

U.S. Fire Administration / National Fire Academy

*Coffee Break Training***Topic: Sprinkler Testing**

Learning objective: The student shall be able to list the frequency at which automatic sprinklers should be tested.

Automatic sprinkler systems are highly reliable when they are maintained properly. An important part of the ongoing maintenance is regular sprinkler testing to ensure the devices will work as they were intended originally. As sprinkler systems age, a portion of the sprinklers are required to be taken out of the system and be submitted to a recognized testing laboratory for field service testing.

The following table summarizes the testing requirements:

Sprinklers That Are	Required Action
Manufactured before 1920.	All sprinklers must be replaced.
In service for 75 years.	Replaced or representative samples from one or more sample areas are tested. Test procedures repeated at 5-year intervals.
In service 50 or more years or, in service 20 years and have fast response elements, including residential sprinklers.	Replaced or representative samples sent for testing. Subsequent testing required at 10-year intervals.
325 °F (163 °C) or greater solder-type elements that are exposed to semi-continuous to continuous maximum allowable ambient temperature conditions.	Tested at 5-year intervals.
Dry sprinklers in service for 10 years.	Tested or replaced. Retested at 10-year intervals.
Exposed to harsh environments including corrosive atmospheres and corrosive water supplies.	Replaced or representative samples tested on a 5-year basis.



A representative sample for testing is at least four sprinklers, or 1 percent of the number of sprinklers per individual sprinkler sample, whichever is greater. Where one sprinkler within a representative sample fails to meet the test requirement, NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, requires that all sprinklers represented by that sample shall be replaced.

For additional information, refer to *International Fire Code*[®], Chapter 9; NFPA 1, *Uniform Fire Code*[™], Chapter 13; or NFPA 25, Chapter 5.