



**SAIB:** CE-11-05

**Date:** December 3, 2010

**SUBJ:** Main Landing Gear

*This is information only. Recommendations aren't mandatory.*

## **Introduction**

This Special Airworthiness Information Bulletin (SAIB) informs registered owners/operators of Taylorcraft airplanes (including all **Taylorcraft, Inc., Taylorcraft 2000, LLC, and Arizona Aerospace Foundation** model aircraft under type certificate data sheets **1A9, 1A11, TG-6, A-643, A-696, A-699, A-700, A-746, and TG-6**) with main landing gear (MLG) tie strut part number (PN) B-A51 of an airworthiness concern. Specifically, this SAIB provides guidance on mitigating action to prevent your MLG tie strut from failing due to corrosion.

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

## **Background**

On September 19, 1978, Taylorcraft Aviation Corporation issued Service Bulletin (SB) No. 78-001 to include procedures for inspecting the MLG tie strut, PN B-A51, ensuring the factory drain hole is open, and drilling a drain hole if none exists. The factory drain hole was located either at the center of the lower lug strap (PN A-530) and/or at the trailing edge of the tie strut. The SB provided for a one-time inspection for a properly installed and operating drain hole, and to add a drain hole in the trailing edge location if one did not exist in the tie strut when inspected.

In March 2010, a Taylorcraft BC12-D airplane experienced failure of the MLG tie strut during landing causing significant damage to the airframe structure. The tie strut streamline tube failed 5 inches above the lower attach lug due to severe corrosion, resulting in reduced strut wall thickness. The lower section of the tie strut was full of corrosion and sediment, and the drain hole was plugged with debris and moisture.

## **Recommendations**

The Federal Aviation Administration (FAA) recommends you inspect your Taylorcraft airplane equipped with MLG tie strut PN B-A51 in accordance with Taylorcraft Aviation Corporation SB No. 78-001 within 30 days from receipt of this SAIB, and annually thereafter. This includes adding a drain hole in the trailing edge of the tie strut in accordance with Figure 1 of the SB if one does not already exist. We recommend you take the following actions that expand upon the SB 78-001 instructions:

- 1) Remove any fairings as necessary to gain access to the lower portion of the gear leg for inspection.
- 2) Locate the factory-installed drain hole located either on in the PN A-530 strap that attaches the lower lug to the strut tube, or at the trailing edge of the tie strut (See Figure 1). In the absence of a factory-installed drain hole at either location, locate and drill a #40 drain hole in

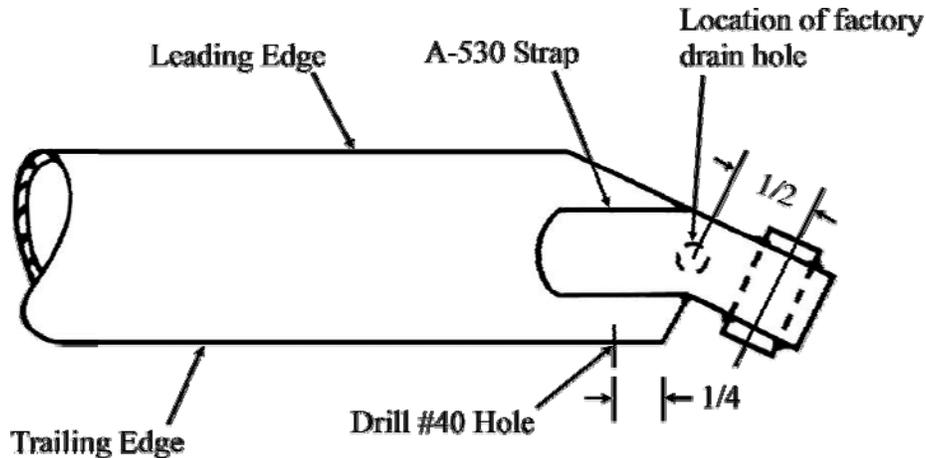


Figure 1: MLG Tie Strut Lower End with Factory Drain Hole in A-530 Strap Lower Surface or in Strut Trailing Edge

- 3) Inspect the area around the drain hole and note any water draining from, or rust particles exiting, the hole. Insert a wire or #40 drill bit into the drain hole and inspect it for the presence of rust particles.
- 4) If any rust particles or debris are noted while performing step 3, do the Additional Inspection Procedure below as necessary.

**Additional Inspection Procedure:**

If rust particles or debris are noted, or there is any question as to the integrity of the MLG tie strut, do the following inspection procedure:

- 1) Support and shore the airplane as necessary, and remove the MLG tie strut for further inspection.
- 2) Inspect the leg thoroughly, gently tapping the lower portion of the tie strut with a rubber or rawhide mallet at the PN A-530 strap to free any rust flakes, dirt, or sediment that may be in the tie strut.
- 3) Carefully position and rotate the tie strut end to end while listening for movement of any loose debris and/or corrosion inside the tie strut. Recheck the drain hole(s) for signs of rust particles or debris. (*Note: Continued presence of corrosion and/or debris may indicate serious corrosion. Additional non-destructive tests (such as X-ray and/or ultrasound) are recommended for tie struts suspected of corrosion.*)

Repair or replace any strut suspected or confirmed to have corrosion. We also recommend you repeat the inspection annually. Failure to detect and replace a corroded MLG tie strut can result in failure of the main landing gear with concurrent damage to the airframe structure.

**For Further Information Contact**

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