SERVICE LETTER

SL-AG-134

Initial Release: 05/09/2024

510 Series Tail Spring Forward Mount Slippage

Affected Aircraft Models	Serial Number Range
S2R-T34, S2R-H80, S2R-510, S2R-G10	ALL

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LOG OF REVISIONS

NOTE: Reformatting and correction of typographical errors is not considered revision.

Rev.	Page	Description of Revision	By:
IR	All	New Document Initial Release.	K. Pierce 05/09/2024

1. PURPOSE/REASON FOR PUBLICATION

Thrush Aircraft has been notified by one or more customers of slippage of the Tail Spring Forward Mount on our 510 Gallon Series Aircraft.

2. SCOPE/COMPLIANCE

This Service Letter acts as a notification to all 510 Gallon Series Aircraft operators of the possibility of inadvertent slippage of the Tailwheel spring forward mount and the steps that Thrush recommends taking to prevent this.

3. INSPECTIONS

1. Clean all parts with a suitable type cleaning solvent.
2. Remove, clean, and inspect leaf spring forward attach bolt every 100 hours. Upon reassembly lubricate bolt and leaf spring hole with Snap-on™ General Purpose Antiseize or equivalent or MIL-G-81322 (Aeroshell 22) grease. Torque to specifications I/A/W Torque chart (figure 32-6). Replace MS24665- 300 cotter pin each inspection.
3. Inspect all bolts holes for elongation. As a general rule, replace components with holes that are out of round by 0.005” or more. Replacement of the leaf spring forward attach bolt (inspect every 100 hours) with a larger diameter is not approved. The leaf spring may not be “drilled out” for a larger bolt.
4. Inspect main spring leaf for corrosion and cracks. Check aircraft maintenance records to be sure spring leaf P/N 5079-1 has not exceeded its five thousand (5,000) flight hour life limit. Replace leaf spring as needed.
5. Inspect spindle housing assembly welds for cracks.
6. Inspect spindle housing assembly for cracks and corrosion.
7. Inspect lock pin and upper and lower lock plates for wear, corrosion, cracks, and proper operation.
8. Inspect centering springs for corrosion, wear at ends, and for correct operation.
9. Inspect lock pin flexible cable and spring for corrosion and correct operation.
10. Inspect P/N95207-1 Acetal (Delrin®) lower support block spacer for wear and cracks.
11. Inspect upper and lower leaf spring support blocks, and attachment hardware for wear, corrosion, and cracks. Ensure that the leaf spring support blocks grips the leaf spring tightly to prevent leaf spring movement fwd. and aft. Ensure flexible sealant around contact edges of support blocks, lower support block spacer and leaf spring is intact to prevent collection of potential corrosive material in this area. Lubricate 2 ea. Trunnion Zerk (grease) fittings with MIL-G-81322 (Aeroshell 22)
12. Repair of the tail landing gear is limited to replacement of component parts, bearings, bushings, smoothing out minor nicks and scratches, repainting chipped or peeled areas.

4. INSTALLATION INSTRUCTIONS

From the AMMs- Ensure that trunnion is perpendicular to fuselage lower surface. **(Ref. Figure 1)** and that leaf spring support blocks grips the leaf spring tightly to prevent movement fwd. or aft. (Add or subtract P/N 90056-26 washers/spacers (.063") between upper and lower support blocks to achieve a tight grip of leaf spring **(Ref. Figure 2)** after bolts are properly torqued.) All bolts shanks and bolt holes are to be coated with Snap-on™ General Purpose Antiseize lubricant or equivalent before installation. Lubricate all bearings, bushings, and Zerk (grease) fittings with MIL-G-81322 (Aeroshell 22) grease. Torque all hardware in accordance with TORQUE CHART with the exception of the top spindle castellated nut and wheel/tire axle castellated nut, which should be torqued as follows:

