

STOL CH 801 WING ASSEMBLY

SECTION 10

“INSTALLING THE TOP PORTION OF THE LEADING EDGE SKIN”

Compass Check

1. Wrap the skin with ratchet straps.
2. Cleco to spar.
3. Layout rib rivet lines.
4. Drill to ribs.
5. Trim skins for root skin installation.

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Helpful Building Tips

1. Use at least **four** straps to clamp skin.
2. Use protection for the skin. i.e. 2” x 2” wood beams.
3. Read and understand this section before starting the job.
4. Don't rush – take your time...

SECTION 10: INSTALLING THE TOP PORTION OF THE LEADING EDGE SKIN



file V1-45

Photo V10-1

A piece of 2x2 wood between the edge of the skin and the straps will prevent damaging the edge of the skin. We recommend the use of four ratchet type nylon straps. The ratchet gives excellent control of pulling pressures. Wrap both the O/B and I/B skins at the same time.

Remove the Clecos in the spar rivet line then pull the skin into position.



file V1-40

Photo V10-2

Take the time and effort to provide protection for the wing skin under the strap ratchets.

Tighten the straps progressively, a little on each. Take your time. Be gentle. Aluminum bends easily.

Before tightening the straps check every corner where straps make contact with a skin edge. You won't want to deform anything with the straps.



file V1-41

Photo V10-3

The nose skins slide under the top rear skins.

Wrap the leading edge skin around the ribs. Slide the skin under the top rear skin and hold it in place with nylon ratchet straps. Now check the position of all components. The skin should be tight to the nose ribs, not bent or deformed in any manner.

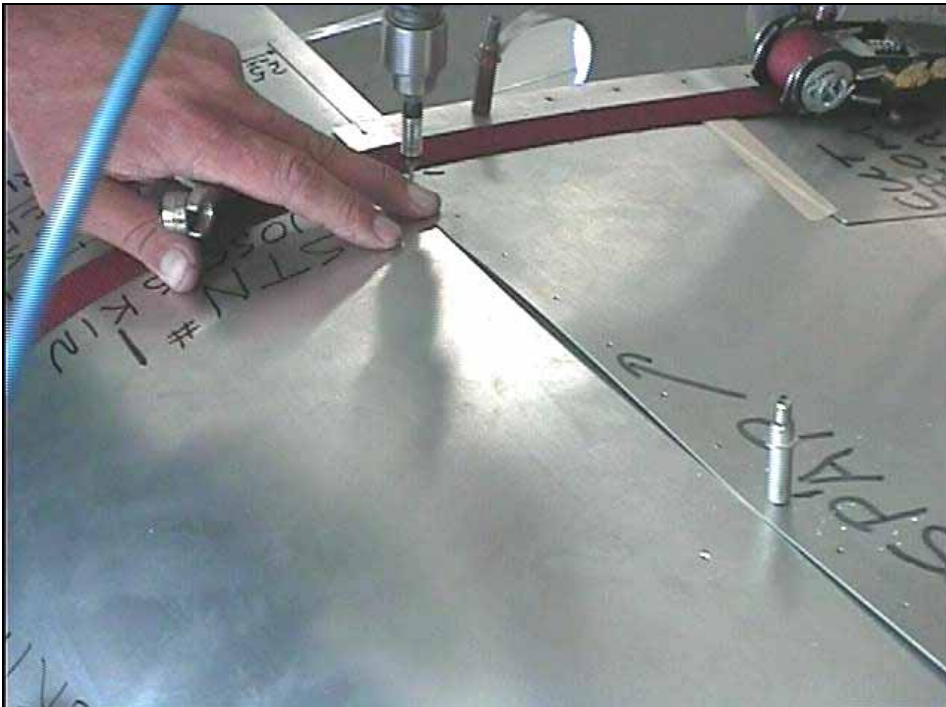


file V1-43

Photo V10-4

The nose skin has been placed under the rear skin in order that the holes in the rear skin may be transferred to the nose skin. All drilling is to be with a 3/32 drill unless stated otherwise.

