

Stromberg Fuel Tee Replacement

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Version 1.1

February 14, 2017

The plastic fuel tee supplying fuel to the twin Stromberg 150CDs on my Sunbeam Alpine Series V had cracked and was spewing gas onto the exhaust manifold. When inspecting the fuel tee for where it was leaking, it split into two pieces. Based on an old Sunbeam Specialties parts order invoice, I think my father had replaced the fuel tee in 1988.



I purchased a new fuel tee from Sunbeam Specialties. It came with a couple of clamps, which I thought was odd, since the fuel tee on my car did not have any clamps.



I removed the nuts that attach the carburetors to the intake manifold. I loosed the nut on the choke shaft linkage. I raised the carbs and then slid the new fuel tee into place. I did not install the clamps. I reinstalled the carb nuts and tightened up the choke shaft linkage bolt. Fired up the car and the fuel tee leaked. Installed the clamps onto the fuel tee. The leaked seemed to be gone. A couple of months later, it seemed like the fuel tee was leaking again.

My search for a replacement fuel tee setup began. I have seen people use a "remote" fuel tee that is connected to the carb fuel nipples using rubber hoses. I tried attaching fuel hoses directly onto each fuel nipple, but there was not enough clearance to install two hoses.

If I could find a fuel rated rubber hose in a T shape, like the hose that connects the carburetor air filters to the flame trap, that should work. After many hours of searching the web, I did not find anything suitable.

People online mentioned using brass tees with compression fittings. The space between the carburetor "frames" is only 1.630 inches. I searched the web for 1/4" brass tees with compression fittings. Everything I found was wider than 1.63 inches.

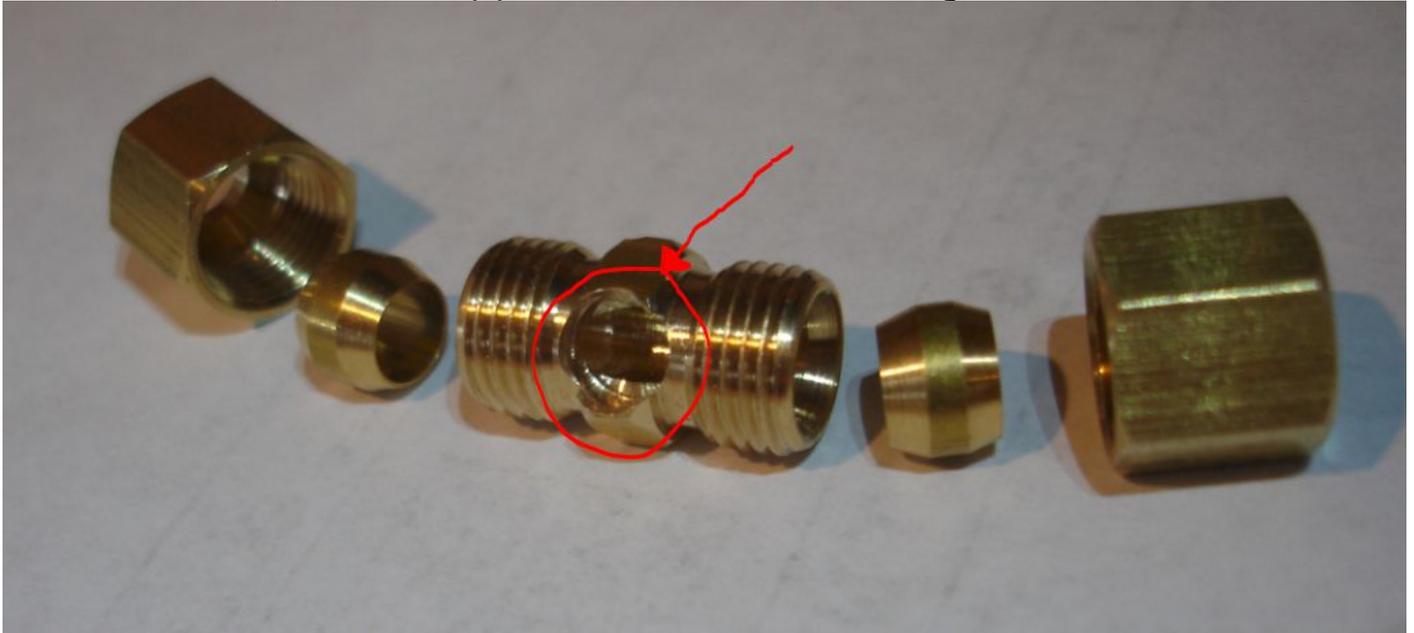
Then I found a brass union with 1/4" compression fittings at a nationwide auto parts retailer. The width of the union when the nuts start to yield resistance is 1.460 inches. It will fit in between the carburetor frames.



