

# Life Safety Training Program

A large blue circle containing the text "ALABAMA PUBLIC HEALTH" in white, bold, uppercase letters. The background of the slide features a repeating pattern of light gray triangles.

**ALABAMA  
PUBLIC  
HEALTH**

If your facility does not have the following code books, you need to get them asap:

1. 2012 NFPA 101 Life Safety Code Book – **start** in chapter 19 for existing building (more than likely) or chapter 18 for new building

If you are not sure which one your building is, contact us.

From chapter 19 or 18 you would then go to the chapter, section, and/or paragraph chapter 19 or 18 sends you to.

Example:19.2.4.1 sends you to 7.4.1.1 –

The first number is the chapter

The second number is the section

The third number is the subsection

The fourth number is the statement

2. 2012 NFPA 99 Health Care Facilities Code Book - per CFR 483.90 only the following chapters 1-6, 9-11, 14 and 15 apply to a healthcare facility.

# TIPS TO HELP YOU HAVE A GOOD SURVEY

1. Always carry a pen/pencil and a writing pad during the survey
2. Pay attention to the surveyor
3. Delegate or put on hold your normal duties until the survey is over, unless it is an emergency
4. Have “paperwork” ready (not on computer)
5. Have keys ready for EVERY DOOR
6. Always check behind outside contractors and verify invoice is correct before they leave

# **Candy Easterling**

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Go to:  
[Alabamapublichealth.gov](http://Alabamapublichealth.gov)

alabamapublichealth.gov/index.html

life safety and emer... Nursing Home Insp... iQIES Portal - Login A Psalm 91 Prayer F... RSA Tower Building... Other bookmarks

ALABAMA PUBLIC HEALTH **Alabama Public Health**  
Healthy People. Healthy Communities. Healthy Alabama.

Login Locations

WHO WE ARE WHAT WE DO WHO WE SERVE A-Z

**COVID-19 Testing Locations**  
If you have symptoms of COVID-19, be sure to get tested. [Locate a testing site](#) (Click Test Sites tab). You may also order free home tests from [covidthests.gov](#). Please do not visit the emergency department for testing or for symptoms or reasons that do not require emergent care.

Find a Test Site Order Home Tests

**Programs**

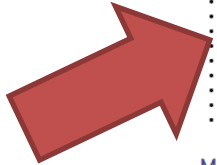
The Alabama Department of Health works to promote, protect and improve your health. Below are just a few of our programs, all of which provide some of the most requested and important services we provide to you. Learn more about our mission, vision and core values. Find other programs and services.

- Vital Records** - Files, stores, and issues certified copies of birth, death, marriage and divorce certificates. [More Information](#)
- ALL Kids** - A low-cost, comprehensive healthcare coverage program for children under age 19. [More Information](#)
- Diseases & Outbreaks** - Prevention and control of designated communicable diseases and threats. [More Information](#)
- ALPHTN** - Utilizes distance learning technologies to reach public & allied health employees throughout the state and U.S. [More Information](#)
- Women, Infants & Children (WIC)** - A supplemental nutrition program for women, infants, and children under the age of five. [More Information](#)
- Food Safety** - Inspection and regulation of food establishments and other facilities. [More Information](#)

**How Do I?**

## L

- Laboratories, Clinical
- Lamar County Health Department
- Lauderdale County Health Department
- Laws/Regulations
- Laws, Alabama Public Health (General Counsel)
- Lawn Mower Safety (Injury Prevention)
- Lawrence County Health Department
- LCMS (Learning Content Management System)
- LCMS Login
- Lead Contractors Certification
- Lead Poisoning (Alabama Childhood Lead Poisoning Prevention Program)
- Lee County Health Department
- Legal (General Counsel)
- Licenses
- Life Safety Code (Facilities Management)
- Limestone County Health Department
- Live Webcasts (ALPHITN)
- Locations
- Lodging (Food, Milk and Lodging)
- Login Portal
- Lowndes County Health Department



## M

- Macon County Health Department
- Madison County Health Department
- Mammography
- Managed Care Compliance
- Map (Public Health Districts)
- Marengo County Health Department
- Marion County Health Department
- Marriage Certificates (Health Statistics - Vital Records)
- Marshall County Health Department
- Maternal and Child Health Services
- Medical Waste, Disposal of (Diabetes)
- Meningococcal (Immunization)
- Men's Resources
- Minimum Data Set (MDS) (Health Care Facilities)
- Milk (Food, Milk and Lodging)
- Minority Health, Office of Health Equity
- Mission
- Mobile County Health Department
- Mold Facts (Indoor Air Quality)
- Monkeypox
- Monroe County Health Department
- Montgomery County Health Department
- Morgan County Health Department
- Mortality Statistical Query System (Health Statistics)
- Mosquito-Borne Diseases
- Motor Vehicle Safety (Injury Prevention)
- MRSA (Infectious Diseases & Outbreaks)
- Mumps (Immunization)

## N





Facilities Management and Technical Services > Life Safety Code

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- Facilities Management and Technical Services Home
- Real Estate Leases
- The RSA Tower
- Plan Review
- Life Safety Code
- Seminars
- Management Team
- Contact Us
- Location
- Links

## Life Safety Code

### Downloads

- Nursing Facilities and Hospitals - Life Safety Code Survey Booklet
- Ambulatory Surgical Centers (ASC) and End Stage Renal Disease (ESRD) - Life Safety Code Booklet
- Fire Watch
- Emergency Preparedness Requirements
- Life Safety Training Program

### Resources

- Federal Quality, Safety and Oversight (QSO) Updates
- Life Safety Code Articles
- Life Safety Code Frequently Asked Questions (FAQs)
- Online Reporting of Fires and Similar Incidents



# Facilities Management

Facilities Management and Technical Services > Federal Quality, Safety and Oversight (QSO) Updates

- Facilities Management and Technical Services Home
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## Federal Quality, Safety and Oversight (QSO) Updates

- QSO 19-06, Updates to Em Prep
- S&C 17-38, Fire Door Annual Testing
- S&C 17-34, Guidelines for POC
- S&C 17-29, Appendix Z - Em Prep
- S&C 17-21, New Requirements Em Prep
- S&C 17-17, Cyber Security
- S&C 17-14, Sprinklers In Attic Spaces for LTC
- S&C 16-22, Adoption of 2012 LSC
- S&C 14-46, Powerstrips in Patient Care Areas
- S&C 14-12, Em Prep Checklist Revision
- S&C 13-47, ESRDs
- S&C 12-21, 2000 LSC Waivers Based on 2012 LSC
- S&C 12-07, Hospital Equipment Maintenance
- S&C 12-04, NH Smoking Safety
- S&C 11-07, Interior Finishes
- S&C 11-05, Hospital Occupancy Classification
- S&C 10-26, Evacuation Drills for ICF/IID's
- S&C 10-20, ASC Waiting Area
- S&C 10-18, LSC Corridor Width & Screens
- S&C 10-04, Damper Waiver Intervals
- S&C 09-41, Policy Regarding Unannounced Surveys
- S&C 08-09, Off-site Kitchens
- S&C 08-08, Off Campus EDs
- S&C 07-29, Canopy and Overhang Sprinklers
- S&C 07-21, ASC Generators
- S&C 07-18, Permitted Gaps in Corridor Doors and Doors in Smoke Barriers
- S&C 07-11, Alcohol-Based Skin Preparations in Anesthetizing Locations
- S&C 07-10, Medical Gas Storage and Usage Considerations
- S&C 07-07, Questions and Answers
- S&C 07-05, Life Safety Code - Exit Discharge Requirements and the Fire Safety Evaluation System (FSES)
- S&C 06-18, Clarification of the Amount of Air Movement Allowed Between Corridors and Resident Rooms (1 MB)
- S&C 05-38, Clarification of Life Safety Code Survey Issues in Nursing Homes (1 MB)
- S&C 05-33, Adoption of a New Fire Safety Amendment for the Use of Alcohol Based Hand Rubs (ABHRs)
- S&C 04-41, Corridor Width and Corridor Mounted Computer Touch Screens in Health Care Facilities (1 MB)
- HCEA 22-89, Extension Cords and Power Strips



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About 14,400 results (0.85 seconds)

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## QSEP - Driving Healthcare Quality - CMS

The Quality, Safety & Education Portal (**QSEP**) provides the full curriculum of surveyor training and guidance on health care facility regulations. **QSEP** is an ...

### Training Catalog

Training Catalog. Please Wait Icon  
of PDF Export PDF Export ...

### Frequently Asked Questions

Frequently Asked Questions.  
Topics. Select a Topic.

### Log Off

What would you like to do next?  
Return to Home Page. CMS ...

### User Manual

Select "User Manual" at the top of  
any QSEP page to access the ...

### QSEP News

QSEP News. Posted January 6,  
2020. Welcome to QSEP. As ...

### Training Menu

Fundamentals of Patient Safety in  
Hospitals - Training Menu. The ...


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time study entry

QSEP - Driving Healthcare Quality

qsep.cms.gov

Home Help SADC & SETI Training Public Access Sign Up Login 1-855-791-8900



# QSEP


## Driving Healthcare Quality

Welcome to the Quality, Safety & Education Portal (QSEP)

Login Sign Up

Select here for public access to the Training Catalog

Select here for instructions on how to access Targeted COVID-19 Training for Nursing Homes





QSEP - Driving Healthcare Quality x +

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Apps life safety and emer... Nursing Home Insp... iQIES Portal - Login A Psalm 91 Prayer F... RSA Tower Building... Other bookmarks

Home Help SADC & SETI Training Public Access Sign Up Login 1-855-791-8900



# Driving


Welcome to the Q

### Login

<p><b>CMS &amp; State Agencies</b></p> <p>State/Federal Surveyors   State Training Coordinators   Regional Training Administrators   CMS Central Office Managers</p>	<p><b>Providers &amp; Other Learners</b></p> <p>Providers   Accrediting Organizations   Quality Improvement Organizations   HHS Employees/Contractors   Advocacy Groups   Educators/Authors/Researchers</p>
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Not sure where to login? [Select here](#) for a comprehensive list of all QSEP user roles.

Select here for instructions on how to access Targeted COVID-19 Training for Nursing Homes



# Training Catalog

Select Training Plan

VIEW ALL

Trainings

Currently viewing: All Trainings

Go to: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Search Trainings

Name	Duration	Action
A		
Alzheimer's and Related Dementia – Part I (The Medical Perspective)	1 hr., 50 mins.	Launch
Alzheimer's and Related Dementia – Part II (The Surveyor's Perspective)	2 hrs., 30 mins.	Launch
Ambulatory Surgical Center Basic Training	35 hrs.	Launch
Antibiotic Stewardship Program for Nursing Home Providers	1 hr.	Launch

Home / Training Catalog

# Training Catalog

PDF Export

## Select Training Plan



## Trainings

Currently viewing: Life Safety Code (LSC)

Go to: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Search Trainings

Name	Duration	Action
B		
Basic Life Safety Code Training	32 hrs.	Launch
Basic Life Safety Code: The Survey Process Training	6 hrs.	Launch
Basic Writing Skills for Survey Staff	2 hrs.	Launch
C		





Basic Writing Skills for Survey Staff	2 hrs.	<a href="#">Launch</a>
C		
Complaint and Incident Intake and Triage	4 hrs.	<a href="#">Launch</a>
E		
Electronic Code of Federal Regulations Simulation	10 mins.	<a href="#">Launch</a>
Emergency Preparedness Basic Training	17 hrs.	<a href="#">Launch</a>
Emergency Preparedness: Provider Readiness	1 hr., 30 mins.	<a href="#">Launch</a>
F		
Foundational Investigative Skills	7 hrs., 30 mins.	<a href="#">Launch</a>
I		
Immediate Jeopardy Training	1 hr.	<a href="#">Launch</a>
L		
Life Safety Code Transition Course	20 hrs.	<a href="#">Launch</a>
N		
National Fire Protection Association (NFPA) 99 Health Care Facilities Code Training	32 hrs.	<a href="#">Launch</a>
NLTC Regulatory Updates 2019	4 hrs.	<a href="#">Launch</a>
O		



On documentation, we usually go back 12 months from the date of the survey.

The survey is from the time we enter your building until the time we leave.

No information will be reviewed after we leave your facility.

The following Medicare/Medicaid (M & M) Statement must be on an E Tag, and on a K Tag for each building (if you have more than one building)

“This plan of correction constitutes a written allegation of substantial compliance with Federal Medicare and Medicaid requirements.”

# 2000 Codes to 2012 Codes

- The Centers for Medicare and Medicaid Services (CMS) published announcement on May 4, 2016  
Adoption of National Fire Protection Association (NFPA) codes and referenced standards
- The Centers for Medicare & Medicaid Services (CMS) has adopted by regulation the 2012 LSC and the 2012 HCFC. The regulation effective date is July 5, 2016.
- CMS will begin surveying for compliance with the 2012 LSC and HCFC on November 1, 2016.

The following are some Life Safety K Tags, this does not include all of the Life Safety K Tags.

# K221 Corridor Doors

The releasing mechanism for any latch shall be located as follows:

- (1) Not less than 34 in. above the finished floor for other than existing installations
- (2) Not more than 48 in. above the finished floor

2012 NFPA 101, 19.2.2.2.1, 7.2.1.5.10.1 (1) & (2)



10/20/2022

23

# K232 Corridor Width

## 2012 NFPA 101, 19.2.3.4 (2) (4)

(2) Where corridor width is at least 6'-0"

(4) Projections into the required width shall be permitted for wheeled equipment, provided that **all** of the following conditions are met:

(a) The wheeled equipment does not reduce the clear unobstructed corridor width to less than 60 in.

