MANDATORY
SERVICE BULLETIN

Middle Fork Mods

Original Issue: 23 May 2025

Reference: MFSBM-2501 Rev 00

TITLE

Mandatory Service Bulletin - Kit for STC SA011869WI

PURPOSE

This Mandatory Service Bulletin informs operators of a potential safety issue and provides instructions to minimize probability of an unsafe failure condition. This Mandatory Service Bulletin supersedes the previously issued Alert Service Bulletin MFSBA-2501 (Ref [5]).

EFFECTIVITY

- Textron Aviation Inc. 172 and 175 model aircraft that have been modified in accordance with STC SA01869WI, Middle Fork Mods LLC Tail Tie Down Assembly 16-020-534530, Middle Fork Mods LLC Serial Numbers 1 through 140
- The complete applicable aircraft model list is detailed in FAA Supplemental Type Certificate SA01869WI.

REASON

There is a potential safety issue regarding the installation of the Tail Tie-Down Assembly interference with the rudder control cable. Two incidents have been reported in which the installation of this modification results in the rudder control cable contacting a fairing screw installed by this Kit. This condition could result in severance or fraying of the cables with loss of rudder control. Figure 1 identifies the area in question.

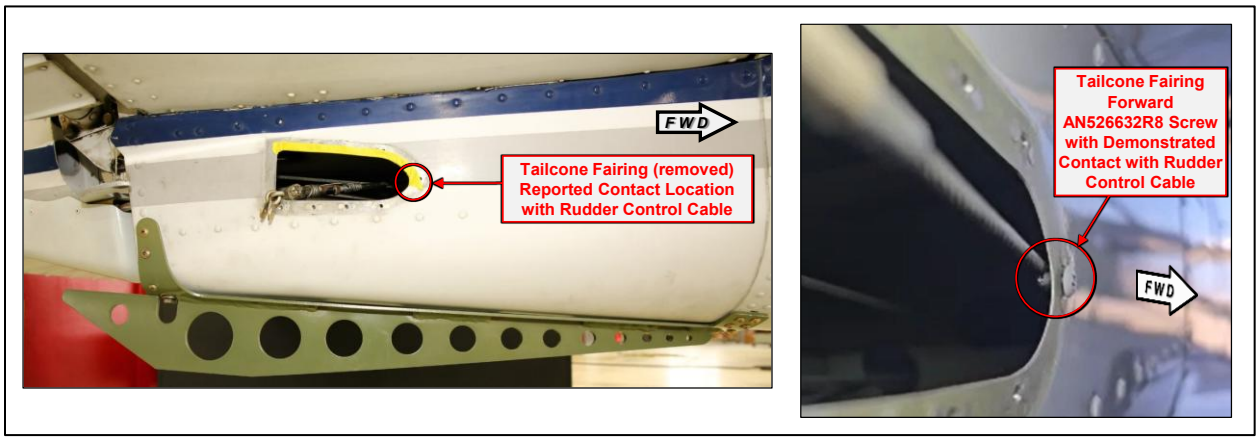

Figure 1: Affected Area

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COMPLIANCE

Compliance with this Mandatory Service Bulletin must be accomplished to correct the potential safety issue. Document Mandatory Service Bulletin compliance as a written entry in the applicable aircraft logbook.

A service document published by Middle Fork Mods may be recorded as completed in an aircraft logbook only when the following requirements are satisfied:

1. The mechanic must complete all the instructions in the service document, including the intent therein.
2. The mechanic or airplane owner must use the technical data in the service document only as approved and published.
3. The mechanic or airplane owner must apply the information in the service document only to aircraft identified in the Effectivity section of the document.
4. The mechanic or airplane owner must use maintenance practices that are identified as acceptable standard practices in the aviation industry and governmental regulations.

Accomplishment of these tasks should be performed at the next scheduled inspection after receipt of this Mandatory Service Bulletin, but no later than the next 16 flight hours.

Refer to the Modification Instructions (16-020-AE3302 Rev 01, Ref [4]) as required.

REFERENCES

[1] Federal Aviation Administration. Department of Transportation. Supplemental Type Certificate Number SA01869WI.

[2] Federal Aviation Administration. Advisory Circular. AC 43.13-2B. “Acceptable Methods, Techniques, and Practices – Aircraft Alterations.”

[3] Applicable Textron/Cessna Aircraft Maintenance Manual (AMM)

[4] Middle Fork Mods. Modification Instructions. 16-020-AE3302 Rev 01. “Tail Tie-Down Replacement.”

[5] Middle Fork Mods. Alert Service Bulletin. MFSBA-2501 Rev 00.

