



SUBJ: Wings - Piper PA-28, PA-32, and PA-34 Aileron Hinge Fitting Corrosion **SAIB: CE-11-11**
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 aileron at the hinge fitting. This also provides our recommendation to focus on the aircraft service manual (SM) 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 reported service data showing corrosion on the aileron at the hinge fitting of a Piper PA-28 aircraft. The damage was found during routine maintenance.

Service manuals for the PA-28, PA-32, and PA-34 provide specific instructions targeting the problem area. Here is a typical excerpt from the SM.

Service manual excerpt

1. Inspect ailerons for surface damage or irregularities (i.e. - skin cracks, distortion, dents, corrosion, and excessive paint build up); structural defects (i.e. - loose or missing rivets); misrigging or structural imbalance; hinge damage, excessive wear, freedom of movement and proper lubrication; and attachment points for missing or worn hardware.
2. Inspect aileron hinges and attachments
3. Inspect aileron cables, turnbuckles, fittings, guides, pulleys and bellcranks for safety, damage and operation.

Recommendations

The FAA recommends that owners and operators increase their focus on the inspections provided in Piper's service manual for the aileron at the hinge. We strongly recommend increased detail

inspection for those aircraft at higher risk due to age, environment, lack of protective coatings, etc., 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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