

16/12/2018 - Flap motor fitting - 5H

Category: 3.9. Forward and Center fuselage

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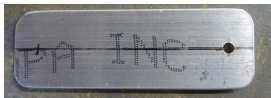
Preparation of the forward covers is completed. Next step in the manual is the installation of the flap motor and flap motor cover.

The flap motor is enclosed in a triangular structure between the seats of the pilot and passenger. A 12 Volt motor pushes the welded flap actuator (arm) up and down. It pivots on the teflon blocks on the F705 bulkhead and is supported in the middle by a third teflon block.

First, we need to make some parts ourselves. I had to search a bit to find the right hardware but in the end found them in one of the brown bags that Vans delivers with the kit.

The first piece I made is F-766C. It's a thick aluminum bar AB6-125x1 which will reinforce the AN4 bolt that holds the top of the flap motor through F-766A flap actuator channel (in other words, the front of the flap housing).

Round the corners, draw a centerline and drill one pilot hole. Only 1 ! The others will be drilled using the predrilled holes in F-766A as pilot holes.



Next you need to make a funky piece of angle out of AA6 angle material. F-766B has an AN4 hole and a teardrop shape towards the hole. This is the second support inside the actuator channel that holds the nut side of the AN4 bolt holding the flap motor. First I drilled the AN4 hole. Pilot hole first, enlarged and finally set to size with the AN4 reamer. Then started to grinding material off on the scotchbrite to make the rounded angle.



Used the cutting wheel to make a first rough cut and the scotchbrite to finish it off.



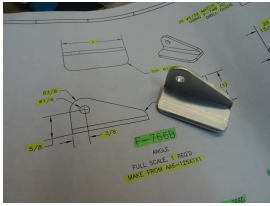
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Efge deburring and sanding and it's all ready.



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Cut the teflon block in two and installed the bottom half so I could drill the AN3 holes that hold them.

Edge distance is key here again and the drilling is kind of blind. I drew a centerline on baggage floor along the already existing holes. These are perfectly centered on the baggage floor ribs. Then I measured the middle of the teflon block and also aligned this center with the ones on the floor. The teflon block will not be aligned with the baggage floor but slightly overhang. That's good. Clamp and drill #12 for an AN3 bolt.



Here's a picture of the flap actuator weldment installed in the baggage area. Looks pretty cool.

I temporarily installed the an3 bolt with castle nuts and hand thightened them. The actuator weldment moves very smoothly without resistance.