**(b) The health care occupancy fire safety plan and training program addresses the relocation of the wheeled equipment during a fire or similar emergency.**

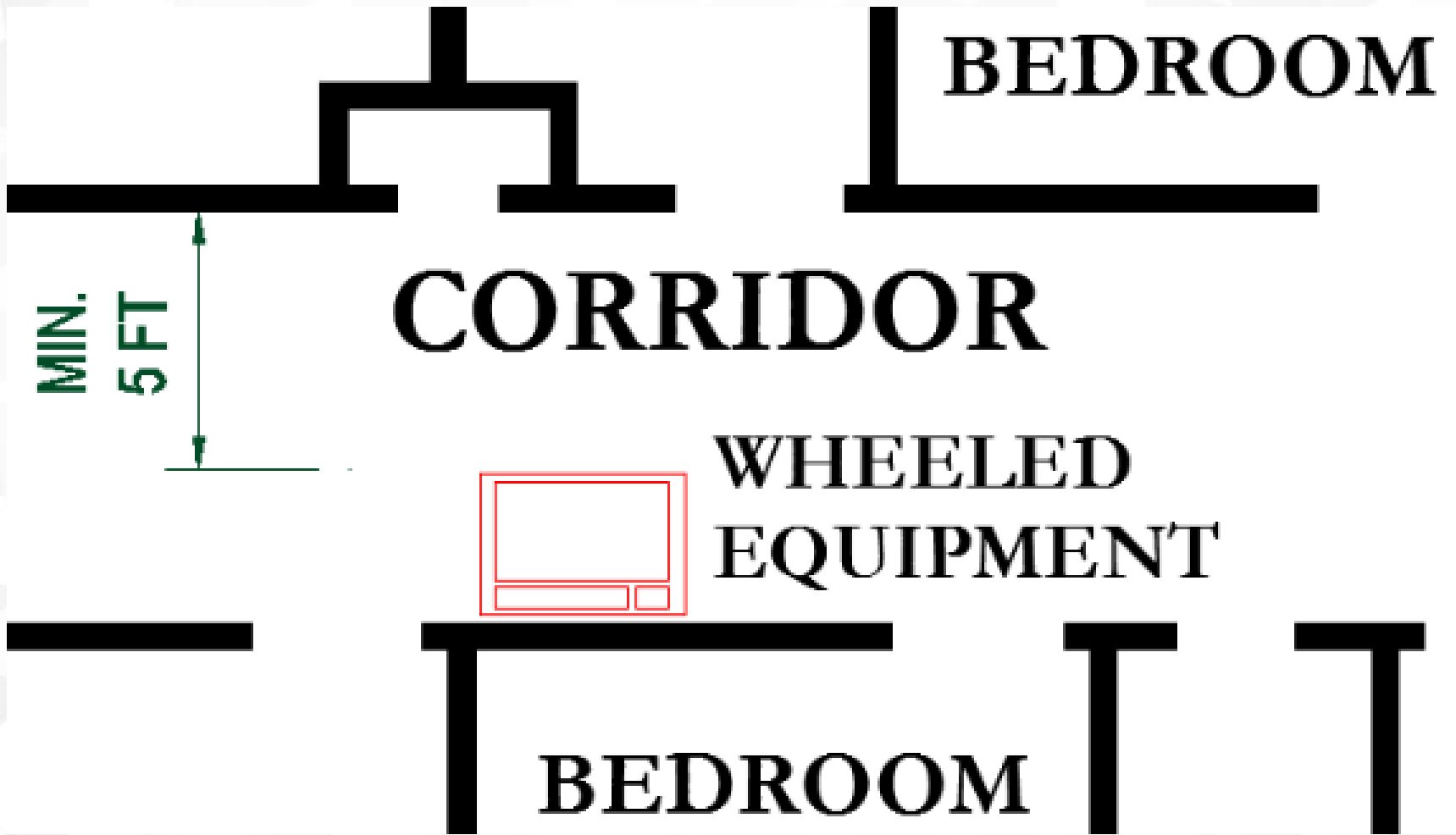
(c) The wheeled equipment is limited to the following:

- i. Equipment in use and carts in use
- ii. Medical emergency equipment not in use
- iii. Patient lift and transport equipment





# Wheeled Equipment in Corridors



# Permissible Wheeled Equipment

Food Service Carts (In Use)

Housekeeping Carts (In Use)

Medication Carts (In Use)

Isolation Carts

Crash Carts

Wheeled Emergency Medical Equipment (not stored)

Portable Lift Equipment

Transport Equipment

Per S&C-10-18-LSC: “An item is considered “not in use” if it is left unattended or is not moved for more than 30 minutes”. The equipment must have a permanent storage location, off of the corridor.

Not referring to “emergency medical equipment” in new wheeled equipment section.

# K232 Corridor Width

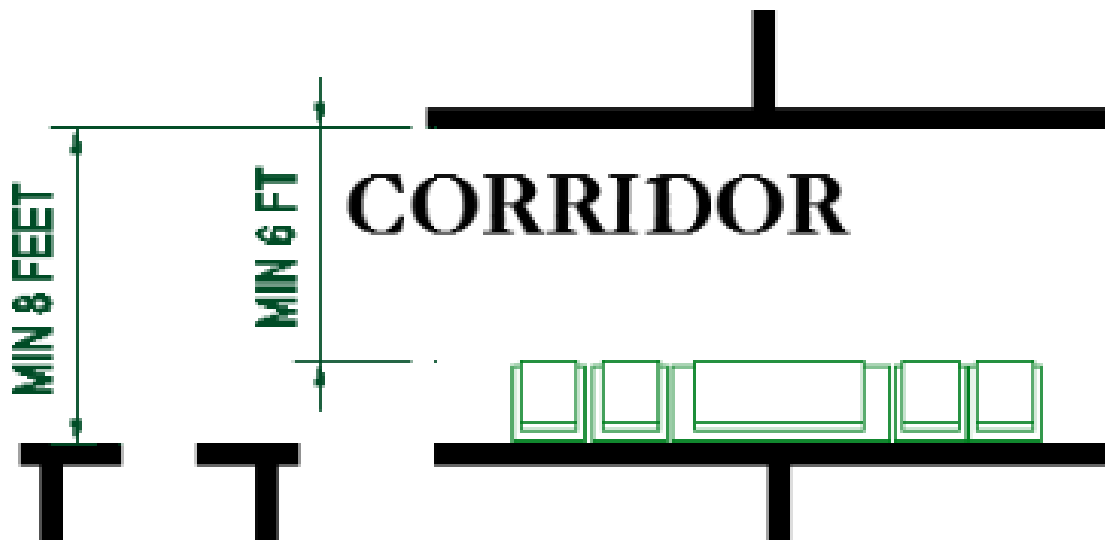
## 2012 NFPA 101, 19.2.3.4 (5)

(5) Where corridor width is at least 8'-0" – fixed furniture is allowed, provided **all** of the following conditions are met:

# Fixed Furniture in Corridors

LSC 19.2.3.4(5) Summary of requirements:

- Securely attached to floor or wall
- On one side of the corridor
- Each grouping limited to 50 square feet
- Groupings at least 10 feet apart
- No obstruction of access to building and fire equip.



- Corridors have smoke detection, or furniture in view from nurse station
- Sprinkler system in compartment

# K293 Exit Signage

What we see:

- Directional exit signs not correct
- Exit signs not illuminated
- Exit sign is in place, but facility has put another sign-up stating “Not an Exit”, “Stop No Exit”
- No monthly visual inspection

2012 NFPA 101, 7.10.2.1, 7.10.5.2.1, 7.10.1.3,









# K321 Hazardous Areas

## 19.3.2.1.5

Hazardous areas shall include, but shall not be restricted to, the following:

- (1) Boiler and fuel-fired heater rooms
- (2) Central/bulk laundries larger than 100 ft<sup>2</sup> (9.3 m<sup>2</sup>)
- (3) Paint shops
- (4) Repair shops
- (5) Rooms with soiled linen in volume exceeding 64 gal (242 L)
- (6) Rooms with collected trash in volume exceeding 64 gal (242 L)
- (7) Rooms or spaces larger than 50 ft<sup>2</sup> (4.6 m<sup>2</sup>), including repair shops, used for storage of combustible supplies and equipment in quantities deemed hazardous by the authority having jurisdiction
- (8) Laboratories employing flammable or combustible materials in quantities less than those that would be considered a severe hazard

# K321 Hazardous Areas

- The walls and ceiling in a hazardous room with automatic sprinkler protection shall restrict the movement of smoke
- Doors shall be self-closing and positive latching
- Cannot prop self-closing doors open

2012 NFPA 101, 19.3.2.1.2, 19.3.2.1.3, and CFR 483.90(a)(1)(ii)



# K321 Hazardous Areas



Inspect self-closing devices to make sure all parts are there and working

# K324 Cooking Facilities

What deficiencies we see:

- Facility not conducting/documenting monthly inspections of the automatic wet chemical extinguishing system under the kitchen hood
- Not conducting the semiannual kitchen hood exhaust system inspection/cleaning by an outside company

2009 NFPA 17A, 7.2.1 & 7.2.2

2011 NFPA 96, 11.4, Table 11.4 & 11.6

This fire extinguisher tag is for the monthly inspection of the automatic wet chemical extinguishing system under the kitchen hood. See next two slides for what you shall be checking





# K324 Cooking Facilities

At a minimum, this **monthly** “quick check” or inspection shall include verification of the following:

- (1) The extinguishing system is in its proper location
- (2) The manual actuators are unobstructed
- (3) The tamper indicators and seals are intact
- (4) The maintenance tag or certificate is in place
- (5) No obvious physical damage or condition exists that might prevent operation
- (6) The pressure gauge(s), if provided, shall be inspected physically or electronically to ensure it is in the operable range

2009 NFPA 17A, 7.2.2

# K324 Cooking Facilities

- (7) The nozzle blowoff caps, where provided, are intact and undamaged
- (8) Neither the protected equipment nor the hazard has not been replaced, modified, or relocated

2009 NFPA 17A, 7.2.2

# K324 Cooking Facilities

At least semiannually, maintenance shall be conducted (by an outside company on the automatic suppression system for the kitchen hood) in accordance with the manufacturer's listed installation and maintenance manual.

2009 NFPA 17A, 7.3.3

# K324 Cooking Facilities

- Grease filters shall be arranged so that all exhaust air passes through the grease filters.
- Grease filters shall be equipped with a grease drip tray beneath their lower edges.
- The addition of obstructions to spray patterns from the cooking appliance nozzle(s) such as baffle plates, shelves, or any modification shall not be permitted.

2011 NFPA 96, 6.2.3.3, 6.2.4.1, and 10.2.7.3

The nozzles are directed at the shelf and will not extinguish any fire



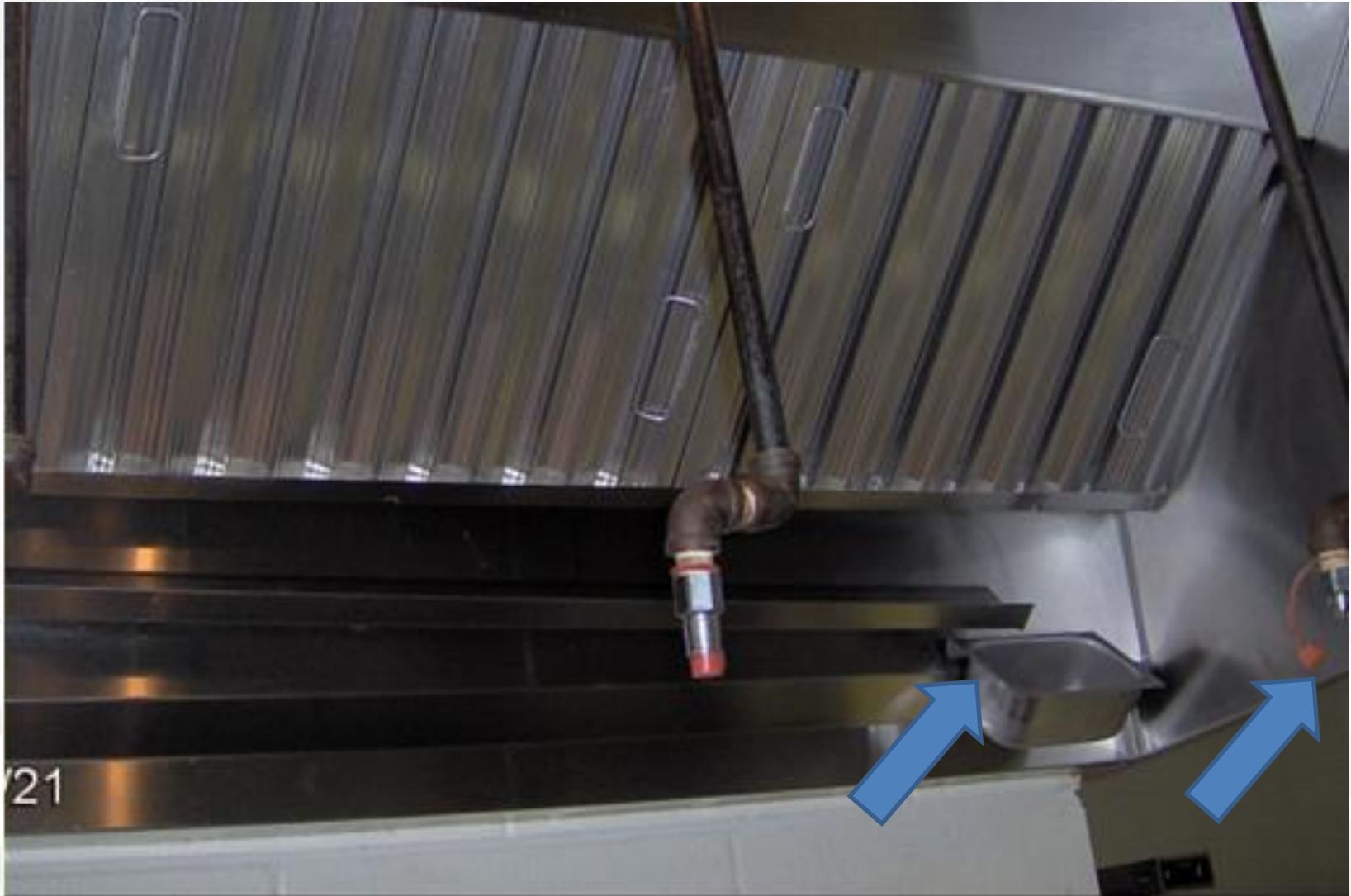
Grease filters shall be arranged so that all exhaust air passes through the grease filters. No gaps between filters



These filters were put in going in the wrong direction: horizontally instead of vertically



The grease drip tray metal container was installed wrong and the far right nozzle blowoff cap is not protecting the nozzle





# K325 Alcohol-Based Hand Rub Dispensers

2012 NFPA 101, 19.3.2.6

- (5) Can have up to 10 gallons in use within a smoke compartment
  - One dispenser within a room is not included in this limitation
- (7) More than 5 gallons stored in a smoke compartment shall comply with NFPA 30.**

Most ABHR solution has a flash point of 63 degrees and would be a Class IB Liquid.

# K325 Alcohol-Based Hand Rub Dispensers Locations

LSC 19.3.2.6

(1) In corridors at least 6 feet wide.

