



**SUNRISE TRAILER SALES & RENTALS**



ABBOTSFORD (604) 852-8528 • CLOVERDALE (604) 574-2097 • KELOWNA (250) 769-8277

**[www.sunrisetrailersales.com](http://www.sunrisetrailersales.com)**

## Table of Contents

Electrical System..... 2

Water System..... 6

LP Gas System.....11

General Care..... 13

Long Term Storage/Winterizing..... 14

# Electrical Systems

## General Information

Your living quarters trailer is equipped with both 110-volt AC and 12 volt DC electrical systems. These systems work independently from one another and supply power to certain components of your interior. Following is an overview of components powered by each system, along with routine maintenance and trouble shooting tips.

## 12 Volt DC System

Power for the 12-volt system is supplied by two deep cycle batteries located on the exterior of the trailer under the gooseneck area. During normal use (drawing approx. 22 amps), these batteries should provide 5-6 total hours of use. To conserve power and reduce battery discharge, it is important to realize different components of your interior use different amounts of power. To slow battery discharge, limit the use of components that require larger amounts of power. Listed below are some components common to your interior and the amount of power required to operate them:

- Interior lights - .75 amps per light
- Furnace - 3.4 amps
- Stereo - 4.0 amps
- Water pump - 4.4 amps
- Refrigerator - 3.0 amps
- Exterior Flood Light - 4.6 amps (per light)

When possible, do not discharge your batteries below 50% and never discharge them below 80% (the charge level of the batteries can be checked by pressing the switch labeled “monitor” in the range hood). Lead acid batteries do not have a memory, meaning they do not require a complete discharge prior to charging. If you regularly discharge your batteries below 80%, the life of those batteries will be significantly reduced. **NOTE: if your trailer is equipped with a hydraulic jack it operates off power received from the LQ batteries. Attempting to operate the hydraulic jack with discharged batteries while being connected to a 110V power source or being connected to your tow vehicle, will cause the 30-amp fuse near the batteries to be blown.**

Your trailer's batteries are charged when the trailer is connected to a 110-volt power source (see 110-volt section below for connecting to 110-volt power source). **NOTE: in order for the batteries to charge, the battery disconnect switch must be in the “on” (pulled out) position while connected to a 110-volt power source.** The amount of time required to charge the batteries depends upon the amount of discharge. For example: batteries discharged 50% may take 8-10 hours to charge and fully discharged batteries may take over 24 hours to fully charge. Additionally, if properly equipped, your tow vehicle can provide a slight charge to the batteries. This is only intended to maintain the battery's charge while in transit and will not replace a charge received from the power converter.

To activate the 12-volt system, switch the battery disconnect to the “on” position (the switch is located in the face frame of the cabinet along the front of the trailer or directly above the fuse panel). The 12-volt system in

your living quarters supplies power to the lights, water pump, bathroom exhaust fan, furnace, range hood, slide out (if equipped) and stereo (if equipped). NOTE: If your trailer is not equipped with a stereo, it has been pre-wired for installation of a stereo at a later time. The circuits of the 12-volt system are protected by fuses located in a panel near the floor in the kitchen area or in the bathroom above the toilet. An inline fuse located near the battery box under the gooseneck area also protects these circuits.

## Slide-Out Dinette (optional)

The use of the slide-out dinette is very simple and convenient. The dinette operates from power supplied by the 12-volt electrical system. **To operate the slide-out, the battery disconnect switch must be in the “on” position.** The slide-out is activated with a switch located in the face frame of the kitchen cabinet. This two-way switch allows you to extend and retract the dinette. To extend the dinette, depress and hold the switch until the dinette is fully extended and stops moving. Promptly release the switch when the dinette stops moving. To retract the dinette, depress and hold the opposite side of the switch, releasing it promptly when the dinette is fully retracted. The dinette is fully retracted when it stops moving. **Failure to promptly release the slide out switch when the dinette stops moving will cause a fuse to be blown and/or damage the slide out mechanism. Such damage is not covered by your warranty.**

The mechanism that slides the dinette in and out requires periodic maintenance. This mechanism is located below the slide out and can be accessed from outside the trailer with the slide out dinette fully extended. Apply a thin layer of grease to both sides and bottom of the sliding mechanism to insure smooth operation. Failure to do so may cause the slide out dinette to operate improperly.

