

CO Guardian LLC
1951 E. Airport Dr.
Tucson, AZ 85706

Document NO. 01-2510-03

**FAA APPROVED
AIRPLANE FLIGHT MANUAL SUPPLEMENT**

to the

CESSNA 172R AND 172S

**PILOT'S OPERATING HANDBOOK AND FAA
APPROVED AIRPLANE FLIGHT MANUAL**

AERO 452 CO DETECTOR

STC NO. SA01428LA

Airplane S/N 17274572 Airplane Reg. No. N52633

This supplement is applicable to Cessna Model 172R airplanes, Serial Numbers 17280001 and subsequent; and Cessna Model 172S airplanes, Serial Numbers 172S8001 and subsequent.

This supplement must be attached to the Pilot's Operating Handbook and FAA Airplane Flight Manual (POH/AFM), Cessna 172R P/N 17SRHUS00 or POH/AFM Cessna 172S P/N 172SPHUS00, or later FAA Approved revisions, when the airplane is modified by the installation of a CO Guardian Aero 452 Carbon Monoxide Detector in accordance with STC No: SA01428LA.

The information contained herein supplements or supersedes the basic manual only in those areas listed herein. For limitations, procedures, and performance information not contained in this appendix, consult the basic Airplane Flight Manual.

FAA Approved 

Manager, Flight Test Branch, ANM-160L
Federal Aviation Administration
Los Angeles Aircraft Certification Office
Transport Airplane Directorate

DATE January 10, 2003

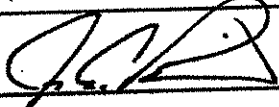
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LOG OF REVISIONS

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IR	1 To 6	01/10/03	Installation of the Aero 452-101-004	 Mgr., Flight Test Branch, ANM-160L Los Angeles Aircraft Cert. Office Federal Aviation Administration Transport Airplane Directorate Date <u>1/10/03</u>

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Section 1. GENERAL INTRODUCTION

The CO Guardian 452-101-004 Carbon Monoxide Detector is designed to detect, measure, and provide both a visual and aural alert, to the pilot of piston engine type airplane, before the level of carbon monoxide (CO) reaches a critical level.

The installation consists of a single carbon monoxide detector indicator with 28V DC power being the interface to the airplane. The airplane supplied power and airplane wiring is protected by a resettable, trip free, two-ampere type circuit breaker labeled "CO Detector". The Carbon Monoxide Detector is installed in the existing airplane instrument panel within view and reach of the pilot.

The CO Detector unit contains a self-test/alert/mute button labeled "TEST/RESET", a Status light LED (green) labeled "STATUS", an alert light LED (amber) labeled "ALERT", and an aural caution (buzzer). In addition, a remote (amber) CO ALERT light is installed. The carbon monoxide alert level is calibrated to provide both an aural and visual alert within 5 minutes or less whenever the carbon monoxide level reaches 50 parts per million (PPM) by volume. The unit will become active after three-minute (3) sensor warm-up period after initial startup. The caution time is shortened at higher levels of CO concentrations and becomes almost instantaneous should the carbon monoxide level reach 400 PPM or above.

In case of a carbon monoxide alert, the pilot can acknowledge the caution and silence the aural by pressing the Test/Reset button while maintaining the visual alert light until the carbon monoxide level is again reduced below the alert level. The indicator is automatically reset to green when the CO level drops below 50 PPM.

Section 2. Limitations

The Aero 452 may not replace any existing instrument or indicator required by the airplane type design or operating limits.

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Section 3. Emergency procedures

If the CO alert activates, press TEST/RESET button to silence the aural alert and complete the unit self test. If the alert light continues to illuminate:

- Shut off the heater, air conditioning or any other opening to the engine compartment.
- Open a fresh air source immediately.
- Don't smoke.
- Use 100% oxygen if possible.
- Land as soon as conditions permit
- Be sure the source of the contamination is corrected before further flight

Section 4. NORMAL PROCEDURES

When the airplane master battery switch is selected on, the Aero-452 goes through a self-test routine. The test checks for functionality of critical components such as the CO sensor, temperature sensor, pressure sensor, and the integrity of the system. You will notice the following test sequence:

An aural alert will beep twice; the Green STATUS light flashes twice in quick succession; then the Amber ALERT light flashes twice in Self-Check routine; then the aural alert will beep once, and the Green STATUS light will illuminate steady.

The external remote CO ALERT light, will flash once before the above sequence and once after the above sequence and then the remote CO ALERT light will remain off until there is a CO alert or a failure of the unit.

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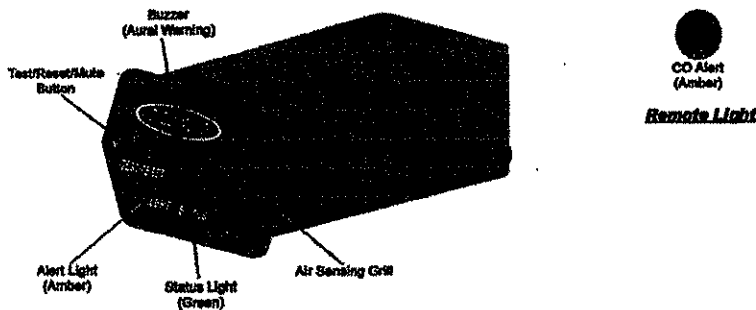
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These indications will occur if there is a malfunction / failure inside the CO detector of any of the following:

A failure of the CO Sensor, Temperature Sensor, or the Micro-controller will result in the following failure indications

- Amber ALERT light will flash once in approximately 1 second.
- Remote CO ALERT light, will illuminate once in 4 seconds.



Section 5. PERFORMANCE

No Change

Section 6. WEIGHT AND BLANCE/EQUIPMENT LIST

The CO Guardian Aero 452 CO Detector installation weights 0.109 lbs located at Sta.17.5.

Section 7. AIRPLANE & SYSTEMS DESCRIPTIONS

See General Introduction, Section 1 and Normal Procedures, Section 4 of this document.

Section 8. AIRPLANE HANDLING, SERVICE AND MAINTENANCE

See CO Guardian Carbon Monoxide Detector Model 452 Installation and Operational Manual Document No. 01-2510-02, Revision A, dated 11/23/02, or later Revision.

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