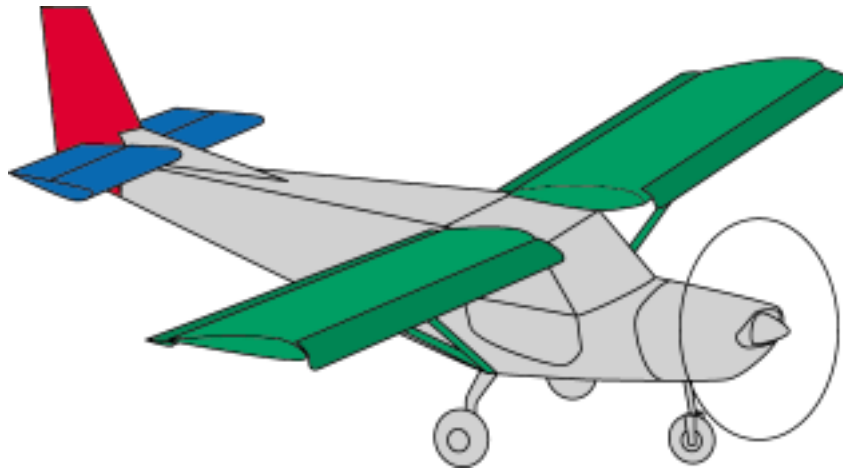


STOL CH 801

AIRCRAFT FINISHING “ATTACHING CONTROL SURFACES”



Section 1: Bolting the stabilizer to the fuselage.

Section 2: Attaching the rudder to the fuselage.

Section 3: Attaching the wings to the fuselage.

STOL CH 801

AIRCRAFT FINISHING “ATTACHING CONTROL SURFACES”

SECTION 1 “Bolting the Stabilizer to the Fuselage”

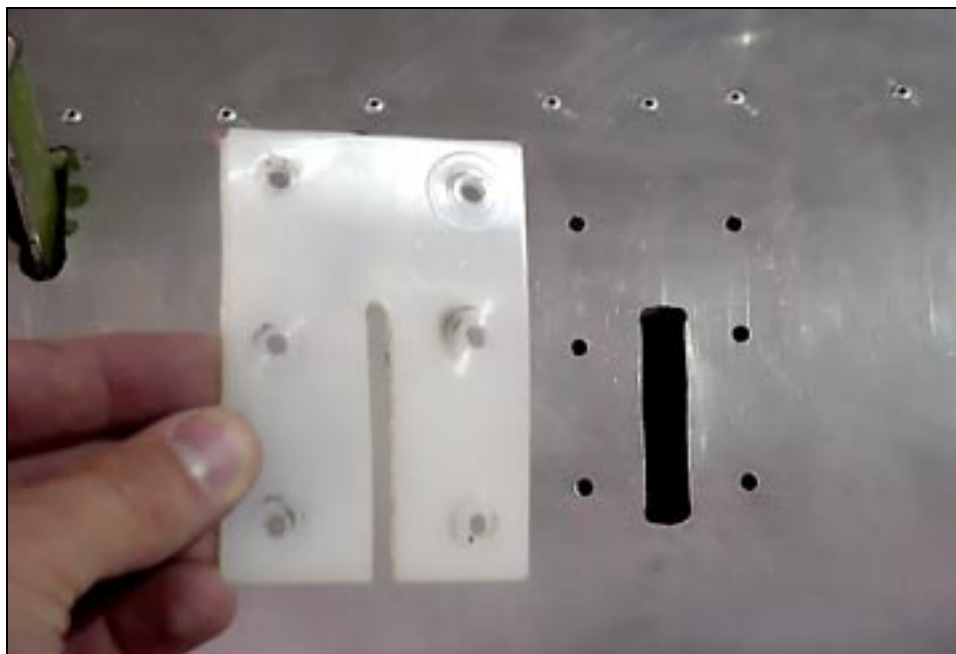
Section 1

1. Cut out in the bottom of the stabilizer for the elevator control cable
2. Bolt the stabilizer to the fuselage
3. Attach the elevator control cables
4. Install the elevator control (deflection) stops.