**Important: Insure that slide-out dinette is fully retracted prior to transporting your trailer. Never travel with the slide-out extended.**

## TV Antenna and Booster

Your trailer may be equipped with an on board TV antenna. This antenna is equipped with a power booster that improves reception in remote areas. The connection for this antenna is located near the TV stand. To receive signals from the antenna, press the switch in the wall plate to the ON position. A light in the wall plate will illuminate indicating the booster is activated.

Your trailer may also be equipped with an exterior outlet to receive cable or satellite signals from an outdoor receptacle. This outlet is located on the driver’s side of the trailer near the front. To use this, connect the outdoor receptacle to the outlet on your trailer using a coaxial cable. Press the switch on the antenna/booster connection to the OFF position to receive cable or satellite signals.

## 110 Volt AC System

Power for the 110-volt system is supplied by connecting the trailer to a 30-amp 110-volt power source or by use of an optional onboard generator. Connecting to a 30-amp 110-volt power source is accomplished by plugging the grounded power cord into a 110-volt outlet. The cord is located behind a locking access door on the left side of the trailer. **NOTE: always use the provided 30-amp cord when connecting to a 110-volt power source. If using the optional onboard generator, no connection is necessary.**

The 110-volt system in your trailer supplies power to the electrical outlets, refrigerator, air conditioner (if equipped), TV (if equipped), and microwave (if equipped). NOTE: If your trailer is not equipped with an air conditioning unit, it has a 14”x14” crank up roof vent and has been pre-wired for installation of an air conditioner at a later time. The 110-volt system also supplies power to a power converter, which in turn supplies

power to all 12-volt circuits. (The batteries are not used by the 12-volt system while the trailer is connected to a 110-volt power source).

The 110-volt system is protected in two ways. First, by ground fault interrupters located in the electrical outlets and second, by circuit breakers located in the same panel as the 12-volt fuses (see 12-volt section for panel location).

## Onboard Generator (optional)

If your trailer is equipped with an optional onboard generator, it will act as a power source for the 110-volt system if a conventional 110-volt source is not available to connect to. The generator is started by depressing a remote switch. The remote switch is also equipped with an hour meter that aids with maintaining a service schedule. For use and maintenance instructions, consult the owner's manual specific to the generator included with this guide. **Note: Do not attempt to run more than 2 major appliances (refrigerator, air conditioner, microwave etc.) at one time when using the generator for your 110-volt service. Doing so will cause the generator to over heat and shut down.**

## Trouble Shooting and Maintenance

Below are some common problems and solutions that may occur with your electrical systems.

If you experience a loss of electrical power to the components serviced by the 12-volt system check the following:

- 1- Insure that the batteries are charged and connected properly to both the positive wire that supplies power to the trailer and the ground wire.
- 2- Check the fuse block in the kitchen or bathroom area and the inline fuse located near the battery for blown fuses. If a fuse has been blown in the 12-volt system, it should be replaced using a fuse of the same size and amperage. Using a different fuse could result in damage to the system that may not be covered by your warranty.

If you experience a loss of power to the components serviced by the 110-volt system check the following:

- 1- Make certain the trailer is connected to the correct power supply using the proper cord as described above.
- 2- Check the circuit breakers, including the main breaker, to insure that they have not been tripped (the circuit breakers are in a breaker box located in the kitchen or bathroom area). If a circuit breaker has tripped it can be reset by first switching it to the "off" position then to the "on" position.
- 3- Insure that the GFI protected outlet located in the kitchen area is reset. See GFI testing instructions below.
- 4- If your trailer is equipped with and air conditioner, wait two minutes following shut off to restart the unit. Failure to allow the air conditioner to re-set will result in the circuit breaker being tripped.

