

## **Troubleshooting an Air Leak in the Fuel System**

### **by David DuBois**

If the pump is ticking rapidly all the time, the problem is most likely going to be an air leak on the inlet side of the pump. This sort of a leak is not likely to show up as a damp spot anywhere as the fuel on the inlet side of the pump is not under pressure at that point. Places where the leak might be are: the pump diaphragm, the gasket under the cover of the inlet surge chamber (the large domed cover held in place with a single hex head screw), the banjo fitting for the inlet line attachment to the pump (loose banjo bolt, bad banjo fitting washers or compression fitting on the fuel line to the banjo fitting itself if one is used), crack in the fuel line, compression fitting on the fuel line at the tank, a fractured braze joint attaching the fitting to the tank, or a hole in the pickup tube inside the tank (fill the tank all the way to the top to check this possibility). To troubleshoot this situation, disconnect the fuel line from the carburetors and direct it into catch vessel of some kind and turn the ignition on and check for bubbles in the stream of fuel - bubbles will indicate an air leak. Next, remove the fuel line from the inlet side of the pump (disconnect the line the fitting at the tank to prevent siphoning fuel from the tank when the line is removed from the pump) and replace it with a flexible line leading into a container of fuel, then rerun the first test. Bubbles in the stream of fuel indicate that the leak is in the inlet side of the pump or possibly the pumps diaphragm itself. No bubbles indicate the leak is toward the tank. Replace the normal fuel line to the pump and move the flexible line to the tank end of the line and rerun the test - bubbles indicate the leak in the line, no bubbles indicate the tank fitting or pickup tube.