

CO Guardian LLC
1951 E. Airport Dr.
Tucson, AZ 85706
Document NO. 01-2510-05

**FAA APPROVED
AIRPLANE FLIGHT MANUAL SUPPLEMENT**

to the

CESSNA 172R AND 172S

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

AERO 452 REMOTE CO DETECTOR

STC NO. SA01531LA

Airplane S/N _____ Airplane Reg. No. _____

This supplement is applicable to Cessna Model 172R airplanes Serial Numbers 17280001 and subsequent and 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 Aero 452 Remote Carbon Monoxide Detector in accordance with STC No: SA01631LA.

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

FAA Approved *Sandra F. Cleber*
Acting Manager, Flight Test Branch, ANM-160L
Federal Aviation Administration
Los Angeles Aircraft Certification Office
Transport Airplane Directorate

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AFM SUPPLEMENT TO
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Section 1. GENERAL INTRODUCTION

The CO Guardian 452-201-003, -004 Remote Carbon Monoxide Detector is designed to detect, measure, and provide both a visual 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 either 14 VDC or 28V DC power, as applicable, 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 behind the existing airplane instrument panel. A remote (amber) CO ALERT light and a Test/Reset switch are installed in the pilot's instrument panel within view and reach of the pilot.

The carbon monoxide alert level is calibrated to provide a visual Alert annunciator within five (5) minutes or less whenever the carbon monoxide level reaches 50 parts per million (PPM) by volume. The unit will become active after a three-minute (3) sensor warm-up period following initial startup. The caution alert 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 will receive a flashing caution Alert annunciation that will remain on as long as the alert condition exists or until the pilot resets the CO Detector. The pilot can reset the CO Detector by pressing the Test/Reset button. The amber alert annunciator will illuminate again if the CO level is still above 50 PPM. The Alert light is automatically reset and turn off when the CO level drops below 50 PPM.

Section 2. LIMITATIONS

The Aero 452-201 CO Detector may not replace any existing instrument or indicator required by the airplane type design or operating limits.

Section 3. EMERGENCY PROCEDURES

If the CO alert activates, press TEST/RESET button to reset the alert annunciator. 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 CO contamination is corrected before further flight

Section 4. NORMAL PROCEDURES

When the airplane master battery switch is selected on, the Aero-452 Remote 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:

- The Amber CO ALERT light will flash twice and then remain off until there is a CO alert, a failure of the unit, or another self-test is performed.

A self-test can be performed when desired by depressing the Test/Reset button.

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

- CO ALERT light will illuminate once each 4 seconds.

Section 5. PERFORMANCE

No Change

Section 6. WEIGHT AND BALANCE/EQUIPMENT LIST

The CO Guardian Aero 452-201 Remote CO Detector installation weights 0.1091bs and is 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

Reference CO Guardian Owners Manual, Carbon Monoxide Detector Model 452-201 Remote, Revision B, dated 03/25/03, or later Revision.