# OWNERS MANUAL



17400 Hackberry Drive Goshen, IN 46526 P.O. Box 2000 (46527-2000) Phone: 219-642-4590 • Fax: 219-642-3867 • www.keystonerv.com

# INTRODUCTION

This manual has been provided by Keystone RV Company solely for the purpose of providing instructions about the operation and maintenance of its recreational vehicles. Nothing in this manual creates any warranty, either express or implied. The only warranty offered by Keystone RV Company is set forth in the Limited Warranty applicable to your vehicle.

The limited warranty and the limited warranties issued by component manufactures require periodic service and maintenance, and the owner's failure to provide this service and/or maintenance may result in loss of warrenty coverage for that item. The owner should review Keystone RV Companies limited warranty and the limited warranty of all other manufacturers.

Instructions included in this manual are for operating some components which may be optional on your vehicle.

This manual is devoted to instructions on travel trailers and fifth wheels.

We hope you will have many years of vacationing pleasure.

**Keystone RV Company** 

17400 Hackberry Drive Goshen, Indiana 46526

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#### **OWNER'S RESPONSIBILITY**

As the owner of a new recreational vehicle, it is important to regularly and properly maintain your vehicle. Be sure to read the Owner's Manual and all appliance manuals so proper maintenance can be applied.

It is your responsibility to return your vehicle to an authorized dealer for any repairs and service that may be required.

## **DEALER'S RESPONSIBILITY**

Throughout the manufacturing process, your recreational vehicle has been inspected by our qualified inspectors. However, our final inspection at the factory is not to be the last one. The dealer is to perform a final inspection of your vehicle. And to help you, the owner, fill out and complete all necessary forms and understand the limited warranty pertaining to your new vehicle.

Dealer's responsibilities also include:

- Familiarizing the customer with the operation of all systems and components
  of the new recreational vehicle.
- 2. Explaining and reviewing the limited warranty provisions to the customer.
- Assisting the customer in completing all necessary registrations and warranty cards for the vehicle.
- 4. Instructing the customer on how to receive local and out of town service on the vehicle and its separately warranted components.
- 5. Servicing all Sprinter recreational vehicles.

# **Keystone RV Company**

#### LIMITED ONE YEAR WARRANTY

FOR TRAVEL TRAILERS AND FIFTH WHEELS MANUFACTURED BY KEYSTONE RV CO. SOLD IN THE UNITED STATES AND CANADA

#### Coverage Provided:

Your new travel trailer or fifth wheel including the structure, plumbing, heating and electrical systems and all appliances and equipment installed by the manufacturer, is warranted under normal use to be free from manufacturing defects in material and workmanship.

This warranty extends to the first retail purchaser and begins on the date of original retail delivery or the date the travel trailer or fifth wheel is first placed into service (whichever occurs first). This warranty extends for a period of one year from such date. Written notice of defects must be given to the selling dealer or the manufacturer not later than ten (10) days after the expiration of the applicable warranty. Warranty repairs, if required, will be made without charge after your travel trailer or fifth wheel is taken to the dealer or manufacturing plant location.

#### Owner's Obligations:

The owner is responsible for normal maintenance as described in the owner's manual; however, minor adjustments (such as adjustments to the interior or exterior doors, LP regulator pressure, cabinet latches, TV antenna control, etc.) will be performed by the dealer during the first ninety (90) days of warranty coverage. Thereafter, such adjustments are the responsibility of the owner as normal maintenance unless required as a direct result of repair or replacement of a defective part under this warranty.

If a problem occurs which the owner believes is covered by this warranty, the owner shall contact the selling dealer, or other authorized dealer, giving him sufficient information to resolve the matter. The owner shall deliver the travel trailer or fifth wheel to the dealer or manufacturing plant location for warranty service.

#### Dealer's Obligations:

By agreement with the manufacturer, the dealer is obligated to maintain the travel trailer of fifth wheel prior to retail sale, to perform a detailed predelivery inspection and to repair any parts necessary to correct defects in material or workmanship.

#### When the Dealer does not resolve the problem:

If the dealer is unable or unwilling to resolve a problem which the owner is convinced is covered by this warranty, he should contact the manufacturing plant at the address listed below and provide the manufacturer with a description in writing of the problem and attempts made to resolve it.

Keystone RV Company 17400 Hackberry Drive Goshen, Indiana 46526 Manufacturing Plant Obligations:

Upon receipt of notice of a claim, where the dealer was unable or unwilling to resolve the problem, the manufacturing plant will repair or replace any parts necessary to correct defects in material or workmanship, or will take other appropriate action as may be required.

What is not covered by this warranty:

- 1. Tires and batteries, appliances and other equipment, which are covered by the separate warranties of the respective manufacturers of these components.
- 2. Damage caused by or related to:
  - A. Accidents, misuse or negligence.
  - B. Failure to comply with instructions contained in the owner's manual.
  - C. Alteration or modification of the travel trailer or fifth wheel.
  - D. Environmental conditions (salt, hail, chemicals in the atmosphere, etc.).
- 3. Normal deterioration due to wear or exposure, such as fading of fabrics or drapes, carpet wear, etc.
- 4. Normal maintenance and service items such as light bulbs, fuses, lubricants, etc.
- 5. Extra expenses such as transportation to and from dealer or manufacturing plant location, loss of time, loss of pay, loss of use of the travel trailer or fifth wheel, inconvenience, commercial loss, towing charges, bus fares, vehicle rental, incidental charges such as telephone calls or lodging bills, or other incidental or consequential damages (other than injury to the person).
- 6. Any unit used as a commercial unit or used as a rental unit.
- 7. Condensation on any window or other parts or any results of condensation.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you have other rights which may vary from state to state.

Dealers or any other persons are not authorized to make modifications to this warranty. Any additional statements concerning this warranty whether oral or written are not the responsibility of the manufacturer and should not be relied upon.

#### INSPECTION

To assist you in avoiding problems with your vehicle, we recommend you do the following:

- (a) Read the warranty. Go over it with your dealer.
- (b) Inspect the vehicle. Do not accept delivery of the unit until you have gone through the unit with the dealer. He has been provided a checklist, Check each item on the list and make sure he does the same. Do not sign the checklist until you have done this.
- (c) Ask questions about anything that you do not understand concerning your recreational vehicle.

#### **OWNER REGISTRATION**

You should fill out and mail the warranty registration within thirty (30) days from the date of delivery.

#### WEIGHT RATING

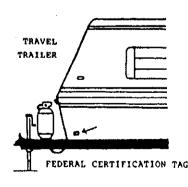
Located on the unit is a Federal Certification Label. This label gives the maximum weight carrying capacities of your unit and each axle designated by the letters "GVWR" and "GAWR" respectively.

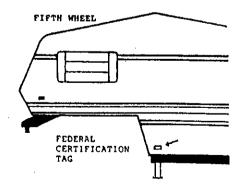
The serial number of your unit is located on this label also.

The Gross Vehicle Weight Rating (GVWR) is the maximum your unit should weigh fully loaded, with water and LP tanks full, with food, clothing, and all other supplies aboard.

