PENNSYLVANIA LUMBERMENS MUTUAL
INSURANCE COMPANY

# SPRINKLER SYSTEM MAINTENANCE

Minimum requirements for the periodic inspection, testing, and maintenance of fire protection systems should be part of the regular scheduled preventive maintenance program for any facility equipped with a sprinkler system. The accumulation of sawdust and wood bi-products in woodworking operations can create conditions that result in the failure of protective systems.

The National Fire Protection Association has specifically addressed several areas that need to be included in the routine maintenance and clean-up operations for any woodworker. The areas that need to be addressed that relate to sawdust and wood products include maintenance of fire protection systems.

The general responsibility for the owner or occupant of a building regarding fire protection systems is to provide periodic inspection, testing and maintenance of the equipment. The maintenance for a woodworking operation includes the cleaning off of the accumulation of sawdust on the sprinkler system piping, heads, and alarm devices. Cleaning should be by brushing or vacuum method and not by blowing off the accumulation with compressed air nozzles or other devices.

Including periodic inspection and cleaning of fire protection systems will also prevent the buildup of sawdust on building systems. The buildup of sawdust and wood products can lead to an unusual fire exposure and can inhibit the effectiveness of the fire detection and suppression systems should a fire occur.

Below are the NFPA guidelines for Sprinkler System Inspection, Testing, & Maintenance.

| FREQUENCY | SYSTEM | ACTIVITY | ITEM | PURPOSE |
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| | | | | |
| DAILY | DPV | Inspection | Valve Enclosure | Assure adequate heat is maintained |
| | | | | |
| WEEKLY | All | Inspection | Control Valves (not locked or supervised) | Assure valve is open; no leakage |
| | All | Inspection | Sprinkler Heads | Check for blockage, damage |
| | DPV | Inspection | Pressure Gauges (no air press. monitor) | Assure normal pressures are maintained |
| | DPV | Inspection | Check Drip Drums for Condensation (during cold weather) | Assure water is not building up in low points |
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| MONTHLY | All | Inspection | Fire Department Connections | Check accessibility; caps in place; no leakage |
| | All | Inspection | Control Valves (locked or supervised) | Assure valve is open & locked / supervised; no leakage |
| | DPV | Inspection | Pressure Gauges (with air press.monitor) | Assure normal pressures are maintained |
| | DPV | Inspection | External Inspection of Valve | Check for physical damage, leakage |
| | WPV | Inspection | Pressure Gauges | Assure normal pressures are maintained |
| | | | | |
| QUARTERLY | All | Inspection | Alarm Devices | Check for physical damage |
| | All | Test | Flow Main Drain | Determine condition & volume of water supply; assure control valve is open |
| | All | Maintenance | Exercise Post Indicator Valves | Assure adequate mechanical operation of PIV and that valve is completely open |
| | DPV | Inspection | Dry Pipe Valve Priming Water Level | Assure priming water level is adequate |

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| | DPV | Test | Waterflow Alarm Test - use of alarm by-pass valve | Assure adequate operation of audible alarm & transmission of signal to supervising company |
| | DPV | Test | Low Air Pressure Alarm Test | Assure adequate operation of alarm when air pressure drops significantly |
| | DPV | Test | Test Quick Opening Device (QOD) | Assure adequate operation of QOD |
| | WPV | Test | Waterflow Alarm Test - use of inspector's test connection | Assure adequate operation of audible alarm & transmission of signal to supervising company |
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| SEMI-ANNUALLY | Deluge & Preaction | Test | Fire Detection System Test | Assure adequate operation of fire detection system signal which releases water into the branch lines |
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| ANNUALLY | All | Inspection | Sprinkler Piping - External Inspection | Assure no leaks, damage, corrosion, or misalignment |
| | All | Inspection | Spare Sprinklers | Assure adequate spare number of each type |
| | All | Inspection | Hangars | Assure no loose or damaged hangars |
| | All | Maintenance | Lubricate OS&Y valve stems | Assure adequate operation of valve |
| | DPV | Test/Insp. | Partial Trip Test / Inspection of Valve Interior | Assure adequate operation of dry pipe valve |
| | WPV | Inspection | Inspect Building | Assure that no portion of piping is exposed to freezing temperatures |
| | WPV | Test | Test Freezing Point of Antifreeze Solution | Assure that solution will not accidentally freeze during cold weather |
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| EVERY 3 YEARS | DPV | Test | Full Trip Test | Assure adequate operation of dry pipe valve, adequate operation of QOD (if any); & water reaches most remote point in system within 1 min. |
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| EVERY 5 YEARS | All | Inspection | Alarm Valve & Check Valve - Internal Inspection | Assure adequate operation of valve |
| | All | Test | Test Representative Sample of Sprinkler Heads with Temperature Rating of Extra High or Greater | Assure adequate operation of heads |
| | All | Test | Gauges - Test of Replace | Assure accurate gauge readings |
| | DPV | Maintenance | Internal Pipe Examination (Note 1: First exam. may be performed 15 yrs. after system placed in service) (Note 2: Exam. must be performed immed. after evidence of foreign mat'l or obstruction found) | Assure adequate flow of water through all branch lines without obstruction |
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| EVERY 50 YEARS | All | Test | Test Representative Sample of All Sprinkler Heads | Assure adequate operation of heads |