**(4) At least 48 inches apart - horizontally**

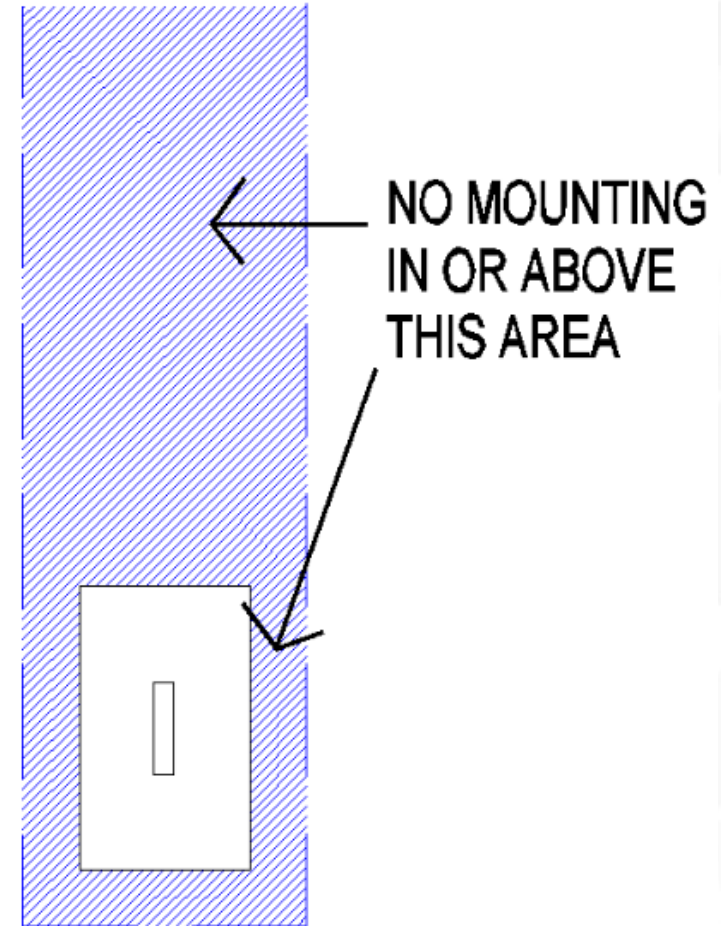
(9) Mounted over carpet only in sprinklered smoke compartments

(8) 1" Horizontally mounting distance from an ignition source, including:

- Light switch
- Electrical receptacle

1" Vertically from bottom

Never above



1" CLEAR AT SIDES AND BOTTOM



# **K325 Storage of Alcohol-Based Hand Rub Solution**

- Not permitted to be stored in basements (9.3.6)
- Not more than 10 gallons in each “control area” without a storage cabinet (9.5 – 9.6.2.2)
- At least one portable fire extinguisher having a capability of not less than 40:B shall be located outside of, but not more than 10’ from, the door opening into a liquid storage area (9.10.2.2)

2012 NFPA 30, Chapter 9

## 9.7 Control Areas.

**9.7.1** For the purpose of this code, a control area shall be a space within a building where quantities of liquids that do not exceed the maximum quantities allowed by Table 9.6.1 or Table 9.6.2.1 are stored.

**9.7.2** Control areas shall be separated from each other by fire barriers in accordance with Table 9.7.2. [5000:34.2.5.1.1]

**Table 9.7.2 Design and Number of Control Areas**

Floor Level	Maximum Allowable Quantity per Control Area (percent) <sup>a</sup>	Number of Control Areas per Floor	Fire Resistance Rating for Fire Barriers (hr) <sup>†</sup>
Above grade plane			
>9	5	1	2
7-9	5	2	2
4-6	12.5	2	2
3	50	2	1
2	75	3	1
1	100	4	1
Below grade plane			
1	75	3	1
2	50	2	1
Lower than 2	NA	NA	NA

NA: Not allowed.

<sup>a</sup>Percentages represent the maximum allowable quantities per control area shown in Table 9.6.1, with all of the increases permitted in the footnotes of that table.

<sup>†</sup>Fire barriers are required to include floors and walls, as necessary, to provide a complete separation from other control areas.

[5000: Table 34.2.5.1.1]

## 2012 NFPA 30, Chapter 9

### 9.9 Construction Requirements.

**9.9.1** Storage areas shall be constructed to meet the fire resistance ratings specified in Table 9.9.1. Construction assemblies shall comply with the test specifications given in ASTM E 119, Standard Test Methods for Fire Tests of Building Construction and Materials.

**Table 9.9.1 Fire Resistance Ratings for Liquid Storage Areas**

Type of Storage Area	Fire Resistance Rating (hr)		
	Interior Walls <sup>a</sup> , Ceilings, Intermediate Floors	Roofs	Exterior Walls
Liquid storage room			
Floor area ≤ 150 ft <sup>2</sup>	1	—	—
Floor area > 150 ft <sup>2</sup> , but ≤ 500 ft <sup>2</sup>	2	—	—
Liquid warehouse <sup>b,c,g</sup>	4 <sup>d</sup>	—	2 <sup>e</sup> , 4 <sup>f</sup>

For SI units, 1 ft<sup>2</sup> = 0.09 m<sup>2</sup>.

<sup>a</sup>Between liquid storage areas and any adjacent areas not dedicated to liquid storage.

# K345 Fire Alarm System Testing & Maintenance



# K345 Fire Alarm System Testing & Maintenance

What deficiencies we see:

- No annual inspection conducted within the past 12 months

2010 NFPA 72, 10.18.3.1, and Table 14.4.5

- More than two visual notification appliances in the corridor in any field of view not flashing in synchronization

2010 NFPA 72, 18.5.4.4.7





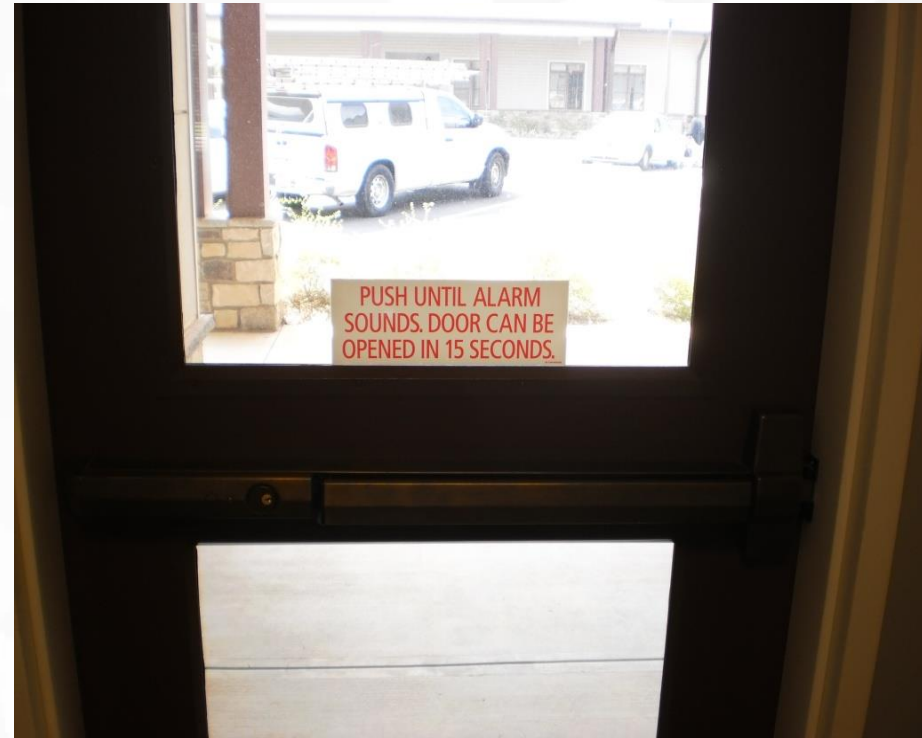
# K345 Fire Alarm System Testing & Maintenance

What deficiencies we see:

- Magnetic exit doors failed to release under:  
activation of the fire alarm system and/or  
loss of primary power to the fire alarm system  
2010 NFPA 72, 21.9
- No sensitivity test for the smoke detectors  
conducted within the past 2 years  
2010 NFPA 72, 14.4.5.3.2

# K345 Fire Alarm Systems Testing & Maintenance

## Magnetic Locking Devices



Delayed

Smoke detector sensitivity testing machine, unless you have a smart fire alarm panel – then shall print off at least every two years

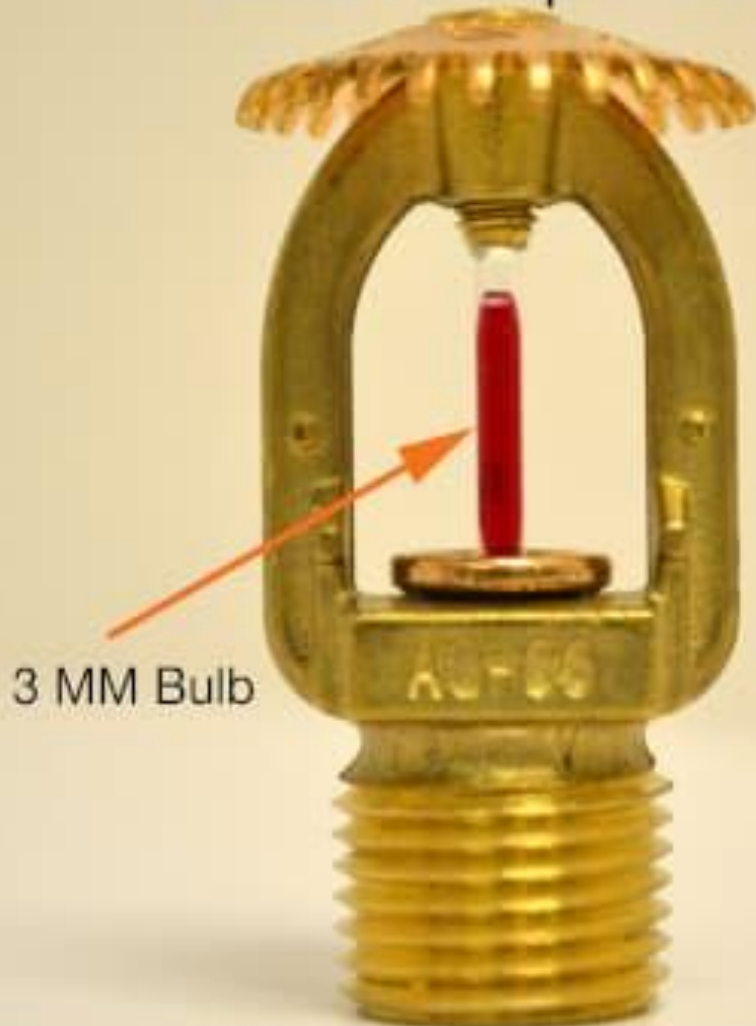


# K351 Sprinkler System Installation

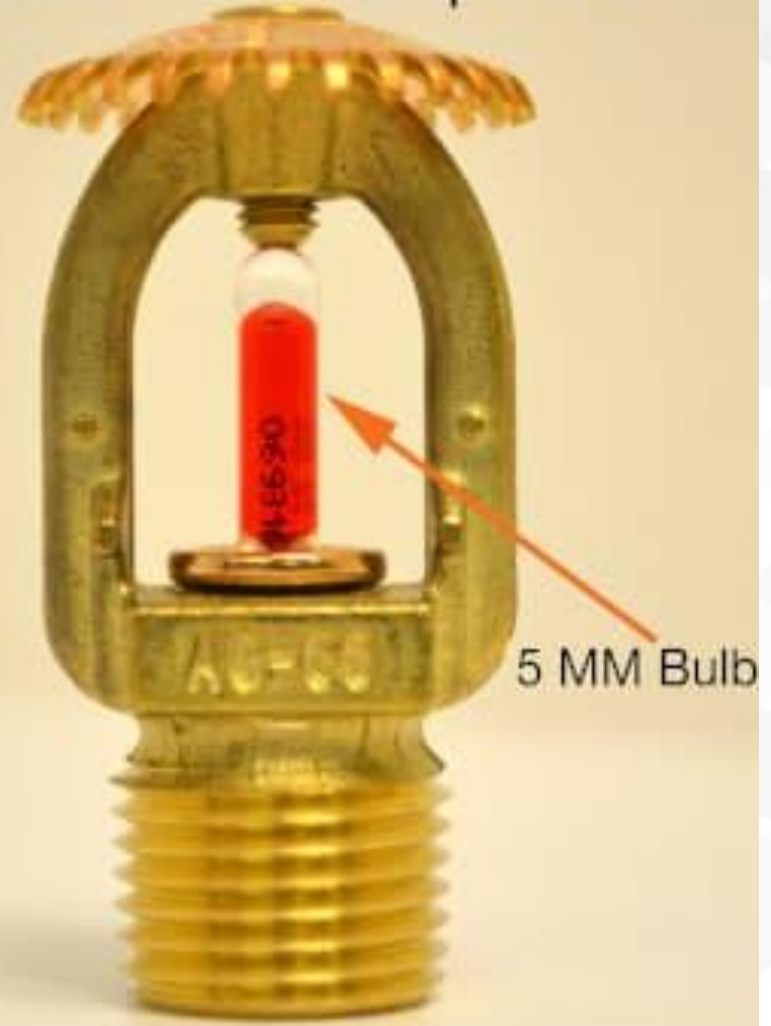
- Where quick-response sprinklers are installed, all sprinklers within a compartment shall be quick-response unless otherwise permitted in [8.3.3.3](#).
- When existing light hazard systems (**this would be nursing facilities**) are converted to use quick-response or residential sprinklers, all sprinklers in a compartmented space shall be changed.

