

# STOL CH 801 FLAPERON ASSEMBLY

SECTION 3b (2 of 2)

**“FITTING THE FLAPERONS  
TO THE WING AND FUSELAGE”**



**STOL CH801 FLAPERON ASSEMBLY - SECTION 3b**  
"FITTING THE FLAPERON TO THE WING AND FUSELAGE"



file FR100-65

Photo FR3-14

The flaperon root hinge pin. Actual part #: **8A2-4A**  
Install this pin from inside the fuselage. Hold it in place with masking tape and cycle the flaperon. The flaperon should move freely.



file FR100-66

Photo FR3-15

The root hinge pin installed as viewed from outside the aircraft.

Note: The bottom 2 rivets in the Root Hinge Pin 8A2-4 may interfere with the joggle flange in 8F2-6, if necessary trim the bottom edge of the Hinge Pin.

Drill the root pin hole in the flaperon control horn with a 1/4" drill. (yes that is correct 1/4"). Install the root hinge with four rivets.



file FR100-76

Photo FR3-17

Wait to drill the 5/16" hole in the Horn 8A2-5, the hole is best determined by the location of the Flaperon Vertical Control Rod 8C9-2 with the Flaperon and the control system in the neutral position.

Note: The dimensions given in this section are not to be used for setting deflections. These are only to be used to layout the cutout in the fuselage.

Draw a radius arc of 135 mm. centered on the hinge pin 8A2-4. The arc line is the center of the slot.



file FR100-77

Photo FR3-18

The cutout is 1" wide, approx. 24mm wide, 12mm on each side of the 135 mm. arc traced centered on the root hinge pin 8A2-4A.

Note: The Vertical Rod Upper Spacer 8C9-4 is 3/4" inch diameter.

The **top** of the slot is approx. 120 mm. measured down from the top of the fuselage.

The **bottom** of the slot is approx. 225 mm. vertical distance to the top of the fuselage.

Drill a 1" diameter hole at the upper and lower center points. Plot the curved shape and cut the control rod access hole to size.



file FR100-78

Photo FR3-19

The next step is install the flaperon outboard tips.

Photo shows the correct trimming and installation of the fiberglass tips, also see photo FR3-21.

The outboard edge of the flaperon (fiberglass tip) is to be flush with the outboard edge of the wing tip.  
 Mark the desired trim lengths. Remove the flaperon and trim to size.  
 Trial fit the tip with the flaperon back in place on the wing.



file FR100-43

Photo FR3-20

Trim the flaperon skin as shown once the fit is established remove the flaperon from the win to complete the work.



file FR100-31

Photo FR 3-21

The flaperon leading edge skin has been removed in this photo for purposes of illustration.

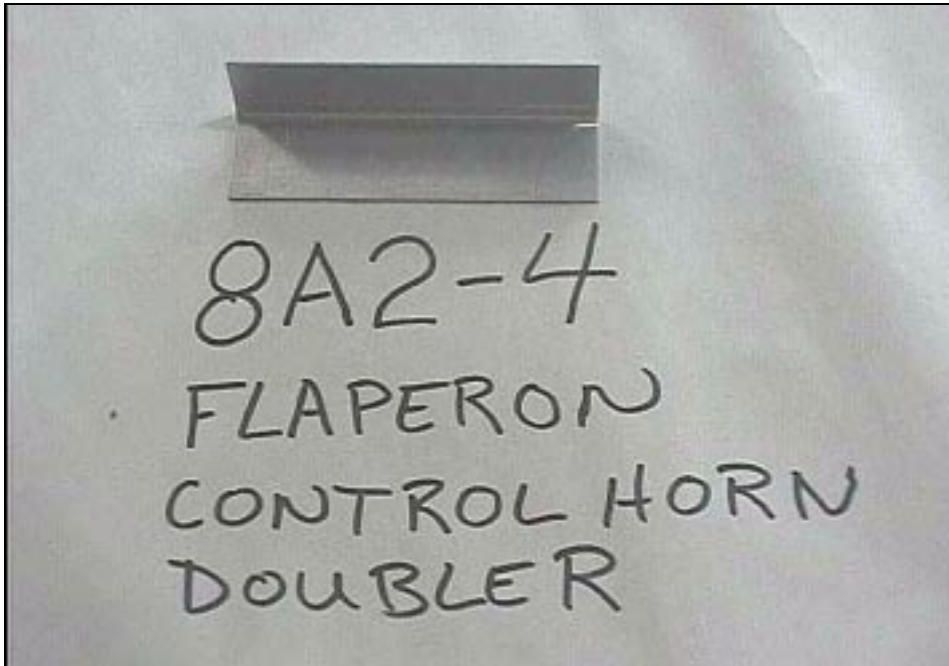
It will be necessary to trim the rear skin along the front (spar), or to cut slots in the fiberglass tip; approx. overlap of the fiberglass tip inside the skin is 20 – 25 mm.



