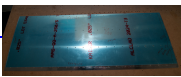


Continued preparation work on the wings.

The wing walk doubler is a sheet of aluminum 0.025" thick that slides under the top skin between the skin and the wing walk side ribs. As the word says, the purpose is to provide a regular weighted person to step on to the wing without doing any damage. So you can see it as a kind of reinforcement of the top skin. The wing walk doublers have to be cut to size out of a stock sheet of aluminum and then measured against the distance from the front side and butting against the inboard side of the top skin. I already did this work when dimpling the rear spar.

This time, I matchdrilled the previously dimensioned wing walk doubler plates with the top skin. The top skin is pre-punched, the aluminum plate I drilled for the doubler is a blank sheet with already some holes in it. This is how the wing walk looks like for the left wing when all holes are drilled. I marked the matchdrilled also on the skin with a sharpie pen for future reference



On the second wing I followed the same process, cleco the top line I drilled before to the skin. Clamp the skin to a wooden table and then drill row by row down to the front side, each time reinforcing the matchup with new cleco's as you go.

This clecoing is important to assure a snug fit of the two plates.



And also the right one finished:



Next job up was to finish the rib preparation in front of priming. This raises a lot of questions and it took a while before I took the decisions where to drill holes. Vans allows you to enlarge the tooling holes (on inboard side and partly predrilled in different sizes) to a maximum size of 0.625. They also allow an extra hole for wiring through nylon conduit in the lower section on the right side of the first lightning hole.

Category: 2.4. Main Wings

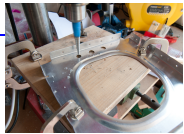
Published: Wednesday, 09 November 2011 11:19

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I need at leest two holes of 3/8", for a 3/8" bushing that will hold the pitot line and the AOA line (dynon). Those will go in the left wing and use the top and bottom inboard holes up to the 9th rib. I use snapbushings in there and the safeail static tubing kit. This makes it much easier then using aluminum tubing.

Enlarging the inboard tooling holes is very easy. Use a unibet and put some tape on the step where you want to stop so 3/8" is the last visible one. Then drill through one by one using a bench drill.



All 9 in the left wing are done like this. The middle hole is untouched for now. I will probably use that one to route my stall warner electricity link in there. In that case I will slip in a snap busing

On the right wing, the center hole will be used to run the Dynon autopilot servo wiring.



Then I needed to take the biggest decision. Conduit in the wing or not. Some say no, other say yes.

I finally decided to cut the holes and use the ID 5/8" conduit for easy of later maintenance and less risk of loosening up wires that can interfere with my flight controls. The price you pay is a little extra weight and sore fingers from trying to put the conduit in place

I located the ideal position of the conduit hole (3/4") according to Vans wiringng advise and made a hardboard mockup of the rib. The small dot in the card is where the center point of the hole should come. It's nothing more the the pinpoint of a sharpy pen pushed through. The image shown is for a right)oriented rib. For the left ribs, just flip the card over and use the same distance. This process assures perfect alignment of the holes for later conduit pulling.



Put the sharpy through again gently and voila... a center point

Category: 2.4. Main Wings

Published: Wednesday, 09 November 2011 11:19

Hits: 1633

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marking on the rib.



I then pilot drilled #30 all these positios on all ribs with a center drill. Later enlarged them using a unibit to 3/4"

Below are the 3 varyities shown, left rib for inner ribs in front of piot and bellcrank on the left wing, middle for same on right wing and right ribs for out ribs left and right.

As you see, the conduit hole is present in all ribs and will run wire from inboard to the wing tip.



Now it's priming prep time.