If the above suggestions do not remedy your problem, there are more detailed trouble shooting guides specific to each component part of your electrical system included with this guide. If a remedy cannot be found, there may be a problem with one of the electrical systems and you should have your trailer inspected and repaired by your dealer.

The electrical systems require limited, but necessary maintenance. Fuses and breakers protect the circuits in your trailer against overload and short circuit. These should be inspected regularly to insure that they have not been blown or tripped. The ground fault interrupter (GFI) located in the electrical outlet above the drawers in

the kitchen area and the exterior outlet (if equipped) should be tested at least once a month. To test the GFI be sure the 110-volt system is active (trailer plugged into power supply or onboard generator is running). Before you start the test be sure the reset button is pushed in completely. Push the test button. This should cause the reset button to “pop” out and a light to glow indicating the protected circuit has been disconnected. Push the reset button back in until it “clicks” to reactivate the circuit. If the GFI fails to test properly there is a loss of protection and a potentially dangerous condition may exist. The system should be inspected and repaired by your dealer.

The batteries that service your living quarters are deep cycle RV batteries. Periodically check the external condition of the batteries. Look for cracks in the cover and case. Check the vent plugs and replace them if they are cracked or broken. Insure that the batteries are kept clean. Accumulations of acid film and dirt may permit flow between the terminals, which could drain the batteries. Because they are deep cycle batteries that consume water, they must be filled periodically. Use only distilled water to fill the batteries. If it becomes necessary to replace your batteries both batteries must be replaced at the same time.

For more details regarding the maintenance of your electrical systems and their component parts, see the owner’s manual specific to each component that is included with this guide.

## Water Systems

### General Information

There are two different water systems in your living quarters trailer. The fresh water system consisting of a fresh water holding tank, water pump, water heater and city water hook up; and the waste water system consisting of both sewage and waste water holding tanks. Following is an overview of each system including instructions for use, maintenance and trouble shooting tips.

### Fresh Water System

A holding tank located under the step into the bed area supplies water to the fresh water system. The water level in the fresh water holding tank can be checked by pressing the switch labeled “monitor” on the range hood. The holding tank is filled through an inlet located behind a locking door on the left side of the trailer. To fill the fresh water tank: 1- Close all low point drains (there are a total of 3 drain valves). **If your trailer is a 10x15 or a 12x12 these drains are located under the step into the bed area and under the kitchen sink behind a cabinet door. If your trailer is an 8x13 these drains are located under the step into the bed area and behind a cabinet door in the bathroom. If you trailer is a 10x10 the drains are located under the step into the bed area and under the sink in the bathroom. If your trailer is a 5x10 Weekender the drains are located under the bench area on the left side of the trailer. If your trailer is a 7x7 Weekender the drains are located under the sink. If your trailer is a 15x15 or 15x20 the drains are located under the refrigerator and behind a cabinet door across from the shower. To close the drains, rotate the knob clockwise. NOTE: The valve under the step near the pump, is a 3-way valve. To open this valve turn the knob fully counter clockwise. To close the valve, turn the knob to the straight up position. To drain the pump and holding tank turn the knob fully clockwise.** 2- Fill the tank through the exterior fill spout, using a hose manufactured and labeled for use with potable water. **Fill slowly, at a low volume** until water overflows out the vent. **Do not force water into the spout** because air in the tank must be released during filling. Do not leave unattended during filling or put the potable water hose into the mouth of the fill spout. Structural damage may occur.

