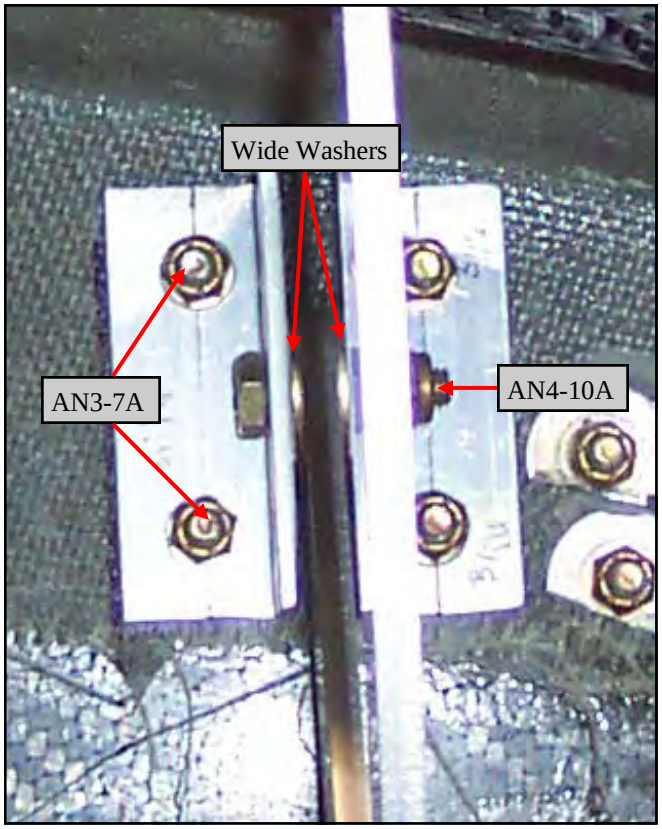
Canopy Hinge Installation

Items Needed: 2 machined canopy tip ups, 1” aluminum angle stock 0.125, 1.25” aluminum flat stock 0.125, assorted hardware.

Date Completed

1. Fabricate 4 hinge support brackets from the 1*1*0.125 angle stock. Use the picture as a reference and the drawings at the back of this section.

2. Temporarily assemble the angles and the hinge using AN4-10A bolt thru the bracket with a large washer between the hinge and brackets on both sides, secure with a nyloc nut. The hinge must move freely with no side slop in the hinge. refer to picture.



3. Hinge location is at 9.5 inches from center of the airframe.
4. Once in this location the hinge should be positioned as far up as it can be mounted.
5. Clamp in place. When satisfied with the
Position, match drill the part to the bulkhead using a 3/16” bit.
6. Use AN3-7A bolts large area washers and nyloc nuts.

Date Completed

Hinge to canopy mount Fabrication

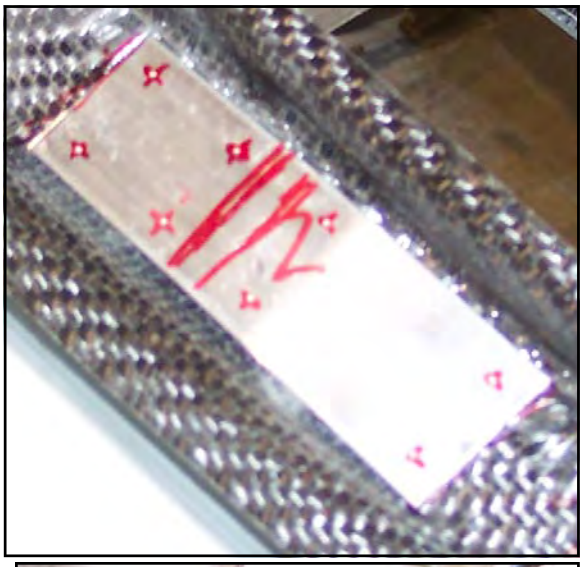
1. Fabricate 2 sets of the below picture parts. The parts are fabricated from the following: Top, 1.25” by 0.125 thick by 4” long
   Left and right, 1.25” by 0.125 thick by 3.5” long

2. The top part is bent to match the bow in the canopy frame directly above where the hinge meets the frame. It must be split half on each side.