Each axle also has a maximum load bearing capacity referred to as the Gross Axle Weight Rating (GAWR).

Under no circumstance should the respective loads ever exceed these ratings.





#### APPLIANCES AND EQUIPMENT

Refer to the individual manufacter's owners manual for operating instructions on the following equipment.

Before operating any gas appliance, make sure the valve on the gas tank is open.

#### WATER HEATER

CAUTION: Before lighting water heater, be sure fresh water system is filled. Purge air from water heater by opening faucets until water flows steadily from each faucet.

FOR YOUR SAFETY!
BEFORE OPERATING YOUR WATER HEATER . . . . . . READ THE MANUAL THAT FITS YOUR MODEL AND FOLLOW THE INSTRUCTIONS EXACTLY!

#### RANGE AND OVEN

Your range and oven will give you fast, dependable, and economical service using LP gas. The oven provides a complete range of heats and maintains temperature automatically for baking. The burner flame will vary during these settings.

You range cleans easily with a warm detergent solution. Naturally, food spillage allowed to remain becomes hard to clean and may clog functional parts. Burned head ports can usually be cleaned with a toothpick.

Carefully consult the instruction manual provided with the range for detailed information.

#### WARNING

Never use the range or oven for extra comfort heating. All the other gas appliances are vented to the outside and safe for continuous use, but the cooking appliances should be used only while cooking and then with one or more vents or windows open.

#### **GAS/ELECTRIC REFRIGERATOR**

The refrigerator must be level for the cooling system to work efficiently.

Do not alter or restrict the outside ventilation system. Always check before traveling to make sure the refrigerator door is secured so the contents do not spill on the floor during transit.

Carefully consult the instruction manual sent with the refrigerator for detailed operational instructions.

#### TV ANTENNA

The TV antenna is designed for all-channel color and black-and-white reception. If reception is poor, make sure the power supply switch is on and connectors are tight. Should reception remain poor, check with your authorized dealer. Check the instruction brochure for detailed instructions.

#### POWER CENTER (CONVERTER)

The power center transforms 110 volt A.C. to 12 volt D.C. It also holds the circuit breakers for the 110 volt system.

The 12 volt system is protected by fuses. Should a fuse blow because of an overload, reduce the load and replace the fuse.

NOTE: The converter does not change 12 volt D.C. to 110 volt A.C.

# NEVER REPLACE A FUSE OR CIRCUIT BREAKER WITH ONE OF A LARGER CAPACITY.

#### **BREAKAWAY SWITCH**

It's located on the A-frame for Trailers and on the pin box for Fifth Wheels. The looped cable for this switch must be attached to be a fixed part of the tow vehicle - not over the hitch ball. When a cord is pulled, breakaway switch automatically sets trailer brakes if trailer battery is charged. Do not use breakaway switch as a parking brake. Continued operation will drain trailer battery and or damage brake magnets.

A 12 volt Automotive battery is required to operate the Breakaway Switch.

#### POWER SUPPLY CORD

The power cord is accessible from the outside. Open the cord hatch cover and pull it from the storage compartment. It will reach an outside power receptacle approximately 20 ft. away. If the power receptacle is further than 20 ft. away, use a heavy duty extension cord. Always use an extension cord with a ground lug or third pin.

Many campgrounds provide less than 30 amp service. It is possible to blow their fuse or circuit breaker. If this happens, reduce the load and replace the fuse or reset the breaker.

#### **FURNACE**

The furnace utilizes a sealed combustion system, which means the combustion chamber is completely sealed from the inner atmosphere of your vehicle. Combustion air is drawn from the outside and combustion products are expelled outside through a vent.

Carefully read and following the lighting and operating instructions from the furnace manual supplied with the unit.

New furnaces sometimes emit smoke and an odor when first used due to paint burning off the heating chamber. Do not mistake this for a malfunctioning furnace. You may want to open the windows during the initial breaking in of the furnace.

Thermostat readings may not always be a true indication of temperature throughout the living space. Use these readings as a guide to obtain the most comfortable level for you.

#### **TOILET STOOL**

The toilet requires little or no maintenance. An occasional spraying of the bowl sealing blade with silicone spray will retain the original smooth operating condition. Use an approved non-abrasive cleaner when cleaning the bowl.

Check for complete instructions in the owner's manual provided with the unit.

#### WASTE WATER SYSTEM

The main parts of the waste water system are the toilet, holding tanks, and tank dump valves. The system is designed to provide complete self-contained toilet facilities, while on the road or parked, without being connected to a sewage line. It may also be used in the stationary position while connected to a sewage hose.

Keep the dump valves closed with either method and empty the tanks when they are nearly full. The idea is to send a large volume of water through the tanks and hose at the same time to float solids away.

After the sewage tank has been emptied, close the gate valves and put approximately five gallons of water in the sewage holding tank. This will help prevent solids from building up in the sewage holding tank. The addition of a deodorizing agent like Aqua Kem will help prevent odors.

Should you ever have a build-up of solids, close the valves, fill the tanks about 3/4 full with fresh water, drive a distance to agitate the solids, and drain the tanks.

#### THINGS NOT TO PUT INTO TOILET OR DRAINS

- 1. Facial tissues (they do not dissolve like toilet paper).
- 2. Detergents or bleach. Use a sewage tank deodorizer, available from dealer.
- 3. Automotive antifreeze, ammonia, alcohols, or acetone.
- 4. Table scraps or other solids that may clog the drains.

#### MONITOR PANEL

The monitor panel allows you to check the approximate liquid levels in the fresh water and holding tanks and to monitor battery charge condition.

With the rocker switch depressed, the "E" or empty indicator light will always be lit. If the tank is full, all lights will be on.

Erroneous indications can be caused by:

- Water with low mineral content. Level is measured by a very low level electrical signal traveling through the liquid. Some water which is very low in mineral content may not conduct the signal properly. This condition may be infrequent, but can exist. Check the panel reading when the fresh water tank is filled.
- Material trapped on the sides of the holding tanks may give a full reading when the tank is actually empty. Use of a spray to wash out the tank following dumping should help prevent this condition.

NOTE: If the sensor probes mounted in the tanks get coated with grease, the monitor panel may indicate falsely or not at all. Avoid pouring grease, oils, or similar substances down drains or the toilet. If this is unavoidable, the holding tank(s) should be washed out with a soapy water solution.

#### CITY WATER HOOK-UP

Simply connect hose to source, open the valve and you have pressurized faucets, toilet and water heater. Open faucets to purge trapped air from water system before lighting water heater.

**CAUTION:** Some water supplies develop excessive pressure, particularly in mountain regions. Water pressure regulators are available to protect your system against high pressure. See your dealer.

#### WATER TANK FILL

Connection to the water storage tank is a 1-1/4" flexible plastic tube. Simply remove cap, insert garden hose and fill. Water is supplied to each outlet by the pump.

#### SANITIZING SYSTEM

To assure complete sanitation of your potable water systems, it is recommended that you sanitize your complete water system.

#### FRESH WATER SUPPLY SYSTEM

The fresh water system is a demand system. The 12 volt pump will run whenever there is need for water from any faucet. Just turn on the faucet for a smooth continuous flow of water.