A pump is used to pressurize the fresh water system when it is not connected to city water. The pump is automatic and self-priming, operating on demand when water is used. To pressurize the fresh water system,

first insure that there is water in the holding tank; refill if necessary (see filling instructions above). Check all drains in the fresh water system insuring that they are closed with the exception of the 3-way valve located near the pump. This valve must be in the “open” position (knob turned fully counter clockwise). Turn the pump on with the switch located on the range hood. Open all faucets one at a time, hot and cold, to purge any trapped air from the system. **Insure that all the air is purged from the system before lighting the water heater.** Close the faucets when a steady stream of water is delivered to each sink and the shower. The fresh water system, including the water heater, is now pressurized and the pump is ready for automatic operation. It will start when a faucet is opened and stop when the faucet is closed. The pump switch may now be left in the “on” position while the trailer is in use. The pump should be turned off while the trailer is in transit or not in use for an extended period. Do not allow the pump to run when the fresh water holding tank is empty. This may cause a fuse to blow and/or damage the pump.

## City Water Connection

Some campsites provide a city water hook up. The city water hook up will automatically pressurize your fresh water system (you will not need to use the water pump when connected to city water). To connect to a city water hookup, attach one end of a hose to the city water connection on your trailer. This connection is located behind the same locking access door as the fill for the fresh water holding tank. Connect the other end of the hose to the city water hook up. Open all faucets, hot and cold, to purge any trapped air from the system.

**Insure that all the air is purged from the system before lighting the water heater.** NOTE: When connecting to a city water hook up use a hose manufactured for potable water to insure the hose will not flavor the water.

**CAUTION: Some water sources develop high pressure, particularly in mountainous regions (high pressure is anything over 55 pounds per square inch). High pressure can cause leaks in your fresh water system and/or damage the water heater. Water pressure regulators are available to protect your fresh water system. Ask your dealer for more information.**

## Water Heater

Your trailer is equipped with a water heater that operates on LP gas and is equipped with an electronic ignition. **Before attempting to ignite the burner, insure that the water heater is full of water by opening all hot water faucets and running water until a steady stream flows from each.** To ignite the burner turn the switch marked “water heater” located on the range hood to the “on” position. A red light will flash until the water heater lights. If the burner does not ignite within 10 to 15 seconds, the system will automatically shut down and go into lock-out. This will be indicated by a steady red light next to the water heater switch on the monitor panel. Lock-outs usually occur if you have run out of LP gas, failed to turn on the LP gas, or a problem exists. To reactivate the system and reset the automatic lock-out safety, turn the switch to the “off” position, wait five minutes, and then try to re-light. You may have to repeat this process a few times before the system corrects itself.

## Water Heater Bypass (Optional)

Your trailer may be equipped with an optional water heater bypass. The bypass allows you to fill your water lines with anti-freeze when winterizing without filling the water heater. Water heater bypasses are not the same in all models. Listed below are bypass directions for all models:

### **12x12, 10x15, 10x10, 5x10 Weekender**

The valve on the cold water inlet (bottom of water heater) should be turned fully clock wise for normal operation and fully counter clock wise for bypass. The valve on the hot water outlet (top of water heater) should be turned fully counter clock wise for normal operation and fully clock wise for bypass.

### **15x15 and 15x20**

The valve on the cold water inlet (bottom of water heater) should be turned fully counter clockwise for normal operation and fully clockwise for bypass. The valve on the hot water outlet (top of water heater) should be turned fully counter clockwise for normal operation and fully clockwise for bypass.

### **8x13**

The valve on the cold water inlet (bottom of water heater) should be turned fully counter clockwise for normal operation and fully clockwise for bypass. The valve on the hot water outlet (top of the water heater) should be turned fully counter clockwise for normal operation and fully clockwise for bypass.

See back of this guide for a schematic showing valve locations.

## **Waste Water System**

The waste water system in your trailer is divided into two sub-systems; the waste water or “gray water” system and the sewage or “black water” system. The gray water system collects waste water that drains from the sinks and shower. The black water system collects waste that drains from the toilet. Each holding tank has its own control valve and each empties through its own drain outlet.

