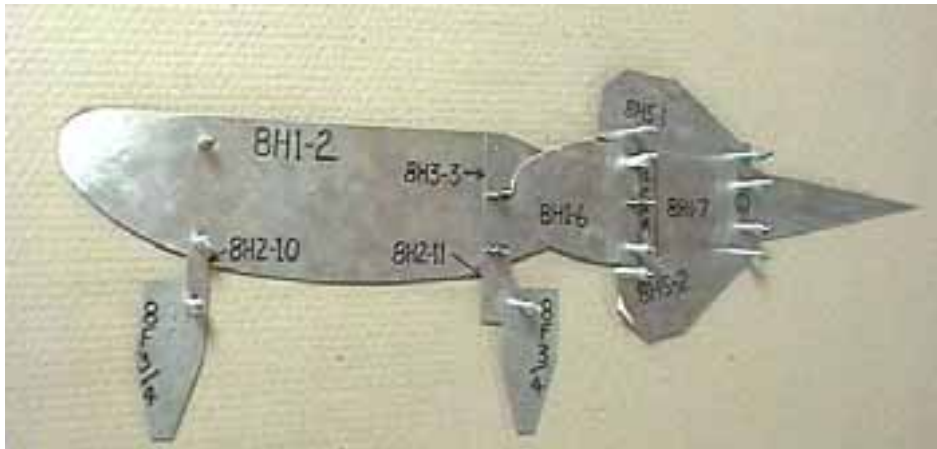


STOL CH 8 01 HORIZONTAL TAIL ASSEMBLY - SECTION 3
"ELEVATOR HORNS"



The sectional view shows the assembly positions of the horn and supports viewing the center section of the elevator from the left side of the aircraft.

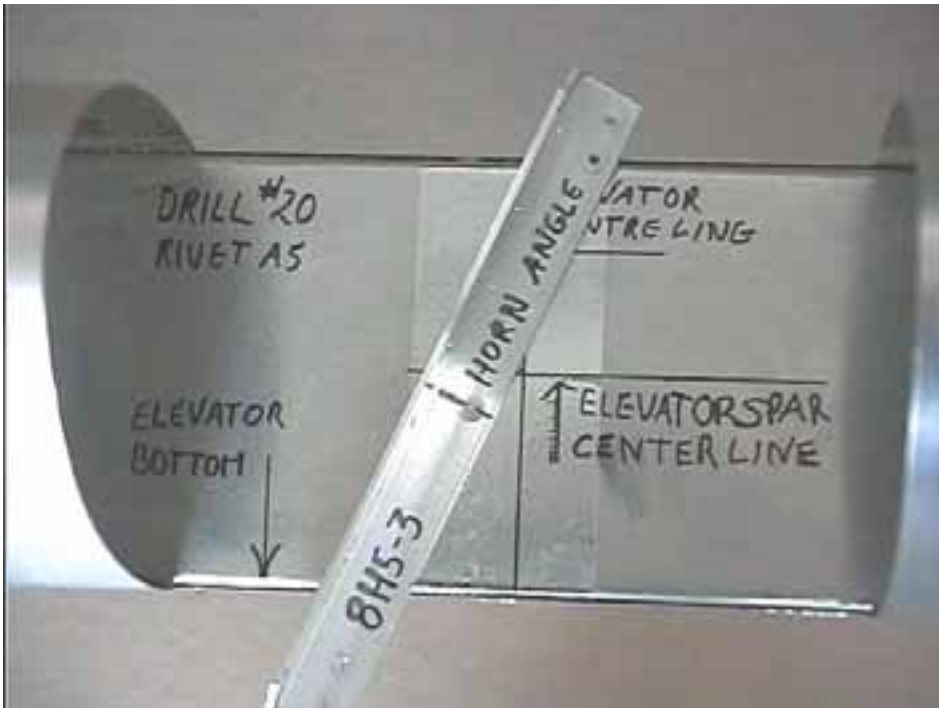
When drilling the rivet holes to mount the control horn parts first drill #40 pilot holes and drill only the minimum number of holes to hold the parts together. After the parts have all been clecoed in place, inspect the complete assembly. When the correctness of the installation has been confirmed drill the remaining holes with the #40 drill, then with a #30 and finally with #20. Progressively opening the holes to #20 size will greatly reduce the generation of burrs on the holes.



Remember: The elevator is installed on the aircraft with the airfoil profile in an upside down position. All reference to left / right and top / bottom or up / down are taken from the installed on the aircraft position of the elevator.