3. It is best to make the side parts with the hinge up against the frame to get the correct bend. The picture below is for the left side but the right side is a mirror image.
4. Bend them a little at a time until they are at the correct angle. Once at the correct angle mark the component to its specific spot.
5. Build a set for both sides.

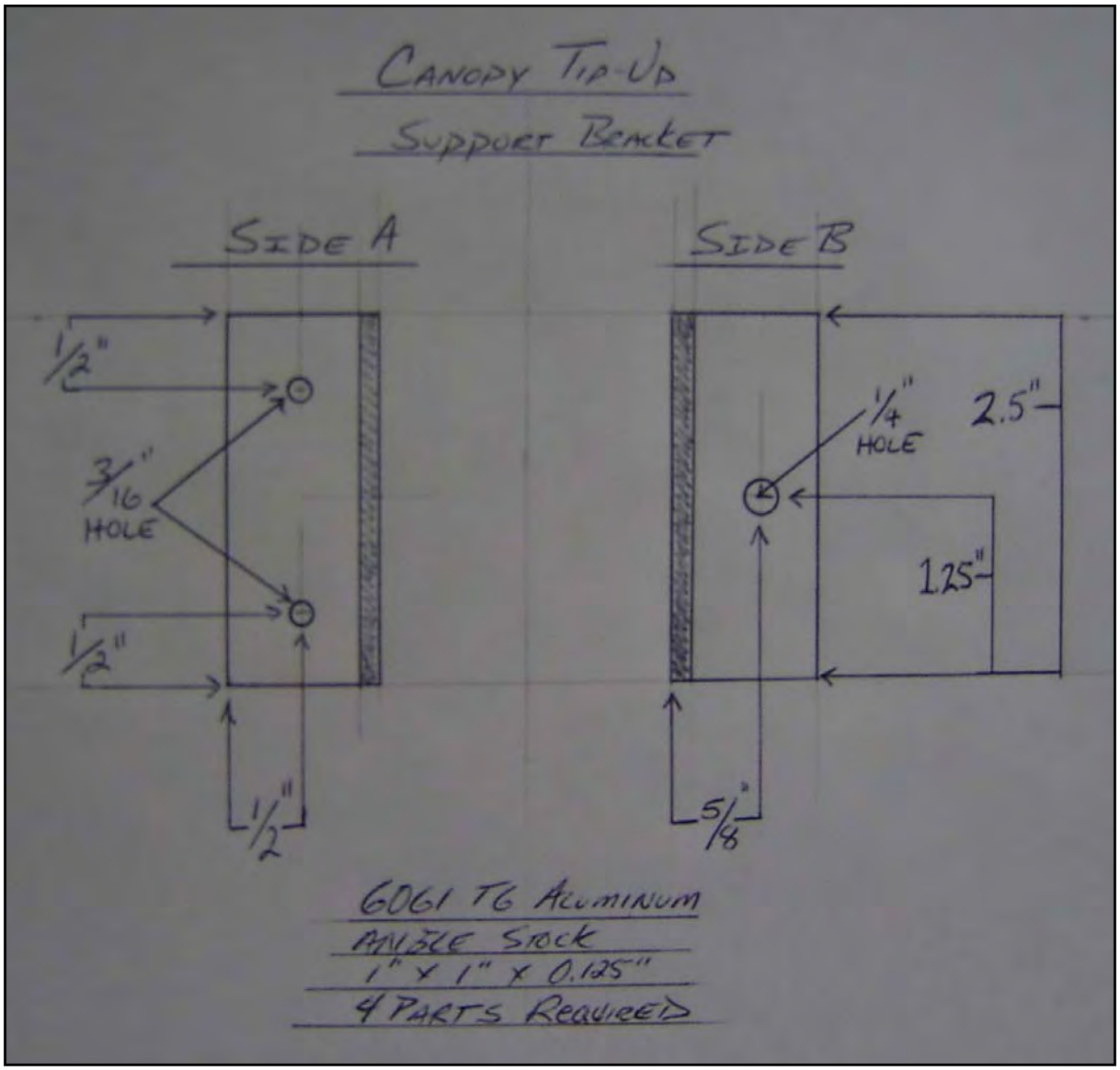
Note: This attached method is used for kits using Sixa-flex adhesive for canopy installation. If installing the skinned canopy with Aero-poxy refer to that part of the section

Date Completed



6. Drill 3/16” holes in the part that is inside of the canopy frame only.
7. These holes should be placed like the picture at right, the holes may be no closer than 1/4” on center from the edge of the material .

