

# AIRCRAFT SPECIALTY



## FLIGHTLINES

Thank you for purchasing your RV-14 Wing Root Filter installation kit. This kit installation encompasses two portions. The first is your Cabin Fuel System. The second is your wing root filter installation.

In the cabin, this kit contains Two Rigid tubes and two flex hoses. They are designed to plumb either the Andair Type 2 Std Valve, or the optional Andair Type 7 valve into your RV14. If you are utilizing the Andair Type 7 valve, you will have to delete the Std valve included with the kit and order the Type 7 Valve from Andair Directly with two 90 degree EF20 Elbows.

If you are installing the Type 7 Valve Kit, you will have a drill template plate included in your kit. The type 7 valve utilizes a different hole mounting configuration than the standard valve. Cleco the doubler plate to the existing plate and use the template to drill new mounting holes that will allow you to install your Type 7 valve into the stock Van's mounting plate.

For the rigid tube assemblies that go from the valve to the wings, we recommend the following.

- Hand tighten the assembly at the valve first. (Critical for the Type 7 Valve)
- Make sure that the AN fitting at the wing root is loose so that it can swing freely and make attachment easier.
- Attach the tube at the wing root
- Tighten everything up

Note: The rigid tubing is 5052 aluminum, which is a soft grade of aluminum but of a much higher quality than the 3003 soft tubing that it supplied with the kit. A very slight amount of pre load may be necessary to install the tubing in your aircraft. The important thing is

## RV-14 Wing Root Filter Install Rev 2 5-15-23

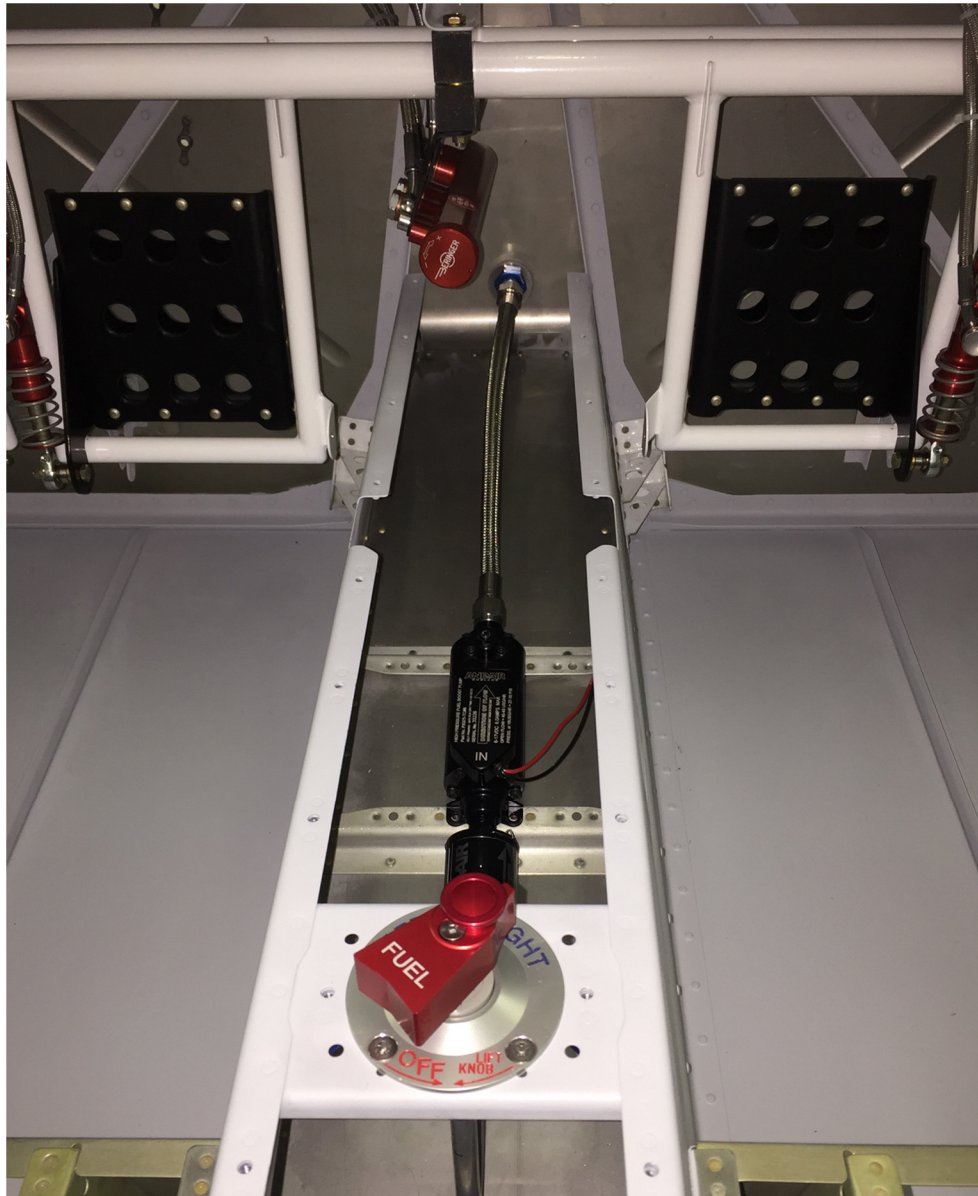
that the tube attaches perpendicular to the fittings and fits well. The tolerances are very tight, and we are able to build these tubes with a very high amount of repeatability. All of our beta testers reported that these tubes “drop right in.” Any slight variance should be such that you can attach everything and it will allow it to fall into place during final tightening. If you have any questions during the installation, please feel free to contact us.



