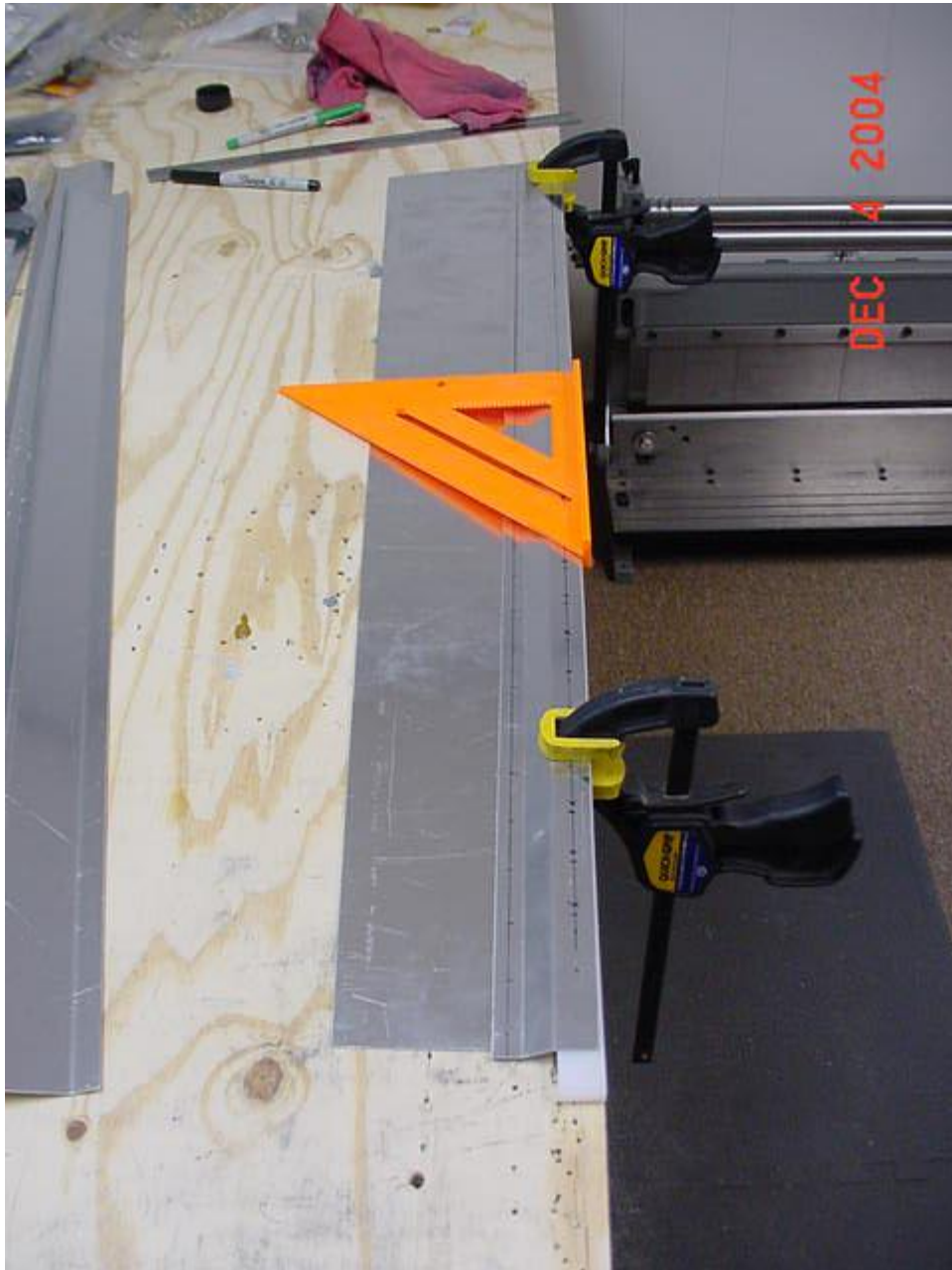


The Speed Slope Windshield and the Slider Canopy Plexiglass are positioned, sized, drilled and clekoed to their respective frames. The next step is to fabricate the slider side skirts, rear skirts and closing mechanism.

Side Skirts

I gathered the bundled skirt parts and put them out on my bench. I went back to the plans and printed out those pages and put them right in front of me. I was pretty much lost, so I (as usual) went to Randy Pflanzer's site to see if I could make heads or tails of what was going on. Well, I couldn't. So I'm winging this one, mostly based on the pictures.



The big outer side skirt sheet has to be cut to follow the flow of the edge of the slider bubble. I took the lower clekos out of the bubble and slid the skirt up underneath the plexi. While I was at it, I marked the location of the bows in the frame. I cut the end of the skirt to the appropriate angle and took it back to the bench. I set the window retainer on the square top of the skirt. Then I took the white plastic piece inside the 3/4 slot now created by the skirt and retainer piece (C-059?). The idea

here is to drill the plastic piece at the same time as the retainer slot holes. Later, you put this piece on the inside of the glass when you attach the plexi to the skirt/retainer with screws. IOW, you screw through the skirt and bubble into the plastic strip. (I'm guessing here based on the drawings).



Back at the bench, I centered up the pieces and got them looking good. Contrary to the plans, there is no offset in the plastic piece, it is now made as wide as the retainer "slot" which is $\frac{3}{4}$ inch. I drew a center line at $\frac{3}{8}$ (I figured that out all on my own!) on the C59. I also drew a center line along the other rivet line where the sandwich of the C059 and the skirt are riveted to the horizontal on the slider frame.

It looks like ALL the holes in the skirts are placed at $1 \frac{1}{4}$ inch spacing, including through the Plexiglass. I made sure the C059 was clamped offset back from where the FB would be, and started $\frac{1}{2}$ inch back from the edge to mark the parts for drilling. I then used a speed square to also mark the lower rivet line on the C059. That saves a lot of time. I drilled all the holes at #40. The "slot" is drilled right through the plastic strip.

I had precut the plexi to $\frac{1}{4}$ inch above the horizontal on the slider. This wasn't enough, it seems it's a "close" figure. This becomes important when you realize that you can't get the assembly properly positioned on the slider. So I unclerked the parts and used the side skirt as a template. I put the skirt in position under the plexi until the lower row of holes lined up with the horizontal and the front edge of the skirt lined up with the bubble front edge. I then drilled through the skirt into the slider frame at each end and clerked it. I went ahead and drilled a few more holes. I pulled the skirt out from under the glass, then placed it back over the glass and clerked it back down. The skirt now can be used as a template to mark the top edge of the retainer slot. I drew a line right along the edge of the skirt,