Layout centerlines on the elevator spar as shown.
Mark on the elevator which side is the up side when installed on the aircraft.
Also mark left and right.

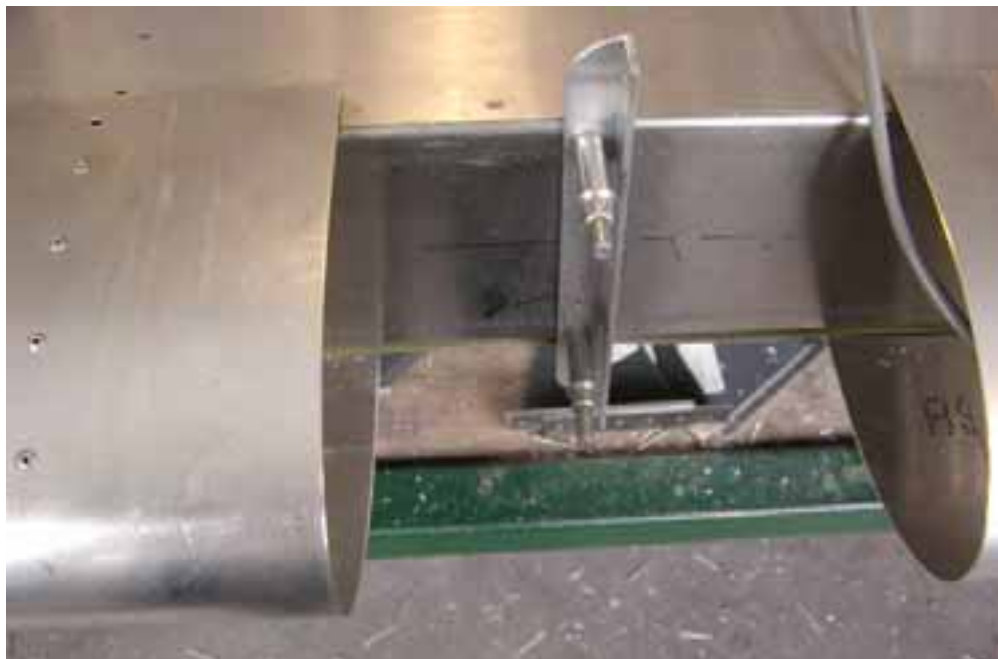
CHECK: 170mm opening between left and right I/B edge of elevator nose skin.



**HORN ANGLE
8H5-3 qty = 1**

The elevator horn angle will now be installed.

Position the edge, (not the predrilled holes) of 8H5-3 on the elevator center line - Use a 3/32 drill and drill the top and bottom holes only - Cleco
Position 8H5-3 so that when the elevator is installed on the aircraft, the rivets will be to the right of center. 8H5-3 is centered vertically by positioning the hinge hole on elevator horizontal centerline.



6 RIVETS A5



LOWER HORN
8H5-2 qty = 1

Note the 20mm dimension at the lower end of the horn. The horn should extend 20mm past the rear surface of the rear channel. The second hole in this photo is under the clamp. Drill and rivet 8H2-14 on center spar:



UPPER HORN
8H5-1 qty = 1

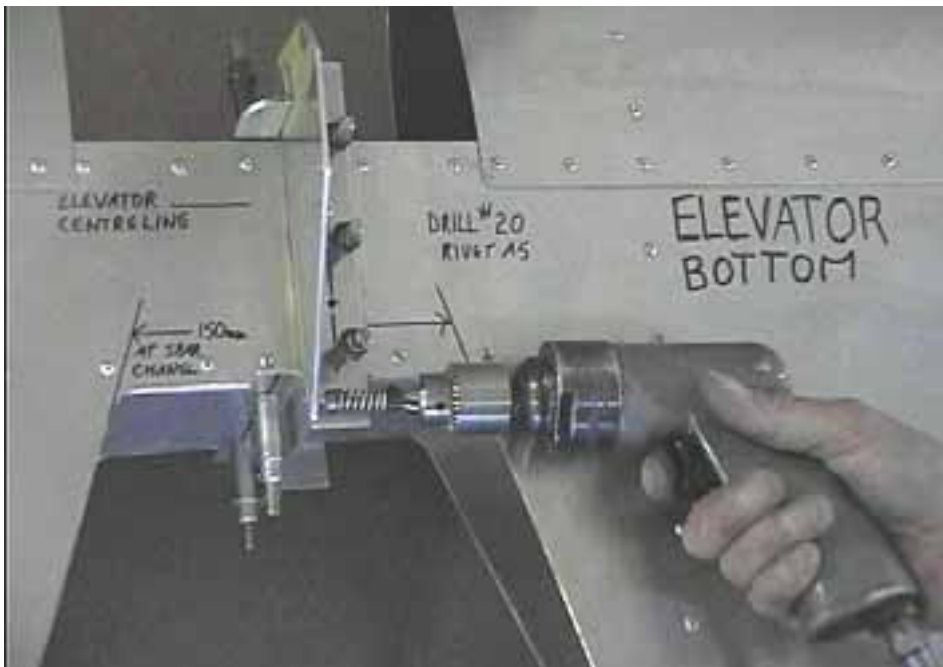
Drill the mounting rivet holes - cleco. Repeat the process for the upper elevator horn. The rivets will be on the left side of the elevator centerline.

