator  
Record inspection date on tag with initials



**Sprinklers and Standpipes** ..... NFPA 25  
Gauges on wet systems – Inspect for condition and normal pressures  
Air pressure gauges on dry and preaction systems if electronically supervised

### Valves, Valve Components, Trim Inspections

Control valves – Normal position, tamper switches or locks, accessible, leak-free, signage  
Alarm and alarm check valves – Exterior inspection  
Dry pipe, deluge, preaction valves – Exterior inspection

### Backflow Prevention Assemblies

Control valves – Tamper switches or locks

### Standpipes

Control valves – Tamper switches or locks

## QUARTERLY



### **Sprinklers** ..... NFPA 25

Water flow alarm and all supervisory devices – Tamper switches  
Fire department connections  
Pressure reducing valves and relief valves  
Hydraulic design information sign



### **Fire Alarm Systems** ..... NFPA 72

#### **Initiating Devices**

Optical flame detectors, water flow switches

## SEMI-ANNUALLY



### **Hood Suppression System** ..... NFPA 17A and 96

Certified technician's inspection



### **Clean Agent Suppression** ..... NFPA 2001

Visually inspect all field devices



### **Fire Alarm Systems** ..... NFPA 72

Surge suppressors  
Fire alarm panel 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 or suppression system switches  
Fire alarm boxes (pull stations)  
Heat detectors  
Smoke detectors  
Interface equipment  
Alarm notification appliances – Supervised  
Supervising station fire alarm systems transmitters – DACTS and dialers

## ANNUALLY



### **Clean Agent Suppression** .....NFPA 2001

System hoses  
Inspect enclosure to determine if penetrations have occurred that could lead to agent leakage



### **Portable Fire Extinguishers** .....NFPA 10

Normal monthly inspection requirements, plus:  
Inspect shell for damage or corrosion  
Inspect hose and nozzle for blockage  
Labels present, legible, and facing forward  
Check for next 6-year internal or hydrostatic test date  
Replace tamper seal  
Remove extinguisher and inspect hanger, bracket, or storage cabinet



### **Sprinklers** .....NFPA 25

Visually inspect from floor – Sprinklers, pipe and fittings, pipe hangers and seismic bracing  
Spare sprinklers in spare sprinkler cabinet  
Hydraulic design information sign

#### **Standpipes**

Piping  
Hose racks  
Hose connections and hose valves  
Hose and hose nozzles

#### **Valves, Valve Components, Trim Inspections**

Interior inspections – Dry pipe valves, preaction, and deluge valves

#### **Private Fire Service**

Hydrants  
Main line strainers



### **Fire Alarm Systems** .....NFPA 72

Fire alarm panels – Fuses, interfaced equipment, lamps and LEDs, main power supply  
Mass notification equipment

## 5 YEAR CYCLE



### **Clean Agent Suppression** .....NFPA 2001

External visual inspection on agent cylinders following CGA-C6



### **Sprinklers** .....NFPA 25

Internal obstruction investigation of piping

#### **Valves, Valve Components, Trim Inspections**

Interior inspections – Alarm valves, check valves, alarm/check valves, filters and strainers  
Interior inspections – Externally resettable preaction and deluge valves

## WEEKLY



### **Diesel Fire Pumps**.....NFPA 25

Operate fire pump under no-flow conditions for 30 minutes  
Make visual observations according to checklist for pump and diesel engine

## MONTHLY



### **Emergency Lights/Exit Signs** .....NFPA 101

30-Second quick check



### **Electric Fire Pumps**.....NFPA 25

Operate fire pump under no-flow conditions for 10 minutes  
Make visual observations according to checklist for pump and electrical system

## QUARTERLY



### **Sprinklers** .....NFPA 25

Mechanical water flow alarm devices – Water motor gongs

#### **Valves, Valve Components**

Low air pressure alarms, quick opening devices, priming water



### **Fire Alarm Systems** .....NFPA 72

#### **Initiating Devices**

Supervisory pressure switches, tamper switches, suppression system supervisory devices

## SEMI-ANNUALLY



### **Hood Suppression Systems** .....NFPA 17A and 96

Test operation of detection system and releasing devices  
Replace fusible links



### **Sprinklers** .....NFPA 25

Vane-type and pressure-switch type waterflow devices

#### **Valves, Valve Components**

Control valve supervisory switches – Tamper switches



### **Fire Alarm Systems** .....NFPA 72

Mass notification equipment

## ANNUALLY



### **Clean Agent Suppression** .....NFPA 2001

Test all systems devices - Detectors, pull stations, abort stations discharge circuits, audible and visual devices  
Agent quantity and pressure shall be verified to design specification  
Agent distribution piping network integrity verified  
Functional test of all detection, actuating inputs, alarm-sounding or displaying devices, remote annunciators, air-handling shutdown, and power shutdown relays per original design



