

# STOL CH 801 WING ASSEMBLY

## SECTION 9

### “FITTING THE TOP REAR SKIN”

#### Compass Check

1. Extend rivet centerlines to the leading edge skin.
2. Install both the inboard and outboard top rear skins.
3. Prepare the wing tip for the future installation of the outboard tip.
4. Cleco top skins in place.

# STOL CH 801 WING ASSEMBLY

## SECTION 9

### “FITTING THE TOP REAR SKIN”

#### Helpful Building Tips

1. Attach the nose rib support boards to the bench. It can be aggravating having things move around while you are trying to work.
2. Check photo # 6V-0 in section 6 to confirm location of the skins.

## SECTION 9: FITTING THE TOP REAR SKIN

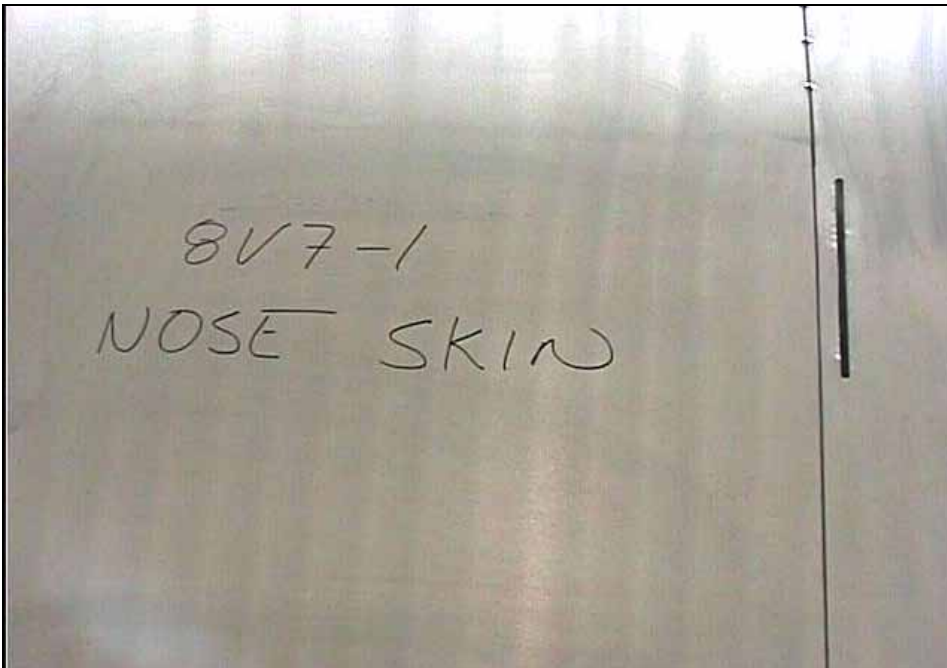


file V1-11

Photo V9-1

The wing is still upside down at this time.

Using a good straight edge as a guide, extend the rivet centerlines forward to the unsecured edge of the nose skin.



file V1-12

Photo V9-2



file V1-13

Photo V9-3

Be careful, the unattached nose skin can be damaged if care is not exercised while turning the wing.

Turn wing right side up.

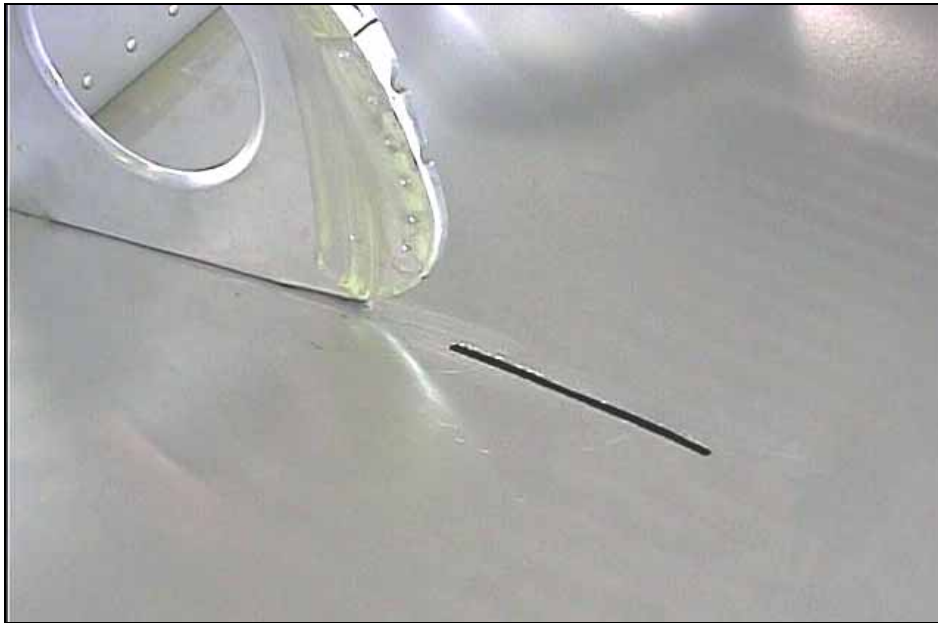


file V1-21

Photo V9-4

Attaching the supports to the bench will help keep the wing stable while work proceeds.

