



FAA
Aviation Safety

SPECIAL AIRWORTHINESS INFORMATION BULLETIN

SUBJ: WING SPAR – Main Spar Lower Cap Cracks

SAIB: CE-15-18

Date: June 15, 2015

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts you, owners and operators of certain **Piper Aircraft, Inc. (Piper) Models PA-46-310P, PA-46-350P, PA-46R-350T, and PA-46-500TP** airplanes of an airworthiness concern, specifically fatigue cracking discovered in the wing main spar lower cap near wing station (WS) 79. This SAIB also provides guidance on recommended actions for these Piper airplane models related to the damage location.

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 Aviation Regulations (14 CFR) part 39.

Background

During routine inspection of a Piper Model PA-46-350P airplane, a 1.53-inch crack was discovered in the main spar lower cap (See Figures 1 through 3 to better identify the damage location). The damage was confirmed to be a standard fatigue crack by metallurgical lab evaluation. The crack discovery was at 5,273 hours time-in-service (TIS) versus the type certificated life limit of 15,580 hours TIS.



Figure 1a – Aircraft-level view of damage area

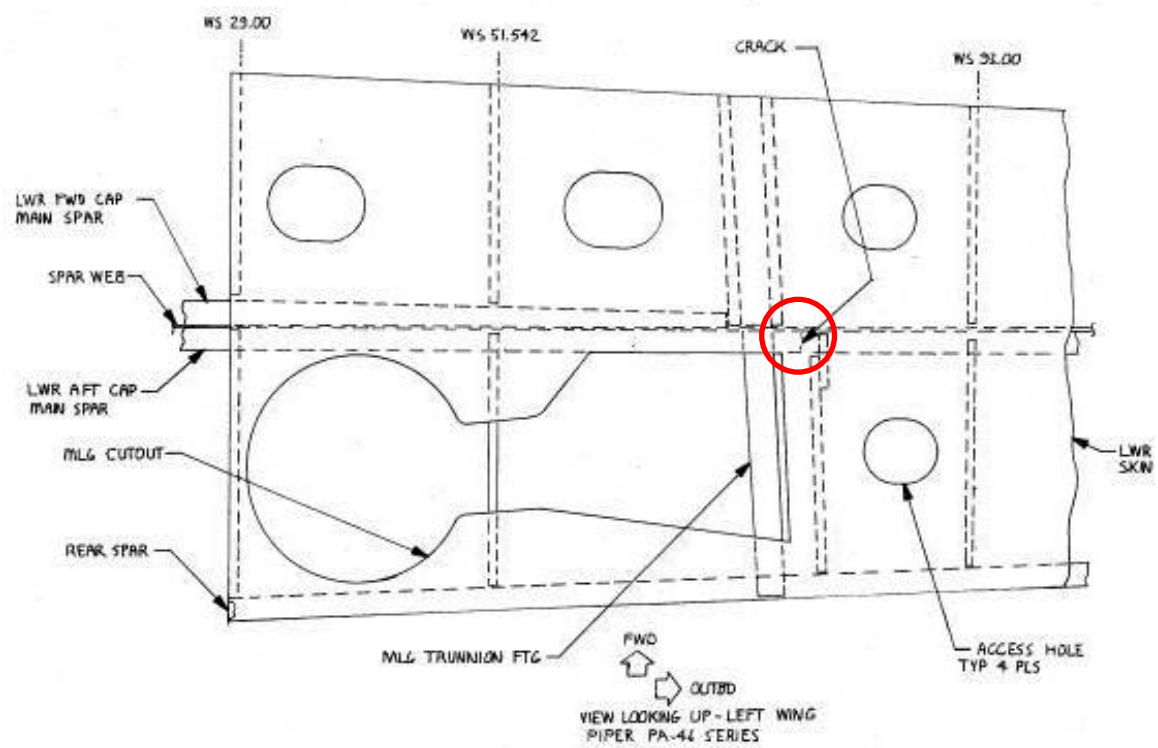


Figure 1b – Aircraft-level view of damage area

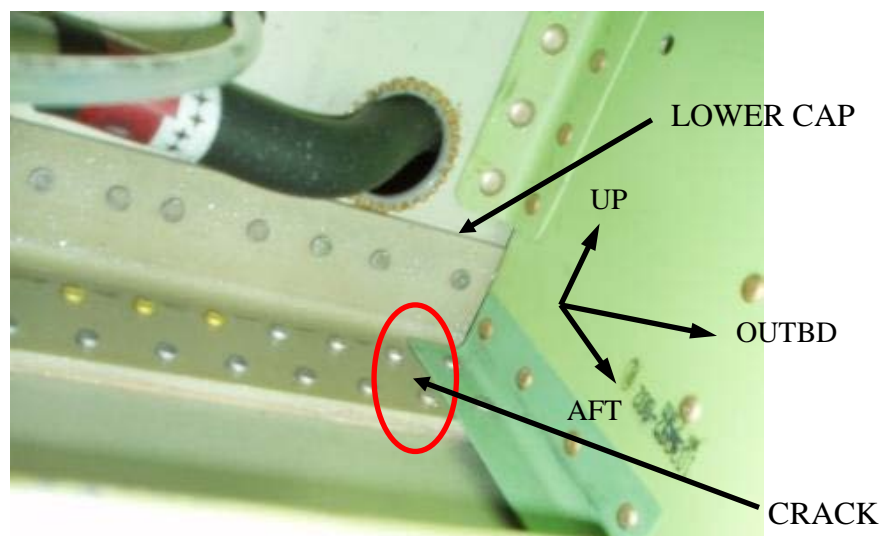


Figure 2 – Detail view of damage area inside wheel well (view looking forward and down)

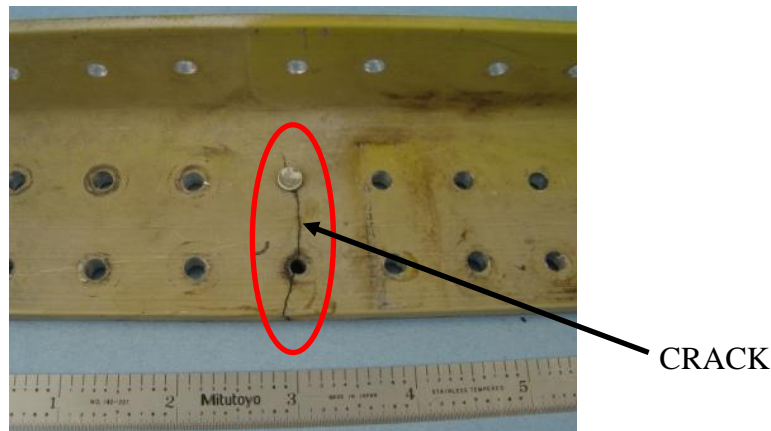


Figure 3 – Detail photographic view of damage area