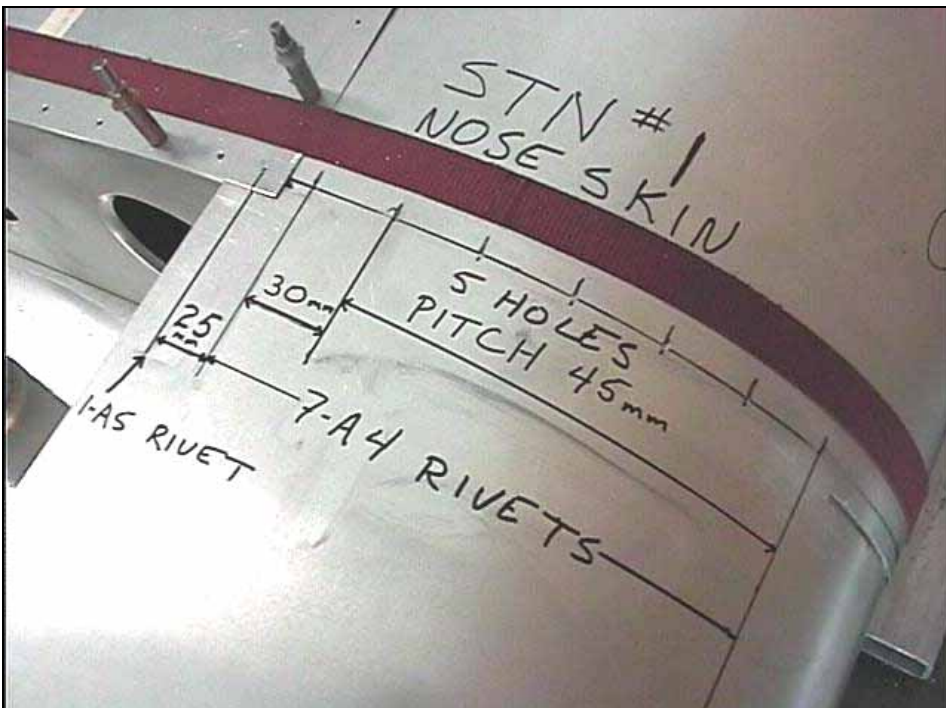
Earlier when the rear top skin was installed, every 8th to 10th hole was drilled in the spar. Now drill those same holes through the nose skin. Cleco into the spar as you go.



file V1-44

Photo V10-5

Drill and cleco every 8th to 10th hole to lock the leading edge skin into place.



file V1-48

Photo V10-6

Layout the nose rib pitches. The 25mm dimension is measured from the spar rivet line. Repeat on all nose ribs.



file V1-47

Photo V10-7

Notice that the straps are still in place holding the skin partially closed.

Open up the skin and drill the nose rib rivet holes.

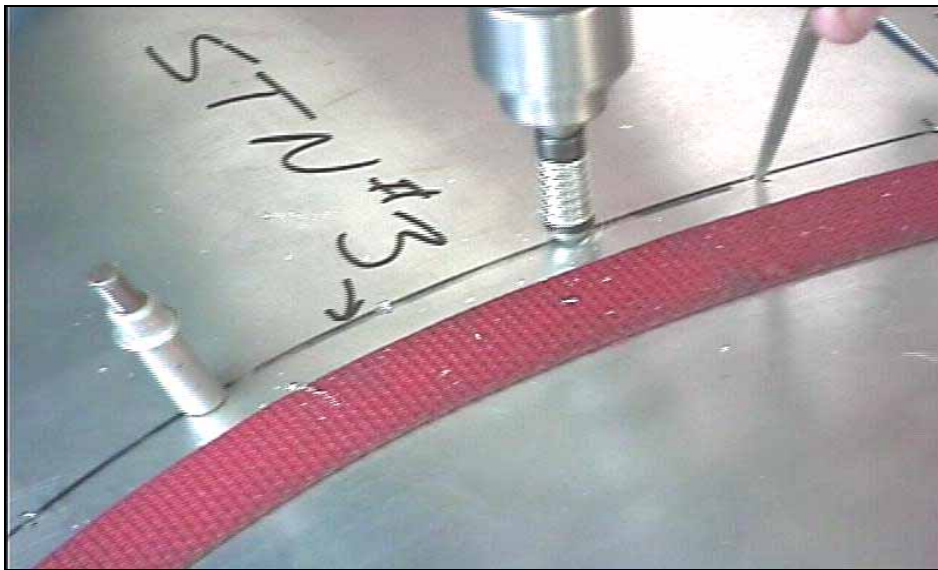


file V1-49

Photo V10-8

A small pick with a rounded point that won't scratch the rib is a real help in aligning the rib.

