

**FLAP SYSTEM - ADJUSTMENT/TEST****1. General**

A. This section has procedures for adjusting the flap switch actuator.

**2. Flap Switch Actuator Adjustment**

A. Adjust the Flap Switch Actuator (Refer to Figure 501 and Figure 502).

- (1) Fabricate a flap switch actuator rigging fixture. Refer to Figure 501.
  - (a) Make the fixture from 0.125-inch (3.175 mm) aluminum as shown in Figure 501.
  - (b) Cut the material to the size shown in Figure 501.
- (2) Remove the flap switch actuator from the system. Refer to Flap Switch Actuator Removal/Installation.
- (3) Temporarily install the bolts in the switch actuator body to keep the stop assembly stable during the adjustment.
- (4) Loosen the lock nuts on the down and up switch.
- (5) Remove the down and the up switch from the switch actuator body.
- (6) Remove the cover from the switch actuator body.
- (7) Remove the snap ring and follow-up arm assembly from the flap switch actuator.
- (8) Put the rigging fixture in a vice with the notched end up.
- (9) Put the flap switch actuator in the rigging fixture so that the sides of the switch actuator are flush with the rigging fixture mating surfaces.
- (10) Adjust the flap control arm so that the hole (B) is aligned with the A radial on side 2 of the rigging fixture. The up stop bolt may be adjusted to hold the flap control arm in the necessary position.
 

**NOTE:** To help adjust the flap control arm so that the hole (B) is aligned with the A radial on side 2 of the rigging fixture, a short #10 diameter screw can be put in hole (B) and used as a pointer.
- (11) Adjust the striker so the gear points toward and is aligned with the center of the spacer.
- (12) Put the follow-up arm assembly in the flap switch actuator so that the hole (C) is aligned with the A radial on side 1 of the rigging fixture.
- (13) Install the snap ring on the flap switch actuator.
 

**NOTE:** To help adjust the flap control arm so that the hole (C) is aligned with the A radial on side 1 of the rigging fixture, a short #10 diameter screw can be put in hole (C) and used as a pointer.
- (14) Hold the flap control arm and the follow-up arm stable.
- (15) Put the cover on the switch actuator body.
- (16) Install the up and the down switch on the switch actuator body. Turn each switch clockwise until a click is heard. This is the approximate position for the switch.
- (17) Place the flap switch actuator in the rigging fixture.
- (18) Make sure that the flap control arm hole (B) is still aligned with the A radial on side 2 of the rigging fixture.
- (19) Turn the follow-up arm counterclockwise, away from the A radial on side 1 of the rigging fixture.
- (20) Attach the ohmmeter leads to the normally open and the common terminals of the up switch.
 

**NOTE:** The up switch must be set in the limits shown on Figure 502.
- (21) Adjust the up switch so the normally open terminal opens as near as possible to the A radial when the follow-up arm hole (C) is turned toward the A radial in a clockwise direction.
- (22) Tighten the lock nut on the up switch.
- (23) Make sure the up switch is adjusted correctly.
 

**NOTE:** The follow-up arm positions for the switch to open and to close are different due to the flap switch actuator backlash. It is very important to do the instructions that follow to adjust the flap switch actuator accurately.
- (24) Put a mark on side 1 of the rigging fixture to show the position of the follow-up arm hole (C) where the up switch opens.
- (25) Turn the follow-up arm clockwise away from the A radial on side 1 of the rigging fixture.

(26) Attach the ohmmeter leads to the normally open and the common terminals of the down switch.

**NOTE:** The down switch must be set in the limits shown on Figure 502.

(27) Adjust the down switch so the normally open terminal opens as near as possible to the mark made in step (24) when the follow-up arm is turned in a counterclockwise direction.

(28) Tighten the lock nut on the down switch.

(29) Make sure the down switch is adjusted correctly.

**NOTE:** Both switches can be turned for the same distance to stay in the limits shown on Figure 502.

(30) To make sure there is sufficient deadband between the switches, measure the travel, at point F, where both switches are open when you turn the follow-up arm past the set point in a clockwise or a counterclockwise direction.

(31) If there is less than 1/8 inch of travel measured in step, slightly adjust either switch out to get sufficient deadband between the switches.

(32) Install the flap switch actuator assembly. Refer to Flap Switch Actuator Removal/Installation.

(33) Operate the flaps through one cycle to make sure the switch actuator is adjusted correctly.

