

Category: 2.9. Wing mating

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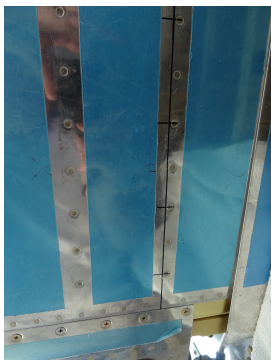
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Now that the wings are mounted and drilled to the rear spar attachpoint, it's time to some small tasks that should be completed now that the wings are installed.

First task is drilling the fuselage bottom skin to the bottom wing skin. Both skins will be held together with screws and nutplates.



While the wing was off, Vans has you draw some reference point on the bottom wing skin in order to remember where the holes underneath are. The idea is to measure back and drill through the fuselage bottom skin and hope that you end up close to the pilot hole underneath. I made the markings as a reference, but decided not to go that way. I hate guessing when it comes to measurements.



Here is a shot of the bottom side of the wing skin. behind the drain point, you can see the overlap. This is work to be done on your back, a very uncomfortable position and a killer for your neck muscles.



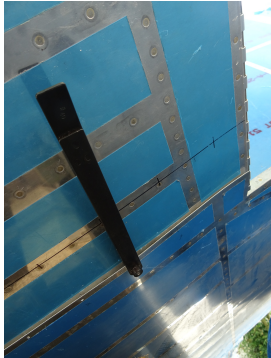
Instead of using the reference lines, I used a hole doubler to find the exact location on the fuselage skin using the pilot hole of the

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wing skin underneath. This is the most precise way to do it but it's not that easy as the spacing between both is really tight but it can be done. I used the markings on my reference line to easily locate the hole underneath.



In the image below all are drilled #40 and some have been updrilled to #19 (the black clecoes). I updrill to #21 and then use a #19 reamer to make the final hole.



Then I repeated the process on the right wing. I found out later on that I actually made too many holes for attach screws compared to what the plans say. Well, it's gonna be stronger in the end having some extra screws so no big deal.



I had some time left and started installing the wing root fairings on the right wing.

Draw an edge distance line on the tank so you can locate the fairing through the predrilled holes. It takes some "massaging" to get the right form on the front. It's tight but fits well.

An additional difficulty is making sure you don't end up drilling in the tank sealant of the fuel tank. The last thing you want to achieve here is a leak in the tank.

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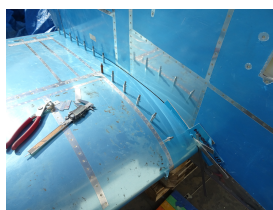
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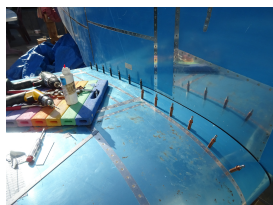
The bottom side view of the fairing



I started drilling from the bottom and then pulled the skin over. In the picture below, all the holes are drilled #40.



Then they get enlarged to #40.



All fits nicely, final drilling and reaming to #19 for 8R8 screws.



The fit looks really smooth and tight. The fairing rest pretty close to the fuselage skin. The plans indicate on DWG38 that the gap between fuselage skin and fairing should be between 3/16 and 1/4 inch. This distance will allow a good fit for the rubber band that slides over the edge of the wing root fairing.

20/05/2020 - Bottom skin pairing and wing root fairing drilling - 5h

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