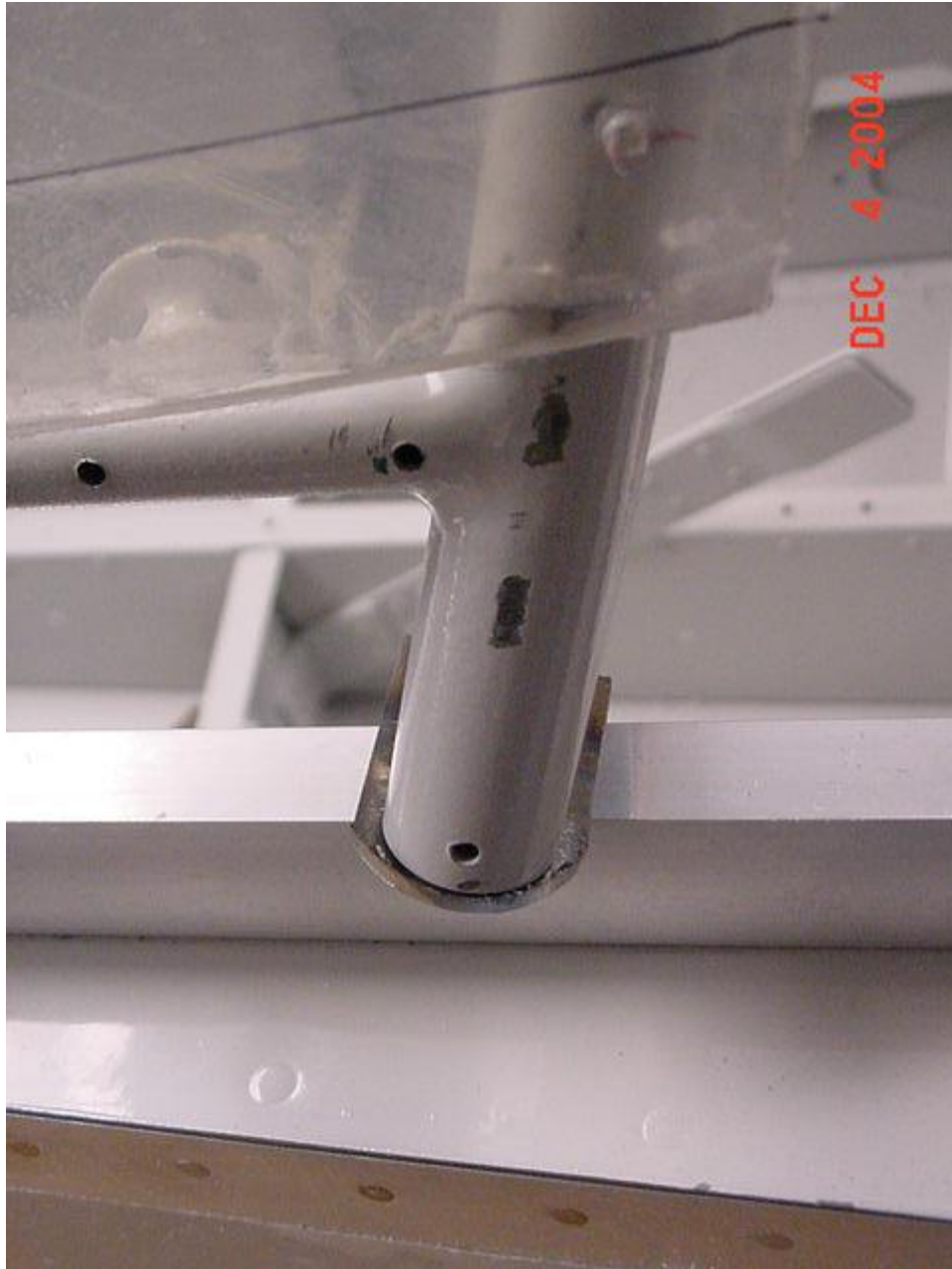
knowing that I can then remove the bubble and mark a line 3/4 down lower and THEN trim off the plexi so it sits in the slot properly. I don't think I'm off too far, so I will probably just use the side grinder to adjust the lower edge of the bubble.



A couple warnings: I got disoriented and drilled the second set of side skirts backwards. I drilled the C059 from the front, not the back. Fortunately, I was able to reverse the C059 and the holes were close enough to still work. Luckily, none of the holes in the C059 retainer will show anyway. I still can't drill a straight line. Even using a punch, I don't seem to be able to keep the drill in place. So none of my rivet lines are perfectly straight. This becomes critical when you are drilling into a thin steel horizontal tube, using the skirt as a template. The holes certainly are close enough to hit the steel underneath, but just enough off center that the bit wanted to travel up the curvature of the horizontal. On a couple holes, I didn't notice this starting until it chewed a bit of aluminum. The problem with this walking is not so much the steel frame as it is the aluminum skirts.



I completely drilled along the right side, but just 5 or 6 holes in the horizontal of the frame on the left. I decided that since I had not rolled the skirts yet, that it is possible that I could screw up the skirts and have to start over. I have to just hope that I don't mess up. I clekoed the skirts on and noticed that the canopy trucks really poked into the aluminum. Theoretically, when the skirt is rolled, it shouldn't be a problem. But I took my side grinder and rounded the steel plate to conform with the outer edge of the FB tube of the slider frame. If nothing else, perhaps I won't have to roll the skirt quite as much. Frankly, when I was using my side grinder, I seriously thought about just cutting the whole thing back into the tube. It looked like if I ground the whole thing back about 1/4 to 3/8 inch that I could get away with not hardly rolling the skins at all. Then I came to my senses, knowing that a cut like that would probably weaken the frame and truck, and the canopy is still inside the fuselage so rolling the skirt outward would still be required. But it was tempting!



The next job was to roll the side skins. That's not as easy as you might think. Then again, for you, maybe it is. For me? Well, I suck at it. The side skirts take a sort of "5" roll at the leading edge, and nearly no changes at the aft, just a slight curve in toward the fuselage at the bottom. The skirt has to come out at the top, away from the canopy, then bend back toward the fuselage at the front. Not that hard, if you have patience, hand strength and the right tools. I rolled my skirts with my palms over a 2 inch pvc. I thought I was good, too, then tried flangers to roll the bottom edge in. Well, of course I kinked the skin. And when I was rolling the left side, I ran the skirt off the end of the pvc and put a crease in it. Dammit. I can fill the crease easy enough on the left side, but the bottom edge on the right skirt where I bungered with the flangers is another story. I may have to make that skirt over. After that mess up, I'm taking a break, chillin', then later on I'll play with it some more and see if I can salvage it. I still need to roll the bottom edge of the left skirt, too. Grrrrrrrr!



I've decided to remake at least one of the skirts. The 2 elongated rivet holes and the ripples in the lower edge where I flanged it are going to look like crap. I don't think the rivet head would even cover the holes, and I can see the rivet spinning and making a black dust mess down the road. I'll keep the skirt, just in case. The roll/bend in it turned out very nicely, and the botched skirt will at least make a good template.

The only real problem I have with this process is cutting a new piece of sheet stock. My 3-in-1 bending brake is not wide enough for one of these skirts. I'll either have to make two cuts, or cut it by hand. I think I may just take a sheet to the university and make the cut on a 50 inch break. One long clean cut is worth the trouble.

The skirts are too long and deep for my 3in1, so I'm going to have to go to the U after all to cut a new skirt for the right side. I've decided to use the creased left side skin, for now at least. I have it rolled into it's final shape. What that means is that there is a nice "5" curve at the fore end, and hardly anything done to the aft end. I think the relationship is going to change after the pieces are riveted and screwed to place, so I'm going with it "as is".