file Fr100-44

file FR3-22

Layout the rivet locations, drill and rivet in place.

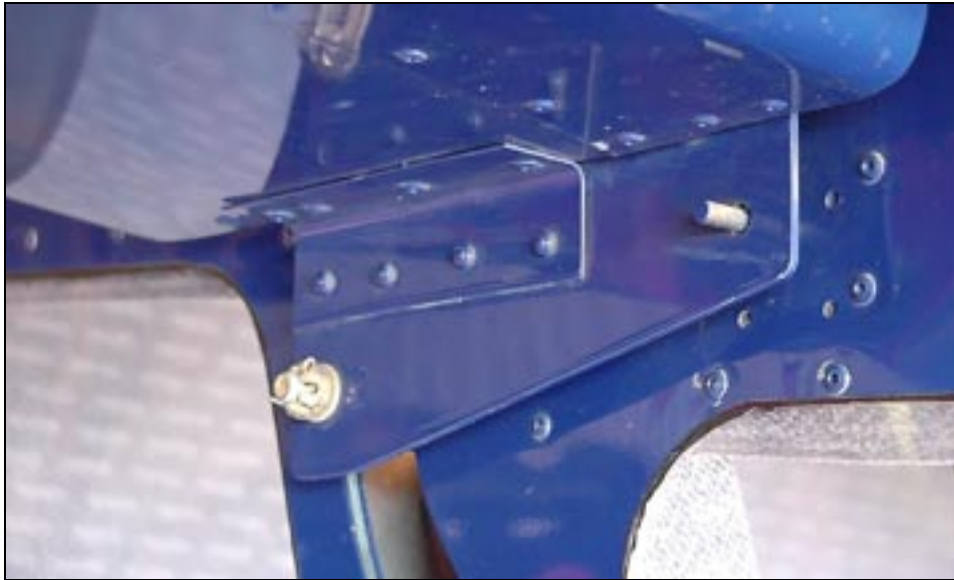


file FR100-80

Photo FR3-23

Actual Part #: **8A2-4B**

Bracket **8A2-4B** is a doubler to be installed to the outboard side of the control horn of each flaperon.



file FR100-67

Photo FR3-24

WAIT TO DRILL THE 5/16" HOLE.

The 30 mm. flange is on the horn.

The doubler angle fits in the corner of the horn and the underside of the flaperon. There are four A5 rivets into the rib and four in the horn.



file F100-72

Photo FR3-25

Bushing 8A2-7 fits inside the Flaperon Arm 8V4-7 t=.125" (1/4" hole in the Arm 8V4-7) with one 1/4" washer on each side of the Arm, One 3/16" washer under the head and two 3/16" washers under the nut.

Use AN3-7A bolt.

Re-install the flaperon on the wing with its correct hardware (bolt in place with correct bushing and washers).  
Repeat the process for the other flaperon and the job is complete.

I have checked my work and parts list and confirm to myself, that all items listed in this portion of the elevator hinge have been installed.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_