CUSTOM KIT

CK-AG-59

REV. A: 10/02/2025

TITANIUM TAIL WHEEL ASSEMBLY INSTALLATION

AIRCRAFT AFFECTED:	
MODEL	**SERIAL NUMBERS**
S2R-T34, S2R-H80, S2R-G10, R1340, S2R-510	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	T. Surratt 07/15/2025
A	Cover 5	Revised S/N effectivity. Revised Parts List.	T. Surratt 10/02/2025

TABLE OF CONTENTS

1. PURPOSE/REASON FOR PUBLICATION

Thrush Aircraft has developed this Custom Kit to offer an alternative tail gear installation option for the 510-gallon series aircraft.

2. SCOPE/COMPLIANCE

This document will provide the necessary parts and instructions for the optional installation of titanium tail gear.

***** SERVICE BULLETIN SB-AG-85 SHOULD BE ACCOMPLISHED PRIOR TO OR DURING COMPLETION OF THIS CUSTOM KIT. *****

3. BY WHOM WORK WILL BE ACCOMPLISHED

The work is to be accomplished by an FAA Certified A&P, IA mechanic, or foreign equivalent.

4. APPROVAL

4-1 THRUSH AIRCRAFT, LLC

This Custom Kit is approved by the Engineering Department at Thrush Aircraft, LLC.

4-2 FAA APPROVAL

The technical content of this Custom Kit is FAA approved.

5. MAN HOURS

2 hours may be required.

6. SPECIAL TOOLS

N/A

7. CUSTOM KIT OVERVIEW

To accomplish this Custom Kit, owner/operator will:

- Remove the current steel tail wheel assembly.
- Install the titanium tail wheel assembly.

8. PARTS LIST

QTY	PART NUMBER	NOMENCLATURE	NOTE
1	94130T913	TAIL WHEEL ASSEMBLY	Titanium

9. JACK

When using the jack points to lift the aircraft, all hopper loads should be removed. A jack point is provided on the tail wheel trunnion attach fitting on the lower left longeron. (Reference Figure 9-1)

1. Chock the forward main landing gear wheels.
2. Remove fuselage skins as required.
3. Place an appropriate jack at the aft jack point of the aircraft and carefully raise the aircraft enough to give plenty of ground clearance to remove the tail gear assembly.

Figure 9-1 Jack Point Location

10. REMOVAL OF STEEL TAIL WHEEL ASSEMBLY

1. Remove the cotter pin and axle castellated nut and the spacer, then remove the tire/wheel assembly.
2. Disconnect the flex control lock cable at the pivot arm and cable hold down clamp.
3. Disconnect the centering springs from the tail wheel centering arm assembly by removing the attach bolt.

   NOTE: Do not alter the lock cable nor the elevator travel stops. Alteration of the tail gear lock cable or the elevator travel stops will require re-rigging of the tail wheel locking system.
4. Remove the main leaf spring assembly by removing the bolt that is holding the spring to the trunnion assembly.
5. Remove the two bolts that hold the lower spring support block to the upper support block.

11. INSTALLATION

1. Upon reassembly, lubricate bolt and leaf spring hole with Snap-on™ General Purpose Anti-seize or equivalent or MIL-G-81322 (Aeroshell 22) grease. All bolt shanks and bolt holes are to be coated with Snap-on™ General Purpose Anti-seize lubricant or equivalent before installation.
2. Lubricate all bearings, bushings, and Zerk (grease) fittings with MIL-G-81322 (Aeroshell 22) grease.
3. Ensure that the trunnion is straight down (approximately 6 O'clock position). (Reference Figure 11-1)
4. If strut tubes were installed adjust trunnion as necessary to re-install strut tubes. Locate and loosely install hardware per figures 11-1 & 11-2.