## **Andair Type 7 Valve installation**

The Andair Type 7 valve can easily be installed in the RV14/14A aircraft utilizing this installation kit. It includes 3 rigid tubes, one flex hose and one Valve Mount drill template. To start the installation, you utilize the included drill template to transfer the the holes to the existing valve mounting plate. This ensures that the type 7 valve mount holes are in the correct location. Once these holes have been drilled, you can mount your Type 7 valve.

Next, you will want to install the two long tubes from the vale to the outboard fuselage. Hand tighten the tubes at the VALVE END FIRST. Then, a gentle push should slide them right into place into the valve clips and the outboard AN attach points. Once this is complete, don't forget to final tighten all your fittings. You can install the remaining flex hoses whenever it is convenient.





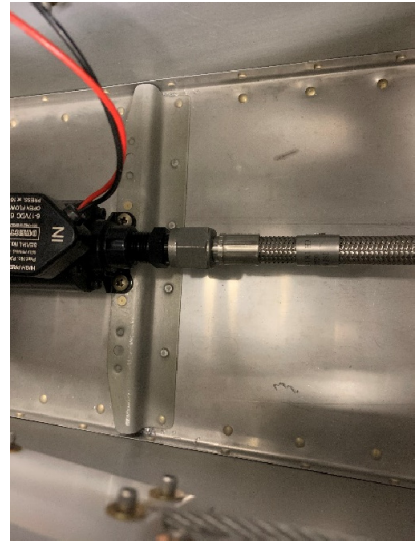
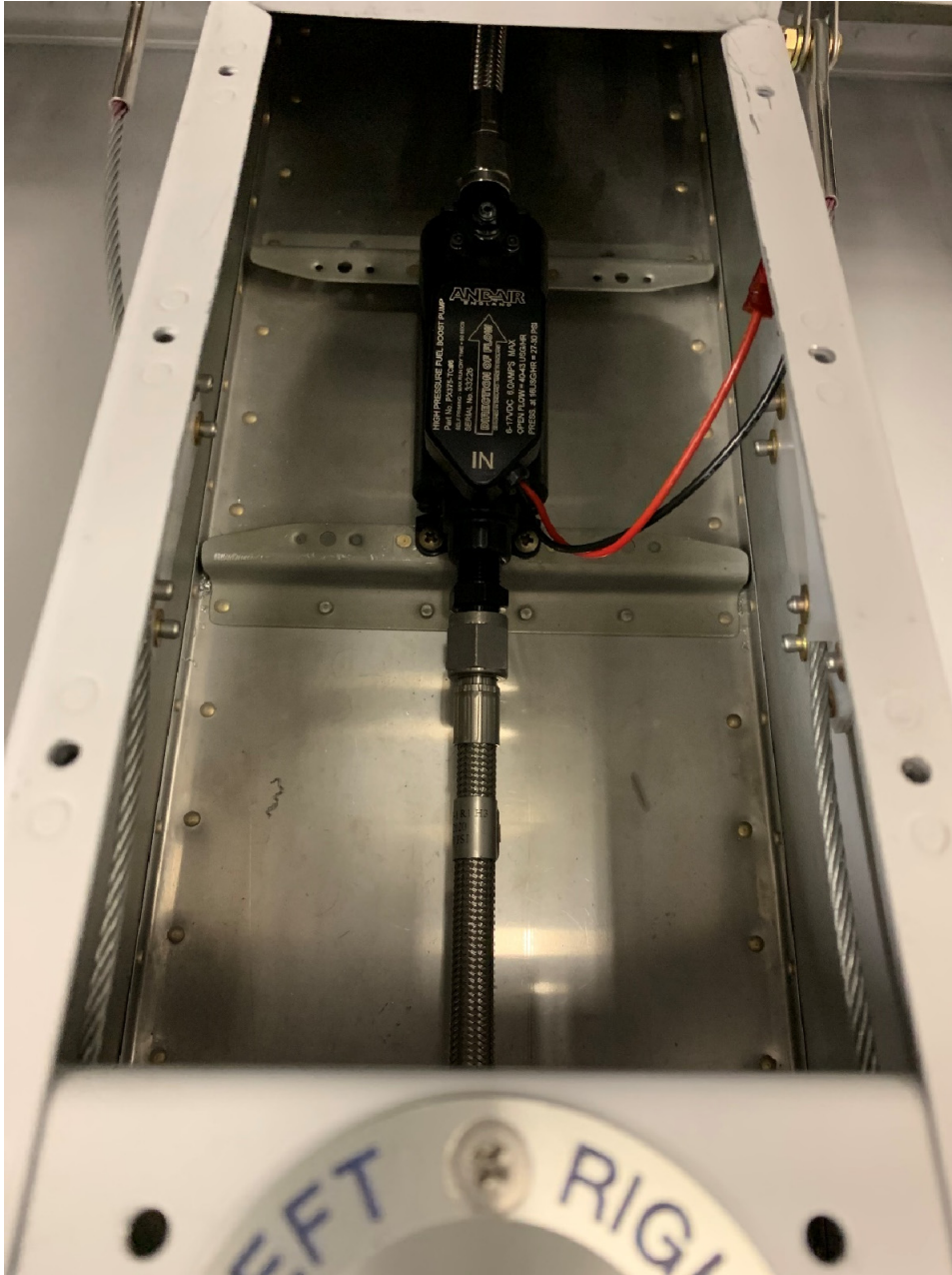
**Note-** The picture below shows the type 7 valve and the complex bend geometry to make the turn tight to the valve and yet clear everything and then make the bends through the tunnel out to the wings. Please note that with the wing root mounted filter setup, the rigid tube shown in this picture coming off of the bottom of the valve will be replaced with a flex hose.





