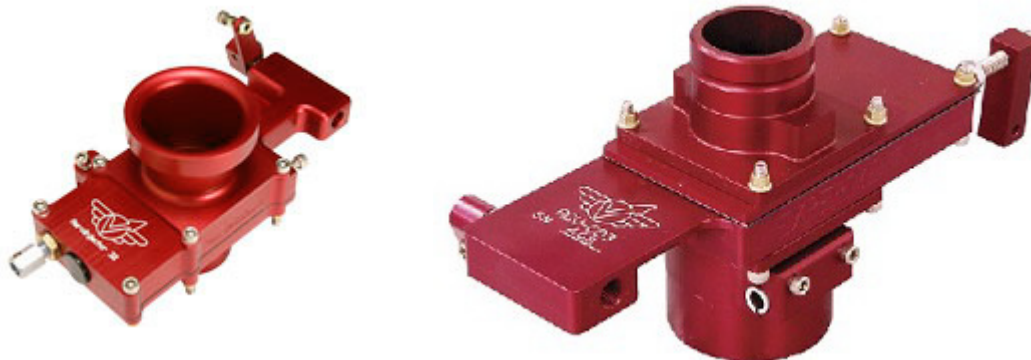


AeroCarb/AeroInjector to Y-Pipe Modification



This Modification to the intake system is not sanctioned by Sonex or by any one associated with Sonex Aircraft LLC.

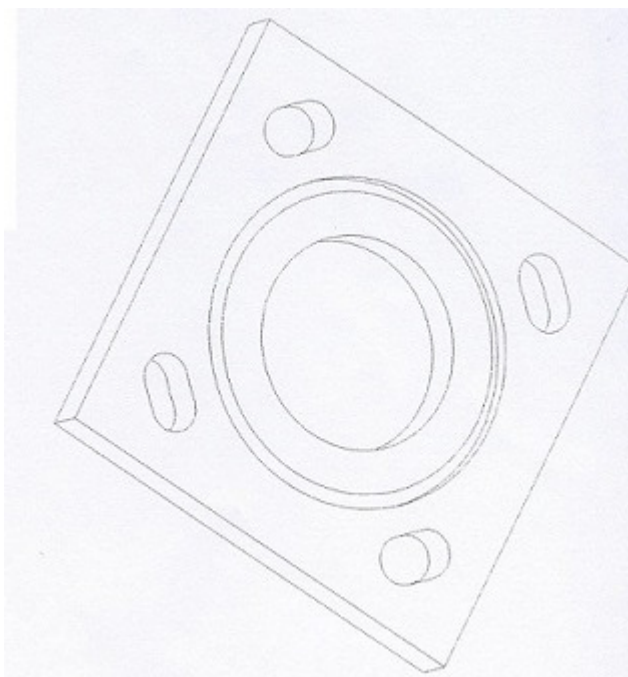
I put my Sonex with the AeroVee and AeroCarb/AeroInjector into service in 2005. Keeping the hose connection (spigot Mount hose) tight and in position was always a problem. I must also explain why this was a problem. The flange on the Y-Pipe, because of my particular setup had to be cut off just above the bead on the intake in order to fit the carb with filter to clear the bottom of the cowling. This in itself was not the main problem, but the size difference between the AeroCarb/AeroInjector and the hose to Y-Pipe. The hose fits the Y-Pipe but is too small for the Spigot on the carb therefore is always trying to squirt out of the hose. I just could not trust safety wire wrapped around the carb and Y-Pipe to keep it from falling off. Every time I checked it was loose. Not being able to keep it tight, I knew I was sucking air there and tuning the carb was a problem. It might not have been sucking air but my mind was telling me so.

My solution to that problem was to do the following.

I purchased what Sonex calls a F Adapter.



