

Fuel Tank Modifications

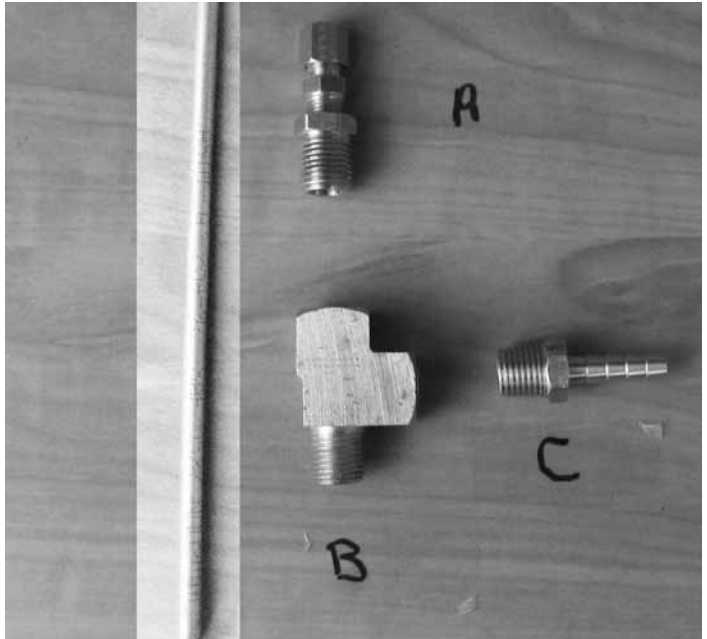
Richard Suttie, Thompson Valley Sport Aircraft Club



Have you ever needed another hole in your gas tank for a supply line or vent line?? Here is a simple way to achieve that goal. I am installing this so my suction line for my primer is not teed into my main fuel line. The following picture is of the original vent elbow (Right, top).

The parts that are labelled in the picture are as follows. I am working with the 1/4 " NPT (national pipe thread) into the tank that houses the vent line. I remove the vent elbow and install the brass fittings assembled as follows (centre).

"A" is a 1/4 inch NPT to 3/16 inch compression fitting. "B" is a 1/4" NPT Tee (street). A 1/4" nipple can be used with a 1/4" tee instead of a street tee. "C" is a 1/4" NPT to barb fitting to match vent hose sizing. To the left is a piece of 3/16" tubing (brake line purchased from an auto parts supplier).



Steps to make up fittings:

Drill out B or nipple (if not using street tee) to make more room for vent application. The vent from the tank will come up around the tube and exit out through *C*. Drill out several sizes larger than the original hole. I also drilled C to allow maximum vent flow. Cut the tube long enough to reach down into tank as far as necessary. (I am running the tube down to within 6 inches of bottom as I am using this for a primer suction.)

Drill out the inside of *A* so tubing will pass through fitting. Install tube at height needed and tighten compression nut. This is now sealed from port *C*. Install fitting into tank and install hoses. (Bottom)



Special note: Not a good idea if you have a plane that is certified for aerobatics!!!!!!