One of the considerations is the relationship of the skirt to the fuselage at the canopy rail. What I did was bend the skirt until it DID NOT touch the fuselage at all. This was harder than expected. The thing wants to squeeze against the ship. That's not a problem now, but after the plane is painted, it will scuff the crap out of the paint. In order to get the skin off the fuselage, I took my finger and tapped along the skirt at the "lip of the ship". Where it does not touch, there is a springy sound and feel to it. Where the metals touch, there is a solid sound and feel to it. This occurs about 2/3 of the way aft, and in my case covered about 5 - 6 inches of the skirt. I reached up under the skirt and bent/rolled it by

thumb and palm until the skirt wasn't touching, or was barely touching. I think when you rivet the skirt down, the bottom will probably bow away from the ship, now towards it. That remains to be seen.



You can see in the pic above where I was tapping, and how far aft the contact point was after making the "S" roll in the leading edge of the skirt. Once I drill all the holes, I'll cleko every hole and check this relationship again.

I'm a bit burnt out since Thanks Giving and have not accomplished much. I think the rest of the way through this canopy and the boot cowl mod is going to go very slow through the Holidays. One day at a time...

OK, OK, I couldn't leave it alone. I went back down to the dungeon and finished drilling the holes through the skirt into the horizontal of the slider frame on the left side. I did a little better this time, and didn't bungle the holes in the aluminum too badly. I clekoed every hole and sure enough, the skirt pulled OUT most places, but it did seem to pull IN further toward the trailing edge. I puller the skirt up (woohooo!) and stuck my fingers in there and worked them pretty good again. Now the skirt sits a bit off the fuselage. I think I'll consider using an edge roller if I can't work the edge down by hand against my PVC pipe.



I went to the other side of the canopy and looked at the relationship of the skirt to the retainer and the plexi. What I determined was that the final cut on the lower edge of the bubble is 1/2 inch above the horizontal, not 1/4 as it says in the plans. Something must have changed. Perhaps I have the plexi retainer upside down. That would make for a lower edge on the plexi,. At the same time, it would make the edge distance shorter to the screws than I think is kosher. So again, I'm going with it as is. The way it is now, the plexi will sit in a "trough" 3/4 inch deep. The other edge of the retainer would only be 1/2 inch deep. Too narrow for me! Compared to the pictures in the plans, I think I have it correct. That certainly doesn't mean anything, though.



My apologies for the above pic. There is a black line drawn where the top of the skirt and retainer sit. There is a red line drawn below that to correspond with the depth of the retainer piece (C059). That makes it 3/4 inch below the top edge of the skirt/retainer assembly. That's how I determined that I have to cut another 1/4 inch off the plexi. And I'm sure the left side is the same way.

Note: Knowing the above info, had I to cut the bubble over again, I would IMMEDIATELY cut the sides just above the horizontal of the slider, once the location of the bubble is fixed fore and aft. Don't forget to pull the "sides" of the bubble in toward the frame when you measure and before you cut it! There's quite a bit of bow there, and it could make a big difference on the actual location of the lower edge.

Also, you can go to all this trouble trying to get the skirt to roll into the ship, but if you then drill into the plexi and cleko to the retainer, the relationship of the lower edge of the skirt changes again. So before you try to finalize anything, you have to drill and cleko both rows of holes.

One of the holes in the steel was up way too high (that's one of the holes I really screwed up). I filled it with JB Weld. I'll re-drill it with the new skirt piece. I'm going to wait to cut the plexi down until I'm a little further along with the skirts.

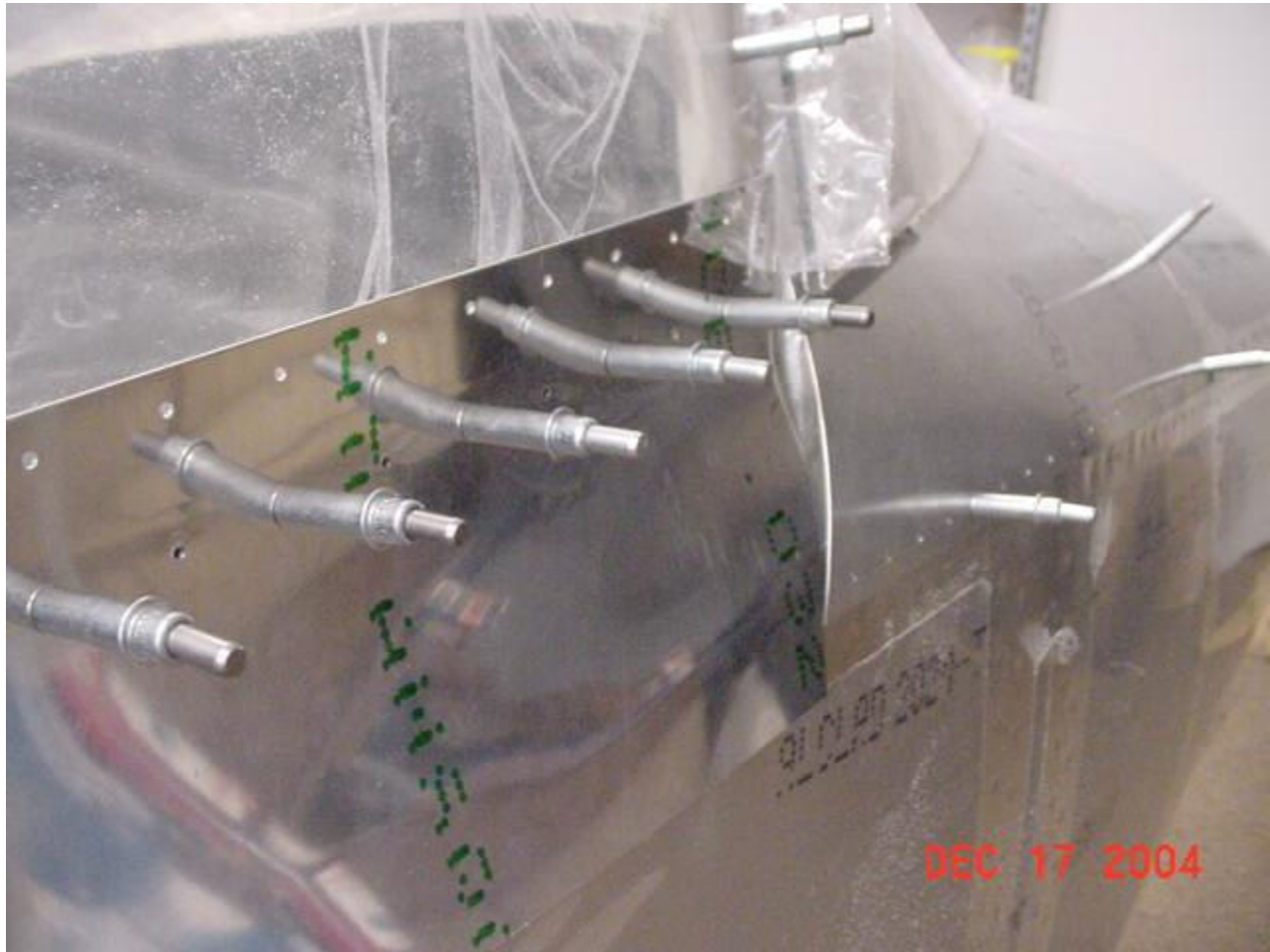
When I cut the new skirt, I am going to make it a bit wider at the fore end. The skirt on the left side is at the level of the rivets at the front end and well below the rivet line on the fuse at the aft end. I'll probably cut this level just before I finish attaching everything permanently. I'd like the skirt to either cover the rivet line completely, or be lined up with it for cosmetic purposes. With a little luck, I'll get the new piece cut tomorrow.

