

STOL CH 801 WING ASSEMBLY

SECTION 5

“Installing the Rear Spar”

and

“Wing Root Ribs”

Compass Check

1. Position the rear spar and clamp.
2. Drill and cleco all spar / rib holes.
3. Open holes and rivet.
4. Fit the rear root rib.
5. Fit the nose root rib.
6. Bolt root rib in place.

STOL CH 801 WING ASSEMBLY

SECTION 5

“Installing the Rear Spar”

and

“Wing Root Ribs”

Helpful Building Tips

1. Clamp all the ribs in place and check their position prior to drilling.
2. Don't worry about squareness (as viewed from above); just check that the ribs are parallel to one another.
3. When trimming the rear root rib. Take small cuts and try the fit to avoid cutting away too much material.

Section 5: Installing the Rear Spar and Wing Root Ribs



file V-48

Photo V5-1

The end of the spar with eleven rows of three rivet holes and one row of two is the root end (inboard end).

If you have not already done so mark the flange center line on the rib rear flanges.

Position the rear spar on the ribs so that the predrilled holes are roughly in line with the rib center lines.



file V-49

Photo V5-2

Clamp the rear spar to rib #1 & 7 to hold the spar in place. Alignment is not critical at this time, you only want to stop the spar from falling to the floor.



file V-50

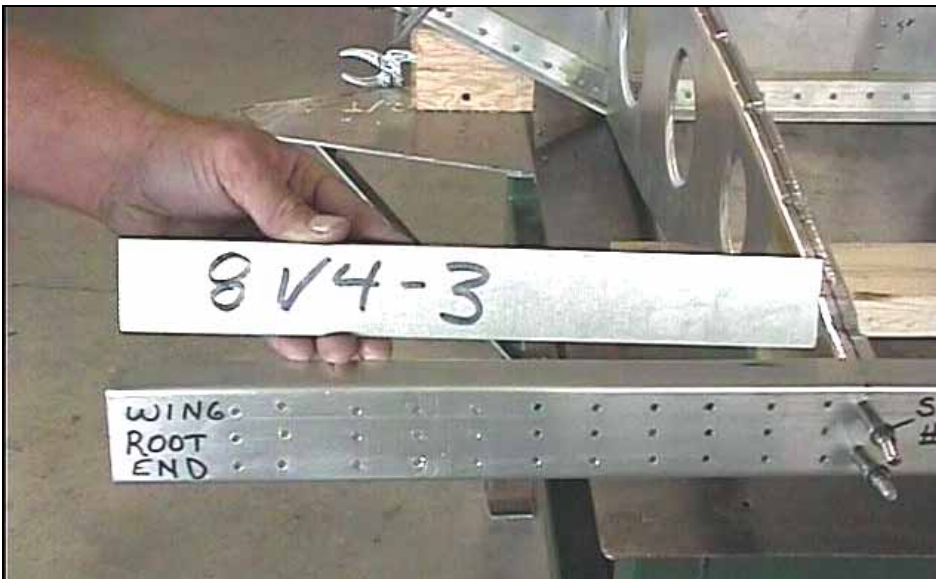
Photo V5-3

Keep the ribs vertically square with the rear spar as you drill and cleco. Use a 3/32 diameter drill bit.

A quick check to confirm that the ribs are parallel to one another is a good double check of your spar positioning.

Proceed to position, drill and cleco each of the remaining ribs (2, 3, 4, 5, 6) in place, sighting the rib flange center line through the hole in the rear spar.

After ribs 2, 3, 4, 5, 6 have been clecoed remove the clamps from ribs 1 & 7, correctly position the rib on the spar, drill and cleco.

