

## FUEL TANK PRESSURE TESTING

After constructing the fuel tanks, they should be leak tested by using low pressure air. In operation, the maximum pressure in the fuel tank is very low, less than 1 psi. Considering the size of the tank and the square inches available, it will take very little pressure to rupture the seams. Great care must be taken not to over pressurize the tank when testing. It is difficult to find a pressure gage that reads such low pressure. Use one of the methods below to check the tank.

Install the filler cap and tape it over with packaging tape or duct tape to insure no leaks. Cap off the fuel pick-up fitting with the cap and nut provided. Remove the sump drain (if installed) and install the air valve. Verify that the vent line is open and put a balloon on the line and tape it in place tightly. With a hand pump, pressurize the tank to inflate the balloon. The balloon is your safety valve, it will blow up before you can harm the tank.

When the balloon is inflated squirt soapy water on all the screws and seams, don't forget the tape attaching the balloon, and look for bubbles. Ignore any bubbles at the filler cap.

**An alternate to using a balloon is to make a manometer.**

Attach a length of clear plastic tubing to the vent line. The tank has to be high enough to allow the tubing to drape to the floor and then curve vertical to about 3 feet. Put some water in the tubing, but not enough that it goes into the tank. When the water level in the open end of the tube is 2'3" higher than the level in the end attached to the vent, you will have 1 psi in the tank. Use soapy water to detect any leak.

If you have a leak in an area that cannot be reached through the fuel sender cover plate in the root rib, then you may have to cut an access hole in the rear baffle to make the repair. The access hole will be covered the same as the hole in the root rib. A blank cover plate is available (P/N T-411). If the leak is only one or two rivets try Locktite #290. This sealant will "wick" into small spaces and cure.

Fuel Tank Test Kit:	Parts list
1.000 AN929-6D	Cap, Flared Fitting
1.000 Fuel air tank valve	
1.000 Doc Fuel Tank Test	