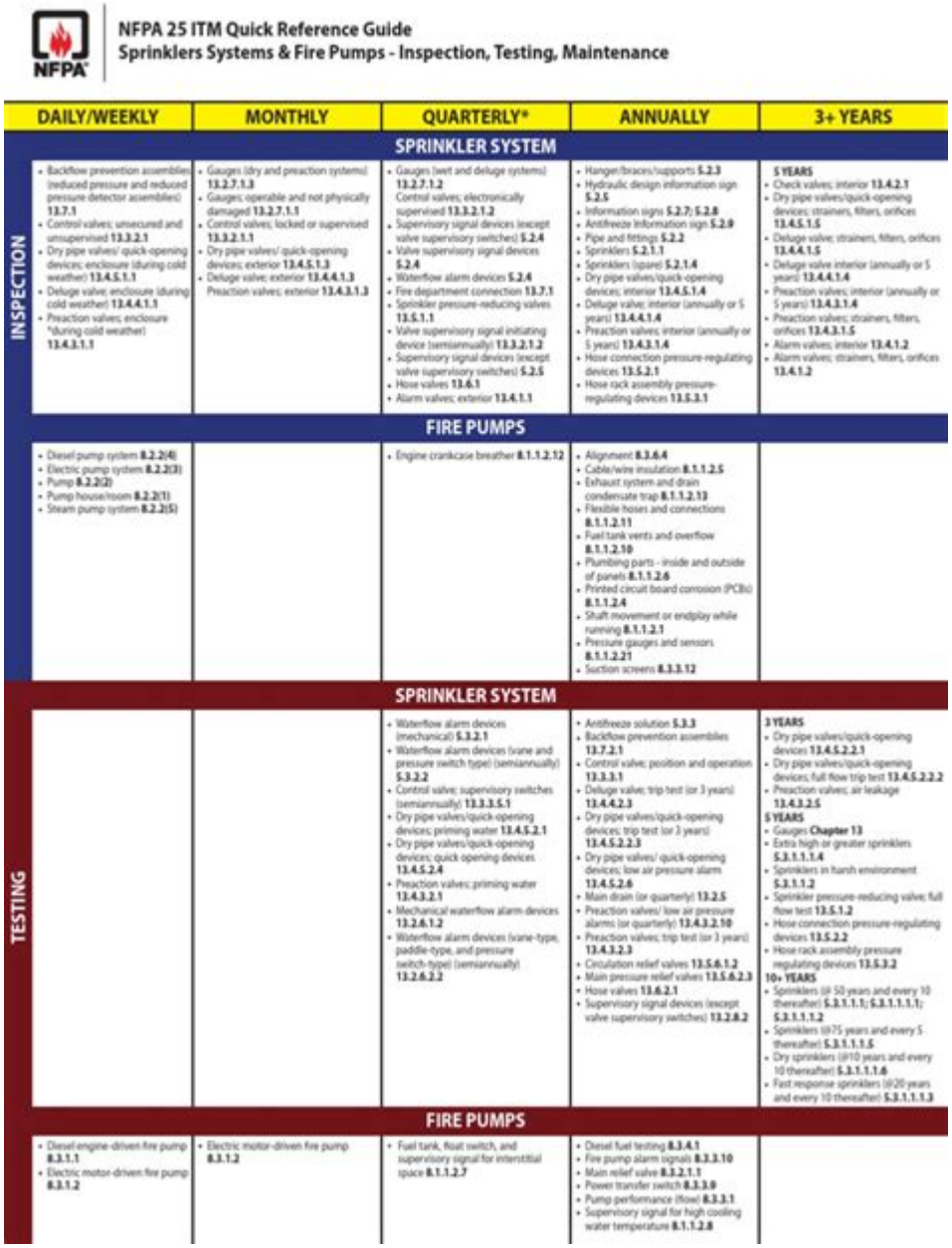
Nfpa 25 Itm Quick Reference Guide



NFPA 25 ITM Quick Reference Guide
Sprinklers Systems & Fire Pumps - Inspection, Testing, Maintenance