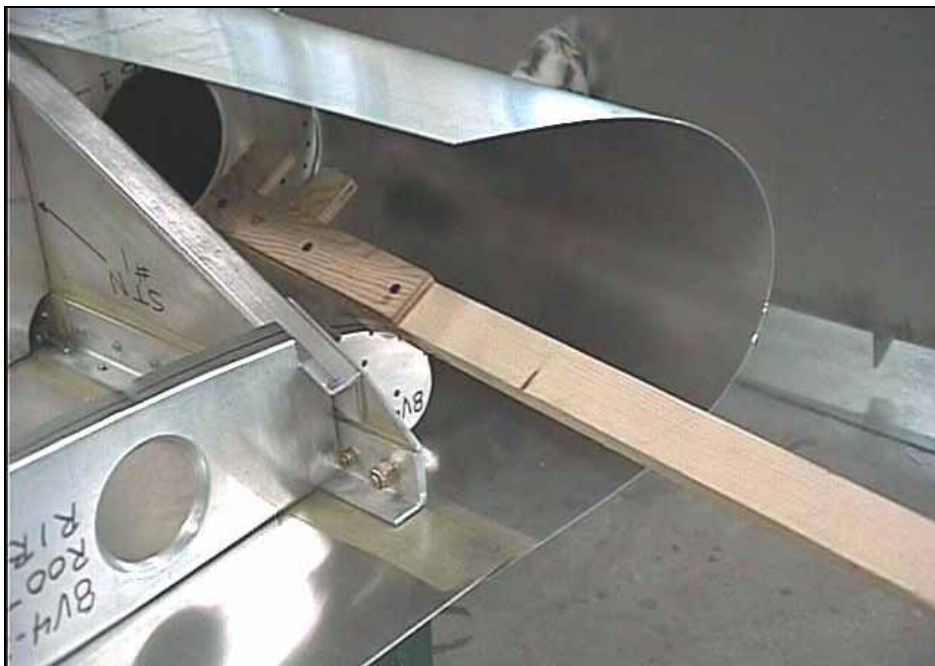
Re strap and cleco the skin back in place.
Align the rib centerlines through the holes that were just drilled.
Drill ribs - 3/32 drill.
Also see photo V10-10.



file V1-50

Photo V10-9

Drill rib rivet holes in all the nose ribs, work from leading edge towards the spar. Cleco well as you proceed.



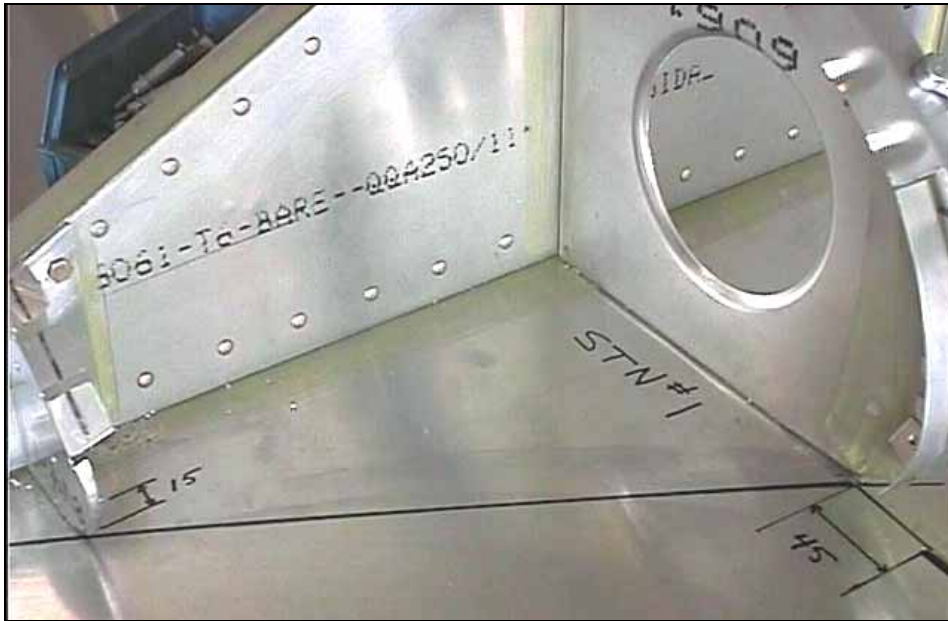
file V1-52

Photo V10-10

A handy tool to help line up rib centerlines while drilling.