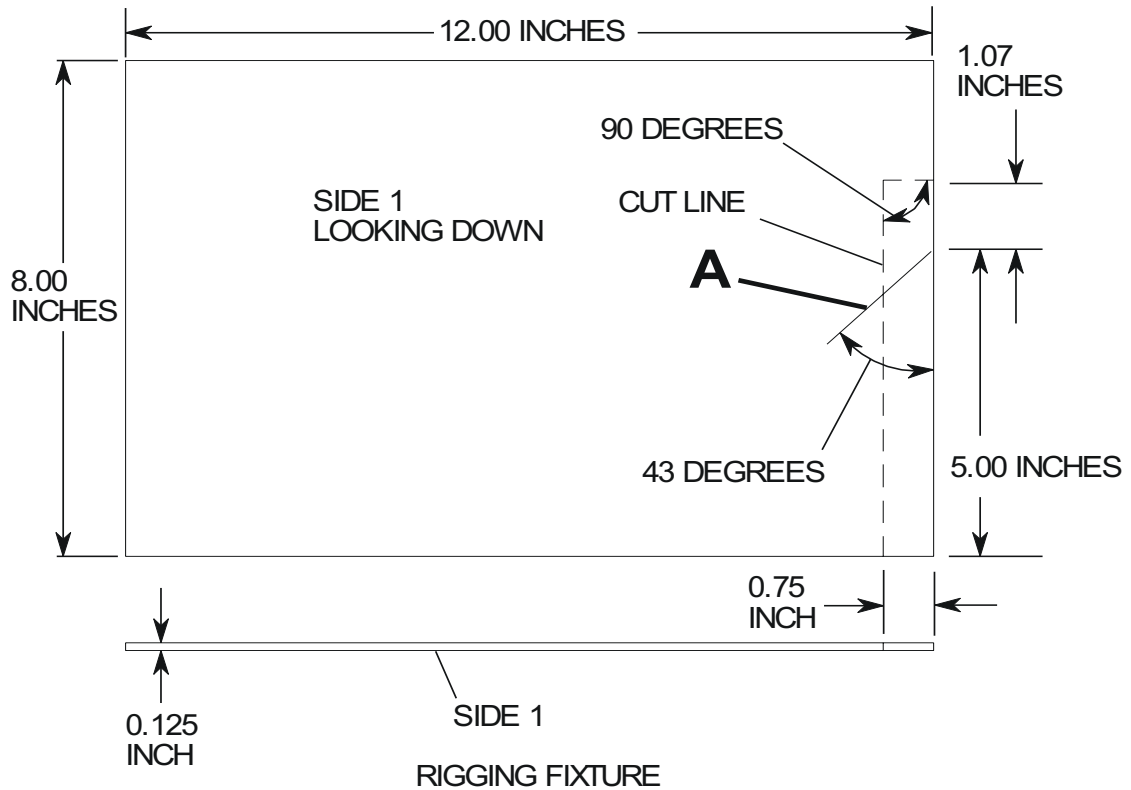
**NOTE:** If the flap motor oscillates, there is not sufficient deadband between the switches.

(34) If there is not sufficient deadband between the switches, slightly adjust the inboard switch out.

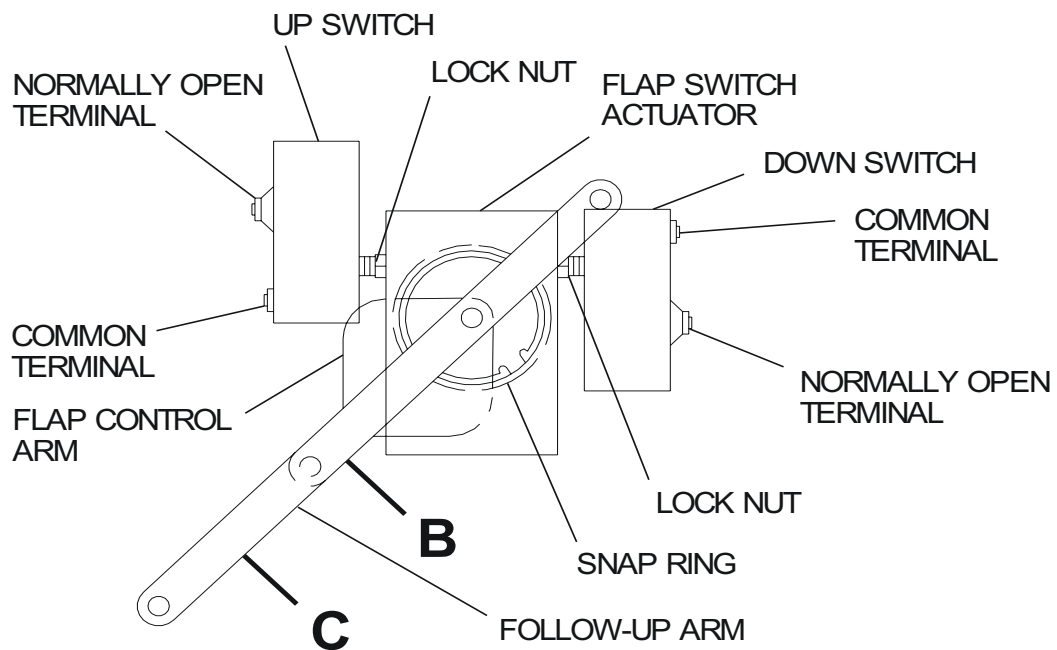
**NOTE:** After the adjustments the switch position must be in the ranges shown on Figure 502.

