



Cruiser RV, LLC

OWNER'S MANUAL

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Introduction

Cruiser RV LLC has provided this manual to you, our customer, for the purpose of providing easy-to-read instructions about both the operation and the maintenance of your Travel Trailer. Nothing in this manual creates any warranty, either expressed or implied. The only warranty offered by *Cruiser RV LLC* is specified in the limited warranty applicable to your Travel Trailer.

The Limited Warranty and limited warranties issued by our component manufactures require periodic service and maintenance. Failure on the part of the customer to provide this periodic service and/or maintenance may negate warranty coverage for that particular item. The customer should carefully review *Cruiser RV LLC's* limited warranty, as well as the warranties of all other component manufacturers.

Some instructions in this manual relate to the operation of components that may be optional on your Travel Trailer.

SPECIAL NOTE

This owner's manual is written using the latest information available at the time of its publication. Since *Cruiser RV LLC* is continuously improving and developing its Travel Trailer line, we reserve the right to make changes in product specifications and components used in our Travel Trailers without prior notice to the customer.

Information About Your Warranty

As the owner of a *Cruiser* Travel Trailer, it is *your responsibility to provide regular care and maintenance to your vehicle*. Your attention to proper maintenance