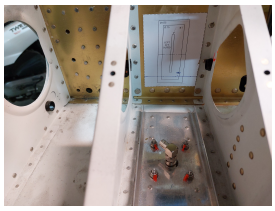
31/12/2023 - Connecting COM radio Coax to antenna - 3h30

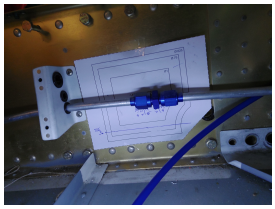
Category: 5.3. Systems
Published: Wednesday, 04 September 2024 13:59
Hits: 560

After installing the COM antenna underneath the pilot seat, I needed to run the coax cable from the COM antenna to the COM radio unit. Antenna cables need to be kept to a minimal length and by preference don't run in the viscinity of other electrical wires. Therefore, I decided to make a dedicated pass through hole through the F704 bulkhead for it. Vans Aircraft provides templates that show the location where you are allowed to make holes in the F704 bulkhead.

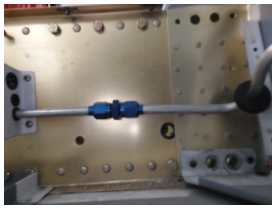
I cut out the template and attached it to the F704 to get a better idea of where I can make this connection.



This is the location from the forward side. The fuel line is kind of in the way a bit to have it centered and I also wanted to keep it low because of the aileron pushrod being in the way on the rear side.



Lower left of the fuel line connection, you can see where I made the whole. I will install the bushing and run the coax through.



The coax connector could only be crimped after being moved through the F704 bulkhead in order to keep the hole small. In the image below you can see how the shield is nicely cut off at the connector so that it will be completly hidden underneath the sleeve which will be crimped on.

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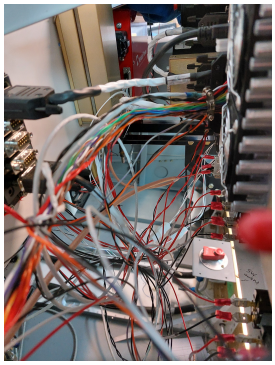
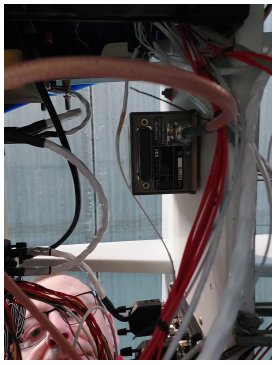
The wiring is starting to become a bit of a spaghetti. It's time to start lacing up those wires and organise the bundles.



The coax cable connects on the com radio from the bottom side using a TNC connector.



In the image below, you see the connection from the antenna through the center bulkhead. I used a 90° adapter so that it runs straight through without sharp bends.

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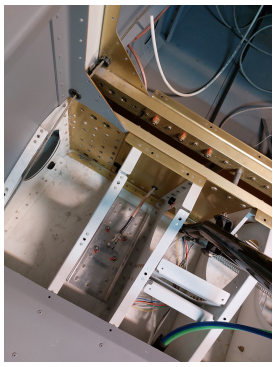
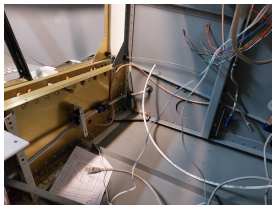
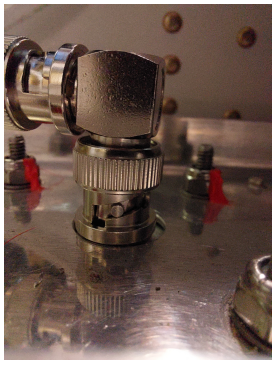


From there it runs parallel to F704 forward bulkhead and then up from the side. I decided not to run this antenna through the center line conduit as there are too many electrical wires in there already and I want to avoid magnetic interference as much as possible.



As I installed the adapter on the com antenna, I stumbled upon this problem. The whole in my support plate is too small and the connector can't bottom out all the way... grrr... more work to adjust this so that it will be able to lock in place.



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