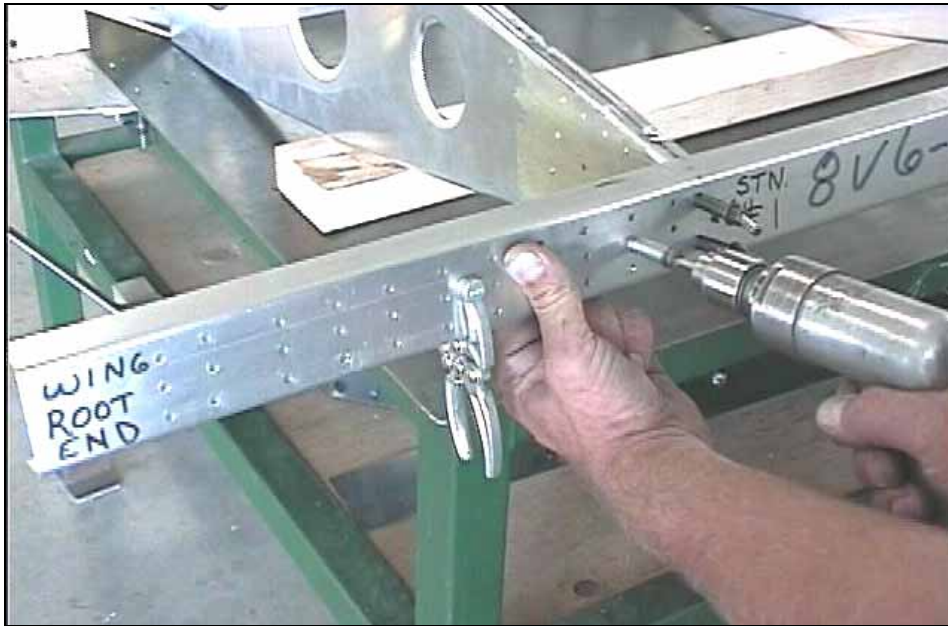


file V-53

Photo V5-4

Maintain 1 mm space between the end of 8V4-3 and rib #7 to prevent chaffing of the rib.

8V4-3 is the rear spar wing root doubler. It is placed on the inside of the rear spar with it's end 1 - 2mm from rib #1

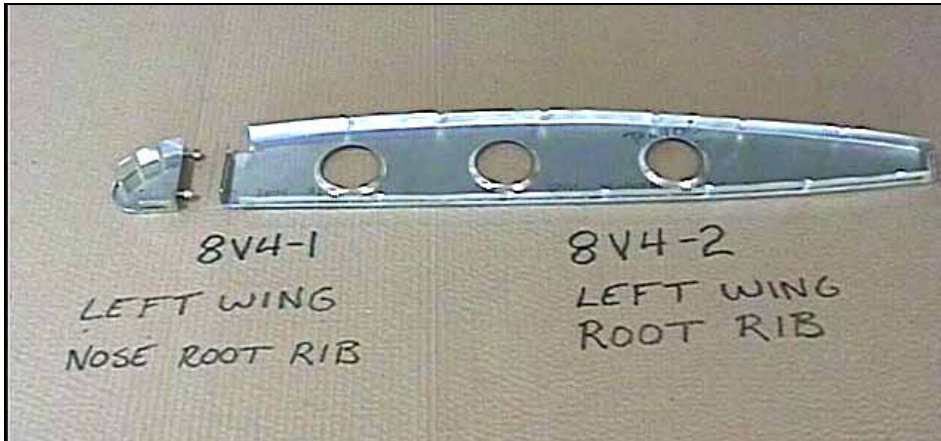


file V-54

Photo V5-5

The second row of three holes to the right of the words "wing root end" as shown in the photo, are the rivet holes for the root rib rear flanges.

Clamp the doubler in place and drill all holes with a 3/32 drill and cleco. Do not open up the holes or rivet yet.