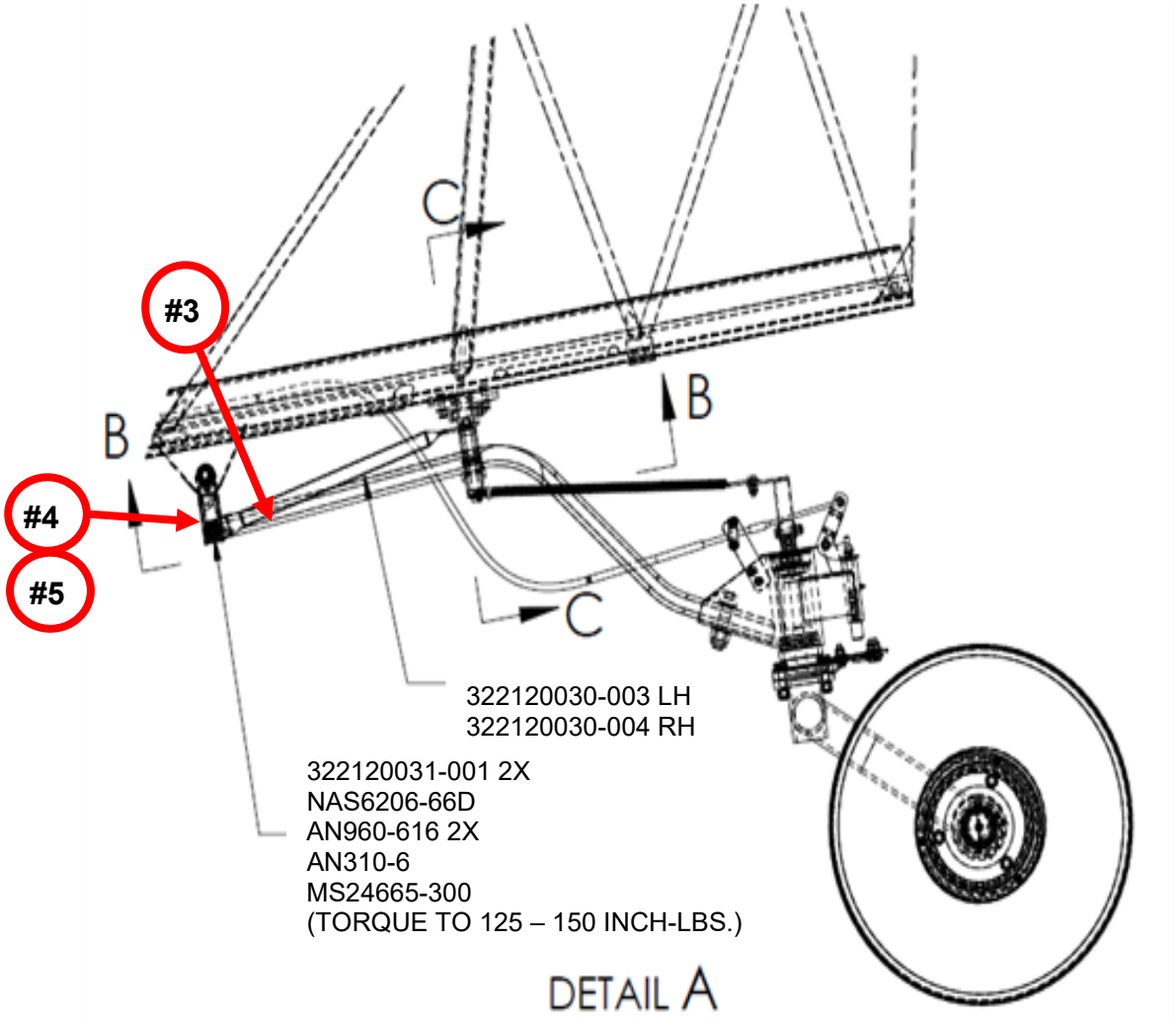
   NOTE: Omit strap (P/N: 95426-23). (Reference Figure 11-2)

   NOTE: Install washers as necessary, AN960C616 / AN960616L, any combination, 0-4 washers maximum total, 2 washers maximum under bolt head or nut, to produce 1 min – 3 max thread protrusion. Adjust washers as necessary to ensure no threads are in bearing.
5. Connect flex control lock cable at pivot arm and cable hold down clamp.

6. Torque the fwd mount bolt (P/N: NAS6206-66D) to 125-150 inch-pounds then install cotter pin. (Reference Figure 11-3)
7. Torque the two aft mount bolts (P/N: NAS6606-56) in the tail spring support blocks to 200-250 inch-pounds. (Reference Figure 11-2)
8. Torque remaining fasteners to specifications I.A.W. the torque chart found within the AMM, with the exception of the top spindle castellated nut and wheel/tire axle castellated nut, which should be torqued as follows:
    a. For installing existing tail wheel on new tail gear assembly: While manually rotating wheel/tire, torque axle castellated nut to 150-200 inch-pounds to seat the bearing, back off to 0 inch-pounds. While manually rotating wheel/tire, torque to 30 to 40 inch-pounds. Rotate axle castellated nut (clockwise or counterclockwise) to the nearest slot and cotter pin hole, then insert the cotter pin. Bend the ends of the cotter pin around the axle nut.

