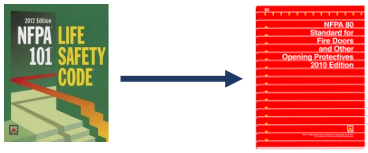
Fire Door Inspections

Adopted by CMS effective July 5, 2016
Referenced NFPA 80 Fire Doors



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Annual Inspection & Testing

NFPA 101, specifically 8.3.3.1, addresses the general requirement for opening protectives in fire barriers. It mandates that any opening in a fire barrier must be protected to limit the spread of fire and the movement of smoke between sides. NFPA 101 8.3.3.1 emphasizes the crucial role of properly protected openings in maintaining the effectiveness of fire barriers and ensuring life safety within a building.

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Qualified Individual

NFPA 80 (2010) reference in Chapter 5 - Care and Maintenance

5.2.3.1 Functional testing of fire door and window assemblies shall be performed by individuals with knowledge and understanding of the operating components of the type of door being subject to testing.

5.2.3.2 Before testing, a visual inspection shall be performed to identify any damaged or missing parts that can create a hazard during testing or affect operation or resetting.

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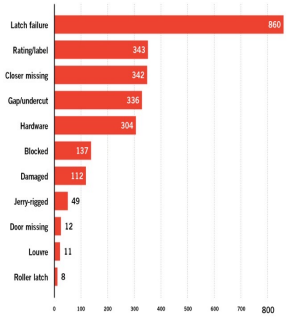
Common Door Inspection and Maintenance Findings



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NFPA 80– 13 Points Fire Door Inspection

- **5.2.3.5.2** - As a minimum, the following items shall be verified:
  - **(1)** Labels are clearly visible and legible.
  - **(2)** No open holes or breaks exist in surfaces of either the door or frame.
  - **(3)** Glazing, vision light frames, and glazing beads are intact and securely fastened in place, if so equipped.
  - **(4)** The door, frame, hinges, hardware, and noncombustible threshold are secured, aligned, and in working order with no visible signs of damage.
  - **(5)** No parts are missing or broken
  - **(6)** Door clearances do not exceed clearances listed in 4.8.4 and 6.3.1.7
  - **(7)** The self-closing device is operational; that is, the active door completely closes when operated from the full open position.
  - **(8)** If a coordinator is installed, the inactive leaf closes before the active leaf.
  - **(9)** Latching hardware operates and secures the door when it is in the closed position.
  - **(10)** Auxiliary hardware items that interfere or prohibit operation are not installed on the door or frame.
  - **(11)** No field modifications to the door assembly have been performed that void the label.
  - **(12)** Meeting edge protection, gasketing and edge seals, where required, are inspected to verify their presence and integrity.
  - **(13)** Signage affixed to a door meets requirements listed in 4.1.4

80

Fire Door Repairs

- NFPA 80-2010: 5.2.15.3.1: If repairs cannot be made with labeled components or parts obtained from the original manufacturer, … the fire door frame, fire door assembly, or appurtenances [*accessories*] shall be replaced.
- When holes are left in a door or frame due to changes or removal of hardware or damage, the holes may be repaired by the following methods:
  - (1) Install steel fasteners that completely fill the holes
  - (2) Fill the screw or bolt holes with the same material as the door or frame
- NFPA 80-2010 5.2.15.4
- In, NFPA 80-2016 …

Fire Door Caulk

5.5.7 When fastener holes are left in a door or frame due to changes or removal of hardware or plant-ons, the holes shall be repaired by the following methods:

(1) Install steel fasteners that completely fill the holes.
(2) Fill the screw or bolt holes with the same material as the door or frame.
(3) Fill holes with material listed for this use and installed in accordance with the manufacturer's procedures.

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Magnetic Door Hold-Open Testing

- Doors in exits, horizontal exits, hazardous area and/or smoke barrier can only be held open with a device that will automatically release allowing door to close when the fire alarm, local smoke detector and/or sprinkler system initiates
- Doors may not reactivate if the fire alarm system is placed in silent mode. The doors should not relock without the system being reset.
- Check systems after performance of maintenance to assure systems are returned to working order.
- Notify the local or state fire marshal and obtain any required permits before any changes are made to the system

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Magnetic Hold Open Devices

- Electromagnet devices mounted on a wall or on the floor. The door also must be equipped with an automatic door closing device.
- Doors in exits, horizontal exits, hazardous areas and/or smoke barriers can only be held open with a device that will automatically release allowing door to close when the fire alarm, local smoke detector and/or sprinkler system initiates
- Chains and other creative methods for field-modifying a magnetic holder or armature should not be used, because they aren't covered by the manufacturer's listings. Floor-mounted units don't require as much coordination but are more susceptible to damage because of their mounting location.