2010 NFPA 13, 8.3.3.2, 8.3.3.3, and 8.3.3.4

## Quick Response



## Standard Response



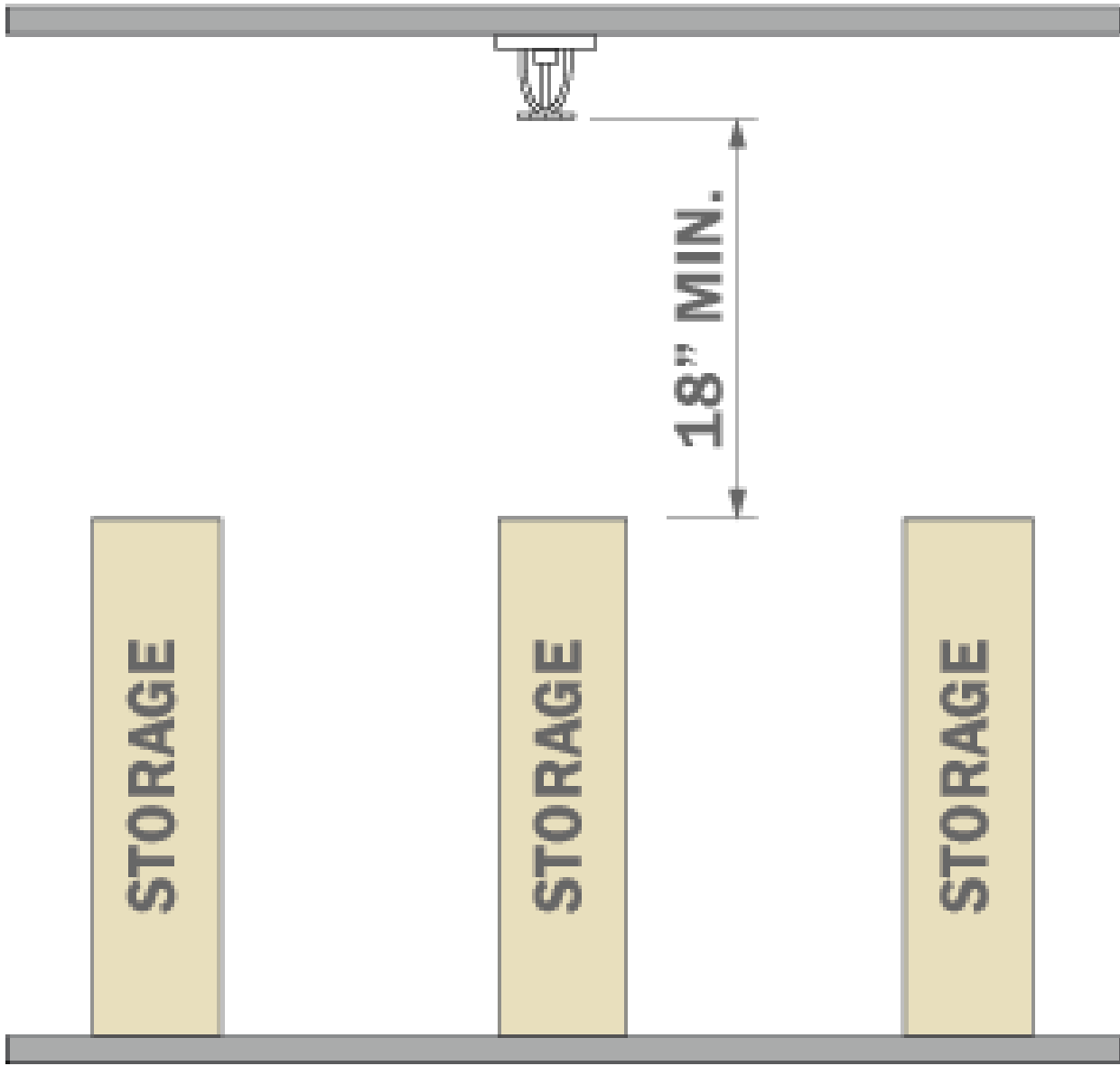
Get to Know Your Sprinklers

[qrfs.com/blog](http://qrfs.com/blog) or tweet @QuickResponseFS

# K351 Sprinkler System Installation

- Clearance between the deflector and the top of storage shall be 18” or greater
- Plates, escutcheons, or other devices used to cover the annular space around a sprinkler shall be metallic or shall be listed for use around a sprinkler

2010 NFPA 13, 8.5.6.1, and 6.2.7.1





10/20/2022





Escutcheons: Recessed, Flat And Adjustable

# K353 Sprinkler Systems – Maintenance and Testing

From 2011 NFPA 25

**Table 5.1.1.2 Summary of Sprinkler System Inspection, Testing, and Maintenance**

Item	Frequency	Reference
<b>Inspection</b>		
Gauges (dry, preaction, and deluge systems)	Weekly/monthly	5.2.4.2, 5.2.4.3, 5.2.4.4
Control valves		Table 13.1
Waterflow alarm devices	Quarterly	5.2.5
Valve supervisory alarm devices	Quarterly	5.2.5
Supervisory signal devices (except valve supervisory switches)	Quarterly	5.2.5
Gauges (wet pipe systems)	Monthly	5.2.4.1
Hydraulic nameplate	Quarterly	5.2.6
Buildings	Annually (prior to freezing weather)	4.1.1.1
Hanger/seismic bracing	Annually	5.2.3
Pipe and fittings	Annually	5.2.2
Sprinklers	Annually	5.2.1
Spare sprinklers	Annually	5.2.1.4
Information sign	Annually	5.2.6.1
Fire department connections		Table 13.1
Valves (all types)		Table 13.1
Obstruction, internal inspection of piping	5 years	14.2

# K353 Sprinkler Systems – Maintenance and Testing

- Dry-type sprinkler heads that have been installed for 10 years shall be replaced, or a sampling sent for testing. Retest after next 10 years. **New this code adoption.**
- Quick Response sprinkler heads that have been installed for 20 years shall be replaced, or a sampling sent for testing. Retest after next 10 years. **Was exception #2 under 2-3.1.1 in 2000 edition.**

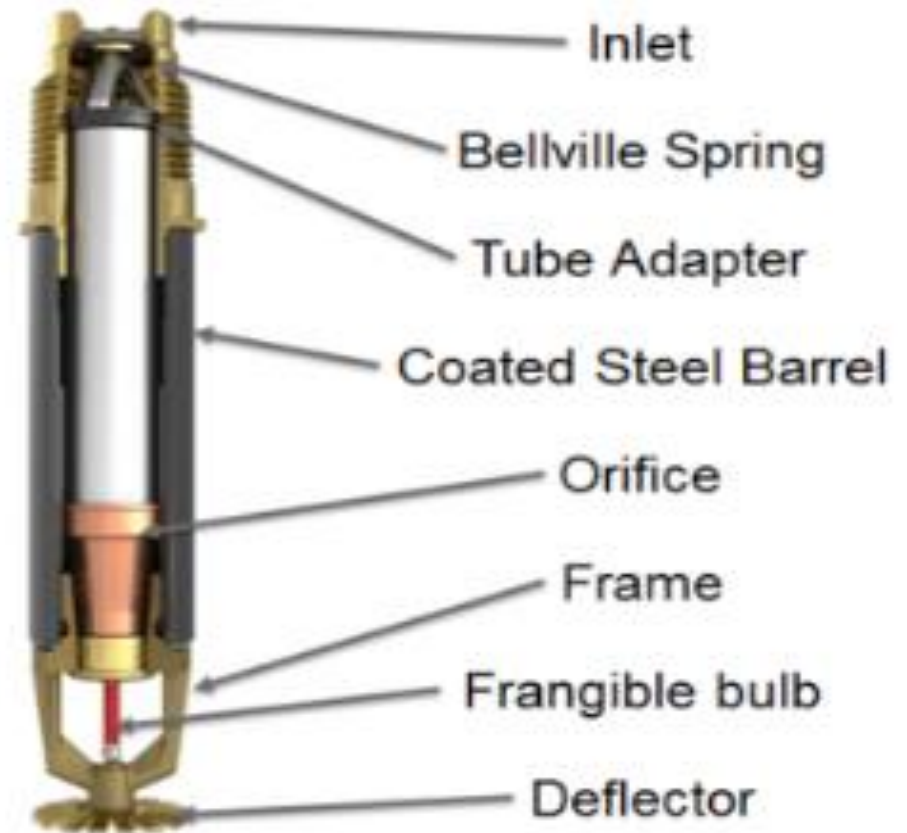
2011 NFPA 25, 5.3.1.1.1.6, and 5.3.1.1.1.3

When the temperature of the protected space reaches the activation temperature of the **bulb**, the bulb will fracture.

When this occurs, the **split washer** and **pip cap** exit the frame and the inner tube assembly slides into the sprinkler frame.



Model V36 Dry Type S



## Dry-type Sprinkler Head

# RELEASING MECHANISMS



**Fusible Link  
(Standard)**



**Frangible Bulb**



**Chemical Pellet**



**Fusible Link  
(Quick Response)**

# K353 Sprinkler Systems – Maintenance and Testing

- Standard Response sprinkler heads that have been installed for 50 years shall be replaced, or a sampling sent for testing. Retest after next 10 years.
- The sample needed for testing per individual sprinkler sample (type) - not less than four sprinklers or 1%, whichever is greater

2011 NFPA 25, 5.3.1.1.1, and 5.3.1.2









# K353 Sprinkler System – Maintenance and Testing

**Have all documentation ready for  
the Life Safety Surveyor.**

Issue Date: March 29, 2019



Reference Number: 46587  
Total Number of Sprinklers Received: 4

(4) sprinklers were submitted consisting of the following characteristics:

Manufacturer:	VIKING	Releasing Mechanism Type:	Glass Bulb
Model:	M	Sprinkler Orientation:	Horizontal Sidewall (HSW)
Sprinkler Type:	Extended Coverage-Light Hazard (ECLH)	Special Sprinkler Features:	None
Water Seal Configuration:	Teflon - Belleville Spring	Response Type:	Quick

TEST SUMMARY TABLE 1

Sprinkler Number	Location of Sprinkler In System	Room Environment	Temperature Rating, °F	Year Marking	Nominal K-Factor	Sprinkler Condition	Releasing Mechanism Response Time, sec.	Operation Classification
150542-1	Room 32	Dwelling Unit	155	1990	5.6	Dusty	10.47	Normal
150543-2	Room 51	Dwelling Unit	155	1987	5.6	Dusty	12.52	Normal
150544-3	Room 58	Dwelling Unit	155	1990	5.6	Dusty	12.24	Normal
150545-4	Room 26	Dwelling Unit	155	1989	5.6	Dusty	15.65	Normal

Sprinkler Condition: Please refer to the *Standard for Inspection and Maintenance of Water-Based Fire Protection Systems, NFPA 25* for requirements and information related to determining when sprinklers are to be replaced. The Authority Having Jurisdiction (AHJ) should be consulted to determine when sprinklers need to be replaced due to their condition. The referenced sprinkler condition is UL's visual observation of the received sample sprinkler.

Operation Classification:

**Normal** - Sprinkler operation was within the applicable time frame for the sprinkler type and temperature rating.

Issue Date: January 29, 2018



Reference Number: 38613  
Total Number of Sprinklers Received: 5

**(4) sprinklers were submitted consisting of the following characteristics:**

<b>Manufacturer:</b>	AUTOMATIC	<b>Releasing Mechanism Type:</b>	Glass Bulb
<b>Model:</b>	H	<b>Sprinkler Orientation:</b>	Pendent (P)
<b>Sprinkler Type:</b>	Standard Spray (SS)	<b>Special Sprinkler Features:</b>	None
<b>Water Seal Configuration:</b>	Teflon - Belleville Spring	<b>Response Type:</b>	Quick

**TEST SUMMARY TABLE 2**

Sprinkler Number	Location of Sprinkler in System	Room Environment	Temperature Rating, °F	Year Marking	Nominal K-Factor	Sprinkler Condition	Releasing Mechanism Response Time, sec.	Operation Classification
98176-1	West Wing Hallway	Other	155	1993	5.6	Dusty	9.21	Normal
98177-2	West Wing Hallway	Other	155	1993	5.6	Dusty	9.77	Normal
98178-3	East Wing Hallway	Other	155	1993	5.6	Dusty	10.15	Normal
98179-4	East Wing Hallway	Other	155	1993	5.6	Dusty	10.29	Normal

Sprinkler Condition: Please refer to the *Standard for Inspection and Maintenance of Water-Based Fire Protection Systems, NFPA 25* for requirements and information related to determining when sprinklers are to be replaced. The Authority Having Jurisdiction (AHJ) should be consulted to determine when sprinklers need to be replaced due to their condition. The referenced sprinkler condition is UL's visual observation of the received sample sprinkler.

Operation Classification:

**Normal** - Sprinkler operation was within the applicable time frame for the sprinkler type and temperature rating.



Issue Date: January 6, 2020

Reference Number: 52377

Total Number of Sprinklers Received: 8

**(1) sprinkler was submitted consisting of the following characteristics:**

<b>Manufacturer:</b>	STAR	<b>Releasing Mechanism Type:</b>	Glass Bulb
<b>Model:</b>	SG	<b>Sprinkler Orientation:</b>	Pendent (P)
<b>Sprinkler Type:</b>	Standard Spray (SS)	<b>Special Sprinkler Features:</b>	None
<b>Water Seal Configuration:</b>	Teflon - Belleville Spring	<b>Response Type:</b>	Standard

TEST SUMMARY TABLE 3

Sprinkler Number	Location of Sprinkler in System	Room Environment	Temperature Rating, °F	Year Marking	Nominal K-Factor	Sprinkler Condition	Releasing Mechanism Response Time, sec.	Operation Classification
192042-1	Outside Rm. 1	Hallway/Walkway	155	1995	<5.6	Clean	35.01	Normal

Sprinkler Condition: Please refer to the *Standard for Inspection and Maintenance of Water-Based Fire Protection Systems, NFPA 25* for requirements and information related to determining when sprinklers are to be replaced. The Authority Having Jurisdiction (AHJ) should be consulted to determine when sprinklers need to be replaced due to their condition. The referenced sprinkler condition is UL's visual observation of the received sample sprinkler.

Operation Classification:

**Normal** - Sprinkler operation was within the applicable time frame for the sprinkler type and temperature rating.



Issue Date: November 21, 2019

Reference Number: 51410  
Total Number of Sprinklers Received: 6

(6) sprinklers were submitted consisting of the following characteristics:			
Manufacturer:	GRINNELL	Releasing Mechanism Type:	Glass Bulb
Model:	A	Sprinkler Orientation:	Pendent (P)
Sprinkler Type:	Standard Spray (SS)	Special Sprinkler Features:	None
Water Seal Configuration:	Teflon - Belleville Spring	Response Type:	Quick

TEST SUMMARY TABLE 1								
Sprinkler Number	Location of Sprinkler in System	Room Environment	Temperature Rating, °F	Year Marking	Nominal K-Factor	Sprinkler Condition	Releasing Mechanism Response Time, sec.	Operation Classification
185595-1	Hospital	Hospital	155	1996	5.6	Lightly corroded or loaded	10.96	Normal
185596-2	Hospital	Hospital	155	1997	5.6	Dusty	12.08	Normal
185597-3	Hospital	Hospital	155	1996	5.6	Dusty	11.12	Normal
185598-4	Hallway	Hallway/Walkway	155	1996	5.6	Dusty	11.36	Normal
185599-5	Hallway	Hallway/Walkway	155	1997	5.6	Dusty	10.83	Normal
185600-6	Hallway	Hallway/Walkway	155	1996	5.6	Physical damage - deflector	---	Abnormal - Visual No Test

**Sprinkler Condition:** Please refer to the *Standard for Inspection and Maintenance of Water-Based Fire Protection Systems, NFPA 25* for requirements and information related to determining when sprinklers are to be replaced. The Authority Having Jurisdiction (AHJ) should be consulted to determine when sprinklers need to be replaced due to their condition. The referenced sprinkler condition is UL's visual observation of the received sample sprinkler.