I needed to convert the union to a tee. It would be nice to have a 1/4" OD supply line coming into the tee, since I could then attach the existing fuel supply rubber hose onto the fuel tee. Since my original fuel tee was trashed, why not reuse the metal pipe from it? I separated the pipe from the plastic remnants.



I used a drill press with a 1/4" bit to drill part way into the center of the brass union. I did not want to drill too far into the union, otherwise the pipe when inserted into the union might restrict the fuel flow.



I removed some of the tapered end of the 1/4" metal supply pipe using a bastard file until it fit nicely into the hole that was drilled in the brass union. The drill hole had its own taper due to the drill bit head shape.

I joined the supply pipe to the union using silver solder. The photo does not show it, but the solder did completely fill the gaps between the supply pipe and the union. Silver solder is quite strong, so I am not concerned with the solder joint breaking.





If the supply pipe had jugged farther into center of the union, I could have drilled lengthwise through the union to remove the excess pipe material. It did not appear to me the pipe jugged too far into the union, so I left it alone.

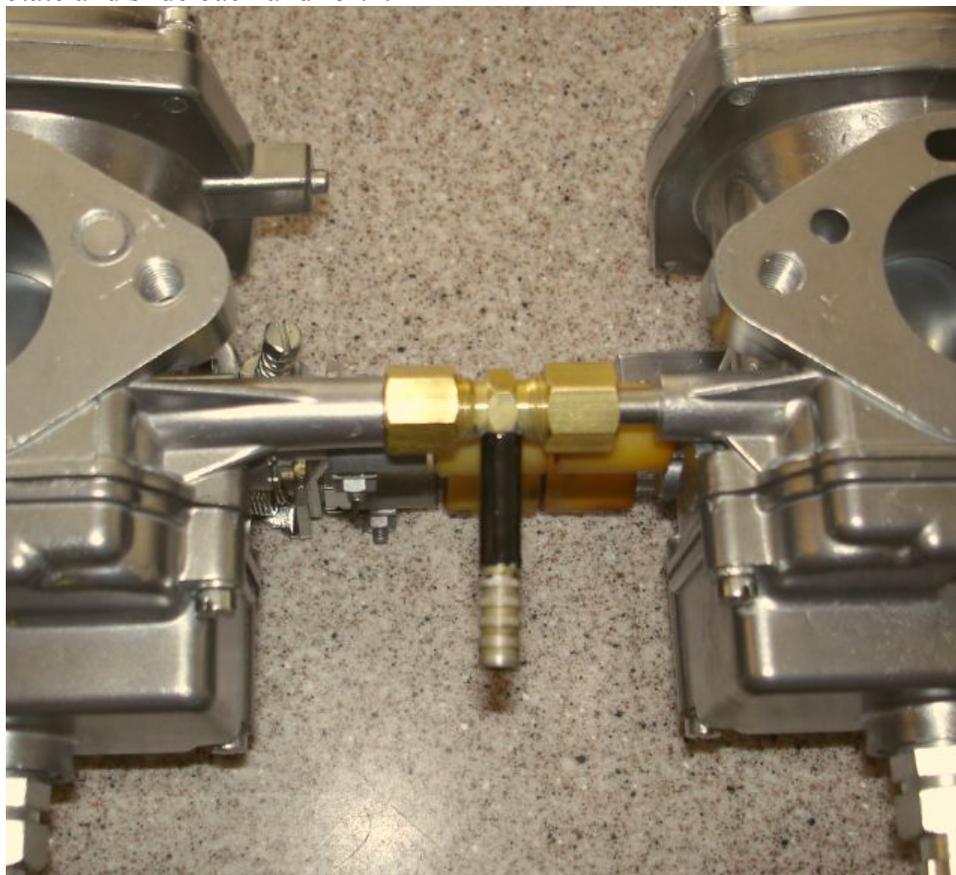
I used a solution of baking soda plus water to neutralize the flux residue and rinsed the part to remove any metal shavings and metal dust.

I sanded the supply pipe to remove the residue.