	DAILY/WEEKLY	MONTHLY	QUARTERLY*	ANNUALLY	3+ YEARS
INSPECTION	**SPRINKLER SYSTEM**				
	• Backflow prevention assemblies (reduced pressure and reduced pressure detector assemblies) 13.7.1 • Control valves; unsecured and unsupervised 13.3.2.1 • Dry pipe valves/ quick-opening devices; enclosure (during cold weather) 13.4.5.1.1 • Deluge valve; enclosure (during cold weather) 13.4.4.1.1 • Preaction valves; enclosure *(during cold weather) 13.4.3.1.1	• Gauges (dry and preaction systems) 13.2.7.1.3 • Gauges; operable and not physically damaged 13.2.7.1.1 • Control valves; locked or supervised 13.3.2.1.1 • Dry pipe valves/ quick-opening devices; exterior 13.4.5.1.3 • Deluge valve; exterior 13.4.4.1.3 Preaction valves; exterior 13.4.3.1.3	• Gauges (wet and deluge systems) 13.2.7.1.2 Control valves; electronically supervised 13.3.2.1.2 • Supervisory signal devices (except valve supervisory switches) 5.2.4 • Valve supervisory signal devices 5.2.4 • Waterflow alarm devices 5.2.4 • Fire department connection 13.7.1 • Sprinkler pressure-reducing valves 13.5.1.1 • Valve supervisory signal initiating device (semiannually) 13.3.2.1.2 • Supervisory signal devices (except valve supervisory switches) 5.2.5 • Hose valves 13.6.1 • Alarm valves; exterior 13.4.1.1	• Hanger/braces/supports 5.2.3 • Hydraulic design information sign 5.2.5 • Information signs 5.2.7; 5.2.8 • Antifreeze information sign 5.2.9 • Pipe and fittings 5.2.2 • Sprinklers 5.2.1.1 • Sprinklers (spare) 5.2.1.4 • Dry pipe valves/quick-opening devices; interior 13.4.5.1.4 • Deluge valve; interior (annually or 5 years) 13.4.4.1.4 • Preaction valves; interior (annually or 5 years) 13.4.3.1.4 • Hose connection pressure-regulating devices 13.5.2.1 • Hose rack assembly pressure-regulating devices 13.5.3.1	5 YEARS • Check valves; interior 13.4.2.1 • Dry pipe valves/quick-opening devices; strainers, filters, orifices 13.4.5.1.5 • Deluge valve; strainers, filters, orifices 13.4.4.1.5 • Deluge valve interior (annually or 5 years) 13.4.4.1.4 • Preaction valves; interior (annually or 5 years) 13.4.3.1.4 • Preaction valves; strainers, filters, orifices 13.4.3.1.5 • Alarm valves; interior 13.4.1.2 • Alarm valves; strainers, filters, orifices 13.4.1.2
	FIRE PUMPS				
	• Diesel pump system 8.2.2(4) • Electric pump system 8.2.2(3) • Pump 8.2.2(2) • Pump house/room 8.2.2(1) • Steam pump system 8.2.2(5)		• Engine crankcase breather 8.1.1.2.12	• Alignment 8.3.6.4 • Cable/wire insulation 8.1.1.2.5 • Exhaust system and drain condensate trap 8.1.1.2.13 • Flexible hoses and connections 8.1.1.2.11 • Fuel tank vents and overflow 8.1.1.2.10 • Plumbing parts - inside and outside of panels 8.1.1.2.6 • Printed circuit board corrosion (PCBs) 8.1.1.2.4 • Shaft movement or endplay while running 8.1.1.2.1 • Pressure gauges and sensors 8.1.1.2.21 • Suction screens 8.3.3.12	
TESTING	**SPRINKLER SYSTEM**				
			• Waterflow alarm devices (mechanical) 5.3.2.1 • Waterflow alarm devices (vane and pressure switch type) (semiannually) 5.3.2.2 • Control valve; supervisory switches (semiannually) 13.3.3.5.1 • Dry pipe valves/quick-opening devices; priming water 13.4.5.2.1 • Dry pipe valves/quick-opening devices; quick opening devices 13.4.5.2.4 • Preaction valves; priming water 13.4.3.2.1 • Mechanical waterflow alarm devices 13.2.6.1.2 • Waterflow alarm devices (vane-type, paddle-type, and pressure switch-type) (semiannually) 13.2.6.2.2	• Antifreeze solution 5.3.3 • Backflow prevention assemblies 13.7.2.1 • Control valve; position and operation 13.3.3.1 • Deluge valve; trip test (or 3 years) 13.4.4.2.3 • Dry pipe valves/quick-opening devices; trip test (or 3 years) 13.4.5.2.2.3 • Dry pipe valves/ quick-opening devices; low air pressure alarm 13.4.5.2.6 • Main drain (or quarterly) 13.2.5 • Preaction valves/ low air pressure alarms (or quarterly) 13.4.3.2.10 • Preaction valves; trip test (or 3 years) 13.4.3.2.3 • Circulation relief valves 13.5.6.1.2 • Main pressure relief valves 13.5.6.2.3 • Hose valves 13.6.2.1 • Supervisory signal devices (except valve supervisory switches) 13.2.8.2	3 YEARS • Dry pipe valves/quick-opening devices 13.4.5.2.2.1 • Dry pipe valves/quick-opening devices; full flow trip test 13.4.5.2.2.2 • Preaction valves; air leakage 13.4.3.2.5 5 YEARS • Gauges Chapter 13 • Extra high or greater sprinklers 5.3.1.1.1.4 • Sprinklers in harsh environment 5.3.1.1.2 • Sprinkler pressure-reducing valve; full flow test 13.5.1.2 • Hose connection pressure-regulating devices 13.5.2.2 • Hose rack assembly pressure regulating devices 13.5.3.2 10+ YEARS • Sprinklers (@ 50 years and every 10 thereafter) 5.3.1.1.1; 5.3.1.1.1.1; 5.3.1.1.1.2 • Sprinklers (@75 years and every 5 thereafter) 5.3.1.1.1.5 • Dry sprinklers (@10 years and every 10 thereafter) 5.3.1.1.1.6 • Fast response sprinklers (@20 years and every 10 thereafter) 5.3.1.1.1.3
	FIRE PUMPS				
	• Diesel engine-driven fire pump 8.3.1.1 • Electric motor-driven fire pump 8.3.1.2	• Electric motor-driven fire pump 8.3.1.2	• Fuel tank, float switch, and supervisory signal for interstitial space 8.1.1.2.7	• Diesel fuel testing 8.3.4.1 • Fire pump alarm signals 8.3.3.10 • Main relief valve 8.3.2.1.1 • Power transfer switch 8.3.3.9 • Pump performance (flow) 8.3.3.1 • Supervisory signal for high cooling water temperature 8.1.1.2.8	