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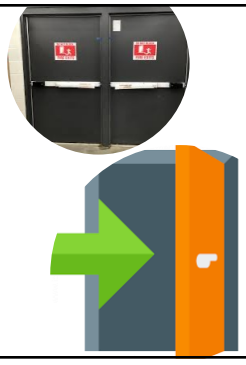
Locking Doors

- Alzheimer and dementia units are examples of areas with patients who **might** have clinical needs that justify door locking.
- Residents having a clinical needs may justify the use of access control or delayed egress locking systems.
- Facilities should provide clinical assessments as well as provide a policy/procedure that involves notifying individuals without a clinical need (residents and guests) as to how to egress the facility.
- Door leaves shall be arranged to be opened readily from the egress side whenever the building is occupied.
- Locks shall not require the use of a key, a tool, or special knowledge or effort for operation from the egress side.



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Clinical Needs (18/19.2.2.2.5.1)

- "Where the clinical needs of patients require specialized security measures or where patients pose a security threat"
  - Behavioral health
  - Geriatrics
  - Neuro Units
  - Lockups/prison wards

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Clinical Needs (18/19.2.2.2.6) Locked Doors or Controlled Egress

- Rapid removal of occupants by ONE of:
  - Remote control of locks within the unit
  - Keying of locks to keys carried by staff at all times
  - Other such reliable means available to staff at all times
  - One lock permitted per door

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Patient Security Needs (18/19.2.2.2.5.2)

- "Patient special needs require specialized protective measures for their safety"
- Complete smoke detection throughout the locked space OR remote unlock from a constantly attended location within the locked space
- Complete sprinkler protection in building
- Release by independent activation of
  - Smoke detection (if no remote release)
  - Waterflow of sprinkler system
  - Loss of power

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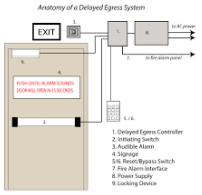
Delayed Egress Doors Testing

- Permitted provided:
  - Releases with/in 15 seconds or 30 seconds per AHJ
  - ≤15 lb. for ≤ 3 seconds to initiate
  - Process must be irreversible
  - Unlocks with the loss of power
  - Unlocks with the initiation of fire alarm and/or smoke detector
  - Emergency lighting at door
  - Instructional sign @ door

PUSH UNTIL ALARM SOUNDS DOOR CAN BE OPENED IN 15 SECONDS



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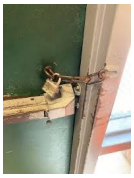
None of These Locks are Ever Permitted



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Gate Locks/ Delayed Egress K222

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Resident Wandering Devices

The wander management solution allows facilities to monitor identified residents with proclivity to wandering, while maintaining their dignity to move freely about a facility. Secure or lock and alarm specific doors if a resident attempt to leave.

91

Wander Guard Auditing

Make sure you are scanning your resident anti-wandering devices regularly. Frequently this is done by nursing and is added to the MAD or TAR. It can be done with a wand that checks the bands to ensure the battery and system is working. Frequently a device is used at each door to ensure the doors function (lock) appropriatley

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Emer. Lighting w/ Battery Function Testing

- Facilities have two situations they may use Battery-powered Emergency Lighting fixtures
  1. At exits where the emergency lighting is may NOT be connected to the generator and/or
  2. An interior room in the facility where there is the generator and/or generator's transfer switch is located
- In both cases these devices will require testing monthly for 30 seconds and once annually for 90 minutes to ensure the battery is functioning appropriately and results for all devices must be recorded

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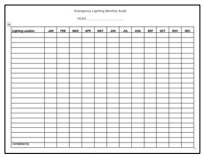
Exit Lighting Testing

- All exit lighting must function for no less than 90-minutes.
- There should be two sources of light at each exit, either two fixtures one light each or one fixture with two lights
- All portions of the means of egress must have emergency illumination that:
  - Cannot be controlled by manual switches or light sensor
  - Normally provide at least on 1ft-candle of light measured at the floor
- Each month when facility is exercising the generator under load (if emergency lighting is connected to generator) each lighting fixture should be observed to ensure that each light fixture is functioning appropriately.