Reference Drawings:

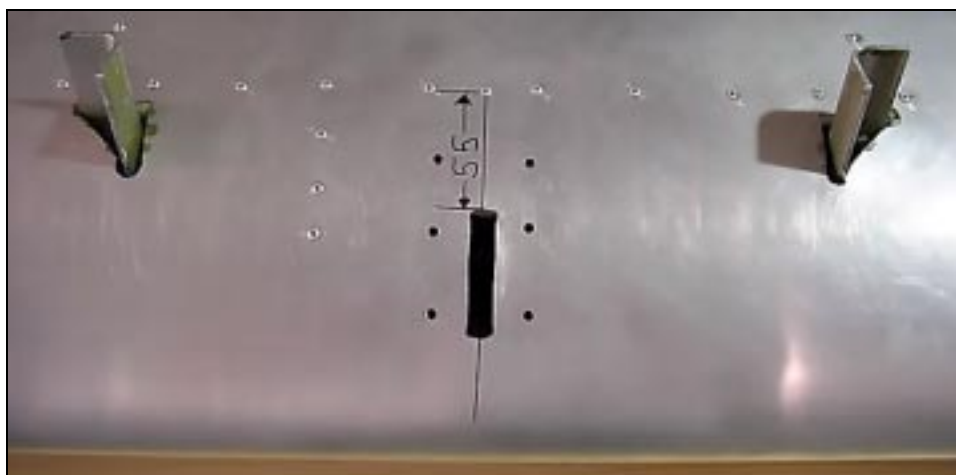
- [8CN-1](#) and [8CN-2](#) for control system hardware.
- [8CN-3.1](#) and [8CN-3.2](#) for control deflections.

1. Cut out in the bottom of the stabilizer for the elevator control cable



file stab-a1

Drill 6 #20 holes in the forward stabilizer fairlead 8C5-7 (58 x 85 mm.)



file stab-a2

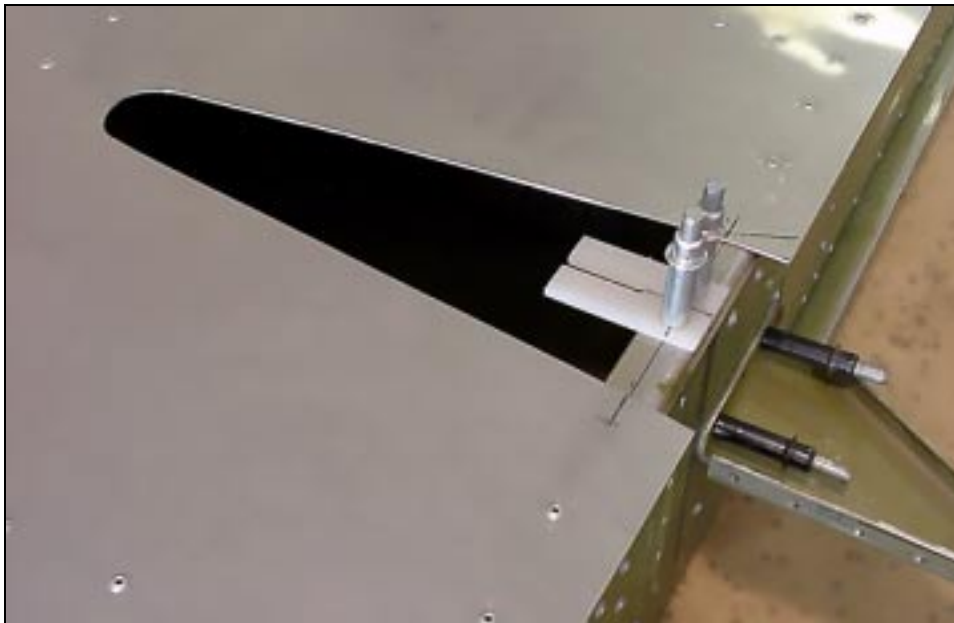
Cut out for the top elevator cable through the stabilizer – the cutout is on the bottom of the stabilizer assembly.

- The center of the slot cutout is on the aircraft center line.
- The bottom edge is 55 mm. from the stabilizer spar rivet line (8H2-1).
- Width: approx. 10 mm.
- Length: length of slot in bearing 8C5-7.



file stab-a4

Position the fairlead 8C5-7 to the stabilizer and drill through the stabilizer skin. Rivet fairlead 8C5-7 to the stabilizer with 6 A5 rivets.



The top side of the stabilizer.

file stab-a2-1

Cable fairlead 8C5-8 is riveted to the rear spar and doubler (2 x A5).

2. Bolt the stabilizer to the fuselage



file stab-1

Clamp the stabilizer to the fuselage:

Move the assemble forward for a snug fit of the horizontal tail attachment brackets 8F3-4 on each side of the stabilizer rear brackets 8H2-1.



file stab-2

A shim may be required between the front brackets 8H2-10 and the fuselage attachment brackets.