NFPA 25 ITM Quick Reference Guide is an essential resource for professionals involved in the inspection, testing, and maintenance of water-based fire protection systems. The National Fire Protection Association (NFPA) has established guidelines to ensure that these systems operate effectively and reliably in the event of a fire. This guide serves as a streamlined reference for those responsible for maintaining compliance with these standards, ultimately helping to safeguard lives and property. In this article, we will explore the key components of NFPA 25, the importance of inspection, testing, and maintenance (ITM), as well as practical tips for utilizing the quick reference guide effectively.

Understanding NFPA 25

NFPA 25 is the standard for the inspection, testing, and maintenance of water-based fire protection systems, including automatic sprinkler systems, standpipes, and fire pumps. The purpose of NFPA 25 is to ensure that these systems are functional and ready to respond in case of a fire emergency.

Key Components of NFPA 25

1. Scope: NFPA 25 outlines the requirements for periodic inspections and testing of water-based fire protection systems.
2. Definitions: The standard provides clear definitions for terms related to fire protection, ensuring that all stakeholders have a common understanding.
3. Responsibilities: It defines the roles and responsibilities of owners, service providers, and authorities having jurisdiction (AHJs).
4. Inspection Frequency: NFPA 25 specifies the frequency of inspections, testing, and maintenance activities based on various system types and components.
5. Documentation: It emphasizes the importance of maintaining accurate records for all ITM activities to demonstrate compliance.

The Importance of Inspection, Testing, and Maintenance (ITM)

Regular ITM of fire protection systems is crucial for several reasons:

- Life Safety: Ensuring that fire protection systems function correctly protects lives during a fire emergency.
- Property Protection: Properly maintained systems can help minimize property damage in the event of a fire.
- Compliance: Adhering to NFPA 25 is often a legal requirement, and failure to comply can result in penalties.
- Insurance: Insurance companies may require proof of regular maintenance to provide coverage.
- Operational Reliability: Regular ITM helps identify and rectify issues before they become significant problems.

Utilizing the NFPA 25 ITM Quick Reference Guide

The NFPA 25 ITM Quick Reference Guide is designed to simplify the complex requirements of the standard. Here’s how to make the most of it:

1. Familiarize Yourself with the Guide

Before diving into the specifics, spend some time understanding the layout and sections of the quick reference guide. Common sections include:

- Inspection schedules

- Testing procedures
- Maintenance checklists
- Record-keeping templates

2. Develop a Comprehensive ITM Plan

Using the quick reference guide, create a detailed ITM plan that outlines the following:

- System Components: Identify all components of your fire protection systems, including sprinklers, standpipes, and pumps.
- Inspection Schedule: Refer to the guide for the required frequency of inspections and testing for each component.
- Responsibilities: Assign specific ITM tasks to qualified personnel, detailing who is responsible for each aspect of the maintenance plan.