       NOTE: Wheel and tire must rotate freely without perceptible axial play.
    b. For the axle spindle castellated nut: While manually rotating the wheel, torque the spindle castellated nut to 150 ft-lbs. ± 10 ft-lbs. If not in locking position, increase or decrease nut to next position, not to exceed 30°, and install cotter pin. Bend the ends of the cotter pin around the spindle castellated nut.

       NOTE: The wheel must rotate without perceptible axial play up and down or binding but should have some resistance to rotation.



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

Figure 11-1 Tail Wheel Installation Diagram

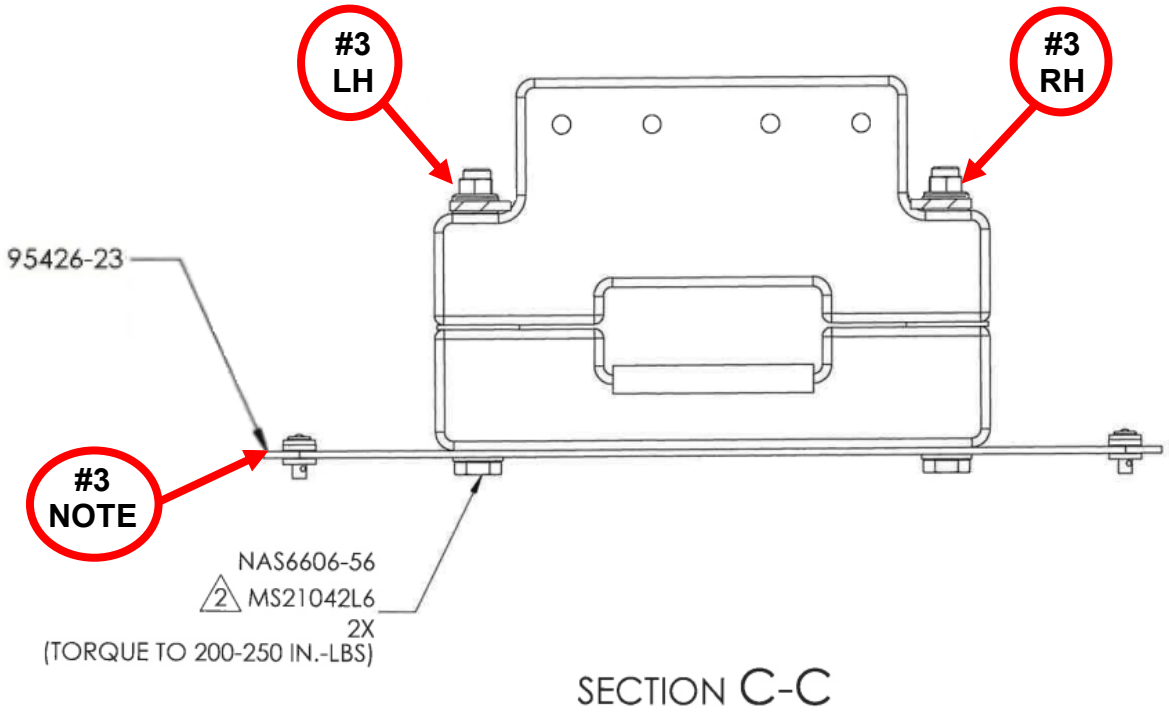


Figure 11-2 Tail Spring Support Blocks (Aft Mount) (View Looking Fwd)