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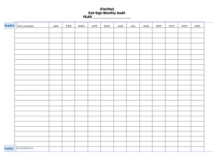
Exits Signs Testing

- Facility should identify all exit signs and audit them monthly that they are working appropriately
- Exit signs should be of high contrast and have at least two light bulbs though many today a strip of LEDs
- The monthly visual inspection is required even if illuminated with LEDs



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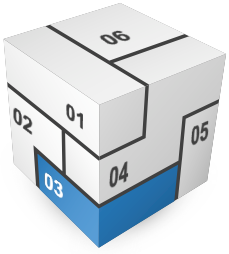
SECTION 3 – PROTECTION K 300s



Features of Fire Protection

This includes sprinkler system, fire alarm system, fire extinguishers, kitchen range hood suppression system

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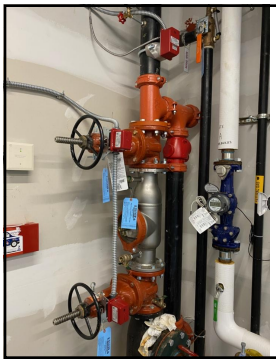

Sprinkler ITM

- Properly Maintain System
- Utilize Qualified Personnel
- Co-ordinate testing
- Always keep System components > 40F
- Keep records of system information and ITM activities and ready Access and system documentation
- Provide Notification of a Shut Down
- Correct Deficiencies and Impairments

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Sprinkler System K351

BOOT CAMP

- Complete sprinkler system required for all nursing homes, regardless of construction type as of Aug. 13, 2013
  - Sprinklers must be installed throughout a facility in accordance with NFPA 13
  - S&C Memo 09-04
  - Waivers and FSESs for lack of sprinklers in certain areas will are not permitted

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Sprinklers Required

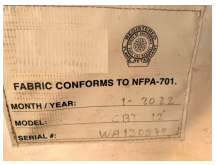
- Common areas that require sprinkler coverage
  - Closets (No minimum size to qualify a space as a closet)
  - Combustible overhangs that extend more than 48" including gutter
  - Room behind dryers
  - Elevator machine rooms
  - Elevator shaft (top and bottom
  - Electrical rooms
  - Walk-in coolers/freezers
  - Linen/Trash Chutes
  - Attics
  - Car ports

99

Awnings and Overhangs

- For overhangs and awnings which are 48" or greater they must be sprinklered unless it can be shown that the entire structure is non-combustible
  - Canvasas is flame spread rated NFPA 701
  - Supports are non-combustible
  - The entire construction (interior and exterior are non-combustible (often the interior construction is wood or combustible materials)

100



Flame Retardant Fabrics

Canvas should be labeled showing conformance to NFPA 701 standard

101

NFPA 25, 2011 Edition Standard for the Inspection, Testing, and Maintenance of Water-based Fire Protection Systems

LSC 9.7.5 Maintenance and Testing

All automatic sprinkler systems and standpipe systems required by this code inspected, tested, and maintained in accordance with NFPA 25

102

Inspection

- What gets a visual inspection?
  - Sprinkler riser components
  - Control & alarm check valves
  - Gauges
  - Sprinklers
  - Piping
  - Fire department connection
  - Dry pipe valves

103

Sprinkler Tamper Switch

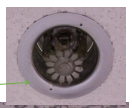
Sprinkler system must have one or more of these devices to ensure water is always available

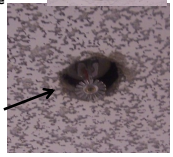
104

Tape and Paint

Dirt

Cover plate examples





- Missing Sprinkler Head Cover
  Ceiling tile "cut" showing

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Sprinkler System

Weekly	Monthly
Gauges on dry system inspected to ensure that normal air and water pressures are being maintained and documented	Gauges on wet system inspected to ensure that normal air and water pressures are being maintained and documented

106

Sprinkler Pressure Gauges

•Test or replace gauges every 5 years and should be labeled with installation date.