A "city" water hook-up with a standard hose connection, is also on your unit to permit connection of your unit directly to a city water supply with a potable water hose. The city water hook-up will bypass the water tank and demand pump. When the city water hook-up is used the switch for the demand pump should be in the off position.

#### WATER PUMP

The water pump is self priming and totally automatic, operating upon demand when water is required.

- 1. Fill or partially fill fresh water supply tank.
- 2. Open kitchen and bathroom faucets.
- Turn on switch for water pump and allow it to fill the water lines and hot water heater,
- 4. Close each faucet after it delivers steady stream of water.
- 5. Water pump should stop running after all faucets are closed.
- 6. Pump should now run when faucet is opened, and stop when faucet is closed.
- 7. Never allow pump to run for long periods of time without water in supply tank. Damage to pump may result or fuse in circuit line may blow.

When using the demand system and no water comes when a faucet is turned, use this chart to correct the problem.

S	tı	ia	ti	a	n

#### Solution

Pump running - no water

1. Fill tank

2. Clear water line to pump

Pump doesn't run

1. Is pump switch on

2. Check 12 volt fuses

3. Check electric connection

All water should be drained from the fresh water system when not in use for more than 1 week.

#### AIR CONDITIONER (optional)

If your unit is equipped with a roof mounted air conditioner, it is operated by a 110V A.C. power source through a separate circuit breaker. Keep in mind that our entire electrical system is designed to handle 30 amps and that the air conditioner takes a sizable portion of that when the compressor starts. Reduce other loads as much as possible when using air conditioning to reduce the chance of overload and possibly tripping main breaker.

Be sure the air conditioner is turned off before plugging your vehicle into an external receptacle.

Replacing or cleaning the filter with hot soapy water is recommended if air conditioner is used daily for a two week period.

A complete instruction manual is provided with the unit.

#### MICROWAVE (optional)

Roast, bake, defrost, stew, simmer and keep warm. Just select the speed you want for fast, flexible microwave cooking. Consult manufacturer's instruction manual before operating.

#### TIRES AND WHEELS

The tires should be checked before starting on every trip. Check them regularly and keep inflated to recommended pressures. The recommended tire pressure is on the side of the tire. A tire gauge is a very inexpensive tool and is valuable for checking tire inflation. Rotate tires at least once every 5,000 miles. You may want to have a spare tire with you in case of an emergency.

All Travel Trailers and Fifth Wheels are equipped with tubeless tires. They are designed for today's turnpike speeds and are rated to carry the weight of the trailer plus your family's personal needs for an extended vacation. If you should require an adjustment on a fault or defective tire, secure the name of your nearest tire dealer or distributor and request an adjustment according to the conditions and terms of the tire warranty.

#### WHEEL NUT TORQUE

Proper wheel nut torque is very important to safe and dependable trailering. The wheel and axle systems used in travel trailers are similar in many ways to those used in cars and trucks. But they differ in several important ways. These differences require special attention to wheel nut torque both while the trailer is new and throughout the trailer's life.

Trailer wheels must carry much higher loads per wheel than passenger car or truck wheels. Each wheel may carry from 1000 to 2500 pounds. Furthermore, wheels on tandem axle trailers do not steer, and are subjected to very high side load stress whenever the trailer makes a tight turn. When you go around corners — especially slow, tight ones — the wheels on your trailer are subjected to these strong side loads. This tends to flex the wheel and gradually loosen the wheel nuts. Although the materials and manufacturing methods are maximized for this kind of service, these extra load stresses and flexing can cause loosening.

It is critical that the wheels be properly torqued during the first 25 to 50 miles of road operation. Although the wheels have been properly torqued before leaving the manufacturing plant, settling and wearing in of components during the first few miles of operation may cause some loosening of the wheel nuts.

The wheel nut torque specification is 90-95 ft.-lbs. ALWAYS USE AN ACCURATE TORQUE WRENCH TO TIGHTEN WHEEL NUTS. A torque wrench with adequate accuracy is available for \$20-\$30 at most automotive tool stores. Considering the overall investment in the trailer, this is a very reasonable cost. Use of a torque wrench can also reduce the effort required to tighten the wheel nuts.

Before each trip and any time a wheel is replaced, be sure to tighten the wheel nuts, following the sequence shown in the diagram, to the specified torque. If the wheel was replaced, check the torque again after 25 and 50 miles. If you notice wheel wobbling or hear a rattling sound coming from a wheel, especially at low speeds, a wheel lug nut may have come loose. This problem is usually caused by improper tightening or by faulty or damaged lug bolt threads. If you have reason to believe a lug nut has come loose, SAFELY STOP THE VEHICLE AT THE SIDE OF THE ROAD AS SOON AS POSSIBLE, Put up warning devices. Remove the lug caps and check the tightness of all the lug nuts. Tighten all lug nuts to the specified torque of 90-95 ft.-lbs. If lug bolt threads are damaged or faulty get professional service help. Do not tow the trailer with missing lug nuts or faulty lug bolts.





NOTE: Use a torque wrench to tighten lug nuts. Tightening by hand or with an impact wrench is not recommended.

TORQUE TO: 90 - 95 FT. LBS.

#### TIRE CHANGING

- 1. Use emergency flares when near a road or highway.
- 2. Block the wheels on the opposite side from the tire you wish to change to prevent accidental movement.
- 3. Position a hydraulic jack on the frame close to the spring hanger.
- 4. Raise the trailer until the tire clears the ground.

# WHEEL BEARING LUBRICATION

Your wheel bearings should be repacked every 6,000 miles or every 6 months. Every time the wheel hub is removed, the wheel bearings must be adjusted. Turn the hub slowly to seat the bearings while tightening the spindle nut until the hub will no longer turn. Loosen spindle nut so it may be turned by hand. Tighten nut finger tight then loosen to first hub slot allowing alignment. Install cotter pin.

NOTE: Do not move hub during this step.

The spindle nut and hub should be free to move with the cotter pin being the only restraint.

Prepare bearings by cleaning with solvent to remove old grease. Repack by pressing fresh bearing grease into bearing roller area. Repack bearings more often if subject to extremely wet conditions. If trailer has not been used for more than 2 months, bearings should be inspected and repacked if necessary.

Repack bearings using a high temperature, automotive type, wheel bearing grease produced by a reputable manufacturer. The soap type should be polyurea, lithium complex or equivalent. Use an NLGI Grade 2 product with a minimum dropping point of 440°F.

#### **BRAKE ADJUSTMENT**

The electric brakes are of the drum and two shoe type and adjust the same as most automotive brakes. The adjusting screw is accessible through a hole at the bottom of the backing plate. Remove the hole plug and use a standard brake adjusting tool. Turn the screw until the shoes contact the drum and enough force to make the wheel hard to turn by hand. Then back off the screw six to eight clicks, or until the wheel turns freely.

#### WARNING!

IF BRAKE FAILURE OCCURS, HAVE THEM REPAIRED IMMEDIATELY. CONTINUED DRIVING IS DANGEROUS.