Now there's a fly in the ointment. I actually found in the manual how I was supposed to fit up the side skirts. I was heading the right direction, but according to Mark's plans and Randy Pflanzner's site, I'm supposed to use a special Avery tool to roll the edges of the skirt. It needs to be rolled in a horizontal plane to better follow the bow of the bubble. The slider bubble is narrow at the front and back and bulges in the middle. Kinda like me. So you have to coax the skirt to follow the contour of the bubble. I don't have the tool. It's the week before Christmas. I don't think I have a snowball's chance under our global warming CO saturated, ozone depleted atmosphere of getting a delivery before Xmas.

Thankfully, Randy offered to lend me his roller. Now I have a choice of driving 2 hours each way to borrow it. If I'm lucky and the overcast stays up at 2k AGL and above the TAF's 4 miles and BR, then MAYBE I can scud run in the SD over there and borrow his roller. I plan on being at the airport at the crack of dawn ready to make a speed run in the Decathlon to meet Randy at his hangar. If it's too lousy to fly, well, my hangar is 20 minutes closer to Randy's. Can you say ROAD TRIP?

I worked on the left skirt today. I re drilled a new one. The new "rivet line" looks great. Then I rolled it. No kinks so far. But at the advice of my buddy Bruce, I cut THREE spares, so I can screw up a couple times if necessary. So far so good. I suppose I could now start on the boot cowl or the rear skirts, but I'd feel better if I was confident about the side skirts being "finished". If I can't get to Randy's to schmooze his roller, I think I'll cut the boot cowl and proceed at that end of the canopy project. I'll just have to see what Mother Nature has in store in the AM.

You can see in the pic above that there is a pretty large gap under the skirt. Also, it's only supposed to overlap the side of the fuselage 1/4 inch. I have a lot of bending/rolling to do on this side and the other skirt. I was just so happy to get a decent skirt to this point, I had to take a pic. So far, there's only about 15 minutes work in this one. I had a question about rolling the skirt, so I also sent the pic to Mark. As per usual, I didn't understand the plans.



Mark and I discussed (via email) the "S" curve (the way I originally bent it - wrong) and he said it was more like a "5" curve. I suggested more like an inverted "?" curve. So now I may have to take some of the "S" curve out of the skirts and make more like a straight bend near the lower rivet line. Then just make a "C" shaped roll from the rivet line to the fuse skin. This now makes more sense. It will conform to the windshield/skins at the leading edge. No matter how you slice it, there's still going to be a gap at the front of the slider where the side skirt ends at the plexi. In other words, no matter what kind of bend you make in the skirt, you'll still have a gap due to the slider front bow being smaller than the windshield bow. We'll see how this looks after I put the roller to work. Now I'm getting somewhere. Sorta..



I was able to re-roll the left side skirt and utilize it without making another skirt. The retainer is another story, and I may end up manufacturing a new one. The skirt on the right side was scrapped twice. Finally, I got one the way I wanted it. I was able to borrow Randy's Avery roller and flange a 3/4 inch lip in the skirt per plans. Then I clekoed the lower roll of holes. I carefully drilled through the plexi, trying not to drill through the holes in the retainer behind. It's easy to get those holes too big, and then the clekos want to pop out. I found that on the right side, I had to take the roller and roll the top edge of the retainer toward the plexi, too, to get a nice relationship. I also had to re cut the plexi so that there was 3/4 inch MAXIMUM of the plexi in the retainer. I cut the glass with a dremel, then on the ship I also modified it with the side grinder. messy but quick. Now the right side looks great. Still more chances to screw it up, though.



This side skirt process was very frustrating. Now that I've done it 5 times, it's not so bad. I think if I were to do it again (and I may need to ...) I would drill the two rows of holes in both pieces, then roll the 3/4 inch lip in the skirt, and then curve the front end. I would cleko both pieces to the slider at the horizontal member and then start drilling through the plexi. When I did this, I would simply start at the front and drill and cleko every hole one at a time. After both rows of holes are clekoed on BOTH sides of the canopy, then I would start to tweak the skirts to lay against the fuselage. That relationship changes a lot along the way, so don't get hung up on it too early. Like most things in this project, you'll have to contend with it more than once.

****BIG NOTES:** Before going any farther, double check that you have clearance between the SS pins that (hold down the frame to the track later on) and the side skirt. That hook that you attach to the track is pretty bulky and protrudes a ways away from the track into the side skirt and retainer. The skirt doubler goes right in there, too. Try to put the doubler BEHIND the pin so that the rivets holding it on are not in the way of the hook upon function. You should put the junction of the side skirt and rear skirt as far aft as possible. I cut mine where it looked good, not where it worked best. Don't make that faux pax Also, the skirt should have a concave shape as seen from the exterior all the way back. The bottom edge of the skirt should be nearly flush/straight to the side of the ship. I did not have enough bow in the skirt, and therefore had interference problems with the pin hook AND the slider track! And my skirt covers the side of the ship at an angle. I would recommend that before attaching the skirt brace that you check for clearance between the pin, hook and skirt and the slider track.

Now that the side skirts and retainer are drilled and preliminarily shaped, time to work on the inside. I got out the skirt brace and started hacking away at it with my dremel. First thing was to cut the forward edge to follow the FB tube. Then I marked the aft end where the RB met the horizontal and

cut the brace there. It turns out the way I marked it, the brace ends up being about 1/2 inch back from the RB. I may have to cut it back more, the plans say 1/2 inch from the ss pin. Anyway, I set it in place and marked the latch pivot location on the brace. I used a dremel to notch it out and a round file and sanding drum to finish the notch.