3. Maintain Accurate Records

Documentation is a critical aspect of NFPA 25 compliance. The quick reference guide typically includes templates and checklists that you can use to keep track of:

- Inspection Dates: Record when inspections were conducted, by whom, and the results.
- Maintenance Activities: Document any maintenance performed, including repairs and replacements.
- Test Results: Keep a log of all test results to demonstrate compliance and identify trends over time.

4. Stay Updated on Changes

The NFPA periodically updates its standards. To remain compliant:

- Review Updates: Regularly check for updates to NFPA 25 and ensure your ITM plan reflects any changes.
- Training: Invest in ongoing training for personnel to keep them informed about best practices and changes in the standard.

Common Inspection and Testing Procedures

The NFPA 25 ITM Quick Reference Guide outlines various inspection and testing procedures. Some of the most common include:

1. Sprinkler System Inspections

- Visual Inspection: Check for obstructions, leaks, and proper positioning of sprinkler heads.
- Flow Tests: Conduct flow tests annually to ensure adequate water supply.

- Hydraulic Calculations: Verify that the hydraulic calculations are up to date and reflect any system modifications.

2. Standpipe System Inspections

- Hose and Valve Check: Inspect hoses for damage and ensure all valves are operational.
- Flow Testing: Perform flow tests to confirm that the standpipe system can deliver the required water flow.

3. Fire Pump Testing

- Weekly Checks: Conduct weekly checks on fire pumps to ensure they are operational.
- Annual Testing: Perform annual flow tests to validate that the pump can deliver the required pressure and flow.

4. Documentation Review

- Compliance Check: Review all documentation to ensure that it meets NFPA 25 requirements.
- Record Retention: Maintain records for a minimum of five years, as outlined in the NFPA guidelines.

Conclusion

The **NFPA 25 ITM Quick Reference Guide** is an invaluable tool for ensuring the inspection, testing, and maintenance of water-based fire protection systems are conducted effectively and in compliance with industry standards. By familiarizing yourself with the guide, developing a comprehensive ITM plan, and staying updated on changes, you can enhance the reliability of fire protection systems and contribute to the safety of lives and property. Regular inspections, thorough documentation, and proactive maintenance are key to a successful fire protection strategy. Whether you are a facility manager, fire safety officer, or contractor, leveraging the NFPA 25 ITM Quick Reference Guide will help you achieve your fire safety goals.

Frequently Asked Questions

What is NFPA 25?

NFPA 25 is the National Fire Protection Association's standard for the inspection, testing, and maintenance of water-based fire protection systems.

What does ITM stand for in the context of NFPA 25?

ITM stands for Inspection, Testing, and Maintenance, which are crucial processes to ensure the functionality and reliability of fire protection

systems.

Why is the NFPA 25 ITM Quick Reference Guide important?

The NFPA 25 ITM Quick Reference Guide provides concise and accessible information for facility managers and fire protection professionals to perform necessary inspections and maintenance efficiently.

What types of systems does NFPA 25 cover?

NFPA 25 covers various water-based fire protection systems, including sprinkler systems, standpipe systems, and fire pumps.

How often should fire protection systems be inspected according to NFPA 25?

Inspection frequencies vary by system type; for example, sprinkler systems generally require annual inspections, while certain components may require more frequent checks.

What are some key components of the NFPA 25 ITM Quick Reference Guide?

Key components include inspection checklists, testing procedures, maintenance schedules, and guidelines for documentation.

Who is responsible for performing the inspections outlined in NFPA 25?

The responsibility typically falls on qualified personnel, such as certified fire protection technicians or facilities management staff trained in fire safety.

What are the consequences of not following NFPA 25 guidelines?

Failure to comply with NFPA 25 guidelines can result in increased fire risk, potential legal liabilities, and issues with insurance coverage.

Can the NFPA 25 ITM Quick Reference Guide be used for training purposes?

Yes, it is often used as a training resource for new staff and as a refresher for seasoned professionals to ensure compliance and safety.

Where can I find the NFPA 25 ITM Quick Reference Guide?

The NFPA 25 ITM Quick Reference Guide can typically be purchased from the NFPA's official website or accessed through professional training programs.

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