### **Emergency Lights/Exit Signs** .....NFPA 101

90 Minute drain test and inspection, verification of charge voltage, alignment of light heads, hazard assessment, inspection sticker, required paperwork



### **Fire Alarm Systems** .....NFPA 72

#### **Control Equipment (FACP): Building Systems Connected to Supervising Station**

Functions, fuses, interface equipment, lamps & LEDs, primary power supply, transponders

#### **Batteries**

#### **Emergency Voice/Alarm Communications Equipment**

#### **Remote Annunciators**

#### **Initiating Devices**

Duct smoke detectors, electromechanical releasing devices  
Fire extinguishing system or suppression system switches  
Fire alarm boxes (manual pull stations)  
Detectors: smoke, heat, gas, flame and others

#### **Alarm Notification Devices**

Audible devices, visible devices

#### **Supervising Station Fire Alarm Systems - Transmitters**

DACT, DART, special procedures

#### **Mass Notification Systems**

#### **Emergency Control Functions and Equipment**



### **Portable Fire Extinguishers** .....NFPA 10

Maintenance: Conductivity test of all carbon dioxide hose assemblies. Pressure regulators on wheeled units. Uncoil and inspect hoses on wheeled units. Empty and recharge all stored-pressure loaded-stream fire extinguishers.



### **Sprinklers** .....NFPA 25

Main drain, antifreeze solution concentration

#### **Valves, Valve Components**

Pressure reducing valves/relief valves (partial flow)  
Master pressure reducing valves (full flow)  
Control valves, dry system and deluge full trip test, preaction valve partial trip test  
Air maintenance device

#### **Backflow Prevention Assemblies**

Full forward flow test

#### **Standpipes**

Main drain test, hose valves, valves (all types)

#### **Private Fire Service Mains**

Monitor nozzles, hydrants

#### **Fire Pump System**

Fire pump alarm signals, full flow test, and perform annual maintenance

## 3 YEAR CYCLE



### Fire Alarm Systems

NFPA 72

Change out batteries as recommended by manufacturer



### Sprinklers

NFPA 25

Dry and preaction system full flow trip test  
Dry and preaction system air leakage test



### Portable Fire Extinguishers

NFPA 10

Replace liquid charge-type AFFF and FFFP extinguishers. Perform internal examination at that time.

## 5 YEAR CYCLE



### Clean Agent Suppression

NFPA 2001

Hydro test discharge hoses or replace  
Check valves tested, change initiators



### Fire Alarm Systems

NFPA 72

Required battery replacement



### Portable Fire Extinguishers

NFPA 10

Internal inspection and hydrostatic test of stored-pressure water, water mist, and loaded stream extinguishers.  
Internal inspection and hydrostatic test of wetting agent, AFFF, FFFP, dry chemical (stainless steel shells), carbon dioxide, and wet chemical extinguishers.  
Hydrostatic test of pressure cartridges associated with portable extinguishers and wheeled units.  
Hydrostatic testing of carbon dioxide hoses equipped with a shut-off valve.



### Sprinklers

NFPA 25

Test gauges or replace  
Sprinklers – Extra-high temperature/corrosive atmosphere  
Check Valves – Test or replace  
Piping internal inspection for obstructions

### Standpipe – Full Flow Test Remote Point

Hose connection pressure reducing valves (Full Flow)  
Hydrostatically test manual and dry standpipes

### Standpipe Hoses

5-Year test for new hoses and every 3 years thereafter

### Valve, Valve Components

Pressure reducing valves and relief valves (full flow)

### Private Fire Service Mains

Full flow test

6 YEAR CYCLE



**Portable Fire Extinguishers** ..... NFPA 10  
Perform internal investigation on stored-pressure extinguishers which require a 12-year hydrostatic test

12 YEAR CYCLE



**Hood Suppression Systems** ..... NFPA 17A  
Hydrostatic test of all containers and hose assemblies



**Portable Fire Extinguishers** ..... NFPA 10  
Hydrostatic test of cartridge-operated dry chemical and dry powder extinguishers with mild steel shells  
Hydrostatic test of halogenated (clean agent) extinguishers

LONG TERM CYCLES



**Clean Agent Suppression** ..... NFPA 2001  
CGA (Compressed Gas Actuator) – Replace at 10 years and every 10 years thereafter



**Sprinklers** ..... NFPA 25  
**Standard Response Sprinklers**  
Standard sprinkler heads at 50 years and every 10 years thereafter

**Quick Response Sprinklers**  
Quick Response head at 20 years and every 10 years thereafter

**Dry Type Sprinklers**  
Dry sprinkler head at 10 years and every 10 years thereafter



Thank you to ORR Fire Protection for creating such a handy guide.