# BRAKES, WHEEL BEARINGS AND WHEELS SERVICE SCHEDULE

Check	Function Required	Dally	Weekly	Every 3000 Miles or 3 Mos.	Every 6000 Miles or 6 Mos.
Brakes	Test for proper function				
Air Pressure	Inflate tires to specifications	•			· · · · · · · · · · · · · · · · · · ·
* Lug Bolts or Nuts	Tighlen lo proper lorque specs			•	
Break-away Switch	Test switch operations, inspect connections			•	
Break-away Batter	Maintain charge, inspect connections		•		
Wheel rims	Inspect for dents, damage, or out of round			•	
* * Brake Shoes	Test brake drag and adjust if required			•	
Brake Magnets	inspect for uneven wear				•
Wheel Bearings and Cups	Inspect for wear or damage and repack			-	•
Hub Drum	Inspect for heavy scoring or wear				•
Seals	Inspect for damage or wear			<del></del>	•

<sup>\*</sup> Tighten wheel bolts or nuts every 50 miles for the first 200 miles and after every change in wheel mounting. (Torque to 90-95 ft.-lbs.)

#### **UTILITY SYSTEMS**

# HYDRAULIC SLIDE-OUT OPERATION

To extend the slide-out room, press and hold the control switch until the room is fully extended.

To retract the slide-out, move or rearrange furniture and interior fixtures as necessary to provide clearance for the room to retract into the trailer interior. Disconnect the electrical cords (if equipped) for the slide-out lights. Press and hold the control switch until the room is fully retracted.

The slide-out room is equipped with a manual override to retract the room in cases where electrical power is interrupted or unavailable, or if you experience hydraulic system trouble.

To operate the manual override see instructions on the Hydraulic Pump.

#### SLIDE-OUT ROOM TROUBLESHOOTING

The most common cause of slide-out room malfunction is low battery voltage. Be sure the batteries are adequately charged. Reduce the electrical load by turning off all 12-volt lights and appliances when operating slides.

If the trailer is not level, the slide-out room may bind in opening. This puts additional strain on the slide-out mechanism and may damage the trailer.

Slide-out room seals may stick if the room has been in the extended or retracted position for an extended amount of time. This sticking can be reduced or eliminated by using a seal dressing such as Armor All.

After installation, re-adjustment and re-leveling may be necessary due to settling. We recommend your selling dealer perform these adjustments for you.

Quality components are used throughout your trailer; however, local weather and atmospheric conditions will in time cause rubber and vinyl weather seals to need replacement, which are not covered beyond the term of your Warranty.

Slide-out set-up, adjustments, and re-leveling are owner responsibilities which are not included in the warranty of your trailer. Therefore, your dealer will charge to perform these services. Professional set-up, adjustment, regular maintenance, and replacement of weather seals as soon as required will extend the life and usefulness of your slide-out room. Weather seals which are allowed to remain in service after deterioration will allow rain, snow, or ice to penetrate inside the walls or roof and may cause extensive damage.

Do a close visual inspection of these seals at least twice each year - once before the winter season and again each spring.

#### **ELECTRICAL SYSTEM**

Your electrical system is a combination 12 volt and 110 volt system, every facet carefully engineered and installed to comply with the "American National Standard #A 119.2" and the "National Electric Code".

The combination system consists of:

- 1. 12 volt automotive system.
- 2. 110 volt outside power source.

<sup>\* \*</sup> Adjust brakes after first 200 miles, then at above intervals.

#### 110 VOLT SYSTEM

This is supplied by plugging the power cord into an outside 110 volt receptacle. It furnishes current to 110 volt roof air conditioners, refrigerator and all internal 110 volt receptacles. It also supplies power for the 12 volt trailer system through the converter.

The 110 volt circuits are protected by circuit breakers and will handle up to 15 amps. The most common cause of a circuit breaker to open is an overloaded circuit. If this happens, reduce the load and reset the breaker.

Your bathroom and exterior receptacles are protected by a highly sensitive device known as a "Ground Fault Interrupter," which is designed to sense the slightest electrical "short" at those recepts and instantly disconnect the current before a person can be injured.

#### CAUTION

NEVER REPLACE CIRCUIT BREAKERS OR FUSES OF HIGHER CURRENT RATING THAN THOSE ORIGINALLY INSTALLED. THIS COULD OVERHEAT THE WIRING AND START A FIRE.

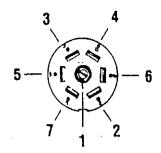
#### 12 VOLT AUTOMOTIVE SYSTEM

The 12 volt battery in the tow vehicle supplies this current to the trailer's electric brakes; clearance lights, turn signals, tail, stop and back-up lights through the electrical connector.

The electrical connector wiring color code is as follows:

No.	Color	ltem	Wire Size
1	Yellow	Backup Lights (not used)	No. 14
2	Black	Brakes	No. 14.
3	Green	Clearance and Tail Lights	No. 16
4	Red	Battery Charge	No. 8
5	Red	Left Turn and Stop Lights	No. 16
-6	Brown	Right Turn and Stop Lights	No. 16
7	White	Ground	No. 16

#### Car Connector Plug

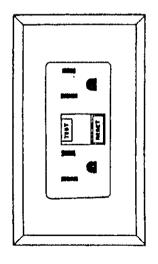


No.	Color	Item	Wire Size
1	Yellow	Backup Lights (not used)	No. 14
2	Blue	Brakes	No. 12
3	Green	Clearance and Tall Lights	No. 14
4	Red	Battery Charge	No. 10
5	Red	Left Turn and Stop Lights	No. 14
6	Brown	Right Turn and Stop Lights	No. 14
7	White	Ground	No. 10

# **GROUND FAULT CIRCUIT INTERRUPTER**

#### **DUPLEX RECEPTACLE**

ALL MODELS 125V AC 60 Hz ONLY 20A Feed-Through Rating.



UL Listed

THIS DEVICE PROTECTS AGAINST FAULT CURRENTS ONLY.

It does NOT protect against over current.

The GFI receptacle is located in the bathroom. The GFI receptacle should be tested at least once a month for maximum protection. To test the GFI receptacle push the TEST button. The RESET button will pop out. Power is now off at all outlets protected by the GFI receptacle. The popping out of the RESET button during the test indicates the device is functioning properly. If the RESET button does not pop out when testing, do not use any outlets on this circuit. Protection is lost, Call your dealer if this device malfunctions. After a successful test, restore power by pushing RESET. Your test is complete when the RESET button stays pushed in.

## LP GAS SYSTEM

LP gas when properly handled, is a clean burning dependable fuel for all your LP gas appliances. The LP tank or tanks mounted on your unit contain liquid under high pressure. The liquid vaporizes into a gas and passes through the regulator which automatically reduces the gas pressure. The low pressure gas is then distributed to the appliances. The arrow on the automatic gas regulator will always point to the gas bottle in service. When the red flag appears in the inspection glass, this indicates that bottle is empty. Arrow should be turned toward other bottle and the empty bottle should be filled as soon as possible. Never adjust the regulator yourself. Have your dealer or an authorized service man make any required adjustment.

