

U.S. Fire Administration / National Fire Academy

Coffee Break Training

Topic: Inspector's Test Outlet

Learning objective: The student shall be able to explain the requirements for the discharge orifice size for an alarm test (inspector's test) outlet.

Wet and dry pipe sprinkler systems require an alarm test device (commonly called the "inspector's test") to verify that the water flow alarm is operational. The inspector's test connection can be located anywhere downstream of the main control valve on a wet pipe system, and must be located on the highest, most remote branch line of a dry pipe system.

The inspector's test is intended to simulate the flow of a single sprinkler. Often, the sprinkler installer will insert a broken sprinkler in the discharge orifice (see illustration). On a wet pipe system, the discharge orifice must be the same size as the orifice of the smallest sprinkler on the system. On a dry pipe system, it must be of a type installed on the particular system.

Why is this important? If the sprinkler system cannot meet the alarm test performance requirements of sounding an alarm within 5 minutes or discharging water within 1 minute (for large dry systems), fitters may install larger orifice sprinklers in the discharge outlet to reduce friction loss and the time it takes to operate the alarm or show water.



Fire inspectors should always verify that the correct size orifice is installed in the alarm test device discharge outlet.

For additional information, refer to NFPA 13, *Installation of Sprinkler Systems*.