Support the nose ribs to keep the rear rib flat on the worktable - make sure your supports are straight and uniform.



file V1-15

Photo V9-5

Note that the slat attach brackets are not to be installed yet.

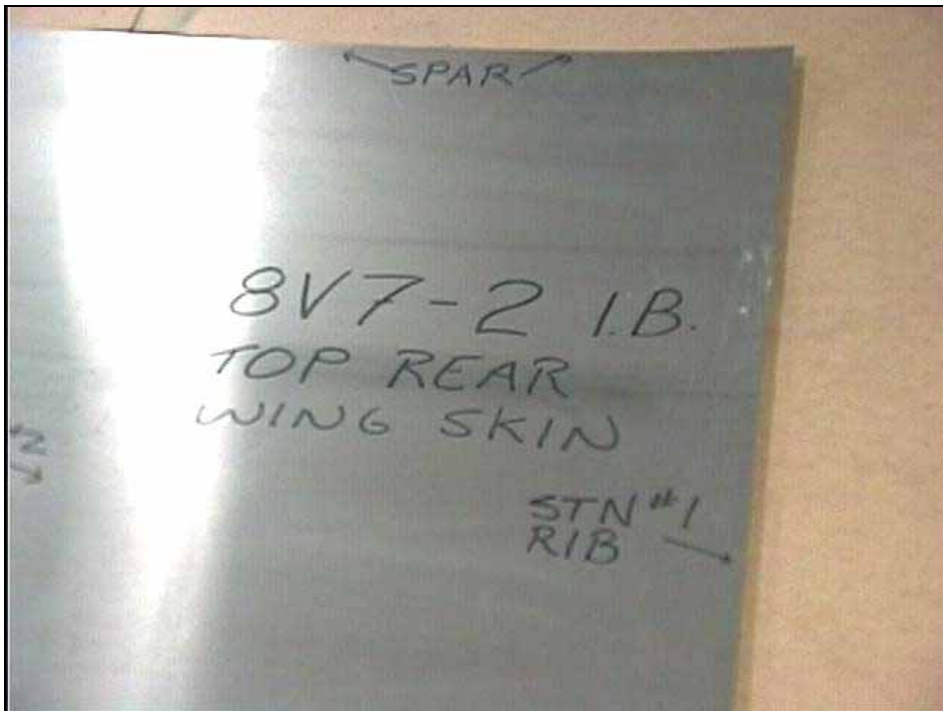


file V1-22

Photo V9-6

Ready to start the installation of the top rear skin.

If practical supply some support for the unattached portion of the leading edge skin.

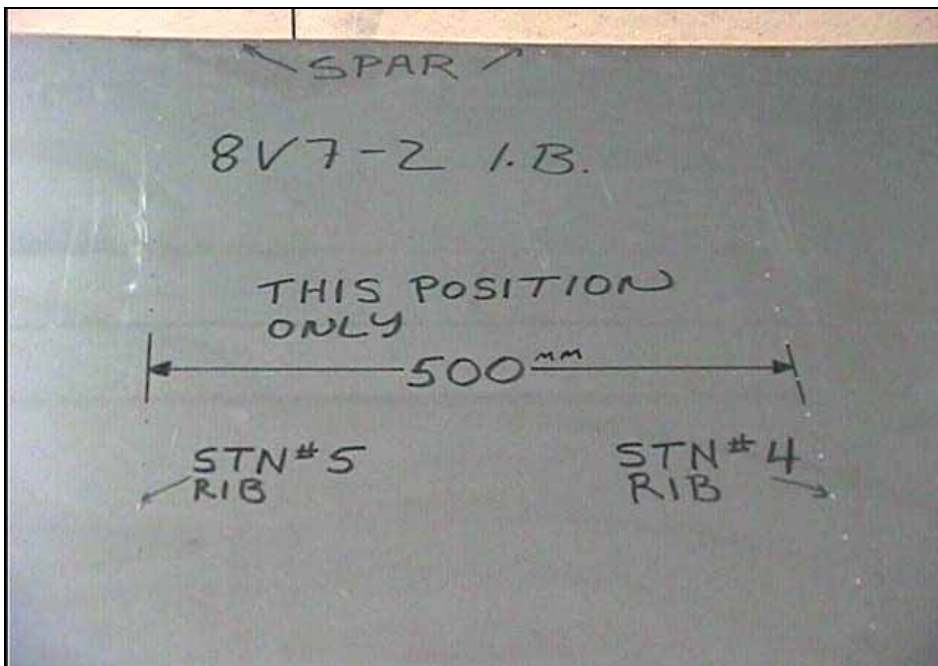


file V1-19

Photo V9-7

The installation process of the top rear skin is similar to that of the lower rear skin. This area of the wing also uses a two piece skin, 8V7-2 I/B and O/B. The I/B skin is installed first.