#### FILLING LP GAS BOTTLES

When your LP gas tank is empty, have it refilled as soon as possible. There are many LP refueling stations available. Many RV parks also have LP gas available. Caution your supplier not to over fill your tank. Room is required to let the liquid vaporize.

There are approximately 11,000 BTU's of heat produced from each gallon of LP gas. Your furnace and oven will require the most LP gas. During extreme cold temperatures, check fuel tanks frequently to avoid running out of fuel.

- 1. Make sure the arrow on the cylinder selector is pointed to the full cylinder.
- Close the valve on the empty cylinder and remove the nut from the valve. (Note - left hand thread)
- 3. Loosen the clamp that holds cylinder in place.
- 4. Remove the cylinder and have it refilled.
- 5. Slide the cylinder back in place and tighten clamp.
- 6. Connect the left-hand nut and tighten securely.

#### LP GAS LINES

The primary manifold is a black pipe located under your unit. Copper tubing with flare fittings are used as secondary lines running to the gas appliances. Should any lines ever rupture, NEVER attempt to splice them. A new line should always be installed. We recommend any LP gas line services be performed by your dealer or an authorized service man. Always close main valve at LP tank when servicing any gas appliance. This prevents any gas leakage which could result in an explosion or cause serious bodily injury.

Although your LP gas system was thoroughly inspected for leaks before delivery, gas fittings can loosen from vibration during travel. Your LP gas system should be inspected at least once a year. If leak is suspected, check immediately!

# PRECAUTIONS AND RECOMMENDATIONS

- Inspect LP fill valve for foreign material before refueling.
- Shut off tow vehicle and pilot lights when refueling gas tanks.
- Never check for gas leaks with open flame match, etc.
- Visually inspect gas lines for any problem periodically.
- Have dealer inspect gas system yearly and before and after long trips.
- Always have qualified technician check and make any repairs in your gas system.

#### NOTICE

THE LP GAS SYSTEM IN YOUR RECREATIONAL VEHICLE IS DESIGNED FOR LIQUEFIED PETROLEUM GAS ONLY. **NEVER** ATTEMPT TO CONNECT NATURAL GAS TO THIS SYSTEM.

# CARE AND MAINTENANCE

#### **EXTERIOR**

 The aluminum exterior has a baked on enamel finish similar to your automobile. Wash frequently with a mild soap solution. Waxing with a good paste wax two or three times a year will help preserve the finish.

#### CAUTION

NEVER USE A LACQUER THINNER, STRONG SOLVENTS OR ABRASIVES. USE OF A SOFT CLOTH AND PASTE WAX WILL REMOVE MOST SPOTS AND STAINS.

#### 2. Rubber Roof

#### Cleaning

For normal cleaning, standard household detergents can be used to wash the rubber roof material. Rinse thoroughly after cleaning. Be sure to keep the sidewalls wet to reduce streaking.

#### Care

The roof material itself does not require annual coatings or additional sealants. Periodic washing with soap and water is all that is required.

The rubber roof material can be cut by sharp objects. Use caution when loading sharp articles on the roof, if you add accessories or new equipment on the roof, be sure the installer is qualified to work on the rubber roof material.

Inspect the roof at least every six months, paying particular attention to the seams where the areas of sheetmetal, rubber and/or fiberglass are joined.

Carefully inspect the flange connections between air conditioners, vents, skylights, etc. If signs of cracking, weather, or drying are evident, reseal the affected area. The roof requires special adhesives and material that can be purchased from your dealer.

- Frames and Bumpers: Inspect for rust periodically and repaint with rust-proof enamel when necessary.
- 4. Wash and wax more frequently in salt water areas. Touch up or repair scratches, scuffs, and punctures as they develop. If repair is required on the exterior, contact your dealer.
- Door and Window Seals: Inspect the sealants around windows and doors at least every six months. If any of the following defects are evident during inspection, the affected areas must be resealed.
  - · Sealant cracked or peeling
  - Voids in sealant
  - · Shrunken or separated sealant

#### UPHOLSTERY

Do not launder upholstery fabrics. Blot up stains promptly, before they set. Use an upholstery cleaner, or mild solvent, depending on the stain. Never soak the fabric. Use as little water as possible. Blot rather than rub. Towel dry or have professionally cleaned.

#### DRAPERIES

Draperies and uphoistery fabrics should always be dry cleaned like any other fine fabric by a competent dry cleaning establishment. Spots and stains should be removed with a commercial spot remover made for this purpose.

#### COUNTERTOPS

Your countertops are made of high pressure plastic laminates and are highly resistant to normal spills and scuffs. Avoid regular use of abrasive pads and scouring powders which will dull the surface and make it more stain-prone.

Confine knife blades and slicing to a chopping block.

Although the laminate resists heat up to 275 degrees F., pots and pans straight from the oven or burner and irons should be placed on lined hot pads.

#### **APPLIANCES**

Refer to the individual manufacturer's owners manuals for care and cleaning for your appliances.

#### CEILINGS

Clean with a mild detergent in warm water. Never use a strong chemical.

Use a damp cloth to clean ceiling. Excessive moisture may damage the ceiling.

#### INTERIOR FINISH

The interior surfaces are easy to clean with mild soap and a damp cloth. Waxing is unnecessary. Stubborn stains may be removed with a spray cleaner.

Scratches can usually be touched up satisfactorily with a good quality commercial furniture scratch remover.

#### FLOOR COVERINGS

The carpeting in your vehicle is tough and easily maintained. Vacuum regularly to remove abrasive grit. Water based spills and spots should be removed immediately with a damp cloth. Grease or oil based stains and spots should be spot cleaned with a good commercial spot cleaner made for this purpose. If complete shampooing is desired, it is best to have it done by a competent professional carpet cleaner. Never soak or water log your carpeting.

#### **TUB AND LAVATORY**

Do not use steel wool, harsh abrasives or liquid cleaners with solvents. These plastic surfaces are best cleaned with soap and water, or dishwashing detergent and water.

#### **WINDOWS**

The all-season windows in your travel trailer or fifth wheel normally open and close easily. If they become clogged with dirt, clean the mechanism with a small, stiff brush and spray with a silicone lubricant.

#### DOORS AND DRAWER FRONTS

The doors and the drawer fronts in your unit are made of high quality wood. They should be wiped off with a dust cloth and a good household cleaner.

#### **BEDSPREADS**

The manufacturer of the bedspreads recommends that the bedspreads not be washed, but professionally dry cleaned.

