

Sprinkler System Testing and Maintenance

Why is it Important to Maintain Your Sprinkler System?

Your facility is equipped with an automatic fire protection system that protects both the occupants and your business. It is important that the fire protection systems are maintained to be sure it will operate when there is a fire. To help ensure the systems are working, there needs to be periodic inspection and testing of the system and associated components. You want to avoid finding out about a malfunction during an emergency event.

What Needs to Done and How Often

NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems describes the frequency of testing for each system component. These are summarized for you on the following pages and are categorized as follows:

- Wet Pipe Sprinkler Systems
- Dry Pipe Sprinkler Systems
- Common Components to All

Who Should Perform the Testing and Inspection?

NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems states that the

inspection, testing, and maintenance should be performed by a person who has developed competence through training and experience. Most companies use a qualified outside contractor for all inspection and testing or use a combination of in-house personnel and an outside contractor for completion of the work. Some states have requirements that the person conducting the annual fire pump test be certified.

How Can Hanover Risk Solutions Help?

Your Risk Solutions consultant can meet with you to explain the inspection, testing, and maintenance requirements based on the fire protection systems installed at your facility. They can discuss the options with you for helping to ensure that your systems are adequately maintained.

Wet Pipe Sprinkler Systems Inspection Testing and Maintenance

- Water Flow Alarms
 - Test vane type and pressure switch type water flow devices semiannually
 - Water motor gongs tested quarterly
- 2" Drain Test
 - Annually and after any system shut down
- System Gauges
 - Test for accuracy every 5 years (or replace)
- Alarm Check Valves
 - Interior inspection and cleaning every 5 years
- Control Valves
 - Test tamper switches semi annually
 - Operate and lubricate valve through full range of operation annually
- Sprinkler Heads
 - Standard sprinklers to be tested at 50 years and every 10 years thereafter
 - Quick response sprinklers tested after twenty years and at ten year intervals thereafter or replaced
 - Sprinkler manufactured prior to 1920 are to be replaced
- Obstruction Investigation
 - Flushing and removal of end sprinkler from a branch line—5 years
- Annual Total System Inspection
 - Building conditions, pipe and fitting condition, hangers and bracing, spare sprinkler supply, antifreeze solution (if present), fire department connection

Dry Pipe Sprinkler System Inspection Testing and Maintenance

- Water flow Alarms
 - Test vane type and pressure switch type water flow devices semiannually
 - Water motor gongs tested quarterly
- 2" Drain Test
 - Annually and after any system shut down
- System Gauges
 - Test for accuracy every 5 years (or replace)
- Dry Pipe Valve
 - Quarterly test of priming water level
 - Quarterly test of low air alarm
 - Interior inspection and cleaning of valve annually
 - Trip test annually
 - Full flow trip test every three years
 - Throttled trip test in alternate years
 - Test any low temperature devices at beginning of heating season
 - Test and maintain low point drains at beginning of heating season and as needed
- Quick Opening Devices
 - Quarterly test of Quick Opening Device
 - Rebuild or repair all orifices, strainers and filters as needed
- Control Valves
 - Test tamper switches semi annually
 - Operate and lubricate valve through full range of operation annually

- Sprinkler Heads
 - Dry sprinklers to be tested every ten years or replaced
 - Sprinkler manufactured prior to 1920 are to be replaced
- Dry Pipe System Obstruction Investigation
 - Flushing and removal of end sprinkler from a branch line—5 years
- Fire Hydrants
 - Annual test and lubrication
 - Flow test every five years
- Fire Pump
 - Diesel pump driver—Weekly start and run test for thirty minutes
 - Electric pump driver—Monthly start and run test for 10 minutes
 - Annual full flow test
 - Exercise circuit breaker and isolating switch monthly
 - Service electric driver—grease and check connections annually
 - Check pump bearings and pump shaft transmission for lubrication annually
 - Check pump shaft for excess end play annually

Common Components To All System Inspection Testing and Maintenance

- Fire Department Connections
 - Inspect quarterly—replace caps as needed
 - Lubricate and verify free operation annually
- Check Valves in City Pit
 - Interior inspection every five years
- Backflow Preventer
 - Test and maintain annually
 - Flow test to meet sprinkler system demand

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