



QUICK RESPONSE

*Saving life and property through effective licensing, plan review,
and inspection of fire protection systems.*

January 2012

Fire Sprinklers – Service Period

Fire sprinklers have proven to be extremely reliable, long-lasting devices. If no fire incident occurs, fire sprinklers may sit idle for years. As a result of this idleness, the operation of the sprinkler itself cannot be verified without periodic testing. This testing is needed to identify potential problems that would otherwise go unnoticed.

After a specific **service period**, sprinklers shall be replaced or a representative sample of sprinklers shall be removed and sent to an approved testing laboratory for evaluation. The test frequency varies based on the type and use of the sprinklers.

- Sprinklers in service for 50 years shall be replaced or a representative sample tested. Test procedures shall then be repeated at 10-year intervals.
- Sprinklers in service for 75 years shall be replaced or a representative sample tested. Test procedures shall then be repeated at 5-year intervals.
- Sprinklers with fast-response elements in service for 20 years shall be replaced or a representative sample tested. Test procedures shall then be repeated at 10-year intervals.
- The failure rate of dry sprinklers in service for 10 years is approximately 50%. As such, dry sprinklers in service for 10 years shall be replaced or a representative sample tested. Test procedures shall then be repeated at 10-year intervals.
- Due to the phenomenon known as solder migration, solder-type sprinklers with an extra high temperature classification (325°F) or greater, exposed to high temperature conditions, shall be tested at 5-year intervals.
- Fire sprinklers subject to harsh environments shall be replaced or a representative sample tested at 5-year intervals. Some examples of these environments are, corrosive atmospheres, exposed to outside weather, cold storage areas (including walk-in refrigerators and freezers).
- Sprinklers manufactured prior to 1920 shall be replaced.



The representative sample of sprinklers shall be the greater of a minimum of 4 sprinklers or 1% of the number of sprinklers per individual sprinkler sample. For example, if a system contains 500 sprinklers (400 upright and 100 pendent), a total of 8 sprinklers shall be removed for testing.

- 400 uprights x 1% = 4
- 100 pendants x 1% = 1 (but not less than 4, therefore 4 pendants)
- 4 pendent + 4 upright = 8 total.

The term “individual sprinkler sample” pertains to the style of the sprinkler such as upright, pendent, etc.

Where one sprinkler within a representative sample fails to meet the test requirement, all sprinklers represented by that sample shall be replaced.

Quick Response is presented monthly by the
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