



DETECT-A-FIRE® Test Procedures

03.12.12

The Fenwal DETECT-A-FIRE is a repeatable device with field proven reliability. Properly installed and applied, the DETECT-A-FIRE offers reliable, economical performance. Nonetheless, the Fenwal DETECT-A-FIRE units should be periodically checked for proper operation.

Visual Inspection:

The recommended maintenance procedure would be to perform a visual inspection in accordance with NFPA 72 guidelines. During the visual inspection, verify that the sensing shell is free of dents, dings or build up of foreign matter of any kind. If the shell is dented or shows signs of any physical damage, the unit should be replaced immediately. If the shell has been painted, the unit should be replaced. If a build up of dust has accumulated on the unit, the unit may be cleaned with a vacuum or soft dry cloth. Care should be used not to damage the unit in any way.

Operational Verification:

Disconnect the unit from system and apply heat evenly to the complete sensing shell from a source such as a heat gun or hair dryer. The heated air temperature must be above the alarm set point temperature of the unit. Depending on the model type, the internal contacts will either make or break the circuit. This can be verified with a standard OHMmeter. Remove the heat immediately after activation.

Functional Test:

When used with automatic fire extinguishing systems first disconnect the initiator/solenoid leads from the panel and connect a 24 VDC bulb to initiator terminals in the control unit. Heat the unit with a heat gun, hair dryer or heat lamp. When the bulb in the control unit changes state, remove heat source and allow the unit to cool. Reset control unit. Test lamp must change state and stay changed after system is reset. Do not reconnect initiator/ solenoid leads until all D-A-F units have cooled below set point as indicated by test lamp. When DETECT-A-FIRE units are used in other types of systems, disconnect them from the system; connect a 24 VDC lamp and power source in series with the units and test with heat source as above. Make sure that contacts have reset to normal condition before reconnecting to system circuit.

Calibration Verification:

A special calibration test kit is required to accurately record the temperature setting of the DETECT-A-FIRE. Please contact technical support at 508-881-2000 for information on suitable test kits.

WARNINGS:

1 DO NOT overshoot the set point of the unit by more than 100°F (55°C), this could result in a shift of the set point temperature.

2 DO NOT contact the sensing shell with heating device such as soldering iron or blowtorch as this will damage the unit and cause in a shift of the set point temperature.

3 IT IS ABSOLUTELY ESSENTIAL that the deluge systems be disengaged prior to any tests.

4 The DETECT-A-FIRE units are hermetically sealed and factory set, employing standard aluminum test blocks at the temperatures listed in the datasheet. A test kit with an aluminum block is required as it simulates factory test equipment. Heat transfer mediums such as liquid and air, or test equipment such as air, liquid or sand baths are not recommended and should not be used for testing purposes.

5 The calibration verification procedures pertain only to the FENWAL DETECT-A-FIRE Vertical (Probe) type, models 2712X-XX and 2802X-X. Horizontal type models, 2702X-X must be verified at the factory.

6 While the DETECT-A-FIRE is a repeatable device, replacement is recommended should the unit be subjected to the intense heat of a fire.