

U.S. Fire Administration / National Fire Academy

*Coffee Break Training***Topic: Inspecting Sprinkler Alarm Valves**

Learning objective: The student shall be able to identify the correct “ready” position for alarm check sprinkler alarm control valves.

Look closely at the photograph, and you’ll see where the sprinkler service technician left this wet-pipe sprinkler system in a condition where a waterflow alarm could not be transmitted.

The plumbing arrangement in the picture, called “trim,” is connected to a wet-pipe alarm check valve. The small diameter pipe allows water to flow automatically from the alarm check valve to the black retard chamber before contacting the water pressure flow alarm that is mounted on the top of the retard chamber. The trim also provides a means to manually test the water flow alarm.



The quarter-turn alarm line valves have been left in the “out-of-service” position on this wet-pipe alarm check valve with retard chamber.

The yellow quarter turn valve on the left is the “alarm shutoff” valve; the one on the right is the “alarm test” valve. According to the sprinkler manufacturer, the alarm shutoff valve normally should be in the “open” position, and the alarm test valve normally should be in the “closed” position: entirely opposite of what is pictured here. (The vertical pipe between the two valves is the retard chamber drain.)

The result of this configuration is that if one or more sprinklers open due to a fire or accident, water cannot reach the retard chamber and pressure switch on top of it. Water will flow undetected from the sprinkler system.

Note also that these valves should be equipped with permanent signs indicating their function.

For additional information, refer to NFPA 1, *Uniform Fire Code*[™], Chapter 13; *International Fire Code*[®], Chapter 9; or NFPA 13, *Standard for the Installation of Sprinkler Systems*, Chapters 7 and 8.

Also, visit one or more automatic sprinkler company manufacturer’s Web sites, and you can download drawing files that explain the correct position for valves, gauges, and related equipment.