

## J40 Propane System

The propane tank locker is on the aft-starboard corner of the boat. It is a top loading compartment with a vent at the bottom that exits out the transom. The only appliance hull #4 came with was the galley stove/oven. We recently replaced everything in the propane compartment. We had a tiny leak that would drop the pressure 50 pounds in a day and there were a couple of points of failure. The regulator, the pigtail hose and though we didn't find a leak in the solenoid, it was very rusty. Time for all the stuff to go. Cost was about \$300 in parts. To fill a tank is 2.5 gallons of propane at a cost of \$5. We go through a tank every 10 years or so, but we don't use it a ton.



The propane runs from the tank, through a tank valve into pigtail hose that connects to a regulator which reduces the tank pressure to the required appliance pressure. The regulator attaches to the solenoid, an electric switch, which is controlled on the power panel at the navigation station below decks. The solenoid attaches to a plumbed copper tube that runs from the compartment, under the deck around the transom, through the lasserette, then through the aft head to the back of the stove area. A flexible hose attaches to a fitting on the copper tube so that the stove may gimbel underway. Lark was built with the copper line having an inline thumb valve in the aft head, but that provided an

additional leak point for failures and was removed. ABYC guidelines allow for one connection joint below deck.

We upgraded to a Force 10 Stove, so here are the relevant numbers. Note that Propane and LPG and not interchangeable fuels.

Gas Pressures Propane gas pressures can vary depending on country of origin. This may necessitate a change to your propane tank regulator and a need to adapt your galley range to the new pressure. Gas Pressures Propane gas pressures can vary depending on country of origin. This may necessitate a change to your propane tank regulator and a need to adapt your galley range to the new pressure. BE CAREFUL when ordering a new stove and get the one with correct pressure ratings/country. For Force 10, North America Propane is 30mb or 12" water column and Europe is 37mb or 15" water column.

In the following picture you can see the compartment vent in the floor in the upper right



You get a good view of the components: Tank, Tank Valve, Pigtail Hose, Regulator and Gauge, Solenoid, Solenoid to Copper Tube Connector, the Compartment Vent and the Tank Tie-down.



The tanks are a tight fit and you may need to wriggle the outboard tank around the solenoid to get it to the wider opening over the inboard tank to get them out for refill. The tie-down seems to work best when it has two tanks in the yoke. All-n-all it is a pretty simple system that requires minimal maintenance and expense. You are probably safe to replace the components every 10-15 years or so depending upon how much salt water they see.

If you turn of the valve at the tank and the regulator gauge reading drops quickly or by a large amount over a day, you have a leak somewhere and it is probably wise to shut the system down at the tanks and figure out what is going on.