Position the lower elevator horn with the flange on the left side of the elevator centerline.



Drill two holes through the extruded "L" into each horn.
Watch the edge distance.
Pitch will be about 10mm.

Position a piece of std "L" as shown against the rear of the horns.
Layout 3 - equally spaced rivet holes. Drill into the rear channel



3 RIVETS A5
L ANGLE into CHANNEL
8H2-14

Drill a rivet hole through the top and bottom horn into the std "L".
Check the positioning. Drill all holes 3/32.
Open all rivet holes with #20 drill.
Leave this part clecoed. They will be riveted in place after the elevator is fitted to the horizontal tail.



1 RIVET A5
(top)
L ANGLE into side of
UPPER 8H5-1

1 RIVET A5
(bottom)
L ANGLE into side of
LOWER HORN 8H5-2

L Angle riveted to Channel 8H2-14

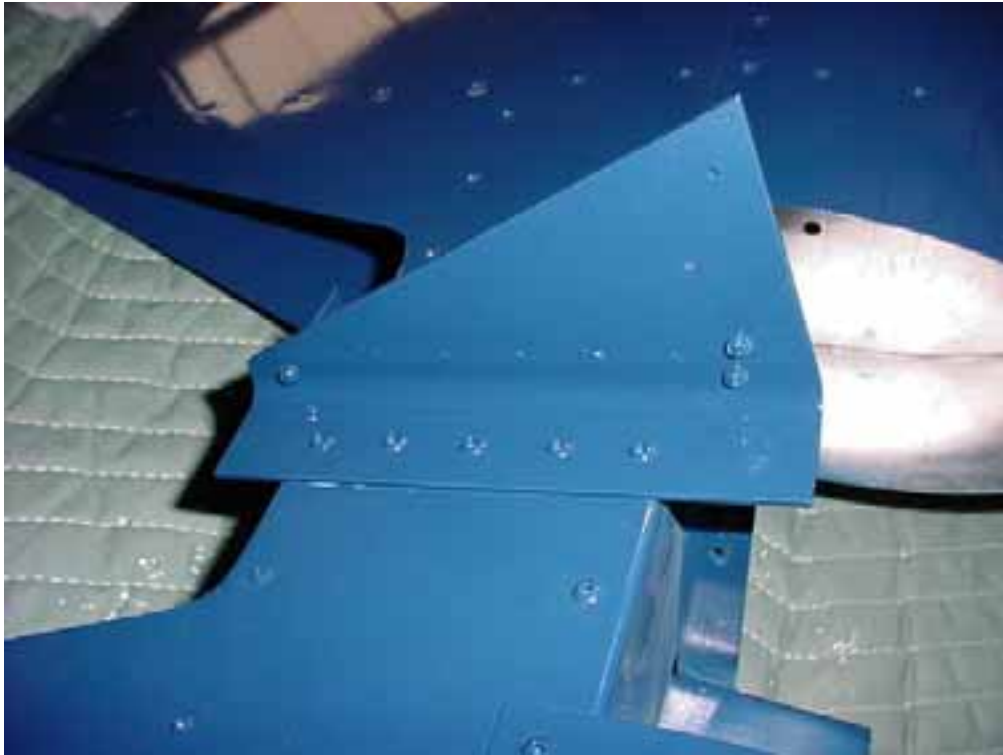


5 RIVETS A5
Upper horn 8H5-1

5 RIVETS A5
Lower horn 8H5-2

Top view

First rivet is through Spar 8H3-6, aft rivet is through
Channel 8H2-14



Horn



Note: the pivot hole in the Horn 8H3-4 will be drilled with $\frac{1}{4}$ " diameter drill bit for AN4-6A bolt. Ref 8H3-4 bushing to 8H3-3

Wait to rivet, the angle will be removed to drill the pivot hole in 8H3-3, see stabilizer section 3