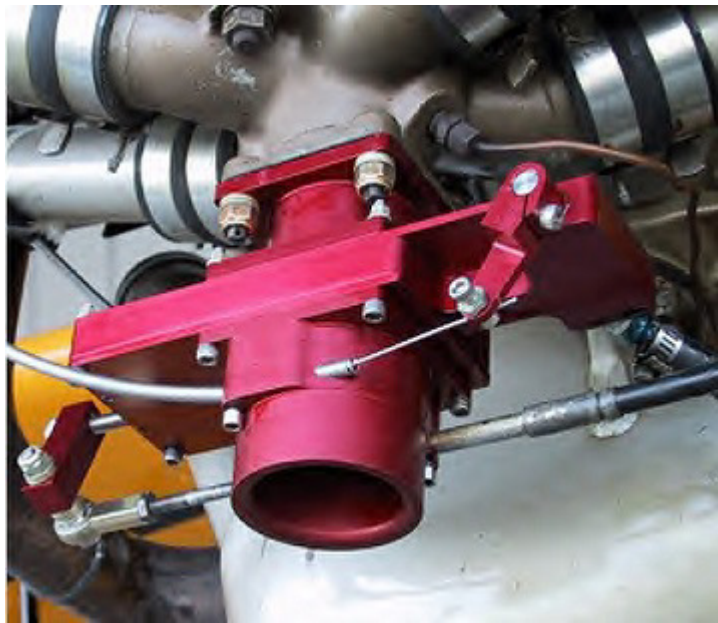
This allows you to bolt your AeroCarb/AeroInjector on the Y-pipe instead of using a hose and clamps that you can never keep tight. With this in mind I took my Y-Pipe off my engine and stopped by my favorite machine shop. Stainless was ordered to match the Y-Pipe material. I had them fabricate a square flange to match the F adapter .



Parts List

1. F -Adapter Sonex Pt. # ACV-C03-07
Optional Flange Mount, 32MM (Subassembly of P/N ACV-C03F),
2. SS Flange Machine shop If intereted I can supply Flange
3. Viton O ring
4. 4 # AN-4 bolts
5. 4 # AN-4 Washers
6. 4 # MS17825-4 Self-Locking Castellated nuts
Allows safety wire through bolts

This picture shows the AeroCarb/AeroInjector setup on a Continental engine. My installation is similar to this.



F flange Y-Pipe side.



F flange Carb side.



Adapter being milled.



This is the amount of twist left and right being built into the mount for tuning.



Flange test fit on Y pipe. Notice the O-Ring groove for sealing. Using Viton O-Ring



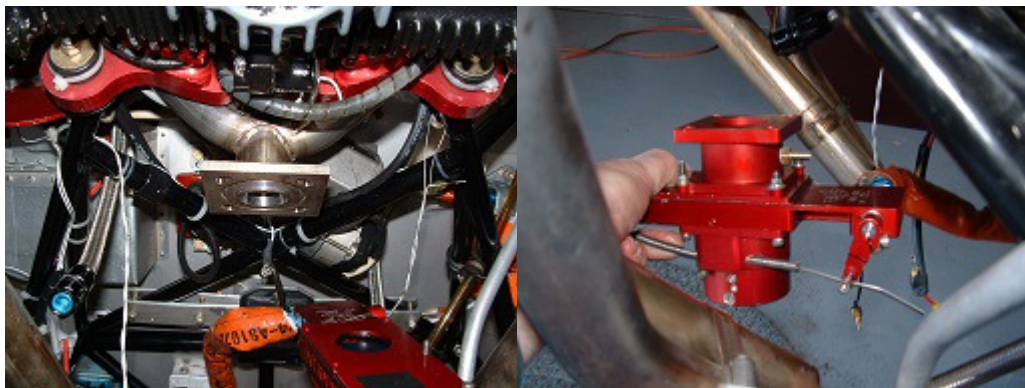
Setting up for welding. **Note** Before welding to pipe, Make sure your **AeroCarb/AeroInjector** Will clear your cowling with what ever setup you have (**Air filter, Heat box, etc**) The **F Adapter** is not the same height as the Spigot mount you take off. Mine just happened to come out correct but if additional room is needed then of course the pipe needs to be shorter, but so short the carb will not clear bottom of engine.



F flange attached to the new Y-Pipe flange.



Y-Pipe installed back on engine. Found that I needed to install carb with the throttle cable facing the firewall. This way as shown cable would not clear oil cooler. The barb fitting on F-Flange is for my Manifold Pressure.



Engine started 04/27/12. Carb retuned, idle 850 to 900 rpm. Ground run at 3150 rpm. I run my carb on the rich side. That way I don't have to retune for winter. I lean on the ground to smooth out idle and full rich on take off. I always lean in cruise to 4.5 to 5 GPH. This modification is not for everyone but for me was the correct choice. I do not worry about it anymore and now allows me to worry about something else.

Dick
Sonex 569SX