

Cautions, Warnings, and Regulatory Information



DO NOT INSTALL ANY AUTOCALL™ PRODUCT THAT APPEARS DAMAGED Upon unpacking your Autocall product, inspect the contents of the carton for shipping damage. If damage is apparent, immediately file a claim with the carrier and notify an authorized Autocall product supplier.



ELECTRICAL HAZARD Disconnect electrical field power when making any internal adjustments or repairs. All repairs should be performed by a representative or an authorized agent of your local Autocall product supplier.



STATIC HAZARD Static electricity can damage components. Handle as follows:

- Ground yourself before opening or installing components.
- Prior to installation, keep components wrapped in anti-static material at all times.



RADIO FREQUENCY ENERGY This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area cause interference in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.



EYE SAFETY HAZARD Under certain fiber optic application conditions, the optical output of this device may exceed eye safety limits. Do not use magnification (such as a microscope or other focusing equipment) when viewing the output of this device.



Introduction

This publication describes the steps and equipment used during the maintenance and testing of the CO Base smoke sensors.

CO Base Maintenance and Testing

Maintenance of the CO sensor

The CO Sensor is not as susceptible to dirt as photo or ion sensors and does not compensate for a loss of sensitivity over the period of its lifetime. The two operations to inform a qualified/trained service person that a CO sensor has reached its end of life are as follows:

- The FACP panel generates an End of Life trouble to notify the user that a replacement sensor is required.
- Manual standard maintenance testing is required by a qualified/trained service person to make sure that the device is fully operational.

End of Life Service:

The end of life of a CO Sensor is based on the manufacture date of the device, not the installation date. The FACP panel daily checks each IDNet CO combination sensor for the End of Life trouble expiration date. The FACP panel generates the following status report based on the condition of the CO Sensor:

- **None:** CO Sensor has not reached the expiration date.
- **Almost Expired 6M:** CO Sensor is within 6 months of expiration date.
- **Almost Expired 12M:** CO Sensor is within 12 months of expiration date.
- **Expired (End of Life):** CO Sensor's date has expired.

To clear the trouble, a new CRS with a valid date must be installed, and a hardware reset of the FACP panel must be performed.

Note: For the panel to annunciate these warnings, you must enable the logging of the **Almost Expired** trouble, with the exception being the **Expired** trouble condition which does not require any activation.

Standard Maintenance

To verify that the sensors are operating correctly, standard maintenance of the CO sensors is required. The standard maintenance process is as follows:

- The FACP panel is put into the service test mode using either the diagnostic function menu item on the front panel or the system diagnostic computer port command.
- A trouble shall be displayed at the panel to indicate that the panel is in the Device Test Mode.
- A tester shall introduce CO gas, heat and smoke simultaneously into the detector.
- The device LED on the base shall turn ON steady if any but not all of the sensors on the device cross an alarm threshold.
- The device LED on the base shall slow flash if all sensors cross an alarm threshold.
- The appropriate action based on the point type of the CO sensor shall be taken at the panel.
- Device Test Mode shall also be entered if faster response time is needed during Walktest.

Note: There is a 20 device LED maximum that can be ON/Flashed at any given time. This limit applies during testing just as it does during alarm operation. A panel reset is suggested before this limit is reached during testing so that the LED will be able to be used as an indication of a successful test.

