

## FILL'ER UP!



There are many ways to get glow fuel from the fuel bottle (can) into your airplane. For the first few years, I used a standard turkey baster with a piece of fuel tubing glued to the tip with silicone adhesive. It was slow going, but it worked. Today there are electric fuel pumps, but they require a 12v battery and that means a flight case of some type.

There are manual pumps that hang off the fuel bottle. No battery required, but the associated fuel tubing and pump sort of hang around everything you try to do in the pits and are always getting in the way. There must be a simpler way.

Of course there is, as you might guess, and it has been around for more than 15 years and is one of the most popular and economical model fuel transfer systems made. It is the Dave Brown Products "Pour 'N' Pump" fuel pumping system. While it is available in both glow and gas versions, we will be discussing the glow version here. The systems are identical except for the internal and external tubing.

The Pour 'N' Pump is about as simple as it can be. Everything is self-contained and totally assembled. Since the pump, mounting strap, tubing and carry handle are integral parts of the can, nothing is left hanging around the pits or lying in the grass. The can itself is an "F" style, one gallon can. The copper fuel pick-up tubing is soldered into the can, extending almost all the way to the bottom (photo1).



Photo 1

Right next to it is soldered a short vent tube that also holds the fuel transfer line. The transfer line has small piece of copper tubing with two different diameters (photo 2). The smaller diameter end fits inside the vent tube photo 3. Once pressed down, the tubing slips onto the exposed vent tube, making an airtight seal as shown in photo 4. There are no leaks even if the can falls on its side.



Photo 2



Photo 3



Photo 4

The mechanical pump is held onto the can with a durable nylon strap that lasts forever. The strap fastens with a large Velcro® fastener (photo 5). A small ledge on the pump's rear keeps it correctly positioned on the can during operation (photo 6).



Photo 5



Photo 6

The pump itself is the best part of this system. There are no moving parts to break or wear out. The elegant system uses simple pressure on a flexible tube to pump the fuel (photo 7). On the back of the pump's rotating wheel are two rollers (photo 8). As the wheel is rotated, these rollers apply pressure to the internal tubing forcing the fuel either into the airplane or from the airplane back into the can.



Photo 7 Photo 8

Pretty simple, rugged, durable and trouble free. If you turn the wheel, the fuel moves. Rotate it clockwise and fuel transfers into your aircraft. Rotate the other way and it leaves the airplane. It is as simple as that. How rugged is Dave Brown's system? Photo 9 shows the new fuel can next to one that is not so new. This is my fuel can and is about 10 years old. It is a little beat up and the paint is chipped, but it works as well as the day I got it. There has never been any problem and all parts are original. It goes with me almost every time I fly.



Photo 9

This points out another great use for this inexpensive, less than \$20 retail, fueling system. I do have an electric fuel pump in my field box. So why do I have another fuel system? I fly 4-stroke engines in several airplanes that use a 20% nitromethane fuel with 20% synthetic oil content. In my 2-stroke engines I use a 15% nitromethane fuel with 5% castor oil/15% synthetic oil blend. With the Dave Brown Pour 'N' Pump, it is easy to take both fuels to the field.

How about filling speed? My high-speed, competition electric fuel pump will fill a 20 oz. tank in 78 seconds. (I know, I know, but we competition pilots actually DO keep track of useless data like this.) The Dave Brown manual system fills the 20 oz. tank in 70 seconds, requiring about 100 easy turns of the wheel.

Although the pump, called a "six shooter" and no, I don't know why, is available separately for a few dollars less, why would anyone pass up the assembled system? I can't think of a reason. Even if the pump's internal hose should fail for some reason, a replacement tube and clamps are available for just a few dollars.



Photo 10



Photo 11

There are two simple improvements I would suggest you consider for your Dave Brown system. Cut the transfer line in half (photo 10) and insert a fuel filter. After the filter, add about one foot of additional fuel tubing to make the fill line a bit longer. Insert a 1/8 in. diameter brass tube about 1 inch long to couple the extension to the rest of the fuel line (photo 11). Use a 1/32 in. nail set to “flare” the brass tube ends to hold the fuel lines firmly in place (photo 12). This is a good idea anytime a fuel line connects to a brass tube. Inserting the extension in the middle keeps the original tubing and nozzle intact to seal the vent line as explained above.



Photo 12



Photo 13

Even with the longer fuel line, this system is compact and an easy traveling companion (photo 13). Dave Brown's Pour 'N' Pump is one of the best, most well thought out, model fuel transfer systems we know about. It is also inexpensive and requires no setup or assembly. This might be just what you are looking for, try it.

→