



Sprinkler Inspections: Automatic Sprinklers

No. FP-2009-9 March 3, 2009

Learning Objective: The student shall be able to identify two problems with an upright sprinkler installation.

Today's illustration identifies two problems with this upright sprinkler in an attic on a 1-inch riser nipple (also known as a "sprig up"). This damage was discovered by another company on a service call after other portions of the sprinkler system froze and broke.

The corrosion resulted from a leak between the sprinkler and pipe. Why wasn't this identified as part of the annual inspection required by the National Fire Protection Association (NFPA)[®] 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*? NFPA[®] 25 requires "Sprinklers shall be inspected from the floor level annually. . . Sprinklers installed in concealed spaces such as above suspended ceilings shall not require inspection." The purpose of these inspections is to find and correct obvious deficiencies; in this case, the sprinkler above the ceiling could not have been observed from the floor.

The second problem probably should have been corrected during the initial inspections for the sprinkler system. According to NFPA[®] 13, *Standard for the Installation of Sprinkler Systems*, the sprinkler is too close to the web of the roof truss. Should the sprinkler operate in a fire, the web would create an obstruction preventing a complete circular water discharge pattern. (See Coffee Break Training 2008-38 for an explanation of the clearance rules from noncontinuous obstructions.)

NFPA[®] 25 provides the person conducting annual sprinkler inspections some guidance on what to do if these sorts of obstructions are found during periodic checks. In a section that describes what to do about "temporary" obstructions, such as storage too close to sprinklers, NFPA[®] 25 states "other obstruction rules are impractical to enforce under this standard. However, if obstructions that might cause a concern are present, the owner is advised to have an engineering evaluation performed."

Whether you are conducting fire code enforcement or maintenance inspections, if you discover potential problems with a fire protection system, you should refer them to the owner or tenant to have them corrected.

For additional information, refer to NFPA[®] 25, Chapter 5 and NFPA[®] 13, Chapter 8.

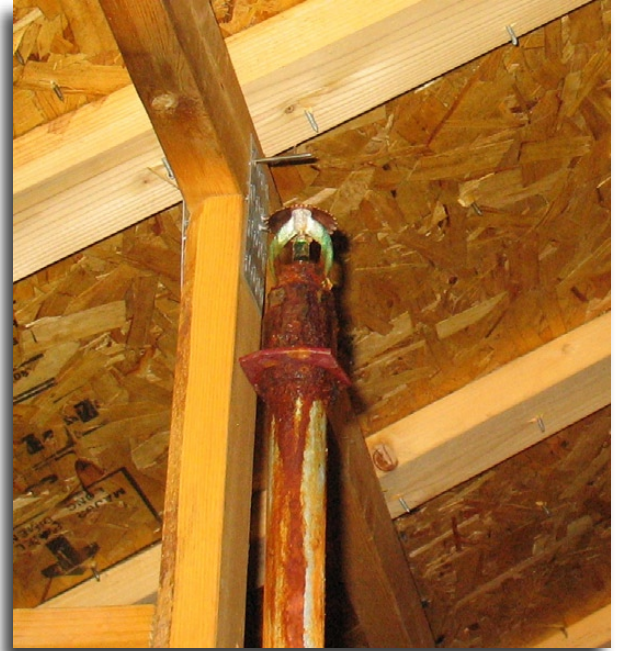


Photo courtesy of Freedom Fire Protection, Longmont, Colorado. This corroded sprinkler was one part of a larger system failure.