**Operation Classification:**

**Normal** - Sprinkler operation was within the applicable time frame for the sprinkler type and temperature rating.

**Abnormal - Visual No Test** - Based upon the "Sprinkler Condition" observed during the visual examination, the operation test was not conducted on the sample.

Issue Date: May 17, 2017



Reference Number: 34209  
Total Number of Sprinklers Received: 4

<b>(4) sprinklers were submitted consisting of the following characteristics:</b>			
Manufacturer:	GLOBE	Releasing Mechanism Type:	Glass Bulb
Model:	JN	Sprinkler Orientation:	Pendent (P)
Sprinkler Type:	Standard Spray (SS)	Special Sprinkler Features:	None
Water Seal Configuration:	Gasket O-Ring	Response Type:	Quick

TEST SUMMARY TABLE 1								
Sprinkler Number	Location of Sprinkler in System	Room Environment	Temperature Rating, °F	Year Marking	Nominal K-Factor	Sprinkler Condition	Releasing Mechanism Response Time, sec.	Operation Classification
68854-1	Nursing Home, Dining Area	Other	155	1997	5.6	Slightly corroded or loaded	12.26	Normal
68855-2	Nursing Home, Lobby Entrance	Other	155	1997	5.6	Slightly corroded or loaded	15.55	Normal
68856-3	Nursing Home, Hallway #1 @ Room #3	Other	155	1997	5.6	Slightly corroded or loaded	10.37	Normal
68857-4	Nursing Home, Hallway #2, Near Exit	Other	155	1997	5.6	Slightly corroded or loaded	11.52	Abnormal - No Waterflow

Sprinkler Condition: Please refer to the *Standard for Inspection and Maintenance of Water-Based Fire Protection Systems, NFPA 25* for requirements and information related to determining when sprinklers are to be replaced. The Authority Having Jurisdiction (AHJ) should be consulted to determine when sprinklers need to be replaced due to their condition. The referenced sprinkler condition is UL's visual observation of the received sample sprinkler.

Operation Classification:

**Normal** - Sprinkler operation was within the applicable time frame for the sprinkler type and temperature rating.

**Abnormal - No Waterflow** - The release mechanism (heat responsive element) operated, but the sprinkler water seal assembly did not release at the applied test water pressure of 7 psia to allow discharge of water.

# Sprinkler Head Loading

- Coated with dust – Could insulate the thermal element, thus reducing the heat transferring to it and affecting the release time.
- Any amount of loading can have some impact on the thermal sensitivity of a sprinkler.
- Clean sprinklers with compressed air or a vacuum provided the equipment does not touch the sprinkler or replace the sprinkler.



# Sprinkler Head Loading



None

Very Light

Light

Heavy

Very Heavy

# K353 Sprinkler Systems – Maintenance and Testing

5.2.4.1 Gauges on wet pipe sprinkler systems shall be inspected monthly to ensure that they are in good condition and normal water supply pressure is being maintained.

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.

2011 NFPA 25



# K355 Portable Fire Extinguishers

- Fire extinguishers shall be subjected to maintenance at intervals of not more than 1 year
- Fire extinguishers shall be inspected at a minimum of 30-day intervals
- Fire extinguishers having a gross weight not exceeding 40 lb. shall be installed so the top of the fire extinguisher is not more than 5 ft above the floor
- In no case shall the clearance between the bottom of the hand portable fire extinguisher and the floor be less than 4 in

2010 NFPA 10, 7.3.1.1.1, 7.2.1.2, 6.1.3.8.1, and 6.1.3.8.3

**DO NOT REMOVE**

SERIAL NUMBER OF EXTINGUISHER

AGC | APF | ANTI-FREEZE | CARTRIDGE | CO<sub>2</sub> | DRY CHEM | FOAM  
 LOADED STREAM | METAL POWDER | PUMP | PRESSURE | PURPLE K | FOAM  
 SILVER K | WATER | WET AGENT | WET AGENT | SYSTEM | CLEAN AGENT | SYSTEM

SERVICED BY: \_\_\_\_\_  
 PERMIT NO. \_\_\_\_\_

NEW MAINTENANCE RECHARGED

2020	2021	2022	2023
JAN	FEB	MAR	APR
MAY	JUN	JUL	AUG
SEP	OCT	NOV	DEC

PrintedTAGS.com

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Fusible Links Temperature Sensing Elements Data

Yr Mfg \_\_\_\_\_ Date Installed \_\_\_\_\_

**MONTHLY INSPECTION RECORD**

DATE	BY	DATE	BY

PrintedTAGS.com

# Fire Extinguisher Mounting Height

**40 pounds and Under**  
 Not more than 5 feet

**Over 40 pounds**  
 Not more than 3.5 feet







# K361 Areas Open to the Corridor

Corridors shall be separated from all other areas, unless otherwise permitted:

- (1) Smoke compartments protected throughout by an approved supervised automatic sprinkler system - shall be permitted to have spaces that are unlimited in size and open to the corridor, provided that **all** of the following criteria are met: Items (a) thru (d) in code book
- (2) Smoke compartments protected throughout by an approved supervised automatic sprinkler

2012 NFPA 101, 19.3.6.1



# K361 Areas Open to the Corridor

(2) (continued) system – waiting areas shall be permitted provided that **all** of the following criteria are met: Items (a) thru (c) in code book

(3) This requirement shall not apply to spaces for nurses' stations.

(4) Gift shops not exceeding 500 sq. ft. shall be permitted to be open to the corridor or lobby, provided that **one** of the following criteria is met: Items (a) or (b) in code book

2012 NFPA 101, 19.3.6.1

# K361 Areas Open to the Corridor

(5) Limited care facilities

(6) Cooking facilities in accordance with 19.3.2.5.3 shall be permitted to be open to the corridor

(7) Spaces other than patient sleeping rooms, treatment rooms, and hazardous areas, shall be permitted to be open to the corridor and unlimited in area, provided that **all** of the following criteria are met: Items (a) thru (c) in code book

2012 NFPA 101, 19.3.6.1

# K361 Areas Open to the Corridor

(8) Waiting areas shall be permitted to be open to the corridor, provided that **all** of the following criteria are met: Items (a) thru (c) in code book

(9) Group meeting or multipurpose therapeutic spaces, that are under continuous supervision by facility staff shall be permitted to be open to the corridor, provided that **all** of the following criteria are met: Items (a) thru (d) in code book

2012 NFPA 101, 19.3.6.1

# K363 Corridor Doors

Shall resist the passage of smoke

No impediment to closing

Must be provided with positive latching hardware

No roller latches

2012 NFPA 101, 19.3.6.3.1, 19.3.6.3.10, CFR  
482.41 (b) (ii)





10/20/2022

# K363

# Corridor Doors



# Corridor Doors

## CFR 482.41 (b) (ii)

### Positive Latching Hardware Must be Provided





# Positive Latching Hardware Shall be Provided for Double Doors on the Corridor



# Manual Latching Hardware is not Permitted on either leaf of Double Doors on the Corridor



# Positive Latching Hardware Must be Working

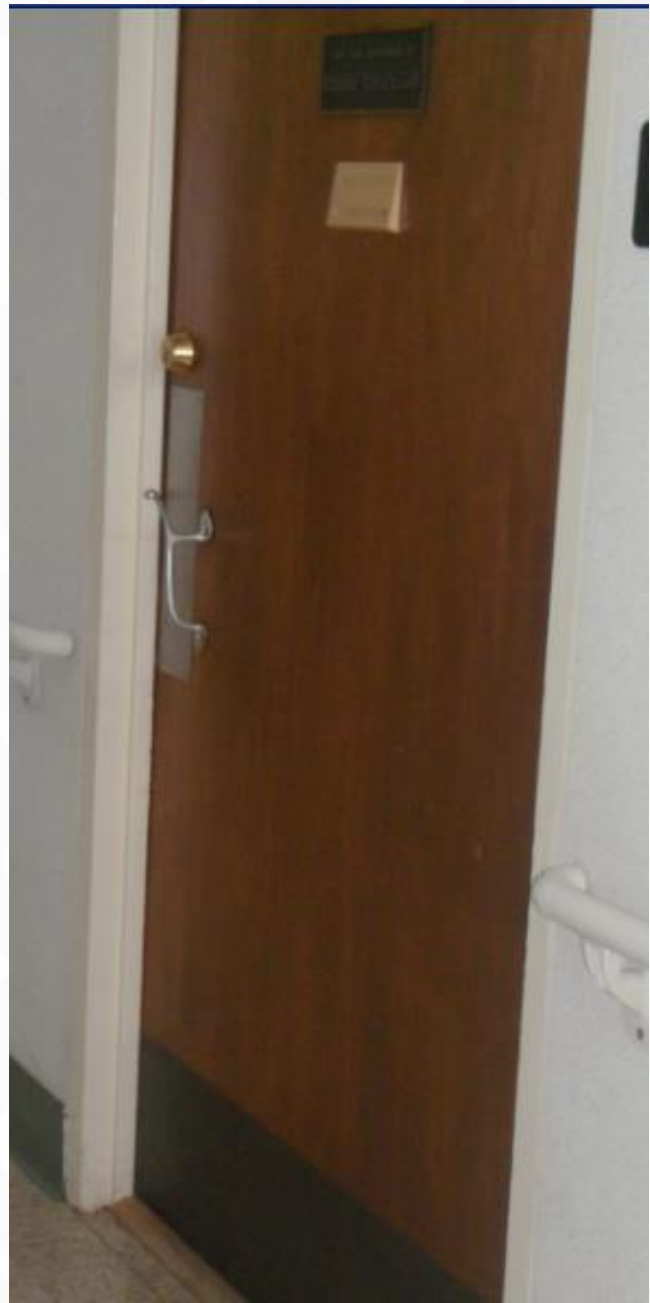


# Positive Latching Hardware Must be Provided















# K363 Corridor Doors

The gap between the face of the door and the doorstop does not exceed  $\frac{1}{2}$ " in a smoke compartment that is fully sprinklered

S&C-07-18

DEPARTMENT OF HEALTH & HUMAN SERVICES  
Centers for Medicare & Medicaid Services  
7500 Security Boulevard, Mail Stop S2-12-25  
Baltimore, Maryland 21244-1850



Center for Medicaid and State Operations/Survey and Certification Group

Ref: S&C-07-18

**DATE:** April 20, 2007

**TO:** State Survey Agency Directors  
State Fire Authorities

**FROM:** Director  
Survey and Certification Group

**SUBJECT:** **Multiple Providers** - Hospitals, Ambulatory Surgical Centers, Nursing Homes, Religious Non-Medical Health Care Institutions, Programs of All-Inclusive Care for the Elderly (PACE) Facilities, Critical Access Hospitals, Intermediate Care Facilities for the Mentally Retarded – Permitted Gaps in Corridor Doors and Doors in Smoke Barriers

**Memorandum Summary**

- In a smoke compartment that is **not fully sprinklered**, a gap between the face of a corridor door and the door stop should not exceed **¼-inch**, provided that the door latch mechanism is functioning.
- In a smoke compartment that is **fully sprinklered**, a gap between the face of a corridor door and the door stop should not exceed **½-inch**, provided that the door latch mechanism is functioning.

# Corridor Doors

## Smoke Resistance

Doors and frames protecting corridor openings shall be constructed to resist the passage of smoke.

### Binding on Frame



10/20/2022

### Gaps to Frame



108

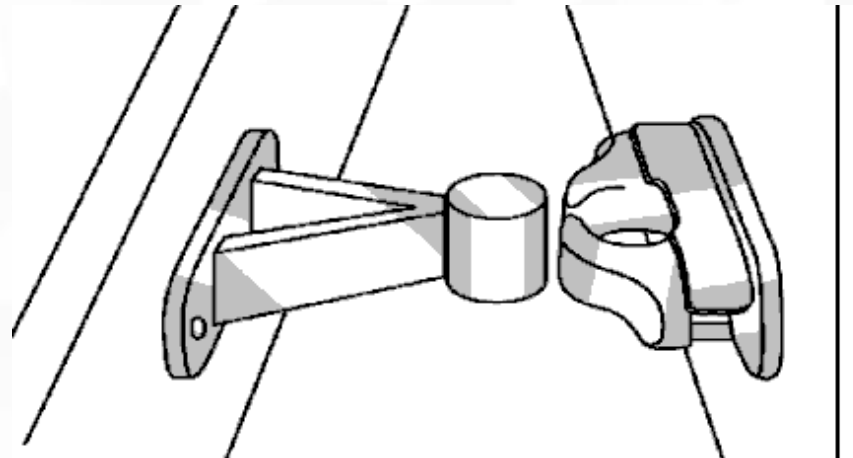
# K363 Corridor Doors

2012 NFPA 101, 19.3.6.3.10

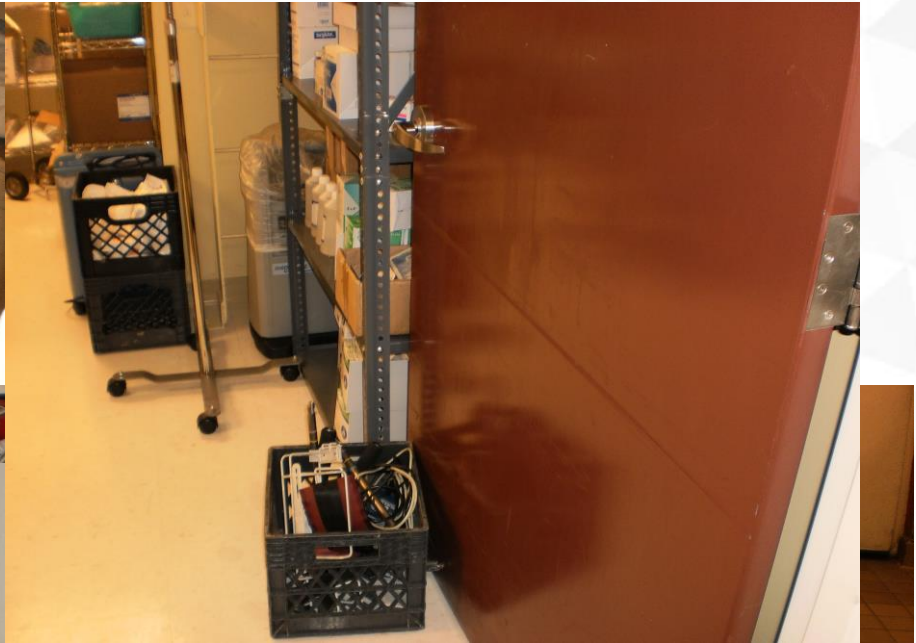
Doors shall not be held open by devices other than those that release when the door is pushed or pulled.