1. For spindle castellated nut: While manually rotating spindle, torque spindle castellated nut to 20 inch-pounds, continue rotating spindle and back off to zero inch-pounds. While manually rotating spindle, torque nut to 10 inch pounds. If not in locking position, advance nut to next position, not to exceed 30º, and install cotter pin. Bend ends of cotter pin around spindle castellated nut. Note: Spindle must rotate freely without perceptible play.
2. For tail wheel axle castellated nut: While manually rotating wheel/tire, torque axle castellated nut to 80 inch-pounds, continue rotating wheel and back off to zero inch-pounds. While manually rotating wheel/tire, torque to 30 to 40-inch pounds. Rotate axle castellated nut (clockwise or counterclockwise) to nearest slot and cotter pin hole, and insert cotter pin. Bend ends of cotter pin around axle nut. Note: Wheel/tire must rotate freely without perceptible play.
3. After the components have been installed, seal the contact edges where the spring P/N 5079-1 (replace every 5,000 hours), upper support block P/N 94131-9, lower support block P/N 94131-11 and spacer P/N 95207-1 come together with a high quality flexible silicone sealant or fuel tank sealant CS3204 B2 (AMS-S-8802 formerly MIL-S-8802) to help block the collection of potential corrosive contaminants in this area.
4. Carefully lower aircraft to ground and remove Jack.
5. Recheck tire inflation pressure (5.00-5 10pr Type III is 88psi) and install dust cover (hubcap).

