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## **INSTRUCTIONS FOR CONTINUED AIRWORTHINESS**

### **CARBON MONOXIDE DETECTOR MODEL 454 INSTALLATION**

### RECORD OF REVISIONS

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## 1. INTRODUCTION

This document presents the Instructions for Continued Airworthiness (ICA) for the Model 454 series Carbon Monoxide Detector installation in aircraft when the Carbon Monoxide Detector is installed.

### 1.1 Applicable Documents

Carbon Monoxide Detector Model 454 Owner's Manual 454-201, and installation drawing 454-202.

The operator should place installation manual and this ICA in an appropriate location for easy access.

### 1.2 Scope

The scope of this document is limited to information, procedures, requirements, and limitations for Instructions for Continued Airworthiness.

### 1.3 Applicability

These Instructions for Continued Airworthiness are applicable only to the CO Guardian Model 454-201-\*\*\* CO Detector installed in aircraft.

## 2. DESCRIPTION

The Carbon Monoxide Detector indicator installation consists of one Model 454-201-\*\*\* CO Detector, one dedicated power circuit breaker, and one optional remote indicating light. The Carbon Monoxide Detector is a stand-alone system or can be interfaced to any existing aircraft's MFD (multi function display) system.

The CO Detector continuously senses the concentration of carbon monoxide (CO) in the cockpit installation area and provides an aural and visual alarm within 5 minutes or less whenever the carbon monoxide level reaches 50 parts per million (PPM) by volume or above. The warning time is shortened at higher levels of CO concentrations and becomes approximately instant should the carbon monoxide level reach 400 parts per million by volume (PPM) or above. The unit has a built in one-minute delay at startup for the CO sensor to stabilize before it will detect CO.

Model 454 Carbon Monoxide Detector is designed to be installed along with model 455-101-003, and enables the occupants of the aircraft to monitor their physiological condition using a pulse Oximeter installed in the cockpit's instrument panel measuring SPO2 (oxygen saturation percentage in blood) and hearth rate.

### 3. DOCUMENT CHANGE CONTROL

Changes to this document will be uploaded on the website ([www.coguardian.com](http://www.coguardian.com)) for owners of the Model 454 CO Detector series within 10 days after the revision is approved. Changes to this document will be indicated by a revision change in the header, vertical lines adjacent to the change, in the Record of Revisions, and in the List of Affected Pages.

### 4. SERVICE INFORMATION

No servicing of the CO Detector is required.

### 5. MAINTENANCE INSTRUCTIONS

The carbon monoxide detector and associated equipment consist of certain parts, which do not require periodic scheduled servicing or periodic scheduled preventive maintenance. At every power up the system will go through a self-diagnostic check. The self-test checks for functionality of critical components such as the CO sensor, temperature sensor, pressure sensor, and integrity of the system and remote display will remain off if everything working properly. The RS-232 MFD will show no CO on the CO detector page (if integrated). The unit has a built-in one-minute delay at startup for the CO sensor to stabilize before it will detect CO.

The CO Detector, the power circuit breaker, the interconnect wiring, and the CO Detector mating connector shall be included in general visual inspections for system integrity, security, corrosion and chaffing.

#### **NOTE:**

The unit must be returned to the manufacturer for overhaul every 5 years for sensor replacement and recalibration.

**NO FIELD SERVICE OR OVEHAUL IS AUTHORIZED.**

### 6. TROUBLESHOOTING INFORMATION

Return the unit to CO Guardian for repair or replacement if during Self-Test of the Model 454 unit, the remote alert light, if installed, continues to blink at a rate of once each four (4) seconds. If integrated to an MFD, the unit will show "CO Detector Failure" or "Unable to communicate".

No service or repair can be performed in the field.

## **7. REMOVALS AND REPLACEMENT INFORMATION**

Reference Carbon Monoxide Detector Model 454 Owner's Manual 454-201 and installation drawing 454-202, for installation and removal information.

## **8. DIAGRAMS**

Reference document # 454-202, for installation diagrams.

## **9. SPECIAL INSPECTION REQUIREMENTS**

No applicable

## **10. APPLICATION OF PROTECTIVE TREATMENTS**

Not applicable

## **11. DATA**

### **11.1 Electrical Loads**

Nominal -- 1 watt

## **12. RECOMMENDED OVERHAUL PERIODS**

To maintain airworthiness status of the Model 454 Carbon Monoxide Detector indicator installation, it is mandatory that the unit be returned to CO Guardian for CO sensor replacement and recalibration every five (5) years.

### 13. AIRWORTHINESS LIMITATION SECTION

#### NOTE

**The Airworthiness Limitations section is FAA approved and specifies maintenance required under §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been approved.**

**The conditions and limitations for TSO approval of this article are minimum performance standards. Those installing this article, on or in a specific type or class of aircraft, must determine that the aircraft installation conditions are within the TSO Standards. TSO articles must have a separate approval for installation in an aircraft. The article may be installed only according to 14 CFR part 43 or the applicable airworthiness requirements.**

To maintain airworthiness status of the Model 454 Carbon Monoxide Detector indicator installation, it is mandatory that the unit be returned to CO Guardian for CO sensor replacement and recalibration every five (5) years.

Because of the sensor calibration and special gases required for testing, if any discrepancies are noted with the unit during installation or during the five (5) year operational life cycle, the unit shall be returned to CO Guardian for repair or replacement.

Return defective and end of service life units to:

CO Guardian, LLC  
1951 E. Airport Drive  
Tucson, Arizona 85756  
www.coguardian.com  
1-800-274-8451

### 14. REVISION

Should any holder of this ICA find a need for a revision to this ICA they are requested to forward a request for change to CO Guardian. The request should contain a clear explanation of the reason for change.

Co Guardian will coordinate all valid changes with the FAA and obtain approval prior to providing ICA changes to registered owners of the Model 454 CO Detector installations.