Doors should not be blocked open by furniture, door stops, chocks, tie-backs, drop-down or plunger-type devices, or other devices that necessitate manual unlatching or releasing action to close.

# Hold-Open Devices Approved



# Hold-Open Devices NOT Approved



# K372 Subdivision of Building Spaces – Smoke Barrier Construction

Shall have a minimum ½-hour fire resistance rating and shall restrict the movement of smoke.

Almost all of the smoke barriers in LTC facilities are one hour fire rated and must be maintained as such.

2012 NFPA 101, 19.3.7.3, and 8.5



# K372 Subdivision of Building Spaces

## – Smoke Barrier Construction

- Seal any and all penetrations
- Use the correct Brand and Product to seal any penetrations. Keep container, even if it is empty for product information
- Use product per manufacturer's recommendations
- No orange or yellow foam (without documentation on the fire rating of the product)



10/20/2022

114



**Mineral Wool**



**Backer Rod**





10/20/2022

116





10/20/2022

118



10/20/2022

119

# K521 HVAC

Each damper shall be tested and inspected one year after installation. The test and inspection frequency shall then be every 4 years. Know if you have dampers and where they are located.

Each damper shall be provided with access for inspection and service of the damper's working parts.

2010 NFPA 105, 6.5.2, & 6

2010 NFPA 80, 19.4.1, 19.4.1.1, & 19.2.3









# K711 Evacuation and Relocation Plan

## Fire Safety Plan.

A written health care occupancy fire safety plan shall provide for all of the following:

- (1) Use of alarms
- (2) Transmission of alarms to fire department
- (3) **Emergency phone call to fire department (New 2012)**
- (4) Response to alarms
- (5) Isolation of fire
- (6) Evacuation of immediate area
- (7) Evacuation of smoke compartment
- (8) **Preparation of floors and building for evacuation**
- (9) Extinguishment of fire

# K711 Evacuation and Relocation Plan

Any required aisle, corridor, or ramp shall be not less than 48 in. in clear width where serving as means of egress from patient sleeping rooms, unless otherwise permitted by one of the following:

(2) Where corridor width is at least 6 ft, noncontinuous projections not more than 6 in. from the corridor wall, above the handrail height, shall be permitted.

**Per ADA not more than 4in.**

(4) Projections into the required width shall be permitted for wheeled equipment, provided that **all** of the following conditions are met:

2012 NFPA 101, 19.7.2.2 (8), and 19.2.3.4 (2), (4)

# K711 Evacuation and Relocation Plan

- (a) The wheeled equipment does not reduce the clear unobstructed corridor width to less than 60 in
- (b) The health care occupancy fire safety plan and training program address the relocation of the wheeled equipment during a fire or similar emergency.**
- (c) The wheeled equipment is limited to the following:
  - i. Equipment in use and carts in use
  - ii. Medical emergency equipment not in use
  - iii. Patient lift and transport equipment

2012 NFPA 101, 19.7.2.2 (8), and 19.2.3.4 (2), (4)

# K712 Fire Drills

- “Drills **shall** be held at expected and **unexpected times and under varying conditions** to simulate the unusual conditions that can occur in an actual emergency”

- “If the drill is always held in the same way at the same time, it loses much of it’s value.”

- Drills should be held at varying times.

2012 NFPA 101, 19.1.1.1.3, 4.7.4

### FIRE DRILL LOG

Log date and time Fire Drills occurred. Disaster Drills cannot count as Fire Drills.

Quarters	First Shift	Second Shift	Third Shift
<p style="text-align: center;"><b>1</b></p> <p style="text-align: center;">Jan – Feb - Mar</p>	<p>Date: _____</p> <p>Time: _____</p> <p>By: _____</p>	<p>Date: _____</p> <p>Time: _____</p> <p>By: _____</p>	<p>Date: _____</p> <p>Time: _____</p> <p>By: _____</p>
<p style="text-align: center;"><b>2</b></p> <p style="text-align: center;">Apr – May - June</p>	<p>Date: _____</p> <p>Time: _____</p> <p>By: _____</p>	<p>Date: _____</p> <p>Time: _____</p> <p>By: _____</p>	<p>Date: _____</p> <p>Time: _____</p> <p>By: _____</p>
<p style="text-align: center;"><b>3</b></p> <p style="text-align: center;">Jul – Aug - Sept</p>	<p>Date: _____</p> <p>Time: _____</p> <p>By: _____</p>	<p>Date: _____</p> <p>Time: _____</p> <p>By: _____</p>	<p>Date: _____</p> <p>Time: _____</p> <p>By: _____</p>
<p style="text-align: center;"><b>4</b></p> <p style="text-align: center;">Oct – Nov - Dec</p>	<p>Date: _____</p> <p>Time: _____</p> <p>By: _____</p>	<p>Date: _____</p> <p>Time: _____</p> <p>By: _____</p>	<p>Date: _____</p> <p>Time: _____</p> <p>By: _____</p>



# K712 Fire Drills

- “quarterly on each shift” – includes weekends
- “familiarize facility personnel (nurses, interns, maintenance engineers, and administrative staff) with the signals and emergency action required under varied conditions” – arrange for **all** employees to participate

2012 NFPA 101, 19.7.1

# Reporting of Fires to ADPH

- Nursing home rules – within 24 hours
- Go to [alabamapublichealth.gov](http://alabamapublichealth.gov), click on the “A to Z Index” in the top left corner, click on “L”, click on “[Life Safety Code](#)”, under “Resources” click on “[Online Reporting of Fires and Similar Incidents](#)”
- Report Fire Watches to this email: [lifesafety@adph.state.al.us](mailto:lifesafety@adph.state.al.us)

# K741 Smoking Regulations



# K741 Smoking Regulations



# K741 Smoking Regulations



# K761 Maintenance, Inspection & Testing - Doors

- Implementation was January 1, 2018
- 45 Minute Fire Rated or higher
- Online course for in house inspector –  
Not Required



Center for Clinical Standards and Quality/Survey & Certification Group

Ref: S&C 17-38-LSC

**DATE:** July 28, 2017  
**TO:** State Survey Agency Directors  
**FROM:** Director  
Survey and Certification Group  
**SUBJECT:** Fire and Smoke Door Annual Testing Requirements in Health Care Occupancies

Memorandum Summary

- In health care occupancies, fire door assemblies are required to be annually inspected and tested in accordance with the 2010 National Fire Protection Association (NFPA) 80.
- In health care occupancies, non-rated doors assemblies including corridor doors to patient care rooms and smoke barrier doors are not subject to the annual inspection and testing requirements of either NFPA 80 or NFPA 105.
- Non-rated doors should be routinely inspected as part of the facility maintenance program.
- Full compliance with the annual fire door assembly inspection and testing in accordance with 2010 NFPA 80 is required by January 1, 2018.
- Life Safety Code (LSC) deficiencies associated with the annual inspection and testing of fire doors should be cited under K211 – *Means of Egress - General*.

Background

The Centers for Medicare & Medicaid Services (CMS) adopted the 2012 edition of the NFPA LSC, which includes requirements for the maintenance, inspection, and testing of fire doors and smoke doors in certain certified health care facilities.

The 2012 LSC added new provisions under Section 7.2.1.15 – *Inspection of Door Openings* for the annual inspection and testing of certain fire doors and smoke doors assemblies in accordance with the 2010 editions of NFPA 80 – *Standard for Fire Doors and Other Opening Protectives*, and NFPA 105 – *Standard for Smoke Door Assemblies and Other Opening Protectives*.

The new LSC provisions under sections 7.2.1.15.1 and 7.2.1.15.2 require certain fire door and smoke door assemblies to be inspected and tested annually in accordance with the NFPA 80 and NFPA 105. However, section 7.2.1.15.1 states that these requirements only apply where required by Chapters 11 through 43. Therefore, as the LSC health care occupancy chapters (i.e., Chapters 18, 19, 20, 21) do not directly reference section 7.2.1.15, these new annual inspection and testing requirement do not apply to health care occupancies.

# K761 Maintenance, Inspection & Testing - Doors

Fire doors assemblies are inspected and tested annually in accordance with NFPA 80, Standard for Fire Doors and Other Opening Protectives.

Individuals performing the door inspections and testing possess knowledge, training or experience that demonstrates ability.

Written records of inspection and testing are maintained and are available for review.

Per survey book: 2012 101, 19.7.6, 8.3.3.1, and 4.6.12  
2010 NFPA 80, 5.2, and 5.2.3



# K914 Electrical Systems – Maintenance and Testing

Receptacles **not** listed as hospital-grade, at patient bed locations and in locations where deep sedation or general anesthesia is administered, shall be tested at intervals not exceeding 12 months.

(1) The physical integrity of each receptacle shall be confirmed by visual inspection.

2012 NFPA 99, 6.3.4.1.3, 6.3.3.2.1, 6.3.3.2.2, 6.3.3.2.3, and 6.3.3.2.4

# K914 Electrical Systems – Maintenance and Testing

- (2) The continuity of the grounding circuit in each electrical receptacle shall be verified.
- (3) Correct polarity of the hot and neutral connections in each electrical receptacle shall be confirmed.
- (4) The retention force of the grounding blade of each electrical receptacle (except locking-type receptacles) shall be not less than 115 g (4 oz).

2012 NFPA 99, 6.3.4.1.3, 6.3.3.2.1, 6.3.3.2.2, 6.3.3.2.3, and 6.3.3.2.4

Use a device like this to check items 2 – 4 on previous slide



# K918 Diesel Generators

## 2010 NFPA 110

**8.3.8** A fuel quality test shall be performed at least annually using tests approved by ASTM standards.



# Fuel Analysis Report

North America: +1-800-437-4474



Account Information	Component Information	Sample Information
Account Number: Company Name: Contact: Address: Phone Number:	Unit ID: 56526 DF Eng. Serial#: RG6090L071130 Fuel Type: DIESEL FUEL Manufacturer: JOHN DEERE Model: 6090 Application: POWER GENERATION Tank Capacity:	Tracking Number: 00006272307 Lab Number: I-237748 Lab Location: Indianapolis Data Analyst: RAM Sampled: 18-Jul-2017 Received: 21-Jul-2017 Completed: 28-Jul-2017
Filter Information Filter Change: No Filter Type: FULLFLOW Micron Rating: 0	Miscellaneous Information Gen Spec/KW: 2274435 Eqp Mfr/Mdl: K9HI FR 275RFR07E Asset Loc.: 22036 Work Order #: 576335	
Comments: TEST RESULTS are within NORMAL PARAMETERS for this product. Your note was taken into consideration.		

Test Results									
Test Method	Test Name	Result	Min	Max	Elemental Analysis mod. ASTM D5185	Result	Min	Max	
ASTM D7220	Sulfur (ppm)	11.9			Iron (ppm)				
ASTM D2709	Water and Sediment (%)	0			Chromium (ppm)				
ASTM D6304C	Water by Karl Fischer (%)				Nickel (ppm)				
ASTM D6304C	Water by Karl Fischer (ppm)				Aluminum (ppm)				
Manufacturer	Aerobic Bacteria (Counts)				Copper (ppm)				
Manufacturer	Bacteria (Counts)	0			Lead (ppm)				
Manufacturer	Fungi (Counts)	Negative			Tin (ppm)				
Manufacturer	Mold (Counts)	0			Cadmium (ppm)				
mod. ASTM D6468	Thermal Stability (%)				Silver (ppm)				
mod. ASTM D445	Viscosity 40°C (cSt)	2.53			Vanadium (ppm)				
mod. ASTM D445	Viscosity 100 °C (cSt)				Silicon (ppm)				
mod. ASTM D664	Acid Number (mg KOH/g)				Sodium (ppm)				
ASTM D7689	Cloud Point (°C)	-12			Potassium (ppm)				
ASTM D7346	Pour Point (°C)	-24			Titanium (ppm)				
ASTM D6371	Cold Filter Plug Point (°C)				Molybdenum (ppm)				
ASTM D3828	Closed Cup Flash Point (°C)	63			Antimony (ppm)				
ASTM D86	Distillation Initial Boiling Point (°C)	169.4			Manganese (ppm)				
ASTM D86	Distillation 10% Recovered (°C)	203.7			Lithium (ppm)				
ASTM D86	Distillation 50% Recovered (°C)	262.9			Boron (ppm)				
ASTM D86	Distillation 90% Recovered (°C)	327.8			Magnesium (ppm)				
ASTM D867	Distillation Final Boiling Point (°C)	356.8			Calcium (ppm)				
ASTM D976	Cetane Index	48.8			Barium (ppm)				
ASTM D4052	API Gravity	36.5			Phosphorus (ppm)				
ASTM D4052	Density (g/mL)				Zinc (ppm)				
ASTM D4052	Specific Gravity								
ASTM D4868	BTU Per Gallon (BTU/gal)				Particle Count (particles/mL) ISO 4406 & mod. ISO 11500	Result	Min	Max	
ASTM D4868	BTU Per Pound (BTU/lb)				ISO Cleanliness Code	11	11	11	
ASTM D6079	Lubricity (µm)				> 4µm				
ASTM D130	Copper Corrosion	1A			> 6µm				
ASTM D482	Ash Content (mass %)				> 10µm				
ASTM D189	Carbon Residue (%)				> 14µm				
ASTM D7371	% Biodiesel - FAME (%)				> 21µm				
					> 38µm				
					> 70µm				
					> 100µm				
Appearance	CLEAR								

Comments are advisory only and are based on the assumption that the sample and data submitted are valid. Missing fluid or component information limits the evaluation. No warranty is expressed or implied.