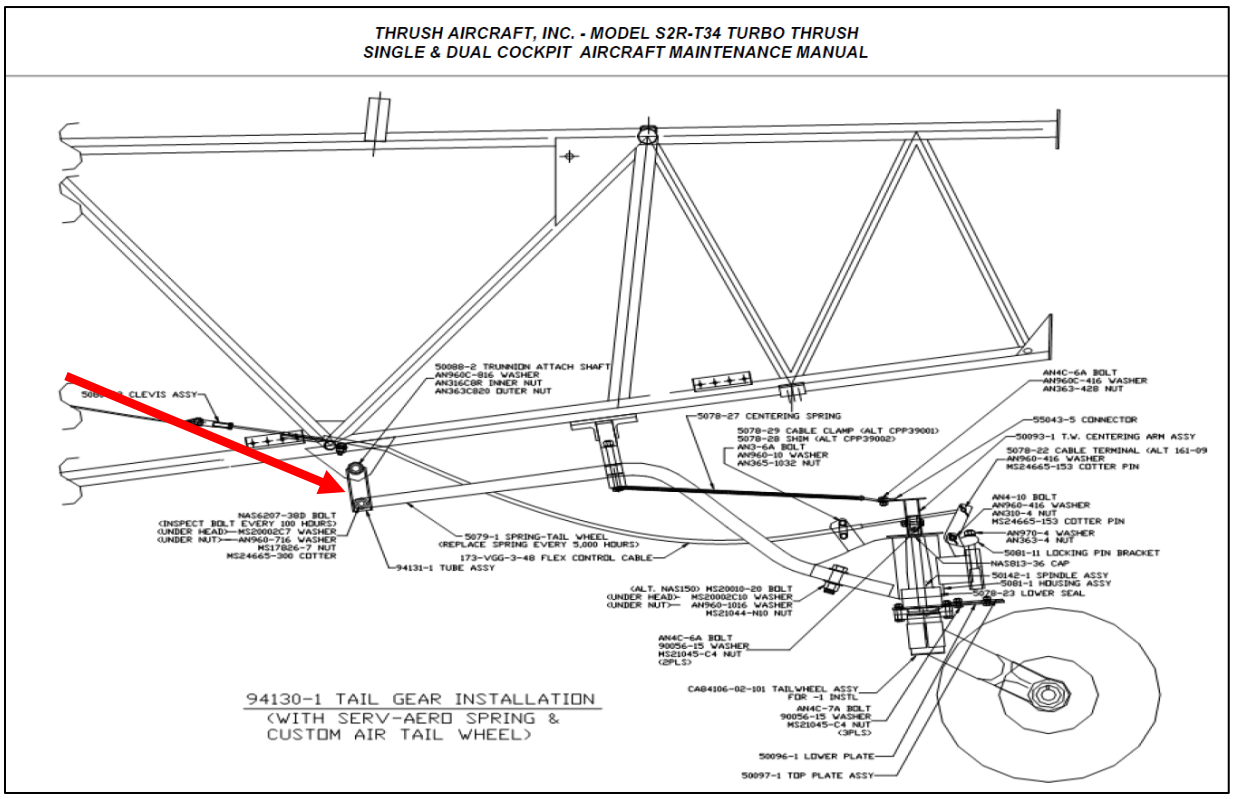

FIGURE 1- TAILWHEEL INSTALLATION DIAGRAM

***** Note that the position of the trunnion is not perpendicular as shown, but should be perpendicular or slightly forward when on the ground level.*****

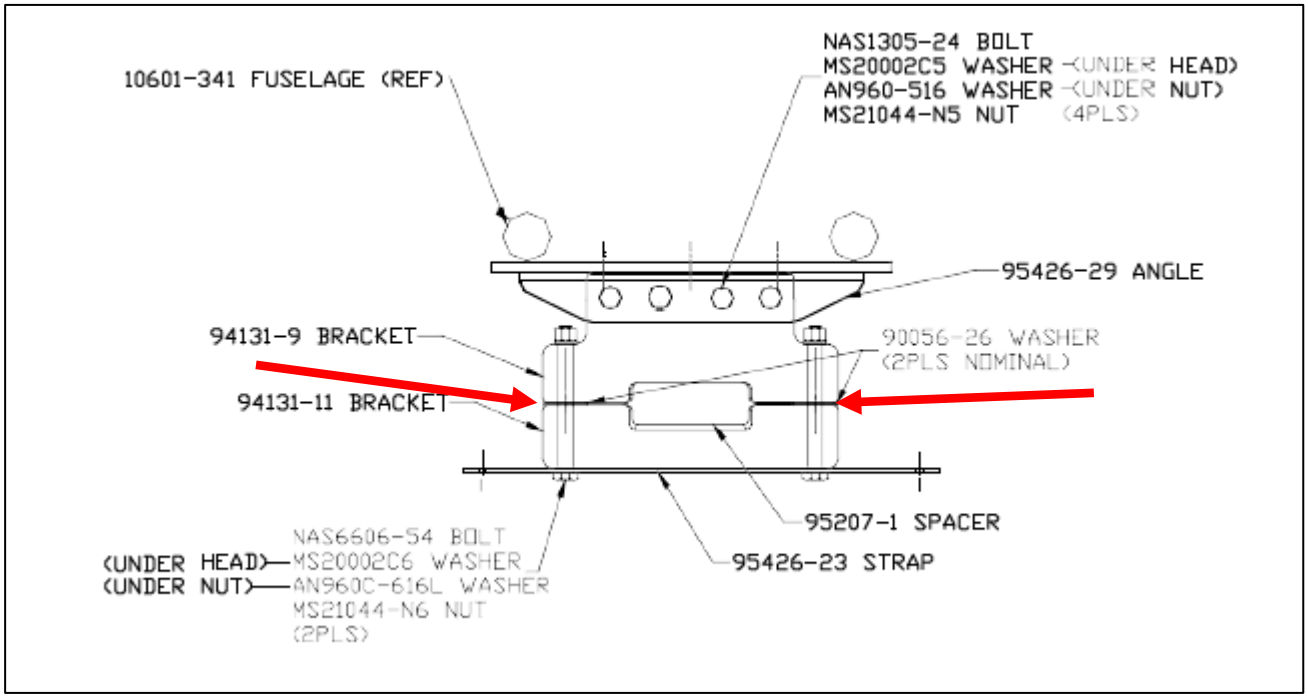

FIGURE 2- SPRING SUPPORT BLOCKS

5. CUSTOMER FEEDBACK

Any customer questions or responses should be emailed to **support@thrushaircraft.com**.