Before using the black water system you must treat the holding tank with water that is mixed with an odor controlling chemical. These chemicals are readily available at any RV supply outlet. **Do not use any products that contain petroleum or ammonia in place of an RV odor controlling chemical. Petroleum and ammonia will damage the holding tanks and seals.** Do not use strong detergents or full strength bleach to deodorize and disinfect the waste tanks or use automotive antifreeze to winterize your trailer. Some chemicals can dissolve plastic. Do not put large table scraps in either holding tank. They could get stuck in, or damage, the gate valve seals in the drain outlets.

Odor in the gray water system is controlled using P-traps therefore, it is not necessary to pre-treat the gray water holding tank with odor controlling chemicals. Each sink and shower drain is equipped with a P-trap to prevent holding tank odor from entering your trailer through the drains. In order for the traps to operate properly, they must have water in them. The water in these traps can slosh out of the drains during travel or evaporate during storage. If odor is detected, run water down the drains to refill the P-traps.

## **Toilet Operation**

The toilet in your trailer operates with either the fresh water holding tank or the city water supply. The toilet flushes directly into the black water holding tank. To add water to the bowl, partially depress the pedal. To flush, fully depress the pedal and hold down for 2-3 seconds. Do not flush facial tissues into the black holding tank. These tissues are chemically treated to give them wet strength and will not dissolve like toilet paper. Special holding tank tissue is available at most RV supply outlets.

## **Emptying Holding Tanks**

When the waste water holding tanks become half, to completely full, they must be emptied. The content levels of your holding tanks can be monitored by pressing the “monitor” switch located on the range hood. Most states and parks have strict regulations regarding the disposal of waste that is collected in the waste water tanks of your trailer. Dumping raw sewage from toilet (black water) holding tanks, except at authorized dumping stations, is universally prohibited. Most state, national and private parks have either a central dump facility or a campsite hook-up for sewage disposal. To empty the waste tanks in your trailer, remove the cap that covers the drain opening (the waste water tank drain valves are located under the trailer on the left side). Connect the

provided hose (located in a cylinder under the gooseneck area) to the drain and open the drain valve by pulling the T-handle toward the rear of the trailer. **Be sure to open the valve completely.** The tank will start to drain as the valve is opened. Allow both tanks to drain until empty. After the tanks have emptied, they should be flushed with fresh water. This can be done by pouring 3-4 gallons of fresh water into a sink or shower drain **before** closing the drain valve on the gray tank, and flushing 3-4 gallons of water down the toilet **before** closing the valve on the black tank. Close the drain valves by pushing the T-handles toward the front of the trailer. The drain valves must be completely closed and the caps secured to the ends of the drains prior to transit.

## Using a Sewer Hook-Up

Some campgrounds provide sewage disposal facilities with connections at each campsite. When using these individual disposal sites, keep both the black and gray tank drain valves **closed** until the tanks become half to completely full. If the black water holding tank drain valve is left open while connected to the disposal site, solid waste may accumulate in the tank resulting in an unpleasant cleaning process. When the holding tanks become full, empty them using the sewer hookup, following the same procedure described above.

## Trouble Shooting and Maintenance

Below are some common problems that may occur with the water systems in your trailer and simple solutions to remedy them.

If no fresh water flows from the faucet while the pump is running check the following: Note: A hum is audible when the pump is running.

- 1- Turn the water pump off to avoid damage.
- 2- Insure that there is water in the fresh water holding tank
- 3- Make certain that the supply and outlet lines are connected to the pump.
- 4- Check the low point drains, making sure they are closed and that the 3-way valve located near the pump is open.
- 5- Inspect the fresh water system to insure that there are no large leaks.
- 6- Check the strainer that is attached to the pump insuring that it is free from debris. The strainer is located in a clear plastic bowl on the supply side of the pump. To access the strainer, close the valve in the fresh water supply line and disconnect it from the plastic bowl. Remove the strainer and inspect. Clean if necessary. Re-assemble in the opposite order being careful not to over tighten the supply line connection. These fittings were designed to be hand tightened only.

