



SAIB: CE-08-12R1

Date: March 16, 2011

SUBJ: Electrical Power

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) advises you of an airworthiness concern on **Cirrus Design Corporation (CDC) Models SR20 and SR22** airplanes where possible failure of a transient voltage suppressor (TVS) may result in an increase in workload for the pilot.

This airworthiness action has been taken after consideration of the responses from CDC as well as airplane owners/ operators through relevant associations and type clubs, using the procedures found in the Small Airplane Directorate Airworthiness Directives Manual Supplement (Airworthiness Concern Process Guide).

At this time, this airworthiness concern is not considered an unsafe condition that would warrant an airworthiness directive (AD) action under Title 14 of the Code of Federal Regulations (14 CFR part 39).

This SAIB is being revised to advise you of service information recently issued by CDC regarding the specific TVS that is the subject of this SAIB.

Background

CDC notified the Federal Aviation Administration of the failure of a TVS on a CDC Model SR22 airplane, which resulted in loss of NAV/COM1 functionality and some smoke and fumes within the cockpit. Since that time, 14 other TVSs have failed on CDC airplanes in the field.

Other airplanes equipped with TVSs from the same manufacturer have recently experienced failures. Our findings thus far, show that the electronic component itself is the primary suspect for a cause of the failures. To date, no specific reason has been positively identified for the failures although several companies are working on the problem.

As previously mentioned, no other functionality other than the NAV/COMM 1 has been lost on a CDC airplane. All CDC airplanes have redundancy with a NAV/COMM 2 available. Also, in all known occurrences of TVS failures, the smoke and fumes have been noted to be of short duration and not sufficient to impede the pilots visibility, or toxic such that the pilot's ability to operate the airplane is impaired.

Since the original release of this SAIB, there is one known additional occurrence of a failed TVS in the NAV/COMM 1 circuit, leading to short-term smoke in the cockpit. CDC has issued Service Bulletin number SB 2X-24-09 to address the problem. The service bulletin adds an in-line fuse, which will open the circuit should the TVS begin to fail. This solution will limit the time smoke may be emitted by a failing TVS as power is removed from the TVS rather than power remaining on the device until it self destructs.

Recommendations

We recommend the following:

- all CDC airplane owner/operators thoroughly read Cirrus service advisory SA 07-17, dated September 11, 2007. The service advisory provides good information on what to expect should a TVS failure occur and what actions should be taken by the pilot;
- An owner of a Cirrus SR20 or SR22 reference Service Bulletin SB 2X-24-09 to see if the bulletin applies to their airplane and if it does, incorporate the actions of the bulletin. Completion of the service bulletin will reduce or eliminate smoke in the cockpit in the event of a TVS failure.

You may obtain the service information referenced above at:

<http://www.cirruslink.com/mycirrus/servicepubs.aspx>

For Further Information Contact

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