[6] Middle Fork Mods. Instructions for Continued Airworthiness. 16-020-MT2901 Rev 04.

NOTE: The modification instructions (Ref [4]) and instructions for continued airworthiness (Ref [6]) have been updated to reflect the changes presented in this Mandatory Service Bulletin.

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DESCRIPTION

Rudder control cable assemblies shall be inspected for separation, broken wires, fraying of cables and wear. Inspect the rudder flight control cable installation to see if any damage or changes exist outside the modifications introduced by this Kit that would change the location of the rudder control cable. Worn or damaged rudder control cables shall be replaced. The tail cone fairing installation shall be updated as per this Mandatory Service Bulletin, to also align with the same process in the updated modification instructions (Ref [4]). There shall be positive clearance between any item on the aircraft and the rudder control cable.

SAFETY INTENT

For aircraft with the Middle Fork Mods LLC Tail Tie Down Assembly 16-020-534530 installed, the intent is to avoid inadvertent rudder control cable contact.

TOOLS AND TECHNICAL DATA

- Middle Fork Mods LLC Modification Instructions Document No: 16-020-AE3302 Rev 01 (Ref [4])
- Phillips # 2 screwdriver
- Mirror and flashlight
- #40 drill bit and drill

PERSONNEL REQUIREMENTS

- One individual that holds an Airframe and Powerplant Mechanic license
- One helper

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ACCOMPLISHMENT INSTRUCTIONS

(1) Reference 16-020-AE3302 Rev 01 (Ref [4]) page 3-17, figure 3-19, “Tail cone Faring, Installed.”

(2) Remove 9x AN526632R8 screws and fairing with #2 Phillips screwdriver.

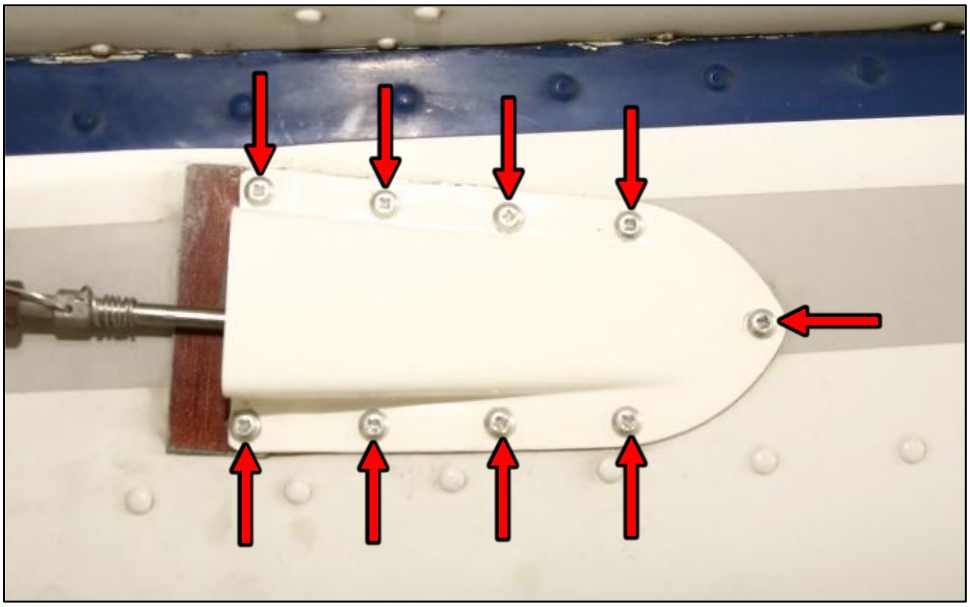

Figure 2: Screws to Remove

(3) Inspect rudder cable in the vicinity of the Tail Tie Down Assembly 16-020-534530.

(a) If no wear or damage is observed on the rudder control cable at the location of the Kit screws and nutplates, no further action is required regarding the rudder control cable.

(b) If any wear or damage is observed on the rudder control cable at the location of the Kit screws and nutplates, replace the rudder control cable following approved guidance of the applicable Textron/Cessna AMM or FAA AC 43.13-1B.

(4) With the tail cone fairing (for both the plastic and metallic versions), countersink the inside of the forward-most rivet hole. Fit one AN426A3-2 rivet, so as to make flush with the inside face of the fairing with the round head on the outside (Figure 3). All riveting workmanship is to be performed in accordance with AC 43.13-1B Chapter 4, Section 4, Paragraph 4-57.