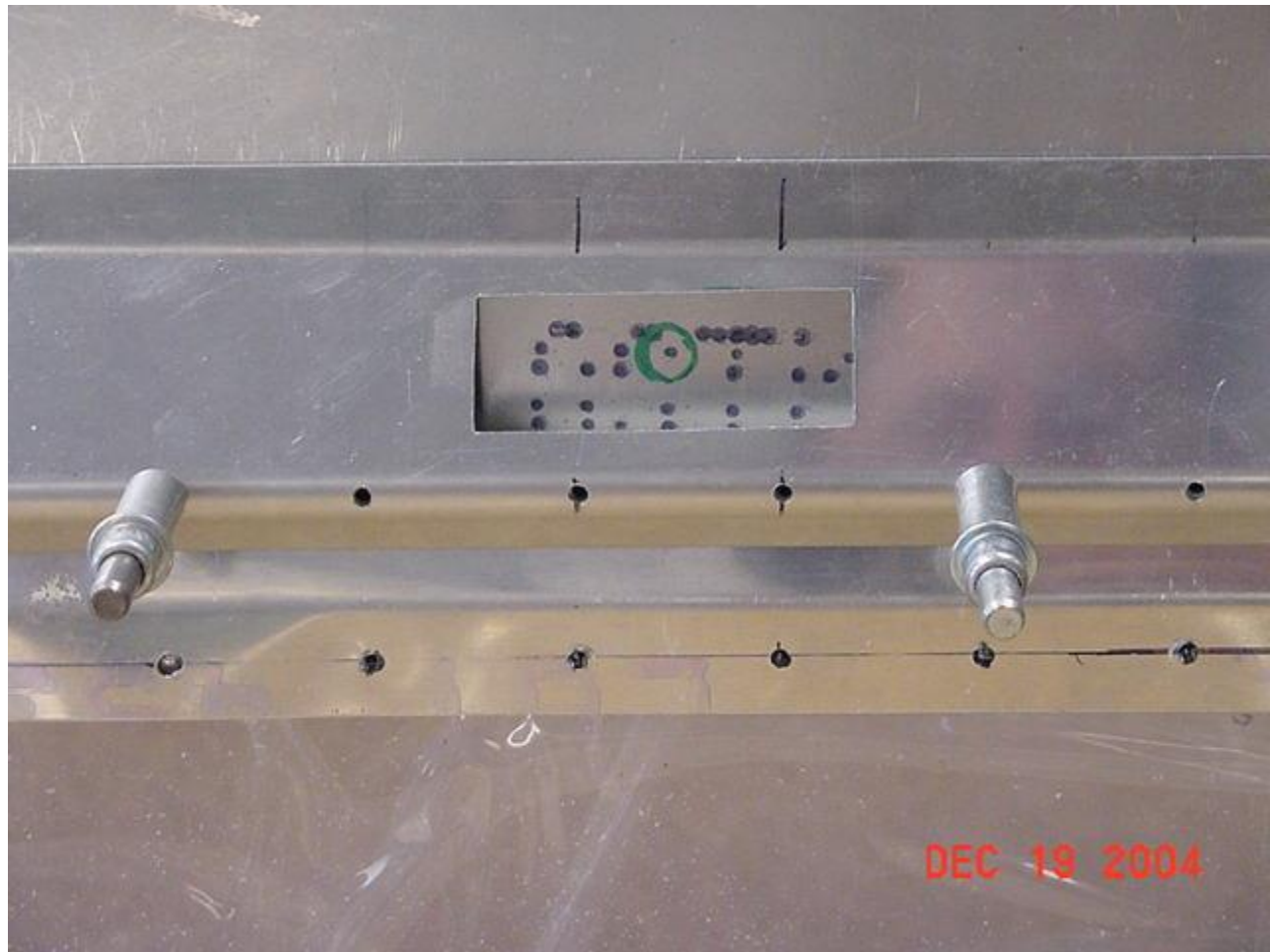


I held the brace in place and determined it (actually both of them) were a pretty close fit without extra bending. I marked the brace at 1 1/4 inch increments along the part where the brace fits over the horizontal tubing. I didn't remeasure these increments, I just eyeballed them and lined them up with the other rivet holes in the skirt. Then I verified the measurements and tweaked them with a ruler. I drilled one #40 hole and eyeballed the piece. I drilled this single hole to be parallel to the latch pivot on the frame. It looked right, so I took the brace to my drill press and pre drilled all the top hole. After that, I put the piece back on the slider frame and drilled into the steel. Now we're cookin'!

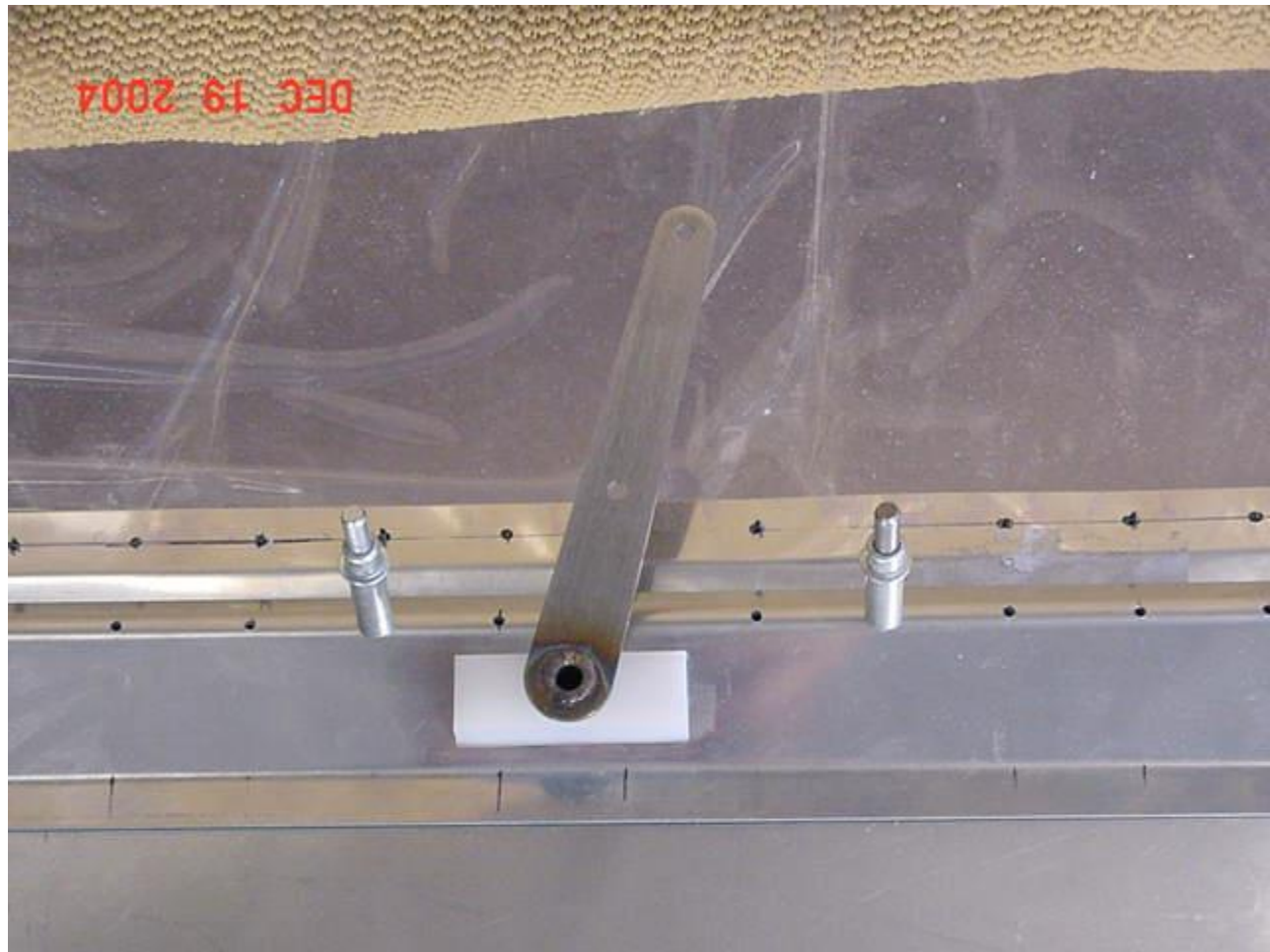
The Latch Mechanism, Part 1



With the brace clekoed to the slider, I measured (per plans) the 21 inched back from the pivot. I tried to pick a location for the rear latch block that would look symmetrical. It was REALLY close on each side. I centered the block on the brace and traced around it. Time for the dremel, then a bunch of filing. I cut the brace barely enough to allow the block to go through the "window". Then I put the brace back on the ship to get an idea how much more I needed to cut out of the window to let the block sit flush against the side skirt. Turns out that one cutting wheel thickness and a little filing was all it needed.