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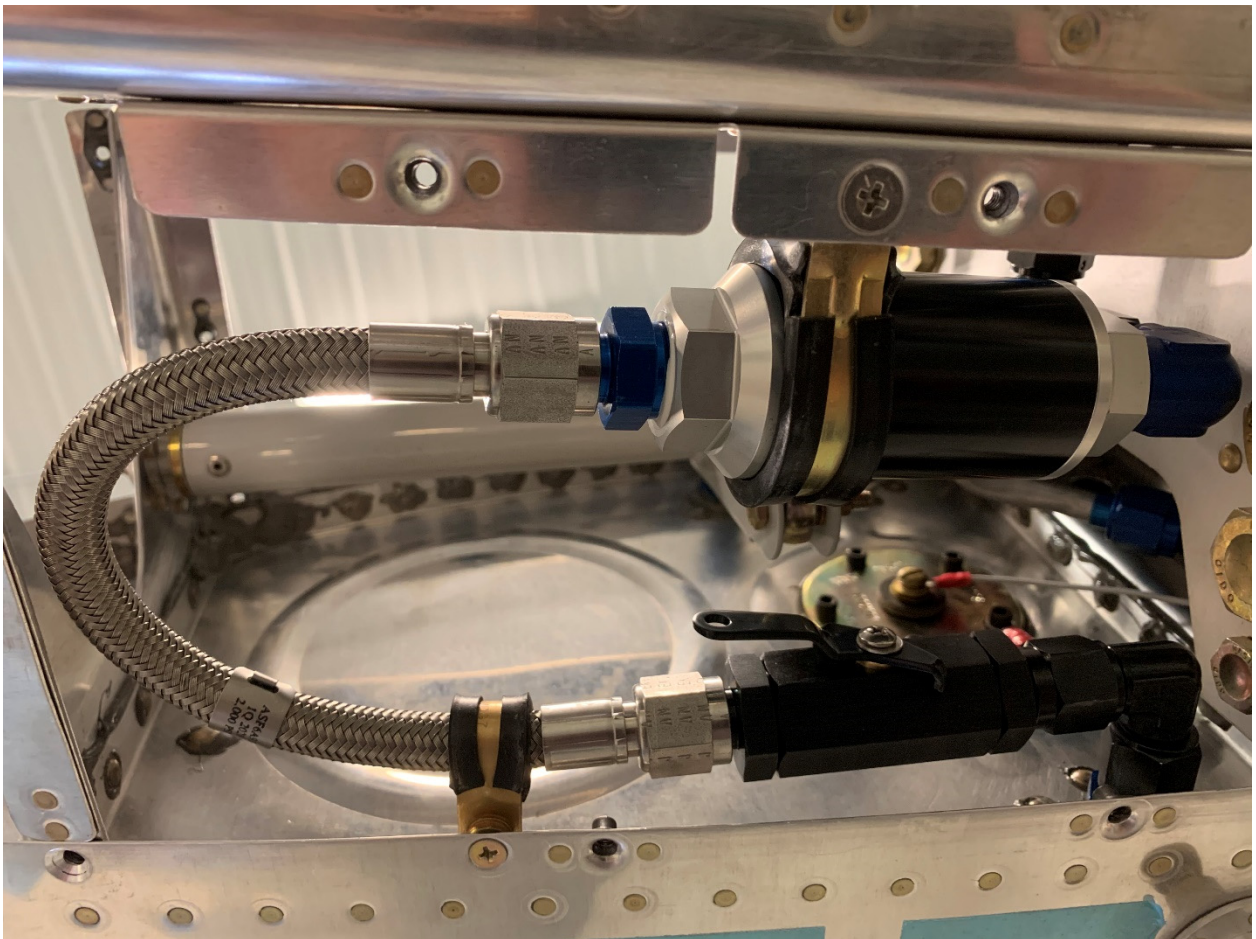
The pictures below show how you remove the Filter from the pump setup, and attach the included (From Vans with the pump kit) AN fitting to eliminate the filter in the tunnel. You will then utilize the short flex hose assembly (**ASF 143-1 R(X) H3**) to go from the Valve to the Pump, and the longer one to go from the Pump to the Firewall. (**ASF 140RT-6 R(X) H1**)



## WING ROOT MOUNTED FILTER PORTION

*“ASF 143-1 R(X) H1” H2 is the same as H1. Wing roots are mirror images*

***VERY IMPORTANT: Pls safety wire fuel valve open. The only time that this fuel valve should be closed is during a conditional inspection for Filter Servicing.***











**PLEASE NOTE THAT AS OF 2023, DUE TO PARTS AVAILABILITY, WE HAVE CHANGED FILTERS ON THE RV-14 TO MATCH THE RV-10 INSTALLATION.**

**The general install is the same, but the filters mount slightly differently.**



On the new install, the AN fittings are integrated directly into the FILTER mechanism. Some of the filters have arrows indicating flow direction. If they do not, the side with the double nut is the OUTPUT side.

This is shown in the image to the left.

The full installation is shown in the image on the next page. Of note is that the filter is a bit smaller in diameter and utilizes a different size adel clamp. This necessitates the use of the included spacer to mount the adel clamp a bit higher and secure the filter.