You need to know what each gauge should be reading

13.2.4.2 Gauges shall be replaced every 5 years or tested every 5 years by comparison with a calibrated gauge.
13.2.4.3 Gauges not accurate to within 3 percent of the full scale shall be recalibrated or replaced.

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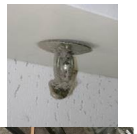
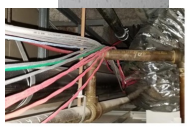
Sprinkler System Annual Inspections

- 5.2.1 Sprinklers and 5.2.2 Pipe and Fittings shall be inspected annually from floor level
- Any sprinkler that shows signs of any of the following shall be replaced:
  1. Leakage
  2. Corrosion detrimental to sprinkler performance
  3. Physical damage
  4. Loss of fluid in the glass bulb heat-responsive element
  5. Loading detrimental to sprinkler performance
  6. Paint other than that applied by the sprinkler manufacturer
  7. Identified as a part of a replacement or recall program





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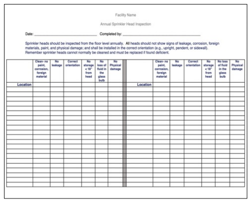
Annual Sprinkler Head Inspection

- Annual sprinkler head inspection including piping and fittings. Inspection should look for heads which have been painted, loaded (other substances – kitchen grease, cigarette tar, bird nest) or corroded (green or rusty) Remember that these are required to be replaced, not cleaned – there is no such thing as a UL listed cleaning agent. Documentation must include evidence that all sprinkler heads have been inspected. Also any sprinkler that shows signs of any of the following shall be replaced:
  - Leakage
  - Physical Damage
  - Loss of fluid
  - Loading of dirt, dust corrosion


Facility Name

Annual Sprinkler Head Inspection

Date: ____________ Completed by: ____________

Sprinkler heads should be inspected from the floor level annually. All heads should not show signs of leakage, corrosion, foreign materials, paint, and physical damage; and shall be installed in the correct orientation (e.g., upright, pendent, or sidewall). Remember sprinkler heads cannot normally be cleaned and must be replaced if found deficient.

	Clean- no paint, corrosion, foreign material	No leakage	Correct orientation	No storage < 18" from head	No loss of fluid in the glass bulb	No Physical damage		Clean- no paint, corrosion, foreign material	No leakage	Correct orientation	No storage < 18" from head	No loss of fluid in the glass bulb	No Physical damage
Location							Location						

109

Sprinkler Inspection Reminders

- Shelving in center of the room
- Irregular shaped rooms with alcoves or nooks, columns
- Built in closets vs. furniture
- Light fixtures, heads, soffits, pipes, etc.

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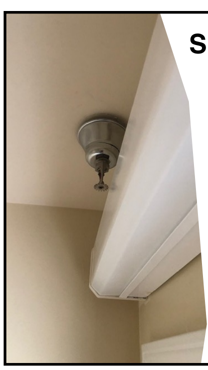
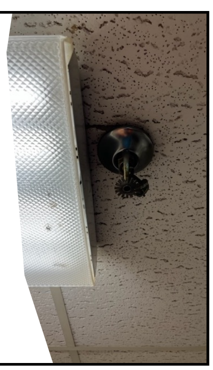


Sprinkler Location

Sprinkler heads must be installed at least 4" or greater from objects

The gist is that sprinklers should be spaced away from an obstruction at a distance at least three times the object's maximum dimension (its height or width, whichever is greater)—up to 24 inches of separation, maximum



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What Kind of System do You Have?

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Sprinkler Design

There are two ways that sprinkler systems have been typically designed – Pipe Schedule or hydraulically calculated.

Pipe Schedule – pipe is sized according to systems pressure and flow required as well as discharge over the estimated area. No longer permitted for new healthcare

Hydraulic Calculated - Engineered to match the fire hazard with the needed water supply – pressure and volume (common since the late 1980s)

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Hydraulic Name Plate

4.1.8 Hydraulic Name Plate - Information sign

- Permanently marked metal or rigid plastic information sign placed at the system control riser supplying antifreeze loop, dry system, pre-action system, or auxiliary system control valve
- Sign secured with corrosion-resistant wire or chain providing the following information:
  1. Location of area served by system
  2. Location of auxiliary drains and low-point drains for dry pipe and preaction systems
  3. Presence and location of antifreeze or other auxiliary systems
  4. Presence and location(s) of heat trace