8. Use clamps or another positive lock clamp to hold the components together so that they will not move.
9. Match drill the holes thru the frame and thru the tip-up to hinge parts made earlier.
10. Attach with AN3-7As and nylocs or for a better appearance 10-32 stainless truss head screws and nylocs.
11. Match drill thru the tip-up to hinge brackets, two 3/16” holes spaced evenly in the bracket.
12. Mount with AN3-6A bolts and nylocs nuts.
13. Repeat procedure for other side.

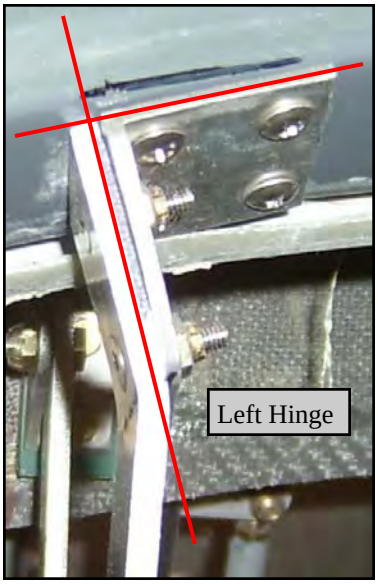

CANOPY TIP-UP
SUPPORT BRACKET
SIDE A
SIDE B
1/2"
3/16" HOLE
1/2"
1/2"
1/4" HOLE
2.5"
1.25"
5/8"
6061 T6 ALUMINUM
ANGLE STOCK
1" X 1" X 0.125"
4 PARTS REQUIRED

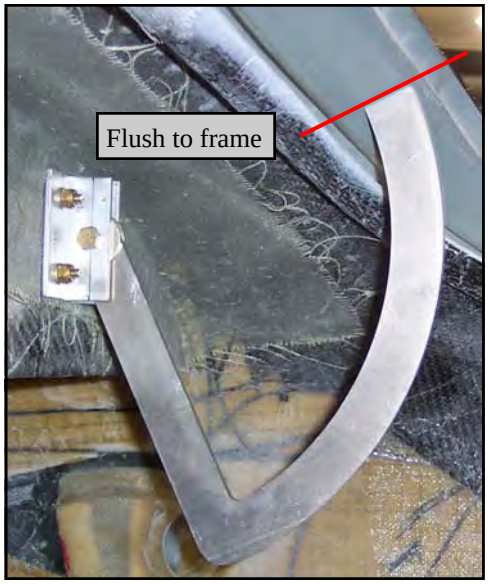
Canopy hinges for “skinned” or 2 part canopy frames

Date Completed

Required Items: Canopy tip ups ALC-0019, 2”by 2” angle aluminum 1/8” thick, 8” of 1/8” thick 1.25 aluminum stock, 8 #8 screws, 8 8-32 nylocs, 4 #10 screws, 4 10-32 nylcos. 6” of 1/8” thick by 1” aluminum stock

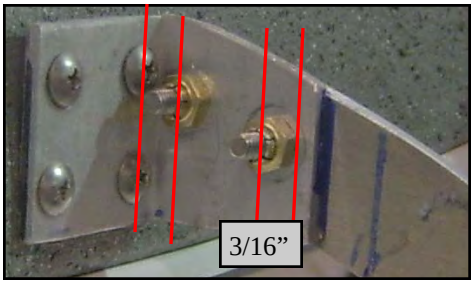
1. Complete pages 1 #1-6 of this section before continuing.
2. Rotate the Canopy tip arm ALC-0019 against the canopy frame.
3. Trim the end against the frame to be even with the frame, no gap.
4. Bend the last 2.25” of the support arm to be perpendicular to the frame.
5. The bend must be outward
6. Take your time to bend this you do not want to bend it back if needed.

