FAA
Aviation Safety

SPECIAL AIRWORTHINESS INFORMATION BULLETIN

SUBJ: Wings - Piper PA-28, PA-32, PA-34 Forward Spar Corrosion **SAIB:** CE-11-13
Date: January 5, 2011

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts you, owners and operators of **all Piper Aircraft, Inc. PA-28, PA-32 and PA-34 models**, of potential corrosion on the wing front spar at the fuselage attach fitting, at the landing gear attach point, and behind the leading edge fuel tank. This also alerts you of our recommendation to incorporate Piper Service Bulletin (SB) 1006 as mitigating action.

At this time, this airworthiness concern has not been determined to be an unsafe condition that would warrant AD action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

Background

Aircraft may develop corrosion during their lifetime. Some of the variables involved in the probability of corrosion development are:

- potential increases with calendar time / age
- potential increases with incompatible materials (e.g., aluminum and steel)
- potential increases in certain environments (e.g., high moisture or salt water)
- potential decreases with adequate protective coatings (e.g., zinc chromate primer)
- potential decreases with adequate inspection

This information is presented in response to service data showing extensive corrosion on the wing front spar at the fuselage attach fitting, at the landing gear attach point, and behind the leading edge fuel tank of Piper PA-28 and PA-32 aircraft. See Figure 1 as an example. Due to similarity of design, the PA-34 is also susceptible to this corrosion. Note: The landing gear attach point configuration will vary, particularly between the fixed and retractable gear models. An example of the area of concern for the landing gear attachment is where the bracket Piper part number 95643-06 / -07 attaches to the front spar on the PA-28R aircraft.

Piper SB 1006 was issued in 1997 to address multiple areas of the wing, including the forward spar, on certain PA-28 and PA-32 aircraft. Production aircraft after the SB 1006 had zinc chromate primer added for corrosion protection. No data was available whether the applicable SB had been completed on the reported aircraft. Note: EASA issued AD 2005-0032 requiring SB 1006.

Figure 1

Recommendations

The FAA recommends that owners and operators incorporate the actions in Piper SB 1006 based on the effectivity of the SB. Due to similarity of design (steel components mating to aluminum spar) and since improper maintenance or painting procedures have been a contributing factor in past service reports, all PA-28, PA-32, and PA-34 aircraft are susceptible to this corrosion development. Therefore, the inspections in the SBs should be implemented for all PA-28, PA-32, and PA-34 models. We recommend that all the actions be taken within 100 hours. We further recommend inspection and incorporation as soon as feasible, but no more than 100 hours, for those aircraft at higher risk due to age, environment, lack of protective coatings, etc., as discussed above.

If damage is found, a Malfunction / Defect Report or Service Difficulty Report (SDR) should be filed. The SDR system is available at http://av-info.faa.gov/sdrx/. There are currently no established allowable limits on the subject parts so repair or replacement will be necessary if damage is found.

For Further Information Contact

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