If the water pump is not running, check the following:

- 1- Insure that the battery is charged and connected properly to both the positive wire that supplies power to the trailer and the ground wire.
- 2- Check the fuse in the fuse block located near the floor in the kitchen area or bathroom, making sure the fuse for the pump is not blown. If it has been blown replace it with a fuse of the same size and amperage rating. Using a different size fuse or fuse with a different amperage rating could cause damage to the water pump that may not be covered by warranty.

If no water is flowing from the faucets when connected to a city water hook up, check the following:

- 1- Insure that there is water flowing from the city water connection.
- 2- Check for leaks in the trailer's water system.

For a more extensive trouble shooting guide see the owner's manual specific to each component of the fresh water system included with this guide.

If , after following the above steps, you still do not have water flowing from the faucets, have your trailer inspected and repaired by your dealer.

To insure that problems are limited, your water systems must be maintained. The pump included in the fresh water system is equipped with a strainer to prevent foreign debris from entering the pump. This strainer should be cleaned periodically to insure proper pump operation. To insure that your fresh water system remains clean it should be disinfected. Disinfecting the fresh water system will protect you from bacteriological or viral contamination from any common water source. You should disinfect the water system if your trailer is new or hasn't been used for an extended period of time. Use the following procedure to disinfect the water system:

- 1- Prepare a chlorine solution using 1 gallon of water and ¼ cup of chlorine bleach. Pour 1 gallon of the chlorine/water solution into the fresh water tank for every 15 gallons of tank capacity (the fresh water holding tank in your trailer has a 38 gallon capacity; you should add 2 1/2 gallons of the above described chlorine solution to the tank). Note: If your trailer is a 15x15 or 15x20 the fresh water holding tank has a 48 gallon capacity and you should add 3.2 gallons of chlorine/water solution. If your trailer is a 5x10 or 7x7 Weekender the fresh water holding tank has a capacity of 28 gallons and you should add 1.9 gallons of the chlorine/water solution.
- 2- Fill the tank with clean drinking water. The fresh water tank is now full of a 50 parts per million residual chlorine concentration. This concentration acts as a quick-kill dosage for harmful bacteria, viruses, and slime-forming organisms. NOTE: Concentrations of higher than 50ppm may damage the water lines and/or tank.
- 3- Open all faucets and run water until you smell a distinct chlorine odor. Close the faucets and allow the system to stand at least 4 hours.
- 4- Drain the system and flush with fresh water. Flush repeatedly, if necessary, until no chlorine taste or smell remains in the system.

Because vibration and flexing encountered during travel can work pipe, tubing, or fittings loose, all plumbing connections should be checked for leaks once per year. Leaks occur most often around threaded fittings. These leaks are usually a result of either a loose fitting or deposits on the sealing surfaces of the fitting. If it is loose, be careful not to over tighten the connection. These connections usually seal with hand tightening plus half a turn with a wrench. If deposits are present on the sealing surfaces, thoroughly clean and reinstall the fitting. If the leak still persists, have the system inspected and repaired by your dealer.

For more details regarding the maintenance of your water system and its component parts, see the owner's manuals specific to each component that is included with this guide.

**The water systems in your trailer are not designed for extended use or storage in below freezing temperatures (32 degrees F – 0 degrees C). If exposed to below freezing temperatures, water may freeze causing damage to the systems. Such damage is not covered under the warranty. This can be avoided by following the storage and winterizing instructions covered on pgs. 14 and 15.**

## LP Gas System

### General Information

Your trailer is equipped with an LP gas system that delivers fuel to many appliances that provide you with comfort and convenience. The appliances fueled by the LP system include: furnace, water heater, cooktop, oven (if equipped), onboard generator (if equipped) and refrigerator.