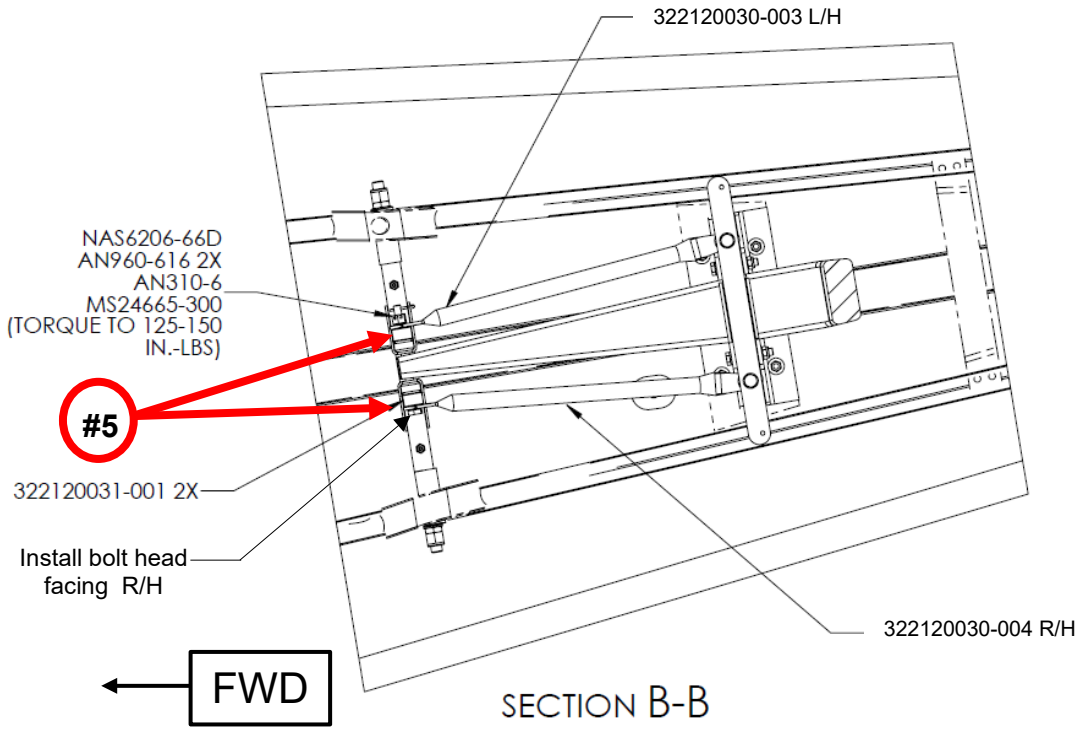


Figure 11-3 Fwd Tail Mount Struts Installation
(View Looking Up Under Belly Skin)

9. After the components have been installed, seal the contact edges where the spring, upper support block, lower support block, and the spacer come together with a high-quality flexible silicone sealant or fuel tank sealant SC3204 B2 (AMS-S-8802 formerly MIL-S-8802).
10. Carefully lower the aircraft to the ground and remove the jack.
11. Reinstall any removed fuselage skins and panels.
12. Recheck the tire inflation pressure (80 min – 88 max psi).
13. Install the dust cover (hubcap).

12. FINAL INSPECTION

Perform a final inspection to ensure that the titanium tail gear assembly has been properly installed and that all hardware has been properly torqued then apply torque stripe for verification of inspection.

13. TAIL GEAR RIGGING

Rigging will be required if the lock cable or the elevator travel stops have been altered in any way. Rigging of the tail gear locking mechanism is to be accomplished in accordance with the applicable Thrush Aircraft AMM.

14. WEIGHT & BALANCE

When this modification is completed, the aircraft's empty weight and balance must be updated to reflect the change. This modification does not change the existing weight and balance envelope.

15. RECORD OF COMPLIANCE

Make appropriate entry in airplane maintenance records as follows:
“Thrush Custom Kit CK-AG-59 A complied with at _____ total hours on aircraft.”

Modification accomplished by:

_____

Name & Certificate # Date

16. RESPONSE CARD

The final step in compliance with this Custom Kit is to complete and return the compliance card on the next page. It may be mailed, faxed, or scanned and e-mailed.

Fax:	Thrush Support	229-317-8225
Email:	Thrush Support	support@thrushaircraft.com

17. CUSTOM KIT CK-AG-59 A COMPLIANCE REPORT

Aircraft S/N:	Aircraft Owner:
Aircraft Registration #:	Address of Owner:
Airframe Total Time:	City & State:
Engine Total Time:	Physical Location:
Complied With By:	Date of Compliance:
Signature:	Certificate #:

PLEASE RETURN THIS REPORT ONLY AFTER MODIFICATION IS MADE
This response card may be mailed, faxed to (229) 317-8225, or emailed to support@thrushaircraft.com.

Fold, Tape, & Mail (Do Not Staple)

Return Address:

Thrush Aircraft LLC.
Attn: Customer Assurance and Support
300 Old Pretoria Road
Albany, GA 31721