#### WINTER STORAGE

- 1. Level the unit front to rear and side to side.
- Remove bottled and canned goods and other items that could be damaged by freezing:
- Open all faucets, valves and drains, including toilet stool valve, water heater drain, and line drain.
- 4. Run demand pump till water stops flowing from faucets. Shut pump off immediately. Allow drains, faucets, and valves to remain open for several hours or blow all extra water out with air. Be sure lines are empty.
- 5. Close all faucets, valves, and drains.
- It is a good idea to use an anti-freeze solution for potable water for more positive protection. Do not use automotive type anti-freeze.
- 7. Before using vehicle again, you may want to sanitize the system.
- 8. Completely drain holding tanks.
- 9. Flush sink, shower-tub, lavatory, and stool with a solution of hot water and dishwater soap. Allow to drain and flush with clean hot water.
- If possible, agitate the water in the holding tanks by driving a few miles, then drain tanks again.
- 11. An alternate to step #9 is to use a chemical deodorant. Let mixture stand for a few days, then drain.
- 12. Flush with fresh water, drain, and, after tanks are dry, close dump valves and drain cap.
- Fill traps with an anti-freeze approved for use in ABS plastic pipes. Normally, a cupful per trap is adequate. Do not use an anti-freeze solution with an alcohol base.
- 14. Turn the thermostat off.
- 15. Put graphite in all the locks and lubricate all door hinges.
- 16. Close all windows and roof vents.

#### EFFECTS OF PROLONGED OCCUPANCY

Your trailer was designed primarily for recreational use and short term occupancy. If you expect to occupy the trailer for an extended period, be prepared to deal with condensation and the humid conditions that may be encountered. The relatively small volume and tight compact construction of a modern recreational vehicle mean that the normal living activities of even a few occupants will lead to rapid moisture saturation of the air contained in the trailer and the appearance of visible moisture, especially in cold weather.

Just as moisture collects on the outside of a glass of cold water during humid weather, moisture can condense on the inside surfaces of your trailer during use in cold weather when the relative humidity of the interior air is high. This condition is increased because the insulated walls of the trailer are much thinner than house walls. Estimates indicate that a family of four can vaporize up to three gallons of water daily through breathing, cooking, bathing and washing. Unless the water vapor is carried outside by ventilation, or condensed by a dehumidifier, it will condense on the inside of the windows and walls as moisture, or in cold weather as frost or ice. It may also condense out of sight within the walls or the ceiling where it will manifest itself as warped or stained panels. Appearance of these conditions may indicate a serious condensation problem. When you recognize the signs of excessive moisture and condensation in your trailer, you should take action to minimize their effects.

NOTE: Your trailer is not designed to be used as permanent housing. Use of this product for long term or permanent occupancy may lead to premature deterioration of structure, interior finishes, fabrics, carpeting and drapes. Damage or deterioration due to long term occupancy may not be considered normal, and may under the terms of the warranty constitute misuse, abuse, or neglect, and may therefore reduce your warranty protection.

#### **Ventilation and Moisture Control**

You can reduce interior moisture condensation by taking the following steps:

- Ventilate with outside air. Partially open one or more roof vents and one or more windows to provide circulation of outside air into the interior. While this ventilation may increase furnace heating load during cold weather, it will greatly reduce water condensation. Even when it is raining or snowing, ventilation air from outside will be far drier than interior air and will effectively reduce condensation inside the trailer.
- 2. Minimize moisture released inside the trailer. Run the range vent fan when cooking and the bath vent fan (or open the bath vent) when bathing to carry water vapor out of the trailer. Avoid making steam from excessive boiling or use of hot water. Remove water or snow from shoes before entering to avoid soaking the carpet. Avoid drying overcoats or other clothes inside the trailer.

# WARNING DO NOT HEAT THE TRAILER INTERIOR WITH THE RANGE OR OVEN.

In addition to the hazards of toxic fumes and oxygen depletion, open flames add moisture to the interior air, increasing condensation. Do not use an air humidifier inside the trailer. Water put into the air by the humidifier will greatly increase condensation.

- 3. Ventilate closets and cabinets. During prolonged use in very cold weather, leave cabinet and closet doors partially open to warm and ventilate the interiors of storage compartments built against exterior walls. The air flow ill warm the exterior wall surface, reducing or eliminating condensation and minimizing possible ice formation.
- 4. Install a dehumidifier. During prolonged, continuous use, a dehumidifying appliance may be more comfortable and effective in removing excess moisture from the interior air. While use of a dehumidifier is not a "cure-all", and ventilation, storm windows, and moisture reduction continue to be important, operation of the dehumidifier will reduce the amount of outside air needed for ventilation. Heating load on the furnace will be reduced, and the interior will be less drafty.
- Install tight fitting storm windows to reduce or eliminate condensation on window glass. The interior surface of the storm window will be warmer, reducing moisture condensation.

#### WARNING

DO NOT COVER EMERGENCY EXIT WINDOW(S). THIS WINDOW MUST BE LEFT ACCESSIBLE AT ALL TIMES FOR EMERGENCY EXIT.

**Dripping Ceiling Vents** 

During cold weather and even in short term occupancy, condensation frequently forms on ceiling vents and may even accumulate to the point of dripping onto the surfaces below. This is frequently misinterpreted as a "leaking" roof vent but is most often condensation drippage. Follow the preceding steps to control moisture condensation, and protect surfaces with plastic sheeting until the moisture has dissipated.

#### **HEIGHT OF UNITS**

Travel Trailer without Air Conditioner	S
Fifth Wheel without Air Conditioner (Lo Profile 22'-28')	S
Fifth Wheel without Air Conditioner (Hi Profile 30'-35')	
Travel Trailer with Air Conditioner	s
Fifth Wheel Slide Outs w/Air Conditioner (Lo Profile 24'-27')	S
Fifth Wheel Slide Outs w/Air Conditioner (Hi Profile 27' - 35') 143 inche	s
Hitch Ball Height	S

#### HITCHING

## HITCHING - TRAILER

Hooking up your trailer will become quite simple to you after a little practice and following these step by step instructions.

- 1. Crank jack up the tongue of the trailer until the hitch coupler is high enough to clear the hitch ball on your tow vehicle.
- 2. Back the tow vehicle to the trailer until the hitch ball is directly under the coupler on the trailer. This is the part that will take a little practice and, if possible, ask another person to help guide you. Another good aid is a mirror that is sold by trailer supply dealers. It attaches to the trailer tongue magnetically and allows you to see the hitch coupler and ball from the driver's seat. When the ball is under the coupler, set the parking brakes, raise the locking latch on the coupler and crank it down onto the ball. Then move the locking latch down to lock it on the ball.
- 3. Engage the lock and retainer clip.
- 4. Raise the tongue by cranking the jack down. (The tow vehicle will come up with it if the high coupler is properly latched.) It also makes it easier to install the equalizing hitch bars. Adjust the equalizer bars to the trailer and tow vehicles are level. (See equalizer hitch manufacturer's instructions.)
- 5. Connect the power cord between the tow vehicle and your trailer.
- 6. Hook-up the breakaway switch. Be sure that the breakaway switch cable is not attached to any part of the tow vehicle assembly.
- 7. Crank the jack all the way up.
- 8. Install and adjust your mirrors.
- Check all lights on your trailer and tow vehicle running lights, stop and tail lights, turn signals.
- 10. Pull the trailer forward and apply the hand control for trailer brakes to be sure they are operating properly.
- Check inside of trailer and see that everything is stored away, vents closed, all doors and drawers closed, entrance door locked and steps retracted.

# LOADING INSTRUCTIONS

Whether you start out for a weekend jaunt or a longer trip, the first thing you are going to do is load such items as food, clothing, bedding, and recreational equipment. As you become experienced in travel trailer living, you will learn what is necessary and what merely takes up storage space.