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Standpipes/ FDC

- **Annual Inspection and Test**
  - Connections are visible and accessible
  - Couplings or swivels are not damaged and rotate smoothly
  - Plugs or caps are in place and undamaged
  - Gaskets are in place and in good condition
  - Identification signs are in place

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Fire Hydrants

Annual Inspection and Test

1. Open and flush each hydrant by removing caps and opening valves. Caution: Ensure the stream of water from this test will not cause any damage.
2. Shut valve and check to ensure barrel is empty, or clear drain, and repair any leaks.
3. Lubricate threaded fittings, especially operating stem nut. Depending on the model, the threads of the stem nut can be lubricated through grease fittings or by removing a nut on the weather cap or stem nut and pouring oil in the bolt hole.

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Backflow Preventer

Backflow testing is a plumbing service that checks your backflow preventer device by assessing its pressure levels. When backflow is present, untreated or contaminated water can be back-siphoned into your clean water.

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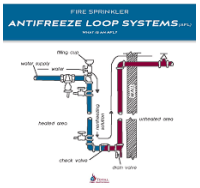
Sprinkler Anti-Freeze NFPA 25

- Traditionally, anti-freeze used to protect sprinkler systems installed in small areas where adequate heat is not provided
  - Antifreeze solutions in existing systems must be tested annually, prior to the onset of freezing weather and determine the minimum temperature rating and the mixture of water and either propylene glycol or glycerin at specific ratios.
    - Currently there can be and issue because propylene glycol and glycerin are flammable substances that can ignite at a high enough concentration
    - The Concentration of solution must be limited to the minimum that is necessary to protect for the lowest anticipated temperature
  - If all the test samples indicate a concentration of glycerin not greater than 38% by volume or propylene glycol not greater than 30% by volume, then the solution is permitted and may remain in the system.



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Sprinkler Antifreeze Systems

- To test an antifreeze sprinkler system, an annual visual inspection of the antifreeze signs and a specific gravity or refractive index test of the solution are required by NFPA 25, using a hydrometer or refractometer at various points to check the concentration and ensure it meets the minimum requirements for freezing temperatures

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NFPA 13 Min-Temperature Line

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Service Period Sprinkler Testing

- Sprinkler Heads manufactured prior to 1920 must be replaced
- Standard response sprinklers tested or replaced at 50 years and 10 years thereafter
- Fast-response sprinklers tested or replaced at 20 years and 10 years thereafter
- Dry sprinklers tested or replaced at 10 years and 10 years thereafter
- Sprinklers exposed to harsh environment tested at 5-year intervals
- Test includes 4 sprinklers or 1% of sample whichever is greater
  - If one sprinkler fails, then all similar sprinklers in sample are must be replaced

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Fire Pump ITM

- Annual
  - Must flow pump at minimum, rated and peak flows [NFPA 25, 8.3.3.1]
- Monthly
  - Electric pump run for minimum of 10 minutes [NFPA 25, 8.3.1.2.2 & 8.3.2.3]
- Weekly
  - Diesel pump run for minimum of 30 minutes [NFPA 25, 8.3.1.1.1 & 8.3.2.4]
    - Automatically started
    - Run without flowing water

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Fire Pump – Weekly Inspection

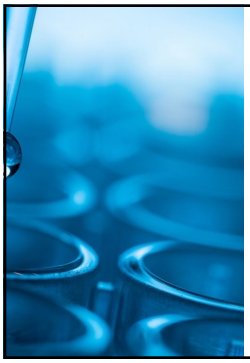
Pump System Conditions

- Conditions of the pump system must be inspected weekly for the following items:
- Pump suction, discharge and bypass valves are fully open Piping is free of leaks
  Suction line pressure gauge reading is within acceptable range Suction reservoir has the required water level
- Wet pit suctions screens are unobstructed and in place
  Water flow test valves are in the closed position, the hose connection valve is closed, and the line to test valves is free of water

Electrical System Conditions

- Conditions of the electrical system must be inspected weekly for the following items:
- Controller pilot light (power on) is illuminated
  Transfer switch normal pilot light is illuminated
  Isolation switch is closed – standby (emergency) source
  Reverse phase alarm pilot light is off, or normal phase rotation pilot light is on Oil level in vertical motor sight glass is within acceptable range
  Power to pressure maintenance (jockey) pump is provided

123



Dry Sprinkler System 3-year Pressure Testing

Dry pipe systems shall be tested once every 3 years for air leakage, using one of the following test methods:

1. A pressure test at 40 psi (3.2 bar) shall be performed for 2 hours.
   (a) The system shall be permitted to lose up to 3psi (0.2bar) during the duration of the test.
   (b) Air leaks shall be addressed if the system loses more than 3psi (0.2bar) during this test.
2. With the system at normal system pressure, the air source (compressor or shop air) shall be shut off for 4 hours. If the low air pressure alarm goes off within this period, the air leaks shall be addressed.