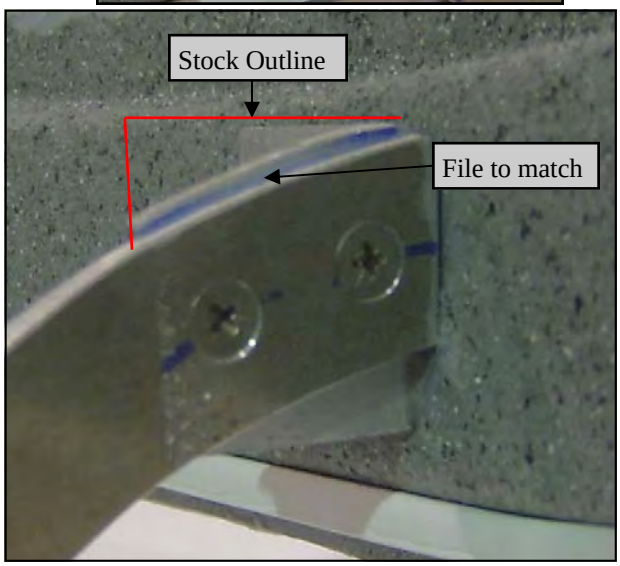




7. Fabricate from the 2” angle stock, 2 parts as shown in the drawing a the back of this section.
8. Place The tip up against the frame and position the angle stock on the tip up so it is spaced evenly to cover it. Clamp in place.

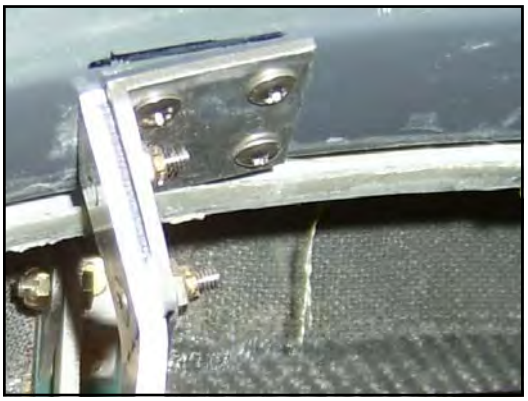
9. Match drill the tip up to the angle stock. Place the 3/16” holes in the center of the tip up, and 3/16” in from the edges of the angle contact.

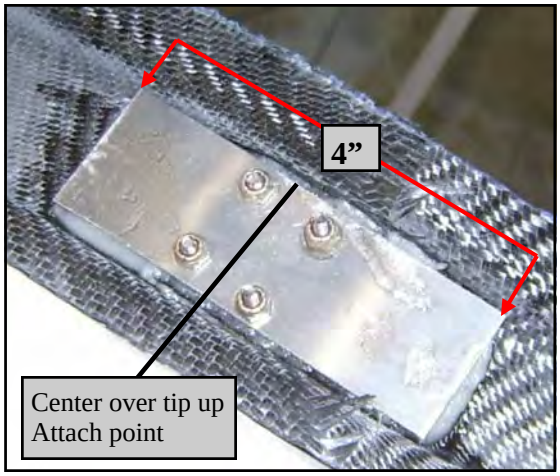




10. Mark the shape of the tip up on the angle. Unclamp this and shape the angle to match.
11. Countersink the outside of the holes and install #10 CS screws and nyloc nuts.

12. **Note:** Before drilling the tip ups to the frame it is best to have the frame fitted to the fuselage per section 43, and the side location tabs installed per section 42.
13. Match drill the tip up to the canopy frame with a #20 drill bit.
14. Repeat for both sides.





15. Make a backing plate from 1/8” aluminum stock.
16. Clamp in place and match drill the tip up, frame and backing plate.
17. Remove plate and deburr holes.
18. Mix up a small amount of 24 hour epoxy and flox .
19. Place a small be of mix were the plate will sit.
20. Attach the tip up to the frame and thru the plate with #8 screws and #8 nylocs.
21. **Do not tighten** the screws all the way. Make them snug and check that the frame has not changed shape. Over tightening the plate will warp the frame.
22. Once the glue has cured tighten the screws down for the final time.

This area left blank for drawing.