The inboard top rear skin extends from rib station #1 to #6



file V1-20

Photo V9-8

The center distance between ribs #4 & 5 is the only one that measures 500mm. Finding this position on the predrilled skin is the guide to correct positioning on the wing.

If not already done, mark the centerline on all the rib flanges.



file V1-23

Photo V9-9

The front edge of the skin is aligned with the front edge of the spar. Position the skin laterally by sighting the rib centerlines through the predrilled holes in the skin. The edge of the skin should align with the end of the spar cap as shown in the photo. Clamp or tape the skin to the spar.

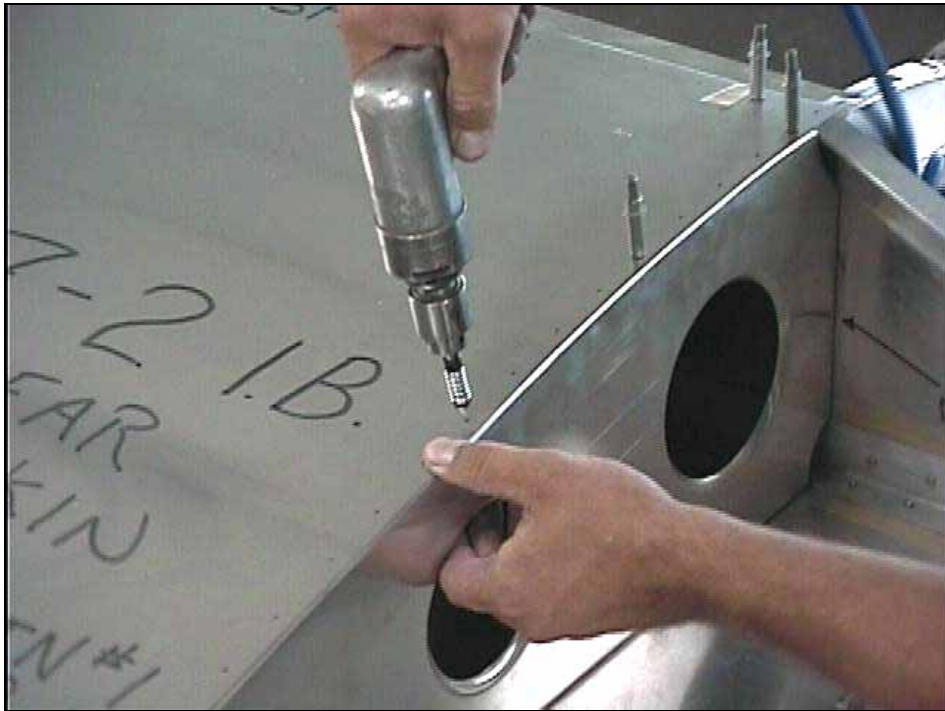


file V1-24

Photo V9-10

Note! Do not drill any holes in the rear spar until wing assembly section 12.

Drill and cleco every 8<sup>th</sup> to 10<sup>th</sup> hole in the spar cap rivet line.



file V1-25

Photo V9-11

Align the ribs with the predrilled holes and drill with a 3/32 drill. Cleco as drilling proceeds. The process is the same as that used on the other skins.

Install the top outboard skin 8V7-2 I/B. The outboard skin extends from rib station #6 past the outboard tip of the spar; it will be trimmed later. The rivet holes at rib #6 are transferred to the O/B skin in the same method used for the lower rear skins.

Locate the skin off the predrilled holes, centered over the rib centerlines. Drill and cleco 3/32.

No holes are to be drilled in the rear spar.





Photo shows marking the O/B skin for trimming.