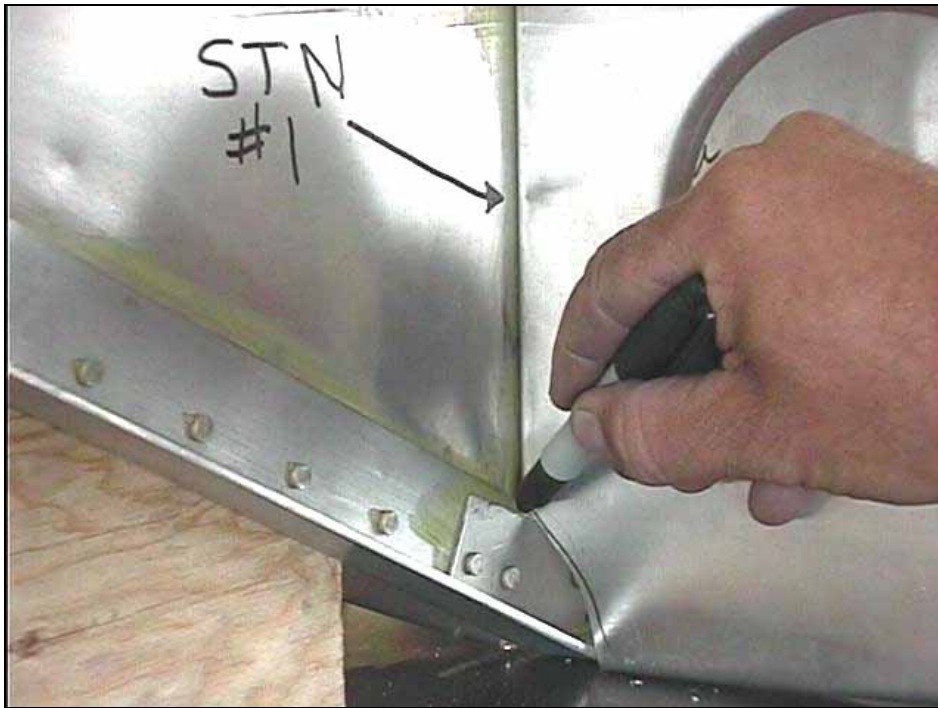


file V-55

Photo V5-6

Orientation is the same for these ribs as it was for the others. Photo V4-1 and V5-9 best detail how this rib is to be installed.

Proceed to trim and fit the root rib.



file V-59

Photo V5-7

See photo V5-10 before trimming the rib.

Place the rib in position and mark it for clearance required at the spar.



file V-58

Photo V5-8

The trimmed rib should look like the rib on the right. The trimming is just to allow the ribs to clear the spar cap. Keep clearance 1 - 2 mm.

Remember to leave a radius in the corner of the trimmed notch, sharp corners are a "no, no".

