



National Fire Protection Association
The authority on fire, electrical, and building safety

NFPA[®]
25

Standard for the
Inspection, Testing,
and Maintenance
of Water-Based Fire
Protection Systems

2017



NFPA 25 and the Need for Data



Session Agenda

- NFPA 25 Scope and Purpose
- How Did We Get Here?
- What Has To Change
- Next Steps for the Technical Committee

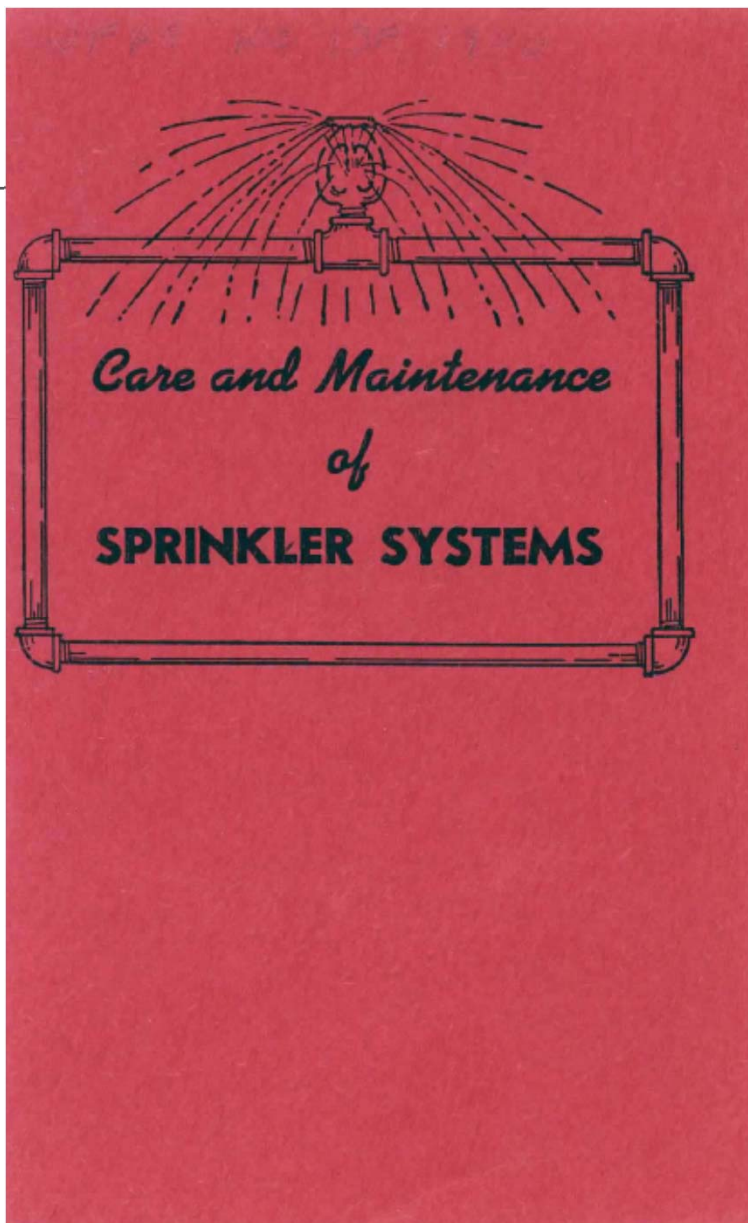


Document Scope

- **1.1 Scope.** This document establishes the minimum requirements for the periodic inspection, testing, and maintenance of water-based fire protection systems and the actions to undertake when changes in occupancy, use, process, materials, hazard, or water supply that potentially impact the performance of the water-based system are planned or identified.

ITM Frequencies

- Origins:
 - NFPA 13A
 - Manufacturers data
 - Insurance Best Practices
 - Judgement
 - Common Sense



NFPA 13A – 1940

Fire Pumps.

STEAM OR ROTARY PUMPS: *Start the pump once each week and operate until water is discharged freely from the relief valve.*



NFPA 13A - 1987

2-4.2 Periodic Operation and Testing.