When used properly, LP gas is a dependable, clean burning fuel. Each gallon of LP gas produces approximately 91,000 BTUs of heat. Your trailer is equipped with either (2) 5- gallon tanks producing approximately 910,000 BTUs of heat or the optional (2) 7.5 - gallon tanks producing approximately 1,365,000 BTUs of heat. These tanks are located under the gooseneck area of the trailer. The total consumption of LP gas depends on the rate of use for each appliance and the operating time. The oven (if equipped) and furnace use the most gas. In cold temperatures and high winds, fuel consumption by the furnace can be very high. Check the tank levels often if using your trailer in these conditions.

The LP gas in the tanks of your trailer is stored under high pressure and is in a liquid form. As gas is used, it is vaporized and passed through a regulator. The regulator reduces the pressure of the gas so it is safe to be used by the various appliances in your trailer. If you experience problems with gas delivery to the appliances in your trailer, do not attempt to adjust the regulator. It has been preset at the factory, and can only be adjusted using special equipment. If you feel the regulator requires adjustment, contact your dealer.

## Using the LP Gas System

Use of the LP gas system is fairly easy and hassle free. To use the system, insure there is LP gas in both tanks. Rotate the black lever on the top, front side of the regulator toward the tank you want to use first. This will be the “service” tank and the other will be the “reserve” tank. Slowly open **both** tank valves. The indicator on the top of the regulator will turn bright green. The indicator will remain green as long as there is gas coming from the service tank. When the service tank empties, the regulator will start drawing from the reserve tank providing an uninterrupted fuel flow. When it switches over, the indicator color will change from green to red. The red color indicates that the service tank is empty and the system is operating on the reserve tank. To remove the empty tank, rotate the black lever towards the reserve tank. The indicator will now turn green indicating that the reserve tank is now the service tank. Close the valve on the empty tank, disconnect the supply line from the tank and have it filled by a trained service person. **If filling the tank for the first time, caution the service technician that the tank is being filled for the first time and to purge any air from the tank before filling.** After refilling, reconnect the tank to the regulator supply line and slowly open the tank valve. The full tank now becomes the reserve tank.

**Turn off the main gas valve on each tank when the trailer is not in use. Keep open flame and spark producing material away from any area where LP gas is used. Pilot lights on appliances should be turned off when filling or venting LP tanks and when refueling your tow vehicle to avoid potential danger from pilot lights igniting fuel fumes. Do not transport or store LP tanks, gasoline, or other flammable liquids inside your trailer.**

## Trouble Shooting and Maintenance

If any appliance that consumes LP gas will not operate, check the following:

- 1- Insure that the LP tanks are filled.
- 2- Check the main valves on the LP tanks making sure that they are completely open.
- 3- Consult the trouble shooting guide specific to the appliance that is not operating.

If the above steps do not resolve your problem, there may be a problem with the appliance or the LP gas system. Have your trailer inspected and repaired by your dealer.

There is very little maintenance associated with the LP gas system in your trailer. The LP system in your trailer was thoroughly inspected for leakage by the manufacturer. However, vibrations associated with travel may cause pipe and tubing fittings to loosen. Have your LP system inspected by your dealer at least once per year and after extended trips. Your trailer is equipped with an LP gas detector that will detect the presence of LP gas inside your trailer resulting from a leak. Thoroughly read the owner's manual for the LP detector that is included with this guide.

## Stabilizer Jacks

Your trailer is equipped with two stabilizer jacks, one on each front corner. These jacks can be lowered and raised using the provided handle. The jacks are designed to stabilize your trailer while in use; they are not designed to support the entire weight of the trailer. The stabilizer jacks should only be used in conjunction with the main lift jack. Never use the stabilizer jacks alone to lift or support the trailer. Such use will cause damage to the jacks not covered by your warranty.