(35) Do the operational check in the Flap Rigging Guide.

Figure 501 : Sheet 1 : Flap Switch Actuator Rigging Fixture



**NOTE:** USE THE RIGGING FIXTURE TO ADJUST THE FLAP SWITCH ACTUATOR.



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Figure 501 : Sheet 2 : Flap Switch Actuator Rigging Fixture

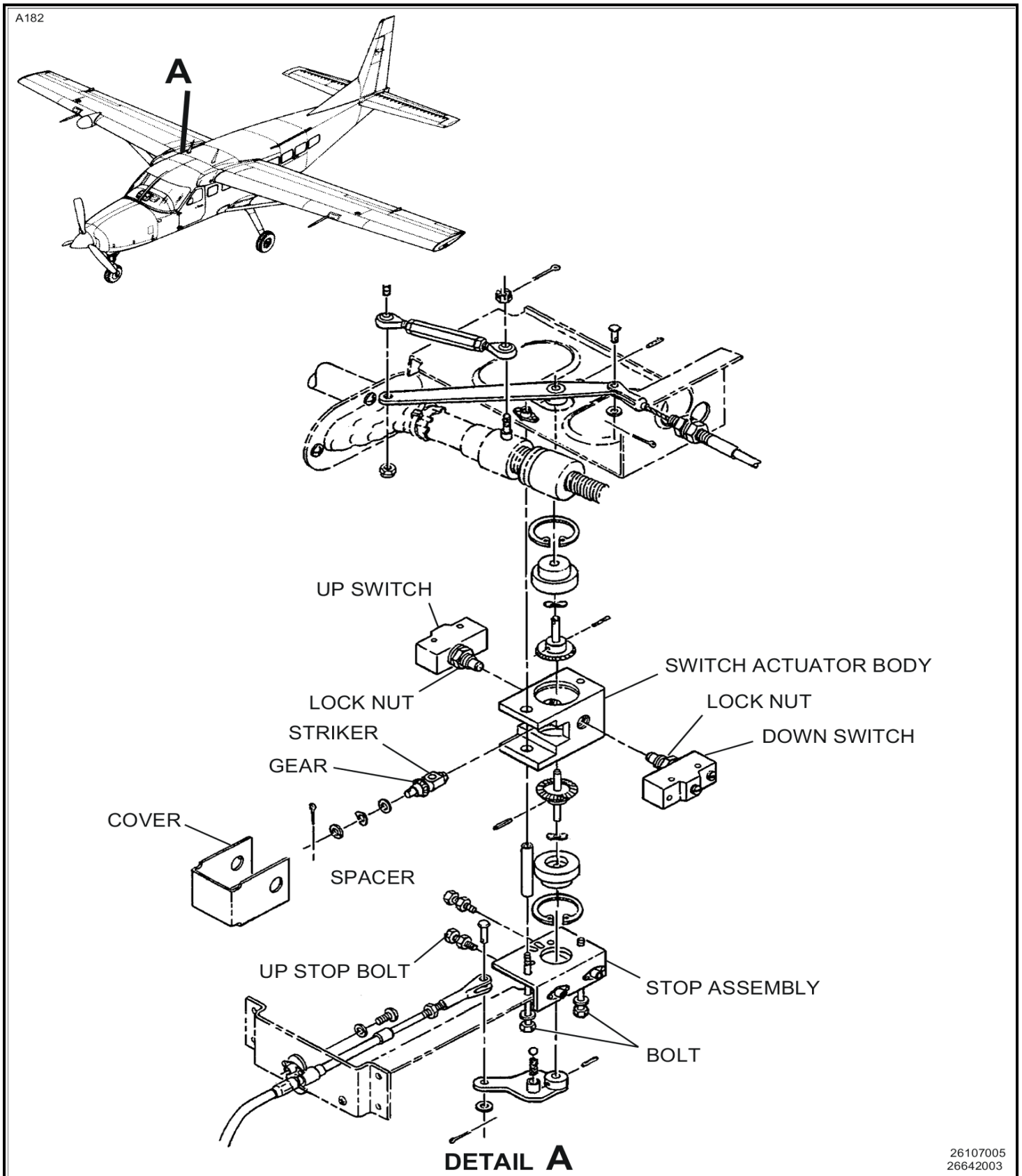