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Internal 5-year Inspection

- Once every 5 years an internal inspection must be conducted of the sprinkler piping
  - At one end of the main (drain system and remove the end cap)
  - Remove one sprinkler head at the end of branch
  - If there is presence of foreign materials further testing may be required
- For the presence of foreign organic & inorganic material
- If tubercules or slime is found required to be tested for microbiologically influenced corrosion (MIC)

125

Sprinkler Head Inventory

- Section 6.2.9.7.1 does require a list of all the sprinklers be included in the spare sprinkler cabinet. This list includes the following:
- Sprinkler identification number (SIN) or the manufacturer, model orifice (size), deflector type, thermal sensitivity, and pressure rating
- General description of each sprinkler type, such as:
  - Upright
  - Pendent
  - QR
  - SR
  - Sidewall
- Temperature rating in °F
- Quantity of each type of sprinklers maintained in spare cabinet
- Issue or revision date of the spare sprinkler list.

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Spare Sprinkler Cabinet

- According to the NFPA 13, if you have 300 **sprinklers** or less, you should have no fewer than six **spare heads**; if you have 300 to 1,000 **sprinkler heads**, you should have no fewer than 12; and if you have more than 1,000 **sprinklers**, you should have no fewer than 24 spares
- NFPA 13

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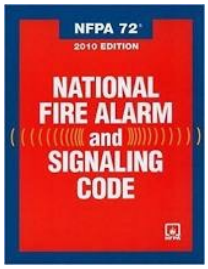
National Fire Alarm and Signaling Code

- NFPA 72 Section 10.4.3 states that qualified ITM personnel shall include:
  - Personnel who are factory trained or certified for the specific type and brand of system being services
  - Personnel who are certified by a nationally recognized certification organization acceptable to the AHJ
  - Personnel who are registered, licensed or certified by a state or local authority to perform service on systems addressed within the scope of this Code
- NFPA 72 Section 14.2.2.: states that the property or building owner or the owner's designated representative shall be responsible for inspection, testing, and maintenance of the system and for alterations or additions to the system



128

- A fire alarm system is installed with systems and components in accordance with NFPA 70 and NFPA 72
  - Surge suppressors
  - Fire alarm panel trouble signals, emergency voice/alarm communications equipment,
  - Remote annunciators
  - Batteries (Sealed lead-acid)
  - 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
  - Alarm notification appliances – Supervised

Fire Alarm System

129

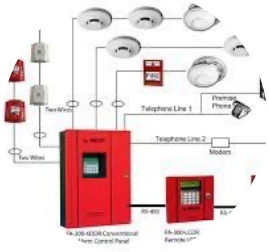
15. Fire Alarm System Inspection and Testing

- The entire system is required to be thoroughly inspected, tested and maintained each year by an approved
- Vendor will in accordance with Chapter 14 of NFPA 72 [see NFPA 72(10), Tables 14.3.1 and 14.4.5; see also: NFPA 90A(12), Sec. 6.4.1]. Before beginning testing, notify:
  - Building occupants–place signs on exit doors, send emails, signs in lobby, bulletin boards
  - Fire department
  - Monitoring company
- Testing must include control equipment, remote annunciators, initiating devices, HVAC shutdown devices and alarm notification appliances.