2-4.2.1 The pump should be operated every week at rated speed. Inspect the condition of the pump, bearings, stuffing boxes, suction pipe strainers, and the various other details pertaining to the driver and control equipment.

- *Exception: Electric motor driven fire pumps should be tested monthly.*



NFPA 13A - 1992

- **5-3.2 Weekly Tests.** Qualified operating personnel shall be in attendance during the weekly pump operation.



Impact of the Change for Building Owner

Weekly

- 52 Activities Annually
- $\$500 * 52 = \$26,000$ USD
- $90 \text{ Min} * 52 = 78$ Hours

Monthly

- 12 Activities Annually
- $\$500 * 12 = \$6,000$ USD
- $90 \text{ min} * 12 = 18$ Hours



Global Impact



Fire Pump Field Data Collection and Analysis

Final Report

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FIRE RESEARCH

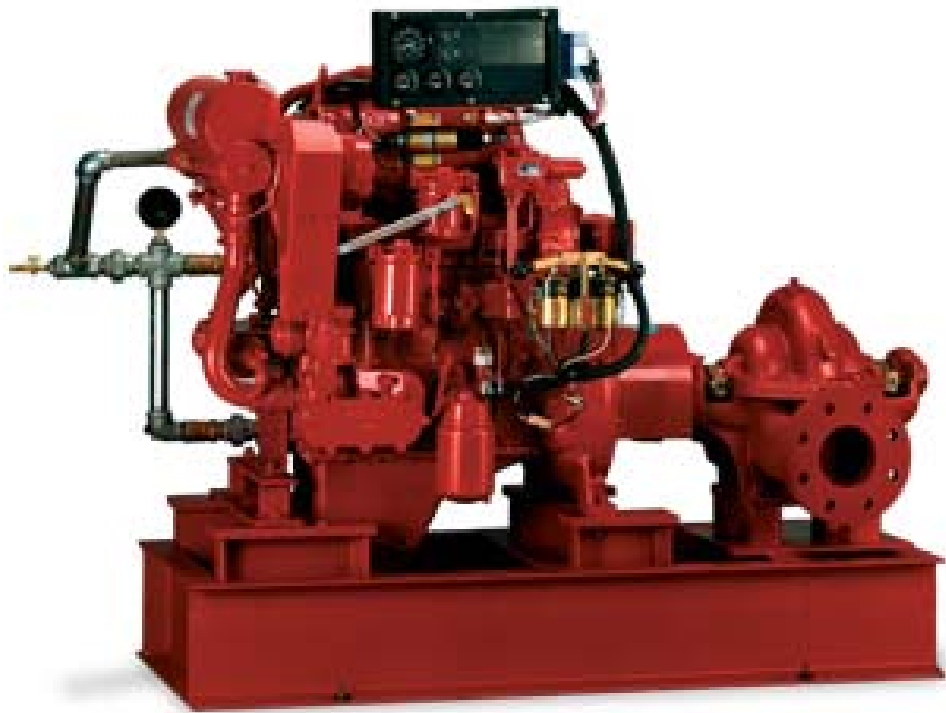
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- Where's The Data?



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Results



- Weekly Test for Diesel Pumps Remained
- Monthly Tests for Electric Pumps Except:
 - Limited Service Controllers
 - High Rise
 - Lightning Zones
 - Vertical Turbine

Why does a pump need to be 99% Reliable?

- “Wouldn’t 99.9% be better?”
 - Test Daily
- “Isn’t 90% Enough?”
 - Test Quarterly
- “Who draws the line?”
 - Owner?
 - Contractor?
 - AHJ?
 - Society?
 - Insurance?



NFPA 25 - 2020 Edition

- Risk Based Approach
 - Occupancy
 - Hazards Present
 - Make the Standard More Manageable
 - Data Driven



What do they need?



- Causation Data
- Component Failure Data
- Reliability Data
- Water Usage
- Fundamental Question of Capital



Questions & Comments?