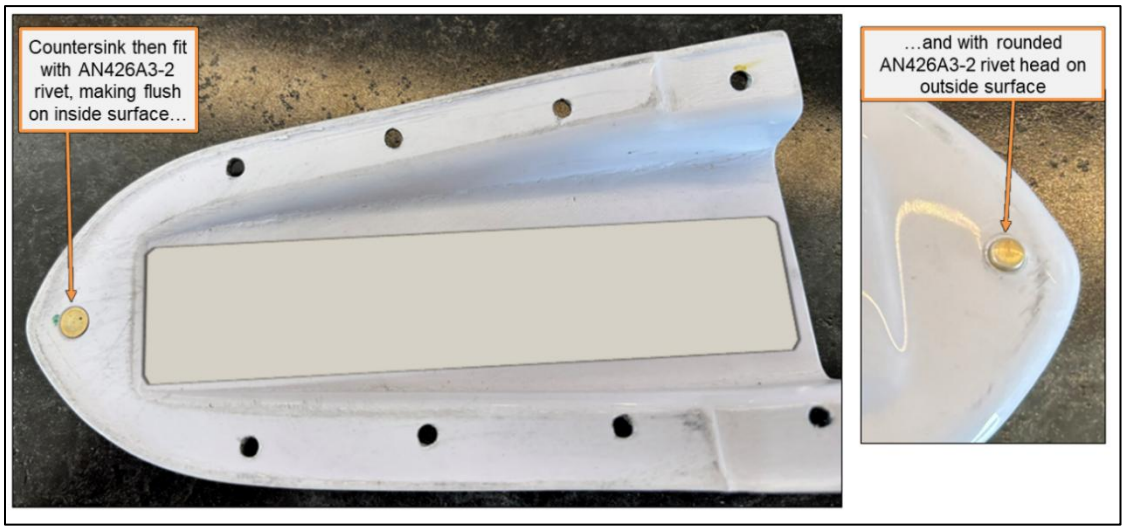

Figure 3: Tail Cone *Faring Modification*

(5) Drill off forward center MS21069L06 nut plate and leave uninstalled

(6) Reinstall the tail cone faring and rub strip using eight AN526632R8 screws (Figure 4).

NOTE: Pass the aircraft rudder cable through the tail cone faring before installation. Reattach the aircraft rudder cables to the rudder (Figure 4) using retained hardware. Tighten castellated nut and install a new cotter pin. Ensure rigging routing and tension is correct in accordance with the aircraft's maintenance manual.

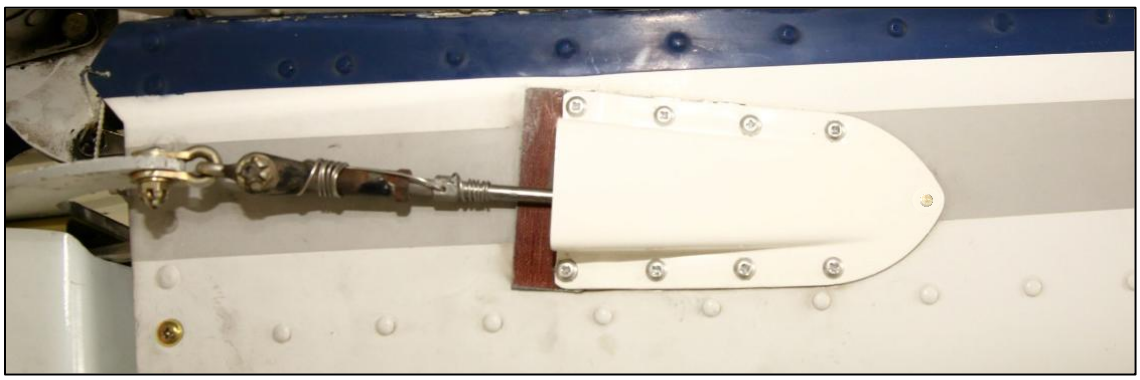

Figure 4: *Tail Cone Faring, Installed*

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(7) **Optional Item: Sealant.** After the tail cone fairing is installed, it is allowable to seal the fairing to the aircraft using materials listed in Table 1 to help prevent dirt and debris from becoming trapped in between the fairing and the aircraft. If desired, run a bead of sealant around the entire perimeter of the fairing.

NOTE: Ensure that the fairing is completely sealed. No gaps in the sealant between the aircraft and fairing are acceptable.

Table 1: Optional Modification Materials

Quantity	Part No.	Description	Supplier	Notes
A/R	748	RTV Sealant	Dow Corning	Or Equivalent
A/R	P/S 890 Class B	Pro-Seal	PPG	

(8) Make log entry in aircraft maintenance records indicating findings and compliance with this Mandatory Service Bulletin.

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