The 3/8 hole in the block allows you to get a marked in there and trace the center hole onto the skirt. I used a very small drill bit to mark the center hole, then used a step drill to open up the hole. The latch tube is a "twee" size. When I got to a step on the drill that I thought was correct, I checked the clearance. It turned out that I still needed to open up the hole a bit. What I did next to keep that hole as small as possible was use the step drill from each side and just whittled slightly on the hole. I did not go all the way to the next size. Good thing too. The latch tube just goes through the hole without dragging. I put the latch handle/tube through the block and set it in the brace. Shaaaweeet!



Hey, this is getting fun! I went ahead and grabbed up the canopy front latch parts and started fitting those in. I used a drum sander on my dremel and reduced the latch pivot to the point where the brass bushing goes all the way on, but still will need a bit of press fit to snug it close to the latch handle. I had to modify the cam part of the latch "hook" so that the brass bushing would roll and out smoothly. Once all these latch parts were sitting on the pivot properly (i.e. looks like the pictures in the plans), then I drilled a #40 hole through the pivot for a Cotter pin. I also drilled the two holes in the latch "hook" and "handle" for the supplied spring. I used locations on each that matched the plans closely. I put the holes where the shape of the parts LOOKED like they were meant to be drilled.



What the heck... I grabbed up the latch connecting rods and some AN3 bolts, nylock nuts and washers and trial fit the whole thing together on both sides. FUN! I like bolting stuff together. I'll let you in on a secret. I never wanted to BUILD a plane, I really just wanted to ASSEMBLE one. There's a difference. Today there was a lot of assembly, and it was a nice break from the drudgery of fitting the skirts. That was depressing me. Anyway, I'm re-energized and ready to rock.



BTW, you may notice my canopy slider looks a bit weird . That's because I've been installing the skirt brace and the latch mechanisms with the canopy sitting between two wicker chairs, on top of some of that carpet non-slip stuff. Much nicer to work on the inside with the canopy sitting upside down so you can get to it. However, when it comes to drilling the brace to the skirt, I will more than likely get inside there and get a buddy to hold the skirt "taut" while I back drill it. I may do this on the (wicker) bench, because I think I have the skirts really close. But I think doing that drilling with the slider on the ship and from the inside out will probably help. I will pre drill the brace, though, on my drill press.



Notice my two helpers in the background.

The next chore before moving onward will be to take the skirts off and haul them to the U so I can trim them back to the 1/4 inch overlap at the side of the fuse. I can trim on my 3in1, but I will have to make 2 cuts. Since I have to deliver some tools to my fellow builder there at work, well, I hope I can sponge the break again. The hard part of getting to that point will be lifting the slider back onto the ship and into the tracks. Wouldn't you know it, I forgot to mark those edges before removing the slider. And lemme tell ya, it's a lot easier to take that puppy off by yourself than it is to put back on!

My friend Bruce helped me trim my skirts on the university's big break, and we (well he, actually) cut and bent a pair of new canopy bubble retainers. The retainer on the left had really sloppy holes after I reversed it and re-drilled it. The piece would have been OK, but I'm happier with the new retainer by far. The holes were back-drilled to the skirt then verified on the canopy frame. I also pre-rolled the upper edge to bow outward to match the bubble. I used the 4 delrin wheeled Avery tool that Randy Pflanzler lent me. That sure makes the retainer fit nicely. Now all is left to do to the retainer is a slight

trim to make the top edge identical to the top edge of the skirt. These are the edges that show through the window, and the aft end is up too high about a 16th. I'll probably just file the edge down by hand when I get ready to prime all these parts. Be careful using the Avery tool. It wants to track off the edge of the metal, and it will ruin your skirt with an ugly crease very easily. Don't ask how I know!
:-)

Rear Skirts



The side skirt assemblies are now far enough along to begin work on the rear skirts. The plans are pretty good for these parts. The only problem is that the instructions are about 50 pages from the pictures. I printed the appropriate pages out and laid them side by side. I still find that having paper copies nearby while working is very advantageous.

The rear skirts come marked on a big sheet of .032. You have to cut them out, then trim, then fit, then final trim these parts. I used a pair of pneumatic shears to cut mine out. I put duct tape on the tines/beaks of the shears to keep them from chewing tracks on the aluminum as they cut. I cut proud of the marked lines from the factory. The size on these parts as marked by the factory templates are very close. Had I known, I would not have cut mine "proud", but would have cut very close to the lines. As I did it, I had to go all around the pieces with hand shears to close trim the pieces. After fitting them, I'm going to do have to do a lot more fine trimming.

BTW, the plans recommend that you make a paper template of your own in case you screw these parts up. It's common to have to go through four or five of these in this process. I had a big piece of

scrap .032, so I just took a marker and traced both my pieces after I hand trimmed them. Now I have spares and I can roll the rear skirts. (good thing I did, too!)



Rolling the rear skirts to fit the canopy turned out to not be all that bad.... so far... To get the right shape, I just grabbed the pointy (bottom) end and rolled it upward, while holding the square end (top) and rolling it downward. These pieces are "curved arrows" that have to be rolled to the shape of the ship. When rolling them, I essentially twisted the piece nearly into a helical tube and worked it with a rolling motion as I was exerting some bending action. I tried to be very careful not to "bend" the metal, but to keep the roll smooth and pretty. I formed the parts until they would sit flat on the ship with three fingers holding down the parts at the lower edges where they will be attached to the side skirt and the plexi. ***The plans recommend you use a PVC pipe as a roller for this part. I highly recommend against that. I think you can do much better with this part by coiling the rear skirts to get the right twist.

The plans call for you to take strips of tape and run them from the drilled plexi holes forward along the glass. Then you mark a line from the hole forward on the tape. That let's you know where the hole is going to be, because you have to blindly drill into the plexi and frame through the rear skirt. I chose to make a strip of aluminum the same width as my masking tape. A strip just a little narrower than the tape would be better. I tried to center the holes in the plexi on the tape. Then I drilled two holes on the metal strip and marked a center line the length of the strip. Next I took a #40 drill bit and used it to punch out the tape into the hole. I then used the drill bit to line up my strip over the hole and centered on the tape. I then used a sharpie to mark the alignment dot through the other hole in the strip, which in my case was 3 inches from the plexi holes. I marked the center line of the strip on the masking tape, and I actually traced the outer edges of the strip over the tape and vellum that still covers the

Plexiglass. ***I wish I would have made an extra hole in the strip to make a second alignment dot. As it was, I traced the outside of the strip to aid in alignment as well as the centerline and the dot.



