

SECTION VI

LPG SYSTEM

INTRODUCTION

The coach is equipped with a permanently-mounted 45 gallon (150 pounds of fuel) LP gas tank which is the energy source for the refrigerator, range/oven and three gas furnaces. A piping diagram of the LPG system is shown in Section X.

LPG TANK AND CONTROLS

The LPG supply tank is located in the compartment forward of the entry door (which also houses the Racor diesel fuel filter/preheater). Tank controls, figure 6-1, include main gas valve, high pressure regulator, filler connection and the 20% relief valve, which provides 312 PSI protection. The low-pressure regulator and electrical solenoid shut-off valve are located in the refrigerator compartment and connect to the tank via flexible high-pressure hose. The solenoid valve is actuated by either a high-pressure condition (caused by a defective regulator); or by the remote LP leak detector, located beneath the refrigerator. Tank level can be monitored at The Monitor panel on the galley side wall. To read the digital display, press the PROPANE TANK button.

CAUTION

Be sure to shut off all gas appliances before filling the LPG tank. Check gas lines and fittings periodically for tightness and leakage.

FUEL REQUIREMENTS

Liquefied petroleum gas is a material composed of various hydrocarbons such as propane, propylene, butane, butylene, or a mixture thereof. In its gaseous form (vaporized) it is colorless and has a garlic-scented additive to ensure detection. In addition to being highly inflammable, it is also dangerous to inhale. For ease of transportation and storage, LPG is compressed into a liquid state and stored, in this form, within the LPG tank. As fuel is used, vapor passes from the top of the tank, via the high-pressure regulator, to the low-pressure regulator, which reduces LPG pressure to 11½-inch water column. Low-pressure vapor is then supplied through LPG piping to the various gas appliances.

Prevent condensation and possible tank or line freeze-ups, when filling the tank, by requesting

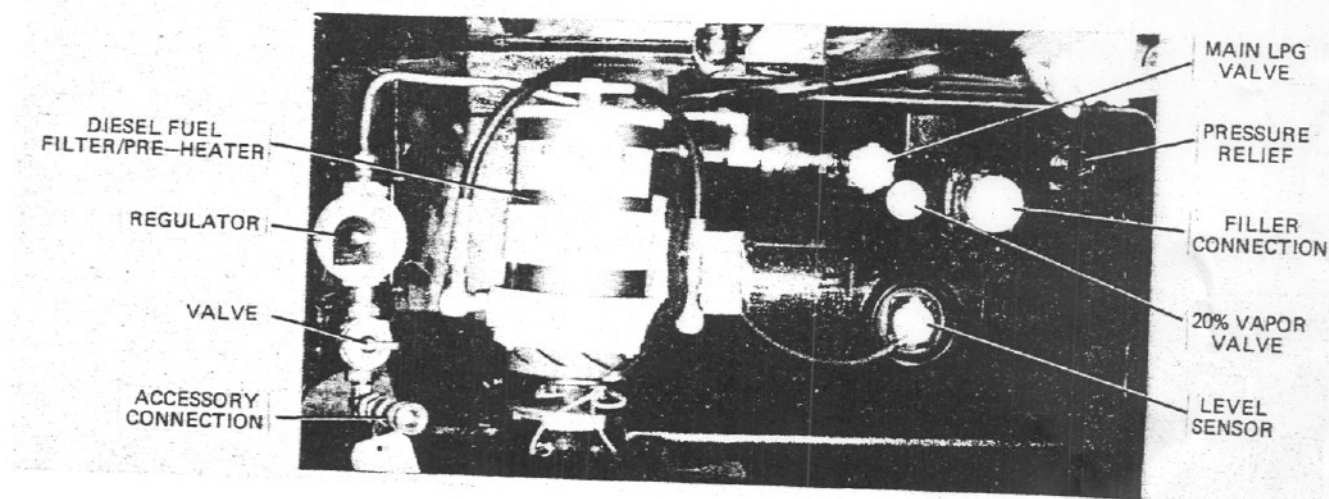


Figure 6-1. Location of LPG Tank and Controls

NEAR A SUSPECTED LEAK!

Lifeguard One, on the dinette wall, monitors various locations through the coach and sounds an alarm if the safe amount of LP gas or carbon monoxide in air is exceeded. The LP gas leakage detector beneath the refrigerator monitors only this area, sounding an alarm and actuating the LP gas solenoid shut-off valve if a leak is sensed.

LPG REGULATOR

The low-pressure regulator, located in the refrigerator compartment, regulates the pressure of the LPG supplied to the appliances. The regulator functions automatically and is factory-preset to provide the correct line pressure. DO NOT attempt to tamper with or reset the regulator! Even a small variation above the normal gas line pressure can be sufficient to create a dangerous situation and cause possible damage to individual appliance regulators. The high-pressure regulator is located on the LPG tank.

OPERATION

Before the main valve on the LPG tank is opened, check that all inside local shutoff valves are closed. These valves are located at the inlet to each of the gas appliances.

CHECKING FOR LEAKS

Periodically check the LPG system for possible leakage. Do not wait for an alarm condition to occur before correcting a leak! Although the entire system and associated appliances undergo extensive factory testing for leakage, road shocks and heavy vibrations may loosen or damage piping or fittings. Leaks will usually become noticeable by the smell of the characteristic odor-additive of garlic (or onions). If you smell this odor, or if Lifeguard One sounds an alarm, immediately turn

Gas leakage will be indicated by the presence of bubbles at junctions or at piping breaks. If it is necessary to tighten a gas connection, turn off the LPG main tank valve, then use two wrenches on the connection, with opposing torques to prevent twisting or distortion of the copper tubing. If the leak cannot be found in this manner, the appliance itself may be at fault. Shut down the suspected appliance to isolate it from the system until repairs can be made by an authorized service station.

LPG CONSUMPTION

Most gas appliances are intermittently operated. However, operation during cold weather conditions does cause a heavy use of the gas furnaces. Extensive oven usage also consumes a great deal of fuel. The amount of LPG consumption depends on the total use and manner of use of these appliances.

Note that each gallon (4- $\frac{1}{4}$ lbs) of LPG fuel produces approximately 91,500 BTU's of heat energy. The LPG tank used in your coach will furnish about 4 million BTU's.

For your guidance in estimating your anticipated fuel consumption, the following is a listing of typical appliance consumption ratings when the appliance is operated for one hour:

Refrigerator.....	1,500 BTU's
Range Oven.....	10,000 BTU's
Range Top Burners.....	5,200 BTU's
Furnaces:	
Bedroom.....	16,000 BTU's
Living Room (front).....	16,000 BTU's
Living Room (middle).....	12,000 BTU's