#### CAUTION

IT IS ESSENTIAL THAT YOU STORE THE HEAVIER ITEMS CENTRALLY AND AS LOW TO THE FLOOR AS POSSIBLE. SECURE LOOSE ITEMS TO PREVENT SHIFTING.

#### HITCHING - FIFTH WHEEL

- 1. Adjust trailer jacks until trailer is at height level for hooking to the fifth wheel.
- 2. Place wheel chocks behind trailer wheels.
- 3. Lower tailgate on truck.
- 4. Release 5th wheel lock handle.
- 5. Line up truck so 5th wheel will accept trailer kingpin.
- 6. Close and latch tailgate.
- 7. Back truck slowly until kingpin engages the 5th wheel and automatically locks.
- 8. Make sure lock is closed.
- 9. Connect power cord between the tow vehicle and the trailer.
- 10. Connect breakaway switch cable.
- 11. Check 5th wheel lock, brakes and lights.
- 12. Completely raise trailer jacks.
- 13. Pick up and store wheel chocks.

#### **TRAVELING**

#### **TOWING**

A good way to practice towing is to choose a large parking lot (where it is permissible).

Easing to a stop and starting smoothly saves wear and tear on your tow vehicle, saves gas, and prevents damage to the hitch and items stowed in the trailer. Your trailer is designed to be towable at any speed that is safe and smooth for your tow vehicle alone. Remember, when towing the trailer, always maintain a space between you and the car in front of you of at least a car and a trailer length for every 10 miles of speed, giving you ample time to stop in an emergency.

Try to drive with an anticipation of problems that may occur way ahead and prepare for them, even though they may never happen. Anticipate dips, gutters, and depressions in the street, slowing down well in advance, as these are the hardest jolts of any kind on your car, your hitch, your trailer, and items stowed in your trailer. Take dips and bumps slowly and be certain that the trailer wheels have passed the point before accelerating. Cross railroad tracks slowly. Always release your brakes before crossing.

On long grades, shift into a lower gear (or lower range, if you have automatic transmission) before your engine labors.

#### CAUTION

UNDER NO CIRCUMSTANCES SHOULD THE ENGINE BE ALLOWED TO "LUG" OR PULL HARD FOR EXTENDED PERIODS OF TIME.

When going downhill, use the same procedure as going uphill well in advance, and thus the compression of your car's engine will help to slow your whole rig safely. Avoid conditions that require excessive and prolonged use of your brakes. Apply and release brakes at short intervals to give them a chance to cool.

#### WARNING

WHEN BEING OVERTAKEN, PASSING OR MEETING AN ONCOMING BUS, TRUCK OR OTHER LARGE VEHICLE, AIR TURBULENCE MAY BE ENCOUNTERED AND MAY CAUSE YOU TO FEEL THE TRAILER SWAY. WHEN THIS OCCURS A SLIGHT ACCELERATION AND/OR APPLYING THE TRAILER BRAKES ONLY WILL HELP OVERCOME THE SWAY SENSATION: HOWEVER, APPLICATION OF THE TOW VEHICLE BRAKES AT THE BEGINNING OF THE SWAY SITUATION WILL ACCENTUATE THE SWAY AND MAY CAUSE YOU TO LOSE CONTROL OF YOUR VEHICLE.

#### STARTING OUT

Starting the car slowly, check the traffic after signalling and be sure the road is clear. You are ready to pull into traffic. Accelerate slowly and evenly. Check the mirror frequently to observe the traffic behind you and the action of your trailer. Then move carefully into the proper traffic lane, as you accelerate.

### **TURNING CORNERS**

Here's where you find a first basic difference with a trailer. The trailer wheels do not follow the path of your car's wheels. The trailer will make a closer turn than the car. Compensating for this action when making turns, you will pull the car out further into the intersection than you would normally, so that the trailer will clear the curb or clear any parked vehicles along the curb.

Making a left turn requires technique similar to a right turn, with a wider than normal swing into the new lane of traffic to keep the trailer from edging into the opposing lane.

On sharply winding and narrow roads, keep well to the center of your lane, equally away from both the center line and pavement edge. This allows the trailer to clear the edge of the pavement without likelihood of the wheels dropping off onto the shoulder, which could cause dangerous trailer sway. Do not overcrowd or cross the center line. All sharp turns should be taken at low speeds. Professional drivers, when rounding turns, slow down well in advance of the turn, entering it at reduced speed, and then accelerate smoothly as they come out again onto the straightaway.

#### OVERTAKING AND PASSING

Remember when you pass another vehicle, that it takes longer to accelerate and you must allow for the length of the trailer to pass as well, before returning to your lane. Use your signals freely. On freeways and expressways, try to pick the lane in which you want to move, and stay in it, preferably the slow lane to the right.

You will usually notice that due to your slower speed, cars will be "trapped" behind you on a two-lane road. It is both courteous and practical to signal, pull onto the shoulder (when possible) and let them pass. It reduces passing hazards and saves tempers.

#### SLIPPERY PAVEMENT

On slippery and icy pavement, drive slowly, and if you feel you are skidding, gently apply the trailer brakes only.

#### **MUD AND SAND**

Let the momentum of your car and trailer carry you through. Apply power gently and stay in the tracks of the previous vehicle. If you do get stuck, tow the car and trailer out together without unhitching.

#### **BACKING AND PARKING**

After arriving at your destination, your next task is to choose a good level parking space and backing into it. A recommended procedure for backing into a space is this:

- 1. Stop near the site, get out and look it over. (Check the site for low hanging tree limbs, posts, large rocks, etc.)
- Always try to place the site to your left. This way you can see what the trailer is doing while you are backing. If the site is on your right, you will be backing into your blind side, which is more difficult.
- With everything clear, maneuver the travel trailer into position for backing into the site.
- 4. Now grasp the steering wheel at the bottom (never at the top) and back up. Turn the steering wheel in the direction you wish the trailer to go. If the site is on your left, move your hand to the left and back slowly, watching the trailer. When the trailer starts into the turn, follow it by easing up on the steering wheel. The trailer will move into position.

#### SET UP

This section outlines the procedures necessary to stabilize and set up your trailer.

Before attempting to set up the trailer, carefully read and understand these instructions. Setting up your trailer is not difficult but does require some forethought and care.

Your trailer is designed to be efficient and comfortable. Careful attention to details and thoroughness during set up will ensure that you will benefit from all the features and comfort built into your trailer.

During storage or after your trailer has been set up, you may notice slight rippling or waviness of the aluminum or fiberglass exterior sidewall panels if your trailer is sitting in the sun. This is caused by the normal expansion of the materials as they warm up. As the temperature goes down these panels will tend to return to their original shape.

## LEVELING AND STABILIZATION

Leveling of your trailer at the site is important. A level trailer is not only necessary for comfort but your refrigerator must be reasonably level in order to operate properly. Stabilization is recommended to keep the trailer from jouncing while unhitched when people are moving inside the trailer.