Step 1 K918

# K918 Diesel Generators

2010 NFPA 110

**8.4.2** Diesel generator sets in service shall be exercised at least once monthly, for a minimum of 30 minutes, using one of the following methods:

- (1) Loading that maintains the minimum exhaust gas temperatures as recommended by the manufacturer
- (2) Under operating temperature conditions and at not less than 30 percent of the EPS nameplate kW rating

# K918 Diesel Generators

## 2010 NFPA 110

**8.4.2.3 Diesel-powered EPS installations that do not meet the requirements of 8.4.2 shall be exercised monthly with the available EPSS load and shall be exercised annually with supplemental loads at not less than 50 percent of the EPS nameplate kW rating for 30 continuous minutes and at not less than 75 percent of the EPS nameplate kW rating for 1 continuous hour for a total test duration of not less than 1.5 continuous hours.**

125 kW

Customer Name \_\_\_\_\_ Work Order # \_\_\_\_\_  
Model 125 RoZ J81 Serial Number \_\_\_\_\_  
Date \_\_\_\_\_ Technician \_\_\_\_\_

Birmingham  Mobile  Jackson

Generator Rating

Voltage 208 Amperage \_\_\_\_\_ Phase 3  
Power Factor Rating \_\_\_\_\_ Approx Ambient Temp During Test \_\_\_\_\_  
Fuel Diesel X Natural Gas \_\_\_\_\_ Propane \_\_\_\_\_ Gasoline \_\_\_\_\_

Hourmeter	VOLTAGE			CURRENT			OUTPUT		ENGINE	
	L1-L2	L2-L3	L3-L1	L1	L2	L3	Kilowatt	Hz	PSI	Temp.
970.3	233	233	233					60	55	179
970.4	234	234	234	219	219	219	80	60	50	185
970.7	234	234	234	218	219	219	80	60	49	187
971	234	234	234	218	219	219	80	60	48	187
971.3	234	234	234	218	219	219	80	60	48	188
971.6	234	234	234	218	219	219	80	60	48	188
971.9	234	234	234	218	219	219	80	60	48	188
972.1	234	234	234	218	219	219	80	60	48	188
972.3	234	234	234	218	219	219	80	60	48	188
972.4	234	234	234					60	49	155
972.8	234	234	234					60	49	155

BF

Comments: ASK IF THIS MEETS REQUIREMENTS? MAKE SURE 30 MINS - 50% OR 7 IHR - 75% OR 7  
HOW WOULD YOU FIX?

93.75 is 75%

972.8

2.5 hours BF





# POWER PRO-TECH SERVICES

**National Operations Center**  
 220 Turner Blvd.  
 Ball Ground, GA 30107  
 PH: (800) 437-4474  
 FAX: (770) 704-0464

**Corporate Office**  
 377 Maitland Ave, Suite 1010  
 Altamonte Springs, FL 32701  
 PH: (800) 437-4474  
 FAX: (770) 704-0464

## Mid-South Regional Office

561 Owens Circle  
 Hueytown, AL 35023  
 PH: (205) 744-7572  
 FAX: (205) 744-7579

TOLL FREE: 1-800-437-4474  
[www.PowerProTech.com](http://www.PowerProTech.com)

CUSTOMER LOCATION: \_\_\_\_\_ CUSTOMER ID: Gen DATE OF SERVICE: \_\_\_\_\_  
 DATA TAG INFO: KVA 288 VOLT 480 PHASE 3 HERTZ 60 KW 230 @ 0.8 PF  
 ENGINE MODEL: 3306 SERIAL: 9NR00879 GEN MODEL: SR4 SERIAL: 6YR00661

TIME	AMBIENT TEMP (*F)	VOLTS (A/C)			AMPS			HERTZ	POWER FACTOR	KW	% LOAD	OIL PRES. (PSI)	WATER TEMP (OUT *F)	FUEL PRES. (PSI)	EXHAUST TEMP (*F)	ENGINE HOURS	ENGINE SPEED (RPM)
		A-B	B-C	A-C	A	B	C										
10:45 AM	84	481	481	481	0	0	0	60.10	0.80	0	0%	85	129	N/A	294	497.0	1,803
10:45 AM	84	483	483	483	129	129	129	60.10	0.80	86	37%	66	175	N/A	516	497.0	1,805
11:00 AM	84	483	483	483	128	128	128	60.10	0.80	86	37%	59	180	N/A	632	498.0	1,805
11:15 AM	84	483	483	483	128	128	128	60.10	0.80	86	37%	57	182	N/A	623	498.0	1,801
11:15 AM	84	483	483	483	172	172	172	60.00	0.80	115	50%	56	184	N/A	657	498.0	1,800
11:30 AM	86	483	483	483	172	172	173	60.00	0.80	115	50%	56	188	N/A	690	498.0	1,800
11:45 AM	86	483	483	483	172	172	172	60.00	0.80	115	50%	55	190	N/A	682	498.0	1,800
11:45 AM	86	484	484	484	205	205	203	60.00	0.80	137	60%	52	194	N/A	703	499.0	1,800
12:00 PM	88	484	484	484	205	205	204	60.20	0.80	137	60%	52	200	N/A	730	499.0	1,803
12:15 PM	88	484	484	484	205	205	204	60.20	0.80	137	60%	52	198	N/A	723	499.0	1,804
12:15 PM	88	485	485	485	265	265	266	60.10	0.80	178	77%	51	202	N/A	745	499.0	1,802
12:30 PM	88	485	485	485	265	266	266	60.10	0.80	178	78%	49	210	N/A	750	500.0	1,800
12:45 PM	88	485	485	485	265	266	266	60.00	0.80	178	78%	46	218	N/A	759	500.0	1,800
1:00 PM	88	481	481	481	0	0	0	60.10	0.80	0	0%	62	174	N/A	362	500.0	1,799

TEST WITNESSED BY: \_\_\_\_\_

TEST PERFORMED BY: \_\_\_\_\_

DOES NOT MEET CODE

FORM:

06/21/2017 12:02

#053 P.004/004



# POWER PRO-TECH SERVICES

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TOLL FREE: 1-800-437-4474  
 www.PowerProTech.com

CUSTOMER LOCATION: \_\_\_\_\_ PPT WO #: \_\_\_\_\_  
 DATA TAG INFO: KVA 288 VOLT 480 PHASE 3 HERTZ 60 KW 230 @ 0.8 PF \_\_\_\_\_ DATE OF SERVICE: \_\_\_\_\_  
 ENGINE MODEL: 3306 SERIAL: 9NR00879 GEN MODEL: SR4 SERIAL: 6YR00661

TIME	AMBIENT TEMP (*F)	VOLTS (A/C)			AMPS			HERTZ	POWER FACTOR	KW	% LOAD	OIL PRES. (PSI)	WATER TEMP (OUT *F)	FUEL PRES. (PSI)	EXHAUST TEMP (*F)	ENGINE HOURS	ENGINE SPEED (RPM)
		A-B	B-C	A-C	A	B	C										
11:00 AM	76	482	482	482	0	0	0	60.10	0.80	0	0%	90	114	N/A	153	502.0	1,804
11:00 AM	76	482	482	482	105	104	104	60.10	0.80	70	30%	72	176	N/A	426	502.0	1,805
11:15 AM	76	482	482	482	104	104	104	60.10	0.80	69	30%	61	175	N/A	528	503.0	1,805
11:30 AM	76	483	482	483	105	104	104	60.10	0.80	70	30%	61	175	N/A	543	503.0	1,805
11:30 AM	76	484	484	484	178	178	177	60.10	0.80	119	52%	60	177	N/A	562	503.0	1,804
11:45 AM	76	484	484	484	178	178	178	60.10	0.80	119	52%	59	178	N/A	596	503.0	1,805
12:00 PM	76	484	484	484	178	178	178	60.10	0.80	119	52%	58	180	N/A	649	503.0	1,804
12:00 PM	76	485	486	485	261	261	262	60.10	0.80	176	76%	55	188	N/A	702	503.0	1,804
12:15 PM	77	485	486	485	261	261	262	60.10	0.80	176	76%	53	194	N/A	748	504.0	1,804
12:30 PM	77	485	486	486	261	261	262	60.10	0.80	176	76%	53	193	N/A	760	504.0	1,805
12:45 PM	77	485	486	486	261	262	262	60.10	0.80	176	76%	53	194	N/A	760	504.0	1,805
1:00 PM	77	485	486	486	261	261	262	60.10	0.80	176	76%	53	194	N/A	769	504.0	1,805
1:00 PM	77	482	482	482	0	0	0	60.10	0.80			62	173	N/A	482	504.0	1,802
										#REF!							

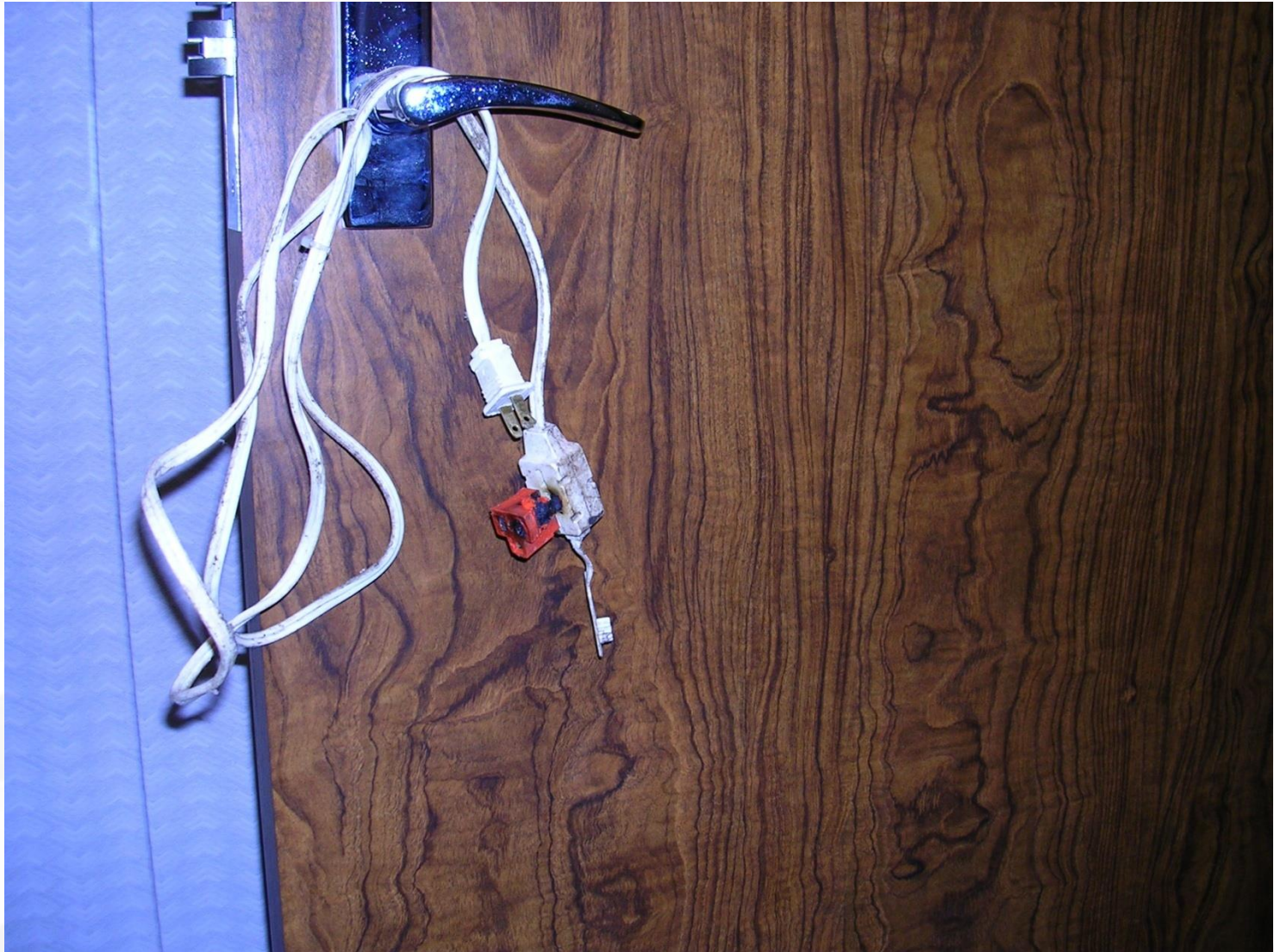
TEST WITNESSED BY: \_\_\_\_\_ TEST PERFORMED BY: \_\_\_\_\_  
 MEETS CODE

# K920 Power Cords & Extensions

Extension cords are for temporary uses only and shall not be used as a substitute for fixed wiring.

All States Letter 22-99  
2011 NFPA 70, 400.8(1)

# K920 Extension Cords and Adapters



# K920 Power Strips

In Resident Rooms Patient Care Related Electrical Equipment (PCREE) should be plugged into a wall outlet, but under unreasonable hardships CMS is allowing facilities to use Special Purpose Power Taps (SPRPT) listed as UL 1363A or 60601-1.

S&C Letter: 14-46-LSC

2012 NFPA 99 (*Health Care Facilities Code*), 10.2.3.6, and 10.2.4

# K920 Power Strips

S&C: 14-46-LSC

- The increasing need for electrical equipment in health care facilities has resulted in a need for more electrical receptacles in areas where patients receive examination and treatment.
- In addition, the exception no longer requires a power strip to be an integral component of a manufacturer tested equipment assembly.