CO Sensor Testing Flowcharts

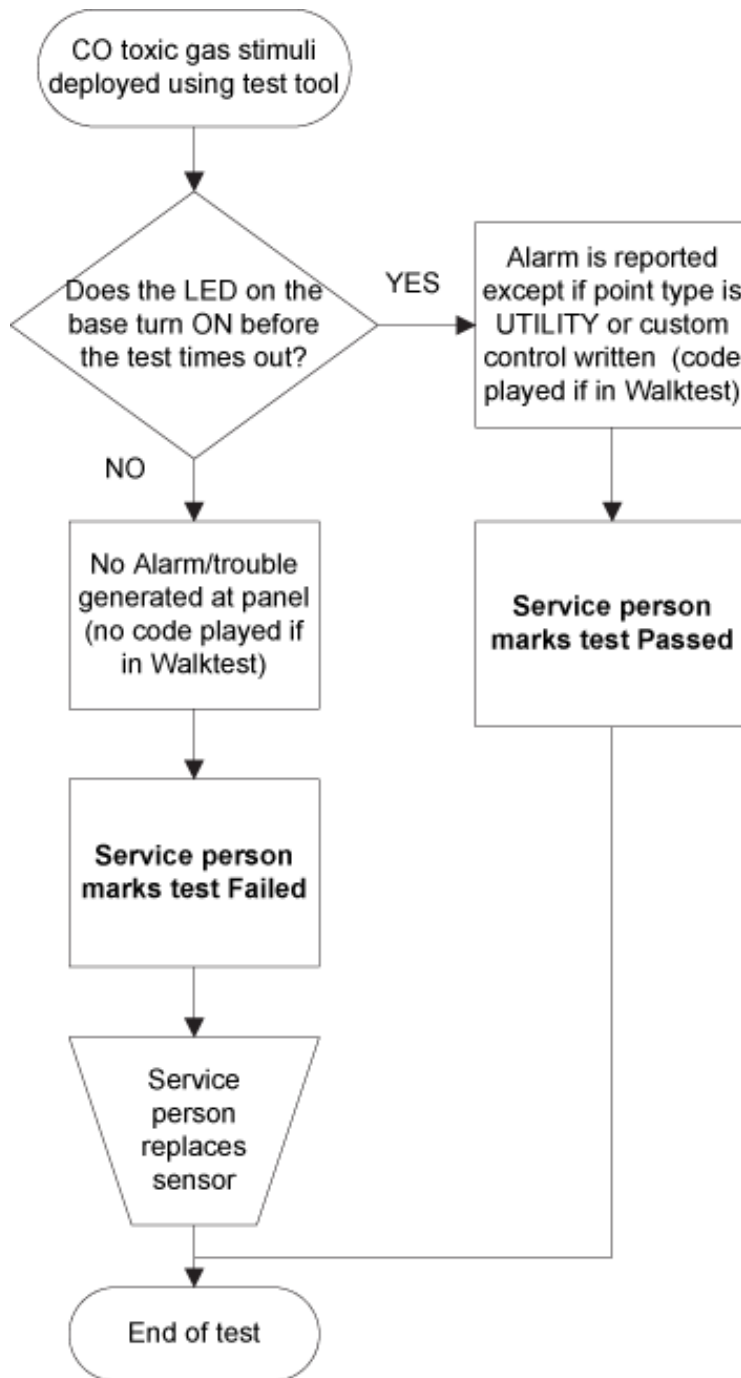


Figure 1: Testing a Single Co Sensor

Note: The following describes the LED states:

- LED OFF - The sensor has not exceeded its threshold
- LED ON - Sensor has exceeded its threshold
- LED FLASHING - This state is not seen when only a single sensor is being tested

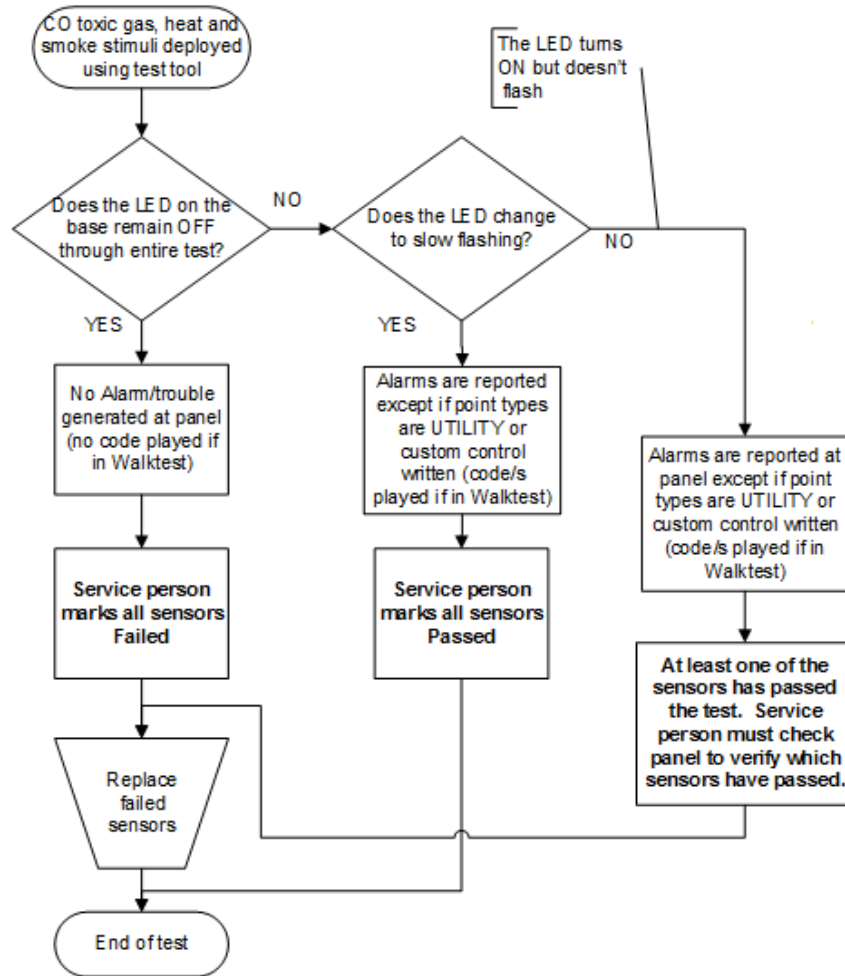


Figure 2: Simultaneous Testing of Multiple Sensor Technologies

Note: The following describes the LED states:

- LED OFF - No sensors have exceeded their thresholds
- LED ON -At least one sensor exceeded its threshold
- LED SLOW FLASHING: All sensors for this device have exceeded their thresholds (Note: This could be 2 or 3 sensors depending on what type of CO combination device is configured)

Slow flashing will only be performed when in Service Test mode.

Note: The LED on the base may turn ON prior to slow flashing depending on when the individual sensors alarm. Only the last LED requested to flash will slow flash. All others will turn to steady ON. Flashing of the LED will only be performed when in Service Test Mode.

During walktest, a reset timer is activated so that the LED is reset to the OFF state without needing a reset at the panel. This reset is user programmable and can be as short as 15 seconds long. This automatic reset may cause the LED on the base to turn OFF before the test is complete. For example, it's possible that depending on the test tool, the LED (if all sensors are good) could turn ON then reset to OFF, turn ON then reset to OFF then finally slow flash then reset to OFF.

Test Equipment Available

- Testfire 2000-024 – Smoke, Heat and CO Detector Tester.
- Testfire 2001-024 – Smoke, Heat and CO Detector Test Kit (with tester baton).
- TS3-024 Smoke capsule, for use with the Testfire Smoke, Heat and CO Detector Tester.
- TC3-024 CO capsule, for use with the Testfire Smoke, Heat and CO Detector Tester.