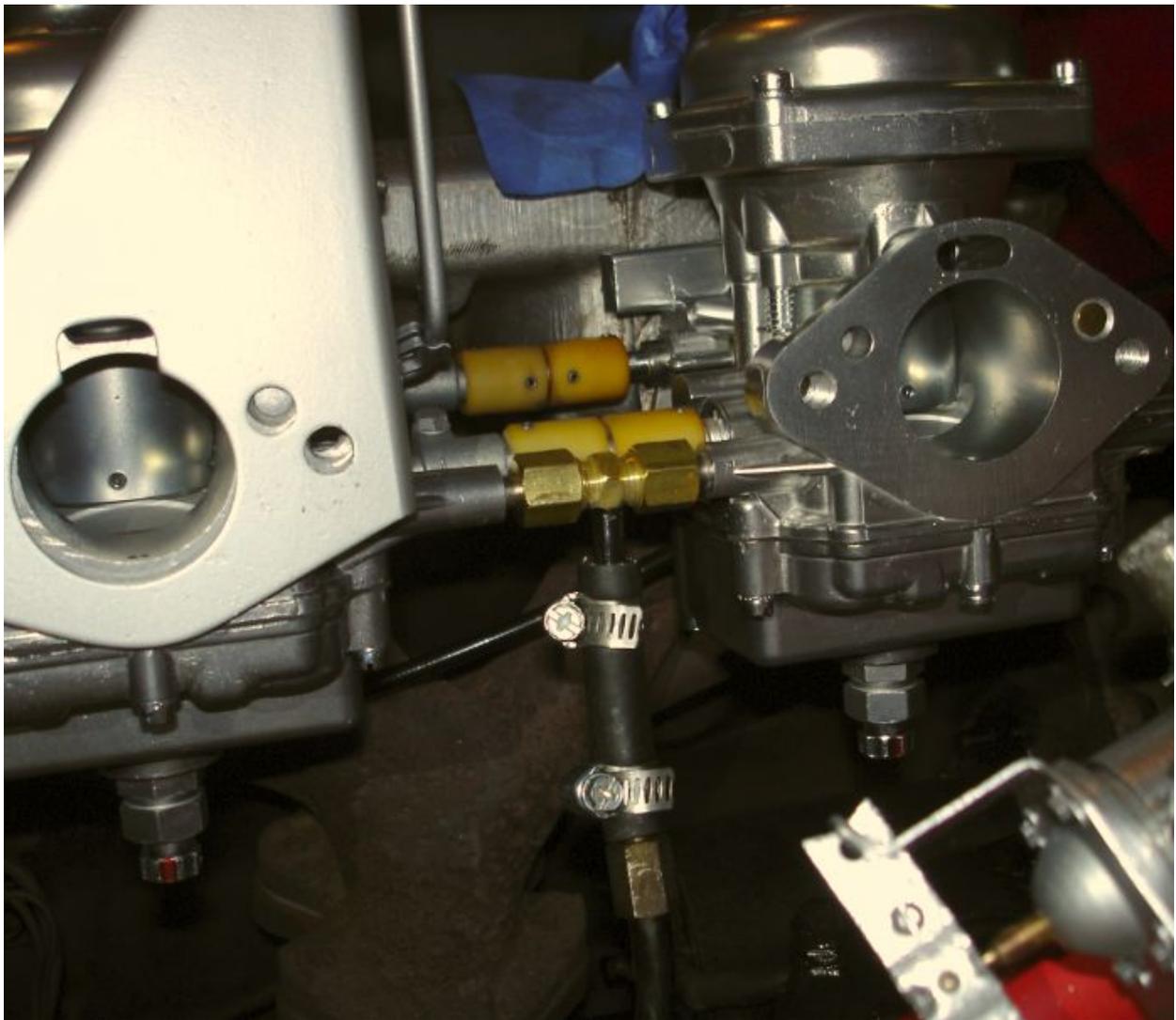


I painted the top half of the supply pipe with Testor's black enamel to both improve its appearance and to prevent rust. It appears the supply tube is steel. It was time to install the custom fuel tee onto the Strombergs. The Strombergs had been sent out to be refurbished, so they were off the car already and the linkage shafts were not attached yet.

The compression nuts were in place on the union and slightly threaded, but not tightened. I placed the fuel tee between the carbs onto the nipples and then attached both linkage shafts. The tee was still loose at this point and could rotate and slide back and forth.



The carbs were installed onto the intake manifold studs. Once the carb nuts were fully tightened, I attached the rubber fuel supply hose onto the fuel tee supply line and tightened a clamp onto the tee supply line. Attaching the fuel line to the fuel tee ensured the tee was oriented properly in regards to the fuel line. Once I was happy with the orientation of the fuel supply line, I centered the fuel tee evenly between the two carbs and tightened the union compression nuts. I did not tighten the compression nuts very much initially, as I wanted to minimally deform the carb nipples.



I started the car and of course some fuel was leaking from the right compression nut. After tightening the right compression nut slightly, the leak stopped.