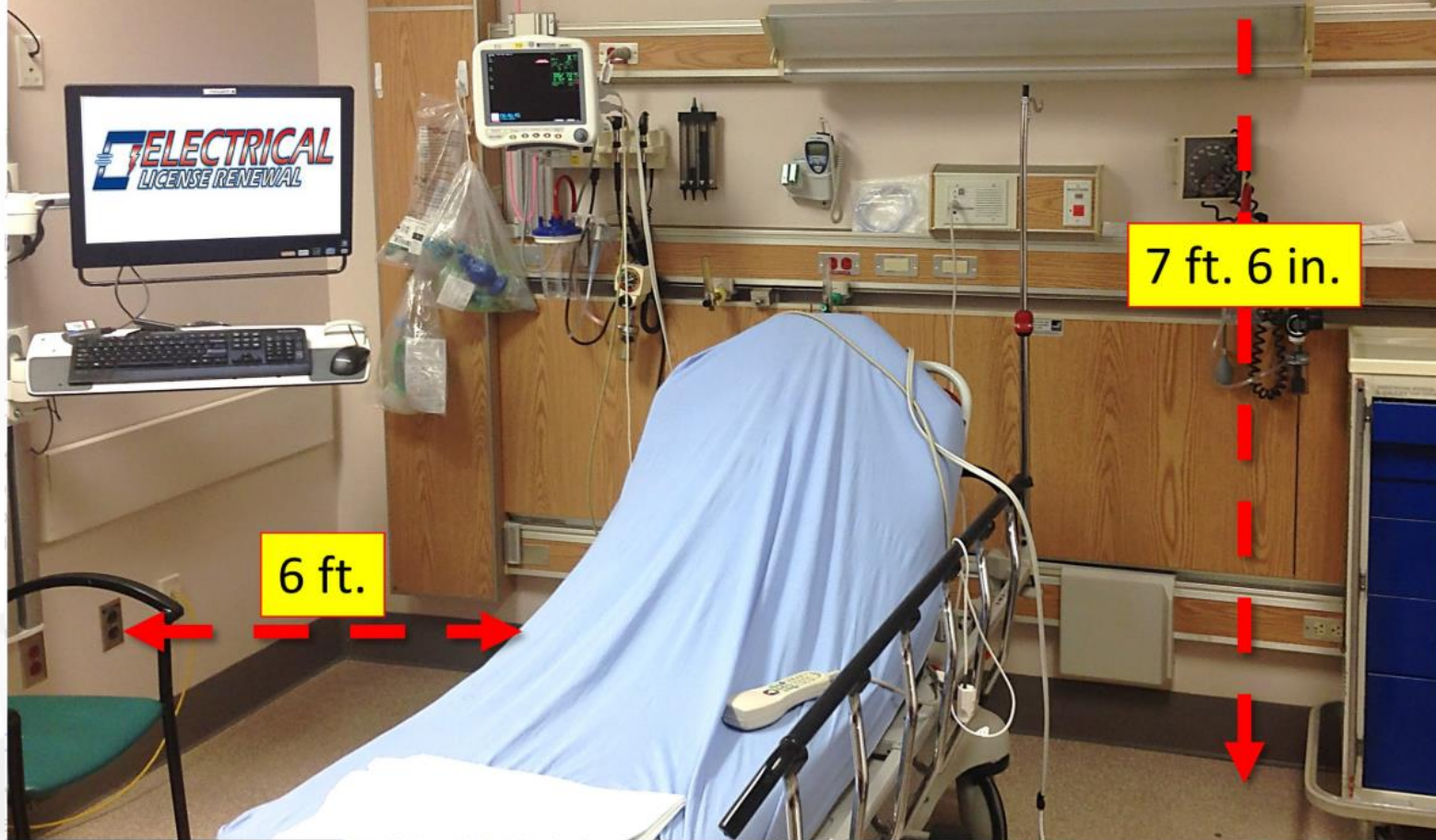
# K920 Power Strips

S&C: 14-46-LSC

- “Patient-care-related electrical equipment” is defined in section 3.3.137 as electrical equipment that is intended to be used for diagnostic, therapeutic, or monitoring purposes in the patient care vicinity.
- Power strips may ***not*** be used in a patient care vicinity to power non-patient care-related electrical equipment (e.g. personal electronics).

The patient care vicinity extends 6 ft. beyond the normal location of the patient bed, chair, table, treadmill, or other device that supports the patient during examination and treatment and extends vertically to 7 ft. 6 in. above the floor.

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# K920 Power Strips

S&C: 14-46-LSC

- Power strips providing power to patient care-related electrical equipment **must be** Special-purpose Relocatable Power Taps (SPRPT) listed as UL 1363A or 60601-1.
- Power strips providing power to non-patient care-related electrical equipment **must be** Relocatable Power Taps (RPT) listed as UL 1363.
- **These two are not interchangeable**

# K920 Power Strips

In Resident Rooms power strips **may** be used outside of the of the patient care vicinity for non-patient-care-related electrical equipment (such as personal electronics).

S&C Letter: 14-46-LSC  
2012 NFPA 99, 10.2.3.6, and 10.2.4

# K920 Power Cords & Extensions

- Cannot mix PCREE and nonPCREE on the same power strip
- No “daisy chaining”

S&C Letter: 14-46-LSC  
2012 NFPA 99, 10.2.3.6, and 10.2.4

# K921 Patient Care Related Electrical Equipment (PCREE) Testing and Maintenance

The facility shall contract with an outside company

**OR**

The facility shall establish policies and protocols for the type of test and intervals of testing for patient care-related electrical equipment for in house testing maintenance.

# K921 PCREE – Testing and Maintenance

The manufacturer of the appliance shall furnish documents containing at least a technical description, instructions for use, and a means of contacting the manufacturer.

The documents specified in [10.5.3.1](#) shall include the following, where applicable:

- (1) Illustrations that show the location of controls
- (2) Explanation of the function of each control
- (3) Illustrations of proper connection to the patient or other equipment, or both

2012 NFPA 99, 10.5.3.1, and 10.5.3.1.1

# K921 PCREE – Testing and Maintenance

- (4) Step-by-step procedures for testing and proper use of the appliance**
- (5) Safety considerations in use and servicing of the appliance
- (6) Precautions to be taken if the appliance is used on a patient simultaneously with other electric appliances
- (7) Schematics, wiring diagrams, mechanical layouts, parts lists, and other pertinent data for the appliance
- (8) Instructions for cleaning, disinfection, or sterilization

2012 NFPA 99, 10.5.3.1, and 10.5.3.1.1

# K921 PCREE – Testing and Maintenance

- (9) Utility supply requirements (electrical, gas, ventilation, heating, cooling, and so forth)
- (10) Explanation of figures, symbols, and abbreviations on the appliance
- (11) Technical performance specifications
- (12) Instructions for unpacking, inspection, installation, adjustment, and alignment
- (13) Preventive and corrective maintenance and repair procedures

2012 NFPA 99, 10.5.3.1, and 10.5.3.1.1

# K921 PCREE – Testing and Maintenance

Service manuals, instructions, and procedures provided by the manufacturer shall be considered in the development of a program for maintenance of equipment.

**A permanent file of instruction and maintenance manuals shall be maintained and be accessible.**

The file of manuals shall be in the custody of the engineering group responsible for the maintenance of the appliance

2012 NFPA 99, 10.5.3.1.2, 10.5.6.1.1, and 10.5.6.1.2



# K921 PCREE – Testing and Maintenance

Duplicate instruction and maintenance manuals shall be available to the user.

Any safety labels and condensed operating instructions on an appliance shall be maintained in legible condition.

**A record shall be maintained of the tests required by this chapter and associated repairs or modifications.**

2012 NFPA 99, 10.5.6.1.3, 10.5.6.1.4, and 10.5.6.2.1

# K921 PCREE – Testing and Maintenance

At a minimum, the record shall contain all of the following:

- (1) Date
- (2) Unique identification of the equipment tested
- (3) Indication of which items have met or have failed to meet the performance requirements of [10.5.6.2](#)

A log of test results and repairs shall be maintained and kept for a period of time in accordance with a health care facility's record retention policy.

2012 NFPA 99, 10.5.6.2.2, and 10.5.6.3

# K921 PCREE – Testing and Maintenance

Personnel concerned for the application or maintenance of electric appliances shall be trained on the risks associated with their use.

**The health care facilities shall provide programs of continuing education for its personnel.**

2012 NFPA 99, 10.5.8.1, and 10.5.8.1.1

# Remember! If It's Not Documented . . . It Didn't Happen!

K291 - Testing of **all** emergency lighting monthly for 30 seconds, this includes the exit discharge to the public way 2012 NFPA 101, 7.9.3

K531 – All elevator's equipped with fire fighters' emergency operations shall test this operation monthly 2012 NFPA 101, 9.4.6

Existing elevators with a travel distance of 25' or more above or below the level that best meets the requirements of rescue personnel shall have the fire fighters' emergency operations  
2012 NFPA 101, 9.4.3.2

# Emergency Preparedness - E Tags

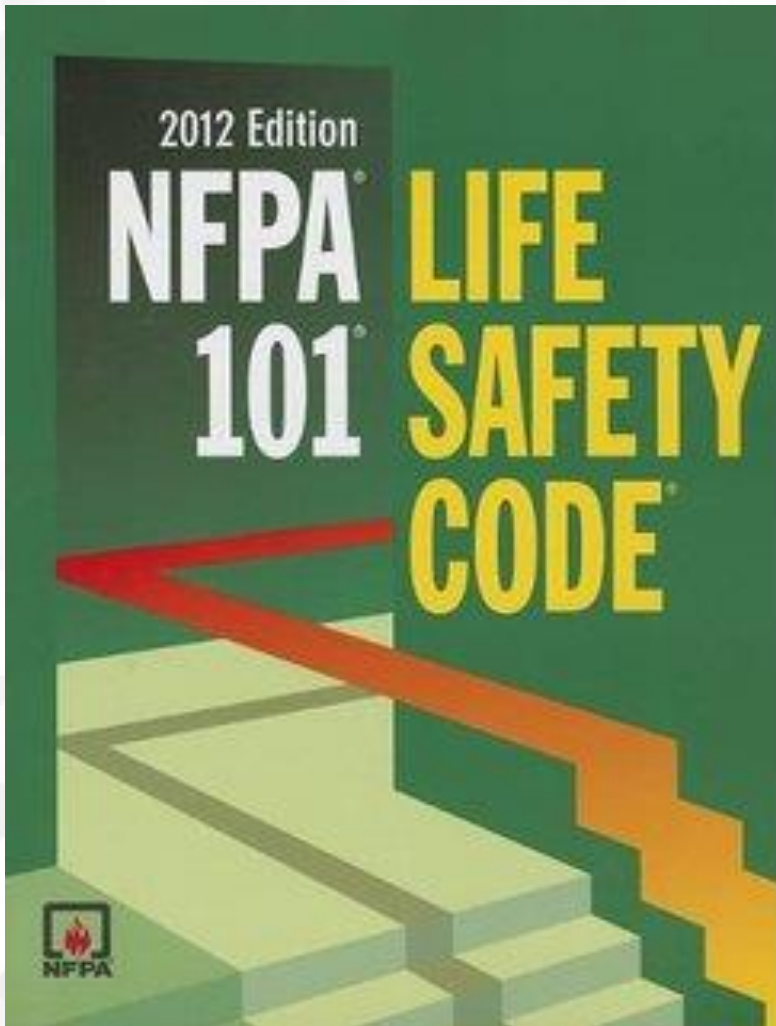
# How to be Deficiency Free

CMS has asked that the State Agency work to reduce repeat deficiencies in facilities.

How can this be accomplished?

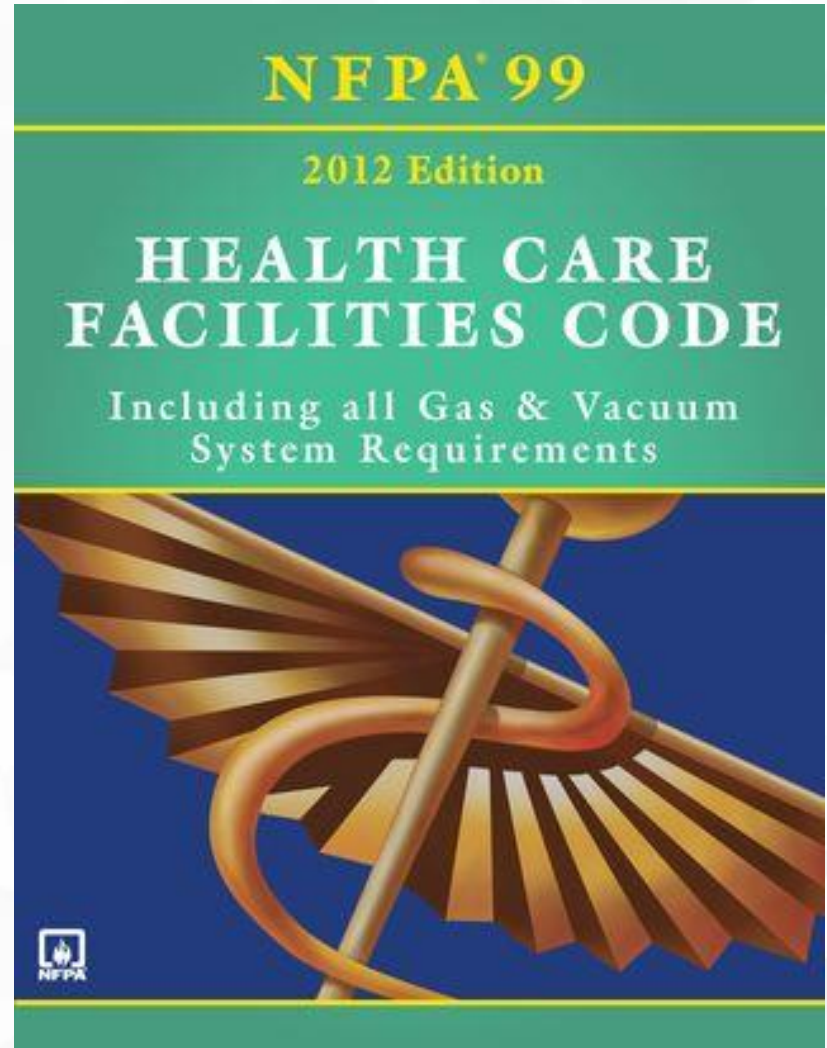
- Facility staff must be better educated, trained and must be more diligent in following through

# Essential 2012 NFPA Code



[catalog.nfpa.org](http://catalog.nfpa.org)

# Essential 2012 NFPA Code



[catalog.nfpa.org](http://catalog.nfpa.org)

10/20/2022



# NFPA Standards

[catalog.nfpa.org](http://catalog.nfpa.org)

2010 NFPA 10, Fire Extinguishers

2009 NFPA 17A, Wet Extinguishing

2011 NFPA 25, Sprinkler Testing

2010 NFPA 80, Fire Doors

2010 NFPA 110, Emergency Power

The logo for Alabama Public Health features a large blue circle in the center of the page. Inside this circle, the words "ALABAMA", "PUBLIC", and "HEALTH" are stacked vertically in a bold, white, sans-serif font. The background of the entire slide is a light gray pattern of overlapping triangles.

**ALABAMA  
PUBLIC  
HEALTH**