Now that the reference lines are drawn, I'll take the rear skirts and tape them down to the canopy and the fuselage to hold them steady. I can then use my metal strip to locate the blind holes in the plexi under the rear skirts. I'll mark and drill the holes with a #40 bit, then go ahead and cleko them as I go along. I will probably start my drilling at the bottom and work my way upward, trying to keep the skirts very taut. I'll need a step stool to get at the top holes. Man, this plane is tall, and it's not even on the gear yet!

Note that the plans call for you to rivet the plexi temporarily to the frame with blind (pop) rivets. My bubble is clekoed along the front and sides and the holes in the glass at the rear correspond directly with the frame. The glass is tight to the frame at the rear, too. So I'm ASSuming I can just concentrate on making the rear skirt holes match the plexi without worrying about the relationship to the frame. If anything, upon fastening the skirt/plexi/frame sandwich, the glass and skirt could pull down a bit more, and this should either help the "seal" at the back, or it should be easy to contend with. There's more adjusting before getting to that point anyway. Seems like I've adjusted these parts about 10 times during this process!

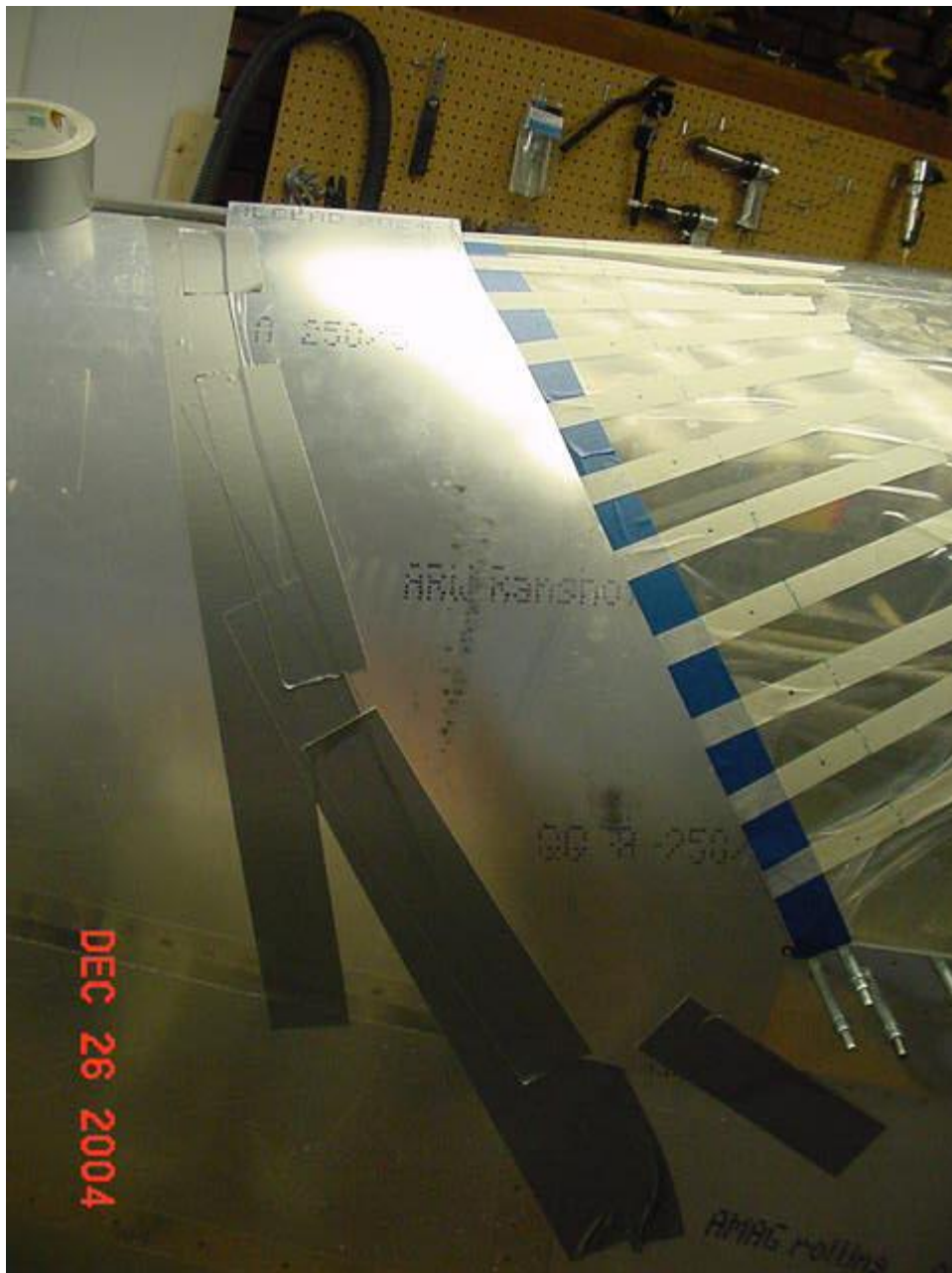


You can see the shiny metal strip in the pic above. It has two centered holes and a center line. Note the marks on the tape that correspond with the strip. Another thought on doing this part of the project was to simply use my strap duplicator. Two things with that idea. One: I was planning on taping the rear skirt completely down to try and get the best fit. Two: I loaned my strap duplicators to my buddy Bruce so he could use them on his RV. He had a much bigger job to use them on (belly skins). And it's Christmas, and below zero outside. I think I'll stay at home. Glad I moved the fuse into my basement. Nice to be able to park the car inside, even though the garage is sometimes below 50 degrees. Anyway, the little metal strip idea worked better than the strap duplicator probably would have. *** The only thing I would do differently would be to put a third hole in the metal strip for an additional dot closer to the edge of the skirt. Another hole in the metal to align to a second visible dot on the tape would have helped with the blind alignment of the hole under the skirt.

