

Tanked Up (Spare LP Gas Tanks)

This seems to be a reoccurring theme on the forum and Internet about propane tanks, hoses, and what to do. First of all let me say that if you are the least bit unsure what to do, DON'T. Get a professional to do the work for you. Second, do this at your own risk. Common sense and good judgment are better than anything else to keep out of trouble and out of a hospital. Again, if you are the least bit concerned about the connections, sealing, assembly, or use of the suggestions in this document, then either contact a professional or don't do it. You are working with propane and it has no sense of its own. Propane is flammable and invisible. Testing of the sealing of a connection is a must at all steps and periodically thereafter.

The system on the trailer uses a device called a regulator to lower the pressure from the propane cylinder to about 11 inches of water column pressure (about ½ psi). The gas then flows through piping to the various devices such as the stove, refrigerator, furnace, water heater, and other devices. Almost all, if not all, trailers today have an auto change over regulator. This device simply monitors the two tanks connected to it. When the primary tank is empty, the valve switches over to a second tank. I like this feature as it means that you check the tanks in the morning and not at oh-dark-thirty (usually 2:30 to 4:30 am in the rain).

I decided about three years ago it was a lot easier to change an external tank than fight the tanks out of the LP compartment and have them filled. Then fight them back into the LP compartment. So I purchased two horizontal LP tanks of 30 lbs. each. They came with a gauge to let you know when the tank is just about empty.

Next, I went to my local hardware store that specializes in propane and propane appliances to pick up some parts and two hoses. A word about the hoses used here. This is on the high pressure side of the propane system. So you want to be carefully, work slowly, double checking, and triple checking. **WARNING:** The hose has to be high pressure propane hose. The hose will be marked with its design pressures and so on. I purchased a 4 foot and a 12 foot hose with the fittings swaged to the end. All that I needed were some male and female Acme fittings. Also, I had purchased a large tank, 100 lbs., to run the trailer during storms, etc. So I needed a POL fitting (This kind of fitting screws into the center of the valve on a tank rather than over it as with an Acme type fitting and is found on larger tanks that do not have an Acme fitting on the outside of the valve. As far as I have seen, all valves have a POL fitting but not all of the Acme fitting.) and a male Acme that I could connect together to link the large tank to the regulator in the trailer.

Now a Word about Safety

I used pipe tape on some of the fittings and pipe sealant on the others. Both work. **WARNING:** All connections have to be tight and sealed. Test the connection with a mixture of liquid soap and water in a spray bottle or purchase one of the commercial leak testing sprays. Either way, test all of the connections! Use the correct tools (flare nut wrenches) and materials. If you are not sure about doing any of this, or don't have the tools, then by all means go to a professional LP tech or an RV LP tech and have them put the hoses together for you.

WARNING: This is the high pressure side of the LP system and the connections have to be sealed against about 350 psi. So if you are not sure, then go to a professional. Ok, connect the spare tank to the female Acme connection on the hose and the male Acme connection into the regulator pigtail. Open the valve on the spare tank to pressurize the hose and fitting. Test all connections several times. Remove the pressure and test again to make sure. What I do is to shut the

valve off at the spare tank, light the stove and use it to burn up the propane in the system thus lowering the pressure before I disconnect the hose between the regulator and spare tank.

This is a picture of the shorter of the two hoses used to connect the 30 lbs horizontal tanks to the trailer regulator. Note the male and female Acme fitting on the ends of the hose.



This is a picture of the longer of the two hoses used to connect the 30 lbs. horizontal tanks to the trailer regulator.



This picture shows the completed POL/Acme fitting for connecting a large (100 lbs) cylinder to the trailer regulator.



This is one of the hoses connected to a tank and the pigtail to the regulator.



And this is of the male Acme fitting screwed into the regulator pigtail providing gas to run the generator.



Final Thoughts

I started using this system when we were on an 8,000 mile trip through the Rocky Mountains. I fought the tanks in and out twice and then thought that there has to be a better way. Since I have made these hoses, the LP compartment tanks are refilled about once a year as we use the horizontal tanks while at camp sites. The horizontal tanks fit in a spot in the back of the truck and are secured there.

If you use an external tank during the winter and it is really cold, you might have to wrap the tank in insulation and/or provide some sort of heat source to help with vaporization. In really cold temperatures, LP does not vaporize as well as it does during warm months. A good friend of mine uses an old electric blanket around his when the temperature in is the low twenties or below. If you are camping in the minus temperatures, then you will have to have some sort of heat for the tank. You don't have to heat it a lot just enough to allow the LP to vaporize.

Just remember to tighten the Acme connections like you do in the LP compartment. The shorter of the two hoses allows us to keep the horizontal tank under the trailer at camp sites. The hose is connected to the regulator pig tail, lead down through the compartment and out the open bottom. I hope this helps some of you.

Finally, none of this suggests that you do anything you do not feel comfortable doing; do not have the knowledge or skills to do; or the correct materials or tools. In that case, contact a professional propane tech or RV propane tech.

So long from the Fox's Den deep in the swamplands of Louisiana....Laissez les bons temps rouler!!!!