



Coffee Break Training - Fire Protection Series

Automatic Sprinklers: In-Service Recalled Fire Sprinklers

No. FP-2014-40 October 7, 2014

Learning Objective: The student will be able to describe the inspection requirements for automatic fire sprinklers.

More than a dozen years ago, the fire sprinkler industry and code officials recognized a problem in the production of various fire sprinklers that were outfitted with O-ring seals. Corrosion and other contaminants could prevent the sprinklers from operating when subjected to heat. A nationwide recall program was launched to remove and replace more than 35 million faulty sprinklers. (See Coffee Break Training FP-2007-31.)

As seen in this photograph, the recall program did not reach all of its intended customers, and many of the recalled sprinklers remain in their original installations. Meanwhile, the voluntary recall and replacement program has ended, and lives and property continue to be at risk where these sprinklers are installed.

National Fire Protection Association (NFPA) 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems* requires regular inspections of fire protection systems by qualified personnel. According to NFPA 25, sprinklers are to be inspected annually from the floor level. This means that inspection personnel are required not to use ladders, stairs or other lifting apparatus, so sprinklers in high-ceiling buildings may be hard to see.

The sprinkler in this photograph is in a hotel room, less than 10 feet (3 meters) from the floor, where it is highly visible. An inspector who is fulfilling the NFPA 25 requirements should have no problem identifying the corrosion. The key issue is for the code official to ensure that the inspections are being done.

NFPA 25 also requires that sprinklers show neither signs of leakage nor corrosion, foreign materials, paint or physical damage. Sprinklers must also be installed in the correct orientation (e.g., upright, pendent or sidewall). Any sprinkler that shows signs of those conditions, or loss of fluid in the glass bulb heat-responsive element, should be replaced.

For more information, consider enrolling in the National Fire Academy (NFA) course “Water-based Fire Protection System Plans Review” (R/N0137). Information and applications can be obtained at <http://apps.usfa.fema.gov/nfacourses/catalog/details/10542>. The course is available at the NFA in Emmitsburg, Maryland, or through your state fire service training agency.



The corrosion around the cap of this recalled Central ELO-LH wet sprinkler increases the likelihood that it will not operate when needed. (Photo/Byron Blake)



Eligible for Continuing Education Units (CEUs)
at www.usfa.fema.gov/nfaonline

For archived downloads, go to:

www.usfa.fema.gov/nfa/coffee-break/