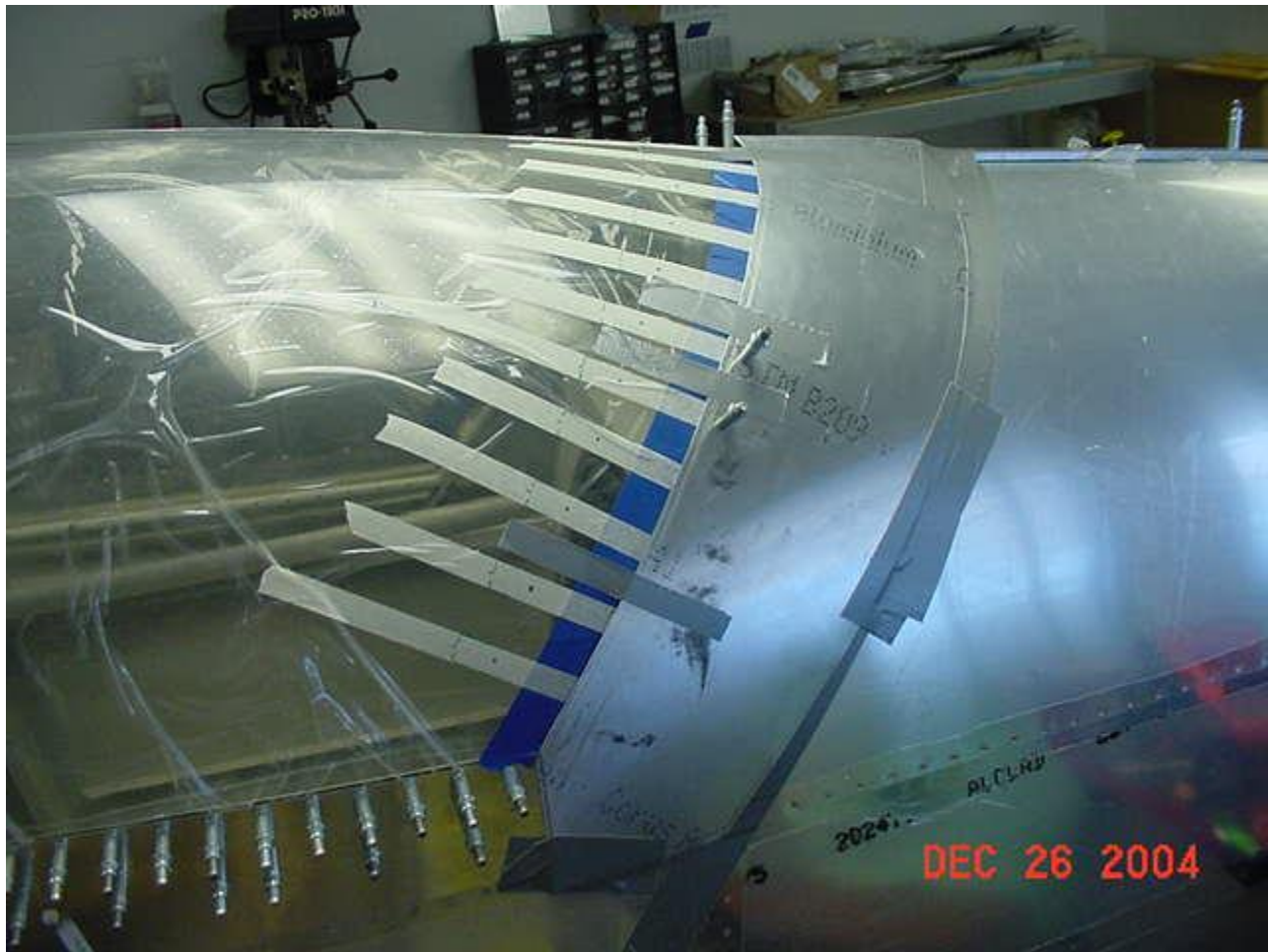
Before moving on to install the rear skirts, I marked a hash mark at 1/2 inch from each of the drilled holes in the plexi. That gives me an edge distance for the metal skirt. The plans call for 3/8, but I made mine wider. That gives me more margin for error on the forward edge of the skirt, which I plan on trimming back, and it also allowed me to move the skirt forward. Whoever cut the side skirt on the left side made it a wee bit shy of the rear bow, therefore the skirt that butts into it has to take up the slack. In that area on the left side, the skirt will remain at 1/2 inch forward of the rivets. I don't think it'll look that bad, and the edge will be behind the passenger's field of view (I hope!).

The rear skirt on the right side took about 20 minutes to roll into shape. I got that one to side very passively on the canopy and against the turtle deck. I got out the duct tape and really taped that skirt down tight. I used my little strip duplicator and marked the location of the hole midway between top and bottom. Wouldn't you know it, the first hole was off about an eighth of an inch. I untaped the skirt,

lined up the hole and clekoed it, then re-taped the skirt into place. All the rest of the holes drilled #40 just beautifully. I went down the side from the middle first, then up to the top. I know you're supposed to alternate, but it was easier for me to hold the skirt and go one direction at a time. The right side turned out very nicely.



The rear skirt on the left side took about an hour to bend/roll by hand. And I never did quite like the way it turned out. It seems that no matter what I did , it always wanted to bow away from the turtle deck about 1/8 inch or so. But I went through the process of taping it down and drilling it anyway. After I drilled starting at the middle again and working outward, clekoing as I went along, the skirt laid down fairly well. But it's a darn good thing I have the canopy slightly open to allow the rear edge to pull down against the turtle deck upon closing.



Now that the rear skirts are clekoed in place, it's time to do some trimming. First off, I got on a chair and went to the top of the ship and marked the "slot" where the center track goes between the skirts. I marked this area and cut out both sides with the dremel. I also marked the bottom and "mating" side edges to correspond with the side skirts and cut those on my 3in1.

Note: when you get to this point, make sure you leave the side skirt as long as possible toward the aft. Make sure the doubler isn't behind the SS pin.



The skirts still required some rolling to improve the relationships at the top and bottom. The part overlapped at the top, and now have a butt joint. There's going to be a butt joint at the bottom, too, where the rear mates to the side skirt. I will make a doubler for each side and rivet them in place.



It's hard to tell by the picture below, but there is nearly no gap on the right at all, and a lot of gap on the left. I actually think that by the time all is said and done, that the LACK of gap on the right may pose as much problem as the excess gap on the left. Theoretically, if the canopy is actually opened during this process about 1/8 to 1/4 inch, there could be that much gap at the aft edge of the skirts.
It's a good thing that aluminum bends!



I will also have to remake the fairing for the center track. Getting that piece to bend at the proper angle has turned out to be quite the bitch. The problem is that I can't make two bends on a piece of .032 that taper to a fine point on my break. I think I'm going to end up using a flanger and make it by hand.

I made some doublers for the side skirts out of .025 scrap. I made them go all the way up to the plexi and about 4.5 inches long. I stopped the lower edge about 1/4 inch or more above the lower edge of the skirt. The theory here is that the doublers will terminate above the level of the fuselage edge (and the canopy track edge). That way I can pull the canopy down and in and only have to worry about the skirts themselves where they contact the sides of the ship.

The fairing for the track is still a bitch. I haven't even been able to bend one out of .025 by hand. Maybe fiberglass is the way to go. I've made 5 of them seriously without success. I wondered what was going on when Pflanzler told me he made 6 or 7 of them to get one he liked. I haven't even got

one that works, let alone one I like!

Another little project I did was drill two holes on either side of the rear canopy handle hole for the screws that hold the plastic block in place.

I still have to drill the canopy skirt brace from the inside of the ship. I'll have to hold off on that until I can coax someone over here and put them to work. Hopefully that will happen this week. Then there's going to be a ton of deburring, dimpling, and countersinking before priming and/or painting all of the slider parts. I really feel like the slider is done, but there's probably at least another good 10 hours of labor still to get that thing REALLY finished. (Looking back, 10 hours was a joke. As I amend this page, I'm over 10 additional hours and not half as finished as I thought I'd be... I'm suck a rooky...)