The stabilizer leading edge is perpendicular (square) to the aircraft (fuselage) center line. Check for equal distances between the right and left outboard ends of the stabilizer to a fixed point on the forward fuselage center line.



file stab-3

The stabilizer rear bracket 8H2-11 sits on top of the fuselage. Adjust the front bracket up or down to make the stabilizer level.

The top surface is level with the fuselage reference line.

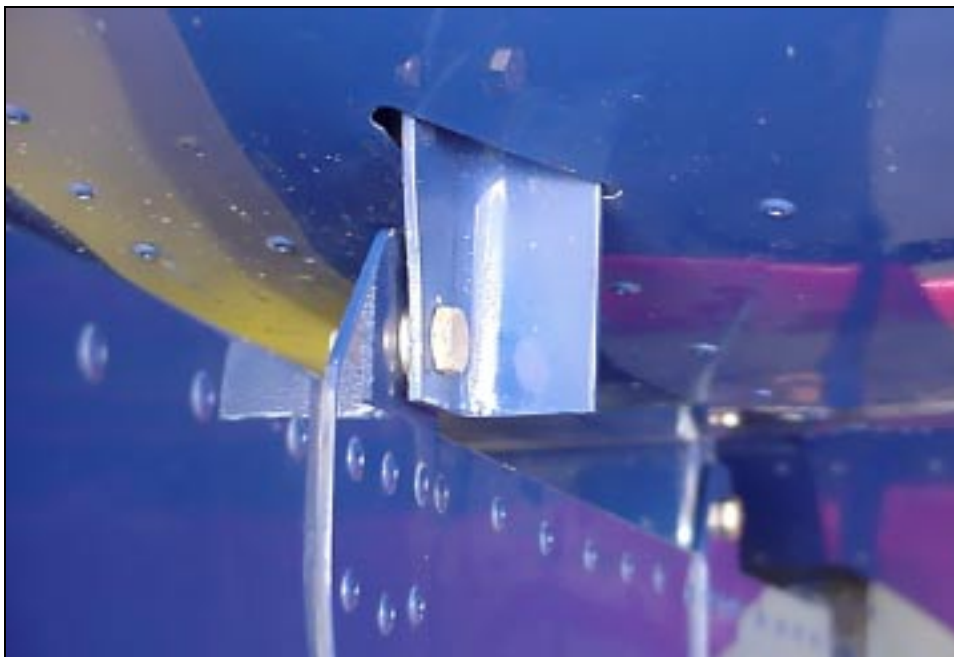


file stab-4

Stabilizer Rear Brackets 8H2-11 to horizontal tail attachment bracket 8F3-4.

Rear Bracket (Left & Right):

= AN4-5A
+ 2 washers
+ SL nuts



file stab-5

Front brackets 8H2-10 to the horizontal tail attachment bracket 8F3-4.

Front Bracket (Left & Right):

= AN4-5A
+ 1 washer
+ SL nuts

Note: If a shim is used for alignment a longer bolt is required (ie. AN4-10A for a 5 mm. shim).

3. Attach the elevator control cables



View from the rear with the rudder removed.

file elev-a1

The elevator controls.



(The cable wire on the right is the trim tab wire secured to the top skin with tie-wrap offset).

file elev-a2

The bottom elevator control cable attachment.

4. Install the elevator control (deflection) stops.



file elev-a3

Upper Elevator Stop:
A piece of $\frac{3}{4}$ " x $\frac{3}{4}$ " x .093
extrusion riveted (2 x A5)
to the side of the center
hinge bracket 8H3-3

A piece of $\frac{3}{4}$ " x $\frac{3}{4}$ " x .093
extrusion riveted (2 x A5)
to the side of the upper
elevator horn 8H5-1

The two extrusion make
contact to provide the
control "stop."

The top elevator control cable attachment. The horn is filed to avoid any contact with the cable assembly at all deflections.

Elevator control deflections are shown on drawing 8CN-3.1
The template to check the deflections is shown on drawing 8CN-3.2



file elev-a4

Elevator control stop:
A piece of trimmed $\frac{3}{4}$ " x $\frac{3}{4}$ " x .093 extrusion riveted (3 x A5) to the rear elevator channel 8H2-14.

The extrusion piece makes contact with the upper rudder hinge plate 8F4-1 to "stop" the elevator.

The elevator control stop – shown in the down position (bottom deflection).



file elev-a5

Detail view of the control stop ($\frac{3}{4}$ " x $\frac{3}{4}$ " x .093 extrusion) riveted to the center hinge bracket 8H3-3.

The upper elevator control stop.