Drill all rivet holes in the spar rivet line.

- Loosen the straps, remove the Clecos and re-adjust the leading edge skin so that it lies on the outside of the top rear skin.
- Re-strap and cleco.
- Drill all rib rivet holes with a #30 drill and re-cleco.
- Drill all main spar line rivet holes with a #20 drill.
- Re-open the skin and deburr all rivet holes.



file V1-55

Photo V10-11

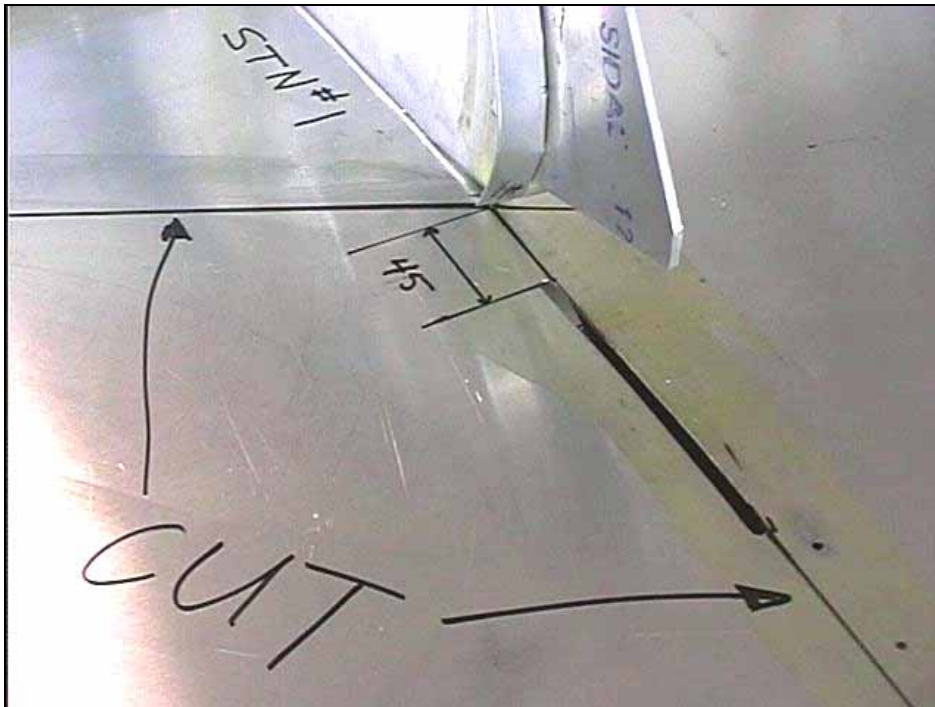
Photos V10-11, 12 and 14 show rib station #1 with the slat pickup installed. This is to provide a clearer idea of function to the builder. The pickups are not normally installed at this time as they are just in the way.

With the skin opened up this is the ideal time to trim it for the future installation of the root wing tip.

Measure out from the spar 55mm next to the inboard rib (the small rib) (photo shows 15mm which is from the edge of the rib flange, which is 40mm from the spar). Also measure 45mm back from the slot in the skin at station #1 rib.

Mark a diagonal line as shown in the photo.

Also mark a line from the edge of the slat at station #1, - forward and 90° to spar then main.