file V1-26

Photo V9-12

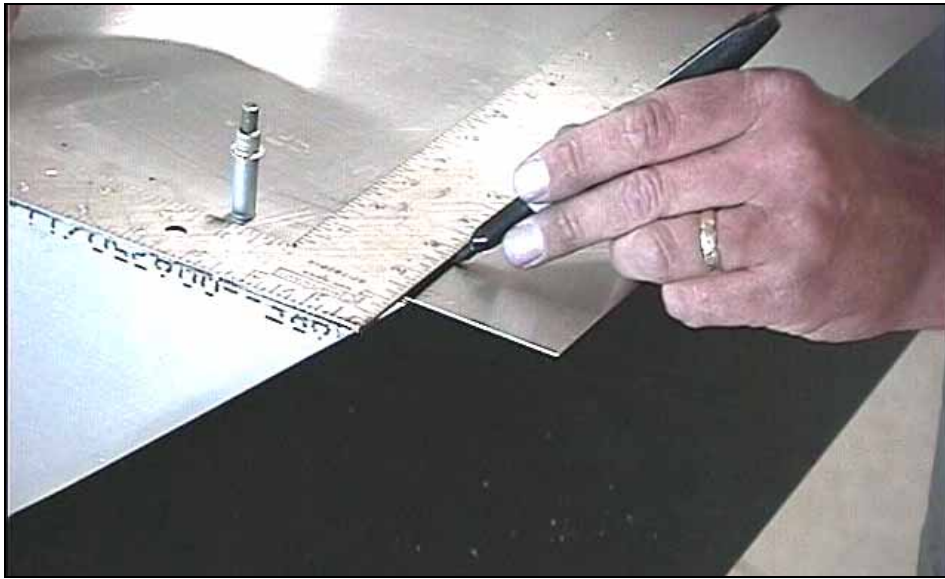
Install the O/B skin in the same manner as the I/B skin.  
The O/B skin covers from rib station #6 to the O/B wing tip.



file V1-27

Photo V9-13

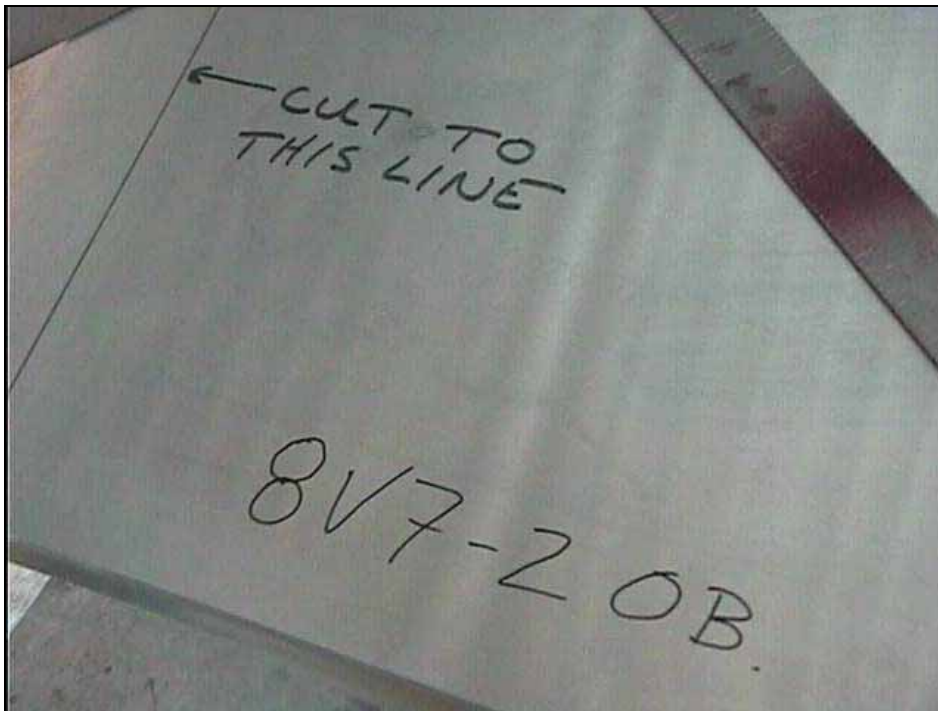
Mark the end of the O/B skin for trimming even with the tip of the spar.



file V1-28

Photo V9-14

Mark a line from the tip of the main spar  $90^{\circ}$  to the spar.



file V1-30

Photo V9-15

Cut the skin to the marked line.  
Except for rib #1, open all the rib rivet holes with a #30 drill and cleco.  
Do not open up any holes in the spar rivet line.



file V1-29

Photo V9-16

Extend the trim line from the skin onto the rear spar then mark the spar at 45°.

Cut the rear spar to that line. Remove the outboard skin and place it aside for now.



file V1-32

Photo V9-17

Cut a piece of Std L as shown in this photo.  
Attach and rivet with 9 evenly spaced - A5 rivets.

This next portion of the assembly is actual part of the O/B wing tip assembly section 16. However, now is the most convenient time to complete this part of the installation.



file V1-33

Photo V9-18

Project a line onto the lower rear skin from the heel of the main spar to the heel of the rear spar.  
Also see photo V9-19 and V9-20.



file V1-34

Photo V9-19

Close up view.



file V1-35

Photo V9-20



file V1-38

Photo V9-21

Trim to the line - 2 passes will give best results.

Replace the O/B top skin and cleco in place. Do not rivet any top skin in place at this time.

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:**

<b>Revision</b>	<b>Summary</b>	<b>Revised By:</b>	<b>Date:</b>
3.0	Reformat	SH	8/18/1999