No single cause has been identified for the cracking. However, several individual contributing factors researched in this area include not applying existing Service Bulletin (SB) 796B, severe aircraft operating environment, and non-conforming fastener installations. Piper has issued several SBs related to the damage area and contributing factors.

Recommendations

The FAA recommends you perform the following Piper SBs on Piper Models PA-46-310P, PA-46-350P, PA-46R-350T, and PA-46-500TP airplanes and recommends you follow the applicability and compliance times included in the SBs.

- SB 796B – Lower Wing Rivet Replacement (PA-46-310P, PA-46-350P)
- SB 1204 – Re-calculation of Wing Structure Life Limit due to Unique Usage (PA-46-310P, PA-46-350P, PA-46R-350T, PA-46-500TP)
- SB 1271 – Wing Spar Inspection (PA-46-310P, PA-46-350P, PA-46-500TP)

The Piper SBs are available at <http://www.piper.com>.

You should repair or replace damaged components if you find damage (cracks, corrosion, etc.). Piper Aircraft, Inc. has experience with repairs and rework in this area.

We also recommend you report damage to the FAA as a Malfunction/Defect Report (MDR) or Service Difficulty Report (SDR) at <http://av-info.faa.gov/sdrx/>.

For Further Information Contact

Gregory K. (“Keith”) Noles, Aerospace Engineer, Atlanta ACO, 1701 Columbia Ave., College Park, GA 30337; phone: (404) 474-5551; fax: (404) 474-5606; email: gregory.noles@faa.gov