Stabilizer jacks are intended to stabilize the trailer body while the trailer's full weight is supported by the hitch jack (conventional travel trailers) or landing gear (fifth-wheel trailers) and running gear. Stabilizer jacks are not designed to lift or level the trailer or support its entire weight.

# Leveling Procedures for a Conventional Trailer

- If the site is not an asphalt pad, concrete slab or other prepared surface, be sure it is as level as possible. Be sure the ground surface is not soft and will support the weight of the trailer on the stabilizing jacks or other support devices.
- 2. Before uncoupling, level the trailer from side to side with suitable lengths of 2" x 6" wood blocks under the trailer wheels. Place the 2" x 6" wood blocks on the ground surface forward of the trailer wheels, and tow the trailer onto the 2" x 6" blocks. Block the trailer wheels so the trailer cannot roll.
- 3. Put the foot pad on the hitch jack post, uncouple the trailer from the tow vehicle and level the trailer front to rear. It may be necessary to place a sturdy 2" x 6" wood block under the jack post foot pad to support the jack post on soft ground surfaces.
- 4. Check the level of the trailer with a carpenter's level both crosswise and length-wise on the trailer floor. To assure reasonable level at the refrigerator, use A round bubble level inside the refrigerator. Acceptable level is when the bubble is within the marked area of the bubble level.

CAUTION: AFTERMARKET STABILIZER STANDS MUST BE PLACED ONLY UNDER CHASSIS FRAME RAILS.

#### WARNING

DO NOT ATTEMPT TO LEVEL, RAISE OR OTHERWISE PLACE ALL OF THE WEIGHT OF THE TRAILER ON THE STABILIZER JACKS.

#### WARNING

STABILIZER JACKS ON TRAILERS WITH SLIDE ROOMS SHOULD NOT BE PLACED AT EXTREME CORNERS OF THE FRAME. LOCATING STABILIZERS IN THESE LOCATIONS CAN CAUSE SLIDE ROOM DAMAGE SHOULD LEVELING BLOCKS SHIFT OR SETTLE.

- After stabilizing the trailer, be sure the trailer frame is not twisted, buckled, or stressed. Check that all doors and windows operate freely and do not bind.
- 6. Before resuming travel, be sure all stabilizers are removed or fully retracted.

Leveling Procedures for a Fifth-Wheel Trailer

- If the site is not an asphalt pad, concrete slab or other prepared surface, be sure it is as level as possible. Be sure the ground surface is not soft and will support the weight of the trailer on the stabilizing jacks or other support devices.
- 2. Before unhiltching, level the trailer from side to side with suitable lengths of 2" x 6" wood blocks under the trailer tires. Place the 2" x 6" wood blocks on the ground surface forward of the trailer tires and tow the trailer onto the 2" x 6" blocks. Block the trailer tires so the trailer cannot roll.
- 3. Lower the "quick drop" landing gear legs before extending the landing gear. The positioning of the "quick drop" legs will depend upon how level your campsite is from side to side and front to rear. The landing gear is then extended either mechanically (hand crank) or by the optional power motor. It may be necessary to place a sturdy 2" x 6" wood block under the foot pads to support the landing gear on soft ground surfaces.

CAUTION: DO NOT OPERATE THE POWER LANDING GEAR WITH CRANK HANDLE ENGAGED.

4. Check the level of the trailer with a carpenter's level both crosswise and length-wise on the floor. To assure reasonable level at the refrigerator, use a round bubble level inside the refrigerator. Acceptable level is when the bubble is within the marked area of the bubble level.

CAUTION: AFTER-MARKET STABILIZER STANDS MUST BE PLACED ONLY UNDER CHASSIS FRAME RAILS.

#### WARNING

DO NOT ATTEMPT TO LEVEL, RAISE OR OTHERWISE PLACE ALL OF THE WEIGHT OF THE TRAILER ON THE STABILIZER JACKS.

- After stabilizing the trailer, be sure the frame is not twisted, buckled, or stressed. Check that all doors and windows operate freely and do not bind.
- 6. Before resuming travel, be sure all stabilizers are removed or fully retracted.

#### CAUTION

THERE ARE SEVERAL WARNING TAGS PLACED ON THE EXTERIOR AND INTERIOR OF YOUR TRAVEL TRAILER. THESE ARE REQUIRED BY LAW. PLEASE FOLLOW THEIR INSTRUCTIONS.

If your trailer or fifth wheel is equipped with a slide out and you are going to use it for an extended period, it is advisable to add support blocks under the slide room. Do not raise the room, but just touch the bottom. Also periodically check the piston of the hydraulic cylinder and apply a film of grease to keep it from deteriorating.

# SPECIAL SAFETY WARNING & PRECAUTIONS

- WARNING: IT IS NOT SAFE TO USE COOKING APPLIANCES FOR COMFORT HEATING. Cooking appliances need fresh air for safe operation. Before operation:
- 1. Open overhead vent or turn on exhaust fan, and
- 2. Open window.

This warning label has been located in the cooking area to remind you to provide an adequate supply of fresh air for combustion. Unlike homes, the amount of oxygen supply is limited due to the size of the recreational vehicle, and proper ventilation when using the cooking appliance(s) will avoid dangers of asphyxiation. It is especially important that cooking appliances not be used for comfort heating as the danger of asphyxiation is greater when the appliance is used for long periods of time.

- WARNING: A warning label has been located near the LP-Gas container. This label reads:

# DO NOT FILL CONTAINER(S) TO MORE THAN 80 PERCENT OF CAPACITY

Overfilling the LP-Gas container can result in uncontrolled gas flow which can cause fire or explosion. A properly filled container will contain approximately 80 percent of its volume as liquid LP-Gas.

- WARNING: Portable fuel-burning equipment, including wood and charcoal grills and stoves, must not be used inside the recreational vehicle. The use of this equipment inside the recreational vehicle may cause fires or asphyxiation.
- WARNING: Do not bring or store LP-Gas containers, gasoline or other flammable liquids inside the vehicle because a fire or explosion may result.
- WARNING: LP-Gas containers shall not be placed or stored inside the vehicle. LP-Gas containers are equipped with safety devices which relieve excessive pressure by discharging gas to the atmosphere.
- WARNING: LP-Gas regulators must always be installed with the diaphragm vent facing downward. Regulators that are not in compartments have been equipped with a protective cover. Make sure that regular vent faces downward and that cover is kept in place to minimize vent blockage which could result in excessive gas pressure causing fire or explosion.

# PERSONAL RECORD

Type	Model No
Serial No	
Date Purchased	
From Whom Purchased	
Range Model and Serial No.	
Refrigerator Model and Serial No.	
Furnace Model and Serial No	
Water Heater Model and Serial No.	
Converter Model and Serial No.	
Roof Air Conditioner Model and Serial No	
Microwave Model and Serial No.	
Tire Make	
Tire Size	
Door Key	
When writing to the factory or a component network the pertinent model and serial numbers.	nanufacturer be sure to include
THE DESCRIPTIONS AND SPECIFICATIONS THE MANUAL WAS APPROVED FOR PRINTI	WERE IN EFFECT AT THE TIME ING.