## General Care

### Wall and Ceiling Board

The walls and ceiling of your living quarters should be cleaned regularly. Clean using a soft cloth or sponge with a mild detergent and warm water. Cleaning should be performed by wiping with a saturated cloth or sponge, and not by soaking with a puddle of liquid. Do not use abrasive cleaners or cleaners containing chlorine bleach or solvents.

### Cabinetry

To clean the cabinetry in your living quarters use a soft cloth or sponge with mild soap and warm water or isopropyl alcohol. Do not use abrasive cleaners or cleaners containing chlorine bleach or solvents. Cleaning should be performed by wiping with a saturated cloth or sponge, and not by soaking with a puddle of liquid.

### Flooring

Sweep or vacuum the floor in your trailer regularly to remove dirt and grit that can abrade, dull or scratch the flooring. Do not use a vacuum with a beater brush because it may damage the floor's surface. Wipe up spills promptly with a damp cloth or mop. Clean the floor using a suitable floor cleaner.

### Doors/ External Access Panels

Seals around doors, external access panels, and windows should be checked periodically. If a seal is cracked or dried out it should be replaced with new material to prevent leakage.

## Winterizing/Long Term Storage

If you plan to store your living quarters trailer for an extended period of time, there are some precautions that, if taken, can prolong the life of your interior. Below is a checklist to be followed for storing or winterizing your trailer.

- 1- Drain all water from the trailer using the 3 low point drains (locations of these drains can be found on page 6 of this guide). **It is important that the trailer is level when draining the water from it. The plumbing is installed so the low point drains are the lowest points in the system. If the trailer is not level when draining the water from it, you may not get all of the water out of the system.** Open all low point drains. Also open all sink and shower faucets and hold the flush pedal on the toilet down for several seconds. The faucets and drains should remain open until you use your trailer again. If your trailer is equipped with a water heater by pass, it must also be open to completely drain the water system. Disconnect the supply and outlet lines from the water pump, run the pump until water stops flowing from it and then turn the pump off. Leave the supply and outlet lines disconnected until you use your trailer again. NOTE: When re-connecting the lines to the water pump, do not over tighten the fittings. The fittings are designed to be hand tightened only.
  - 2- Drain the water from the water heater by removing the plastic drain plug from the tank and opening the pressure relief valve. The drain plug and pressure relief valve can be accessed through an exterior access panel on the right side of the trailer. **Important: insure that water heater has been turned off and that the water in the water heater is cool prior to draining.**
  - 3- Pour 1 cup of RV antifreeze into the kitchen sink drain and 1 cup into the bathroom sink drain (if equipped). Pour 2 cups into the shower drain. This will force antifreeze into the gray water holding tank to protect the drain valve. While holding down the flush pedal on the toilet, pour 2 cups of antifreeze into the toilet. This will allow antifreeze to enter the black water holding tank to protect the drain valve. Remove your foot from the flush pedal and pour 1 cup of antifreeze into the toilet. **NOTE: Use only non-toxic RV antifreeze that is specifically made for potable water systems. Automotive antifreeze, if ingested, can cause blindness, deafness or death.**
  - 4- Remove the batteries, charge if necessary, and fill with distilled water if needed. Store the battery in a cool dry location. Charge as needed during the storage period.
  - 5- Close the window blinds or cover the windows by other means to prevent the sun from fading fabrics.
  - 6- If your trailer is equipped with an air conditioner, clean or replace the air filters and cover the shroud.
- If you do not feel comfortable winterizing your trailer yourself, many dealers offer this as a service. Contact your dealer for more information.

For a more detailed description for long term storage and/or winterizing specific component parts of your trailer, see the owner's manual specific to each component that are included with this guide.

**This is intended to be a general guide for the use and maintenance of your living quarters trailer. There may be specific use and maintenance items for component parts of your trailer that are not covered in this guide. This information is contained in owner's manuals specific to each component. These manuals can be found in an envelope accompanying this guide. You should read and become familiar with the owner's manual for each component of your trailer.**