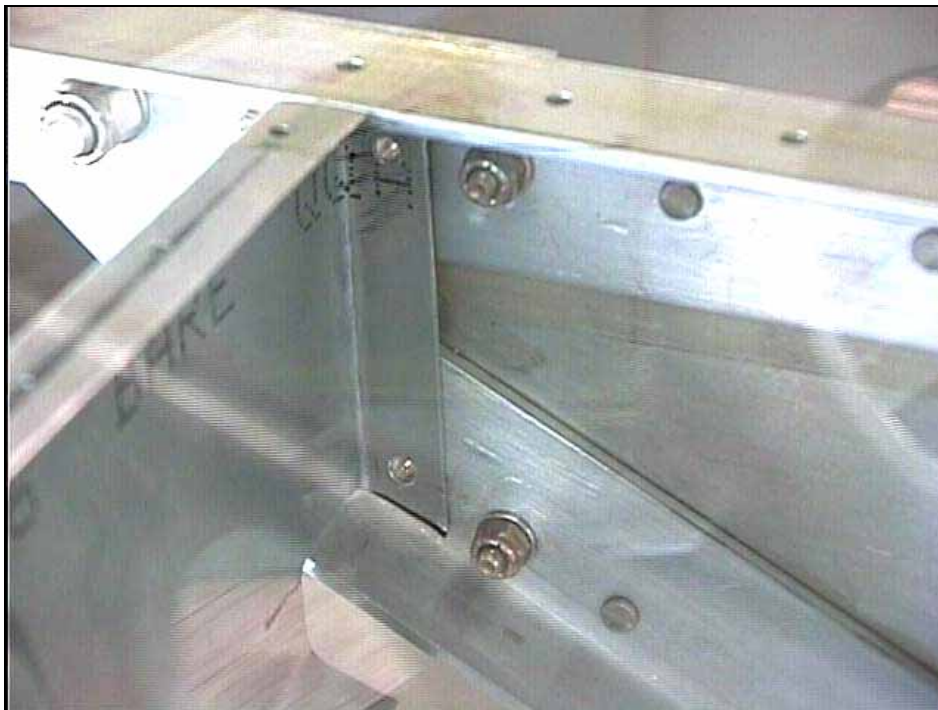


file V-60

Photo V5-9

Remember - top and bottom are referenced from the "as installed in the aircraft" position. Your wing is currently upside down.

The top edge of the root rib will sit substantially lower than angled spar cap as shown. Keep the other bottom flange flush with the straight spar cap. As shown in photo V5-10.

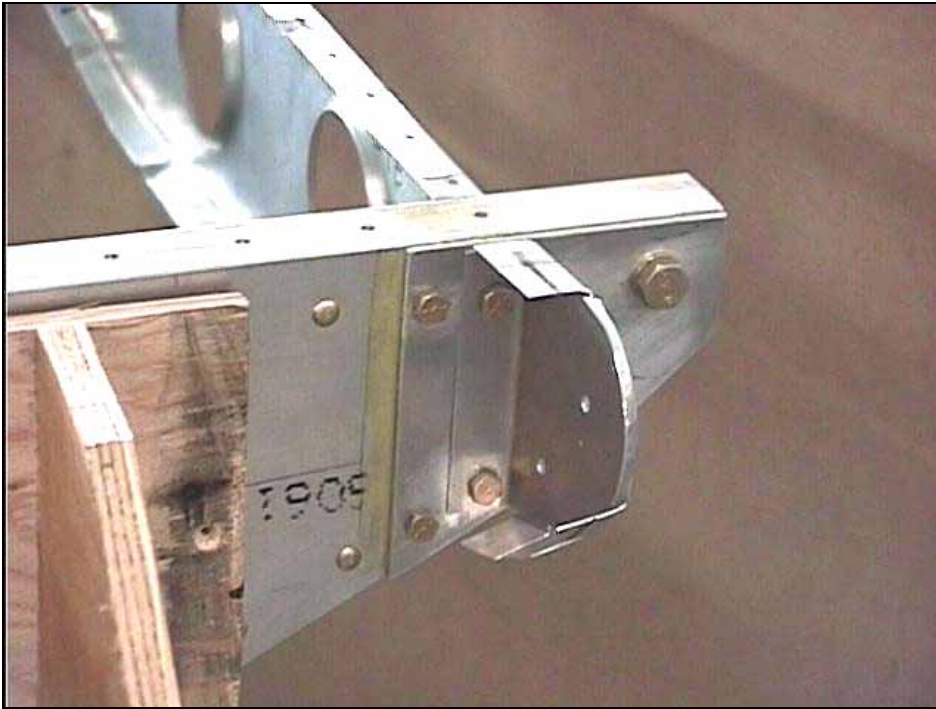


file V-61

Photo V5-10

This view shows the position of the rear root rib.

Drill the rib holes with a 3/16 drill.
Position the nose rib and drill the two 3/16 holes.



file V-62

Photo V5-11

Bolt the rear and nose root rib in place.
Drill the three rivet holes in the rear flange of the root rib / rear spar.
See note at photo V5-5.
Open the holes in the rear spar with a #20 drill, deburr and rivet the ribs,
spar and spar doubler 8V4-5 in place.

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: _____

Revision List:

Revision	Summary	Revised By:	Date:
3.0	Reformat	SH	8/17/1999