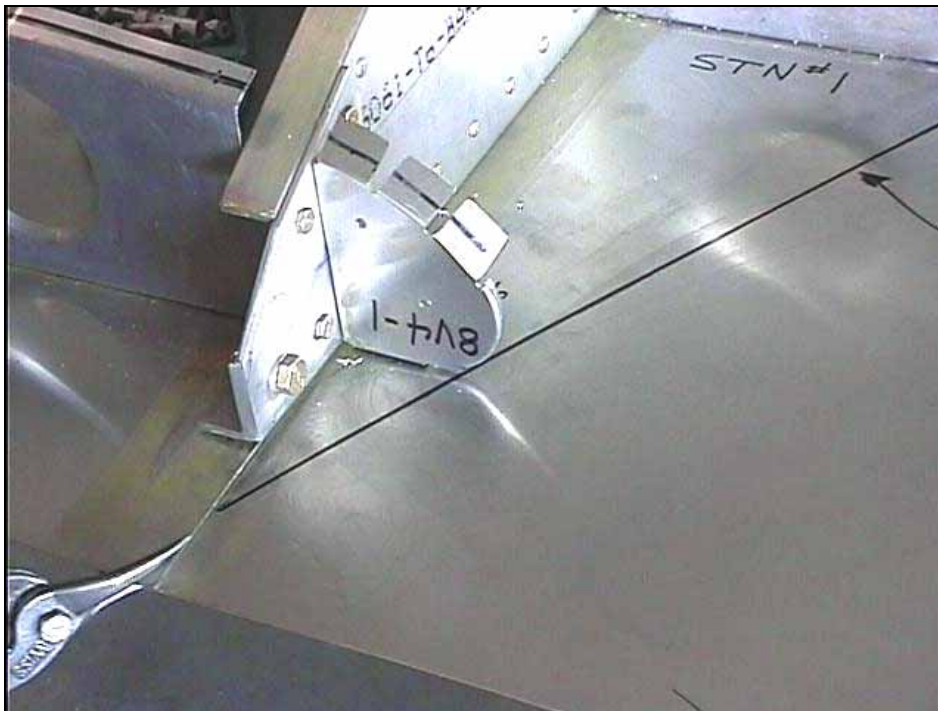


file V1-56

Photo V10-12

The 45-mm is a nominal dimension and may vary slightly one aircraft to another.

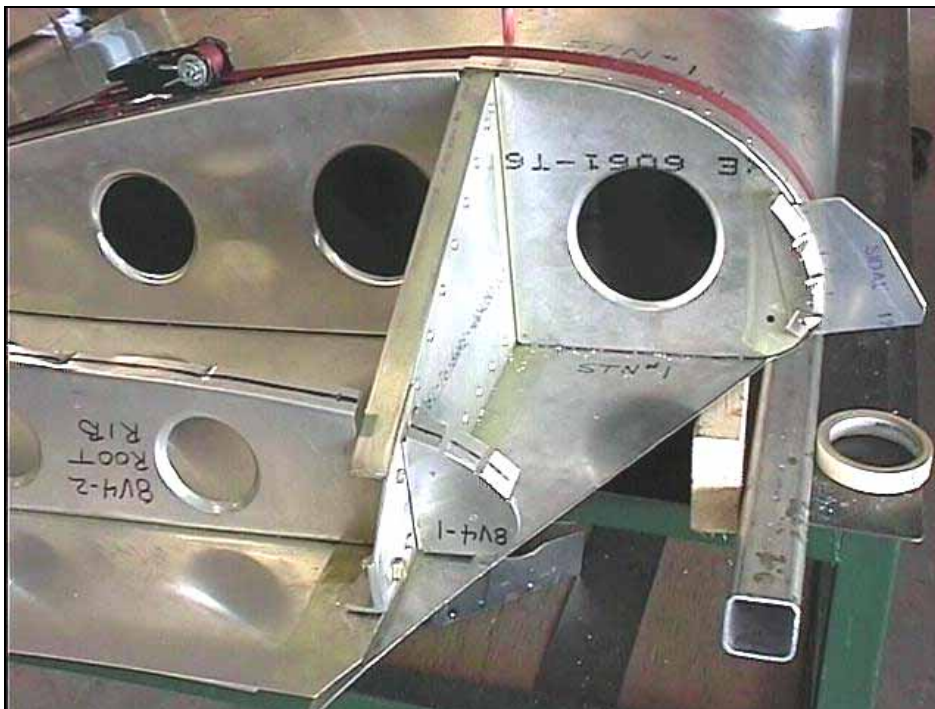
Cut and trim to the lines.



file V1-57

Photo V10-13

Trim to the lines marked.



file V1-62

Photo V10-14

In this photo the nose skin has been re-wrapped to demonstrate the final fit and trim in actual fact the skin will still be open.

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	8/18/1999