



Replacement / Calibration of Automatic Fire Sprinkler Gauges

The life expectancy of a pressure gauge is generally 10 to 15 years. Since many of a fire sprinkler system tests and inspections rely on the accuracy of the system's pressure gauge(s), they shall be periodically tested or replaced

Purpose

To outline the requirements of National Fire Protection Association – Chapter 25 - Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems as it relates to the replacement of calibration of gauges of automatic fire sprinkler systems.

Applicable Codes & Standards

2020 Fire Code of New York State – Section 901.6

National Fire Protection Association – Chapter 25 - Section 13.2.7.2 / 13.2.7.3. - Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems (2017 edition).

Testing / Replacement Requirements

Gauges shall be replaced every 5 years or tested every 5 years by comparison with a calibrated gauge.

Gauges not accurate to within 3 percent of the full scale shall be recalibrated or replaced.

Understanding the 3% Recalibration

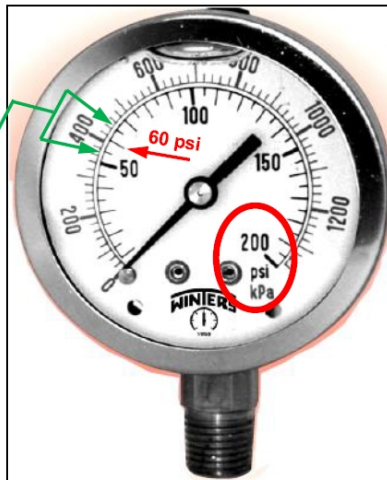
For example, the full scale of the pictured gauge is 200 psi and is installed on a sprinkler system with a normal pressure of 60 psi.

The pictured gauge on a system with 60 psi normal press is permitted to read from 54 psi to 66 psi.

$$200 \text{ psi gauge} \pm 3\% = 200 \times 0.03 = 6 \text{ psi}$$

$$\text{Normal pressure} = 60 \text{ psi} + 6 \text{ psi} = 66 \text{ psi}$$

$$\text{Normal pressure} = 60 \text{ psi} - 6 \text{ psi} = 54 \text{ psi}$$



"Many of the tests prescribed in NFPA 25 rely on the accuracy of pressure gauges. It is not the intent of 5.3.2 to require that each and every gauge be individually calibrated. "

Each and every gauge on a system does not have to be tested for accuracy or calibrated. Comparing the reading of the tested or calibrated gauge to other gauges on the sprinkler system is permissible. For example, pressure gauges on systems that are installed in similar positions and elevations (e.g. on an adjacent riser) that show similar readings are acceptable.

Gauge Marking

Gauges shall be permanently on the back side of the gauge be marked with a ½” label tape by label machine detailing the month and year of installation or replacement. No marking of any kind on the front of the gauge or any other hand markings or etching shall not be acceptable.

FRONT OF GAUGE



BACK OF GAUGE



NOT ACCEPTABLE