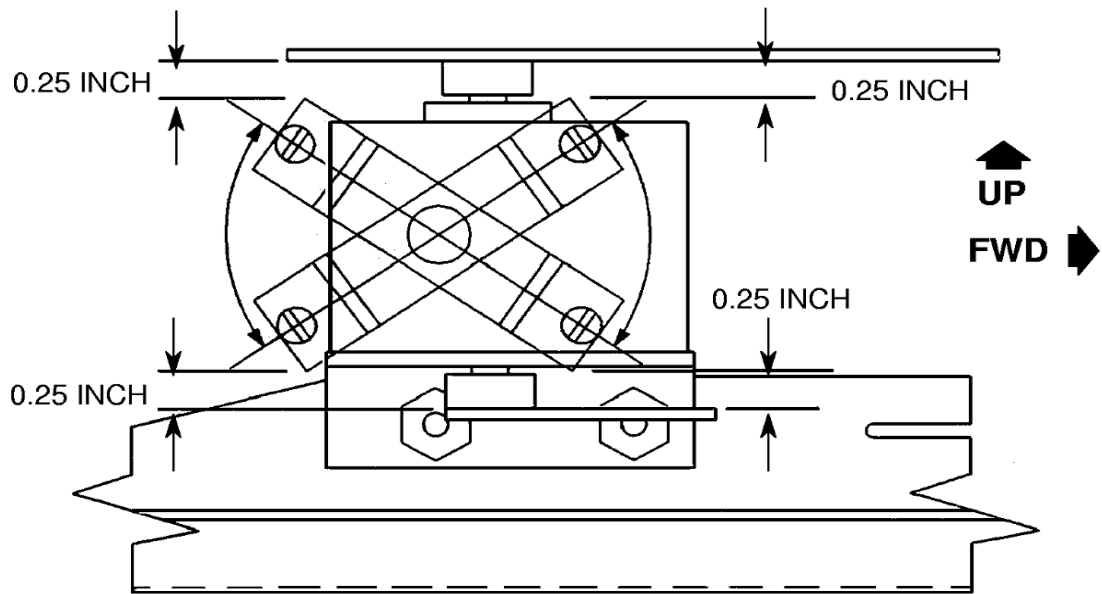
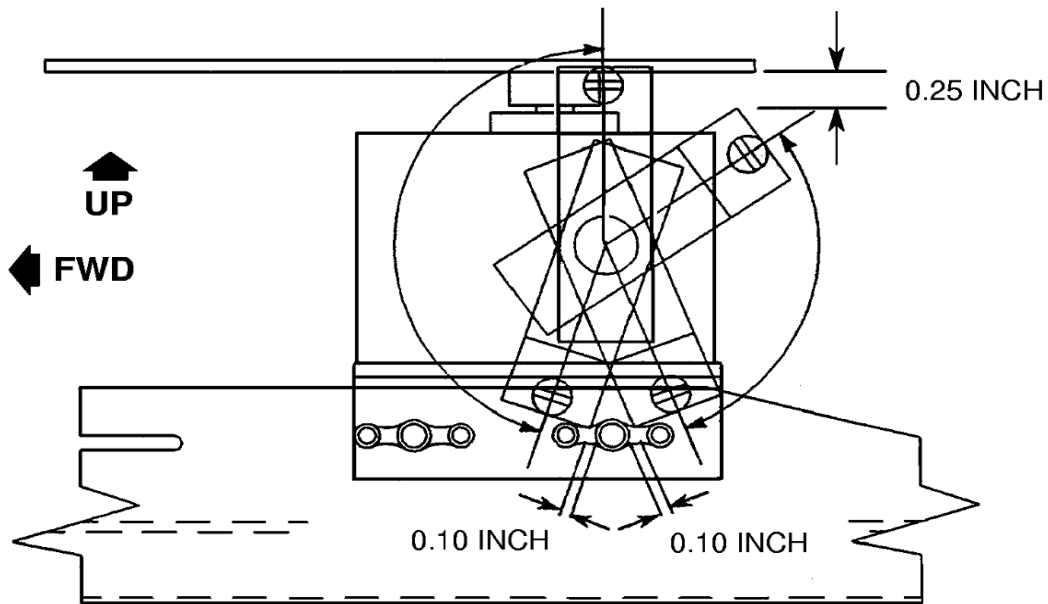


Figure 502 : Sheet 1 : Flap Switch Positions

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FLAP SWITCH ACTUATOR UP SWITCH  
ALLOWABLE SWITCH POSITIONS



FLAP SWITCH ACTUATOR DOWN SWITCH  
ALLOWABLE SWITCH POSITIONS

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