130

Semi-Annually Visual Inspection K345

- Start at control panel
- Check for the obvious
- All equipment is in proper place, and properly mounted and oriented
- All notification appliances must be operated annually, and proper operation must be verified
- Periodically verify system is “normal” and not in ‘trouble’, ‘fault’, ‘supervisory’
- No obvious wire breaks, corrosion, or other damage to connections
- All documented (each device)

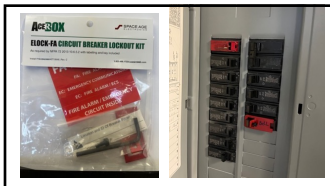


131

K345 Common Deficiencies

- System not inspected and tested semi-annually
- Improper documentation of the fire alarm inspection
- Circuit disconnect for fire alarm system not locked and location not labeled at fire alarm control panel
- Fire alarm control panel fails to monitor failure of battery charging in panel
- Electromagnetic hold open devices re-engage when the fire alarm system is placed in silence

132



Fire Alarm Circuit Breaker

NFPA 72

- Fire alarm breaker not red and not protected from physical damage
  - 10.5.5.2.2 For fire alarm systems the circuit disconnecting means shall be identified as "FIRE ALARM CIRCUIT."
  - 10.5.5.2.3 For fire alarm systems the circuit disconnecting means shall have a red marking.
  - 10.5.5.2.4 The circuit disconnecting means shall be accessible only to authorized personnel

133

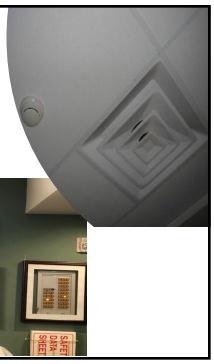
Smoke Detection K347

- Corridors
- Elevator lobbies
- Spaces open to corridors
- Adjacent to smoke or fire doors that are equipped with hold open devices
- At fire alarm panel
- Mounted at least 36" away from HVAC air diffusers
- Mounted within 12" from ceiling

134

- Where not continuously occupied, smoke detectors shall be provided at the location of each FACP, NAC power extender, and supervising station transmitting equipment.
- Smoke detector functional testing vs. sensitivity
- Duct smoke detectors not tested
- Same number of detectors not tested
- 100% inspection and testing required

Smoke Detection Issues



135

Smoke Detectors – Sensitivity Testing

- Smoke detector functional testing and servicing done with annual fire alarm system service.
- Smoke detector sensitivity testing must be done:
  - First year after installation
  - Every 2 years thereafter
- Duct smoke detectors tested
- Same number of detectors not tested
- Detectors not replaced/recalibrated

136

Kitchen Range Hood System Testing and Inspection

- ITM is expected every 6-months and includes examining the equipment, the detectors, and the gas container, distribution piping, etc.
- Fixed temperature fusible links must be replaced semi-annually

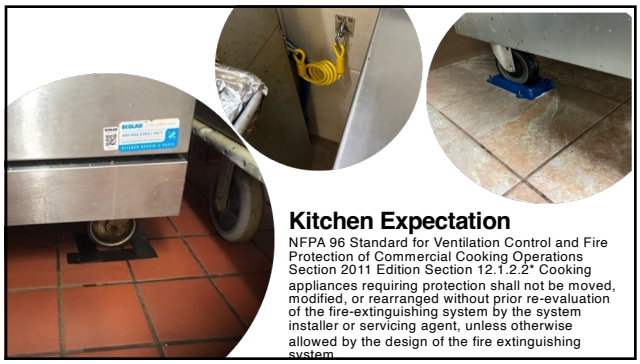
137

Kitchen Range Hood System Cleaning

The industry standard for commercial kitchen exhaust system cleanliness and maintenance is NFPA 96. The frequency with which you should clean your system is determined by the type of cooking operation your company or organization performs and how frequently you use those appliances.

- **Semi-Annually:** Cooking operations with a moderate amount of production can benefit from these systems.
- **Quarterly:** Cooking systems for high-volume kitchens – grease deep fryers

138



Kitchen Expectation

NFPA 96 Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations Section 2011 Edition Section 12.1.2.2* Cooking appliances requiring protection shall not be moved, modified, or rearranged without prior re-evaluation of the fire-extinguishing system by the system installer or servicing agent, unless otherwise allowed by the design of the fire extinguishing system.

139

Kitchen Fire Extinguisher

- A Class K portable fire extinguisher is required within 30 feet of all commercial cooking equipment
- K Type Extinguisher with Expected Sign
- Typically adjacent to the manual activation station for the fire extinguishing system, which is in the path of egress.
- Staff must know then process of when to us

140

Cooking in Resident Rooms K 324

- **K324** – Cooking is not allowed in resident rooms. NFPA 19.3.2.5.3 and 19.3.2.5.4
- **K925** – Cooking appliances cannot be within 15 feet of any area where O2 is administered
- **NFPA 101, 2012 edition:**
  18/19.3.2.5.4* Within a smoke compartment, residential or commercial cooking equipment that is used to prepare meals for 30 or fewer persons shall be permitted, provided that the cooking facility complies with all of the following conditions:

  (1) The space containing the cooking equipment is not a sleeping room.
  (2) The space containing the cooking equipment shall be separated from the corridor by partitions complying with 19.3.6.2 through 19.3.6.5.

141

Other …Cooking Facilities K 324

•Cooking type equipment in the facility such as therapy gym, activities, etc. do not require rangehood type extinguishing system

•When residential cooking equipment is used for food warming or limited cooking (e.g. microwaves, toasters, and hot plates), the Life Safety Code does not automatically classify the area as a hazardous area or require protection per 9.2.3. (Food Warming 19.3.2.5.2)

142

Kitchen Stove Lockout

(9)* A switch meeting all of the following is provided:

(a) A locked switch, or a switch located in a restricted location, is provided within

the cooking facility that deactivates the cooktop or range.

(b) The switch is used to deactivate the cooktop or range whenever the kitchen is

not under staff supervision.

(c) The switch is on a timer, not exceeding a 120-minute capacity, that

- automatically deactivates the cooktop or range, independent of staff action.

143

Common Hazardous Spaces

- Spaces deemed hazardous include:
  - Mechanical rooms, boiler rooms, hot water tanks rooms
  - Laundry Rooms (greater than 100 sq.ft.)
  - Paint shops
  - Repair shops
  - Soiled linen rooms
  - Trash collection locations
  - Oxygen storage rooms
  - Rooms/ spaces normally greater than 50 sq.ft. determined hazardous by an AHJ because they contain such items as quantiles of medical records, therapy equipment, nursing equipment, medical and nursing supplies, infection control supplies, beds, mattresses, wheelchairs, leg rests, etc.

144

Hazardous Space

- Existing facilities need to remember that any storage space should be smoke tight space, a door that closes and latches and has automatic closer. All this protects the facility.
- Deficient practices
  - Door does not have automatic closer
  - The door does not close to the latched position.
  - The door is held open with a wood wedge.
  - Holes in walls

145

Floor Hold-Opens

- Corridor doors must be able to self-close and section 19.3.6.3.10 of the 2012 Life Safety Code says corridor doors (fire-rated or non-rated) shall not be held open by any device other than those that release when the door is pushed or pulled.
- Section 7.2.1.4.1 does require all doors to open to the full required width of the doorway, so that means the door must open at least 90 degrees

146

Alcohol Based Hand Sanitizer

- Aerosol-based hand sanitizers (cannot exceed 95% alcohol)
- Maximum individual capacity for aerosol is 18 oz.
- Maximum non-aerosol individual capacity if .32 gallons (1.2L)
- Dispensers must be separated from each other by horizontal spacing of not less than 48 inches
- If installed in corridors, the corridors must have a minimum width of 6 feet.

147

Alcohol-based Hand-Rub Storage

- Storage of greater than five gallons shall be stored per smoke/fire compartment and is considered hazardous therefore the room must have a door, positive latching hardware, be secure and automatic closer.
- The additional requirements restricting access by certain patient/resident populations to prevent accidental ingestion are also still in effect.

148

Fire Extinguishers

- Portable fire extinguishers must be installed, tested, and maintained in accordance with NFPA 10
- Installation between 4" and 60"
- Maximum travel distance to extinguisher
  - Class A (combustible materials) –75ft
  - Class B (combustible liquids) – 75ft
  - Class C (electrical equipment) –75ft
  - Class K (kitchen fires) –30ft
- Ensure fire extinguishers are mounted correctly. Not more that 5 feet above the floor and not less than 4 inches off the floor

149

Fire Extinguishers Preventative Maintenance

- Annual maintenance is also required to be recorded on a tag or label attached to each extinguisher that indicates the month and year the maintenance was performed and the name of the person or company performing the service
- In addition to the tag or label, it is recommended that a permanent record be kept for each extinguisher that indicates at least the following:
  - The date maintenance was last performed
  - Change chemical for dry chemical fire extinguishers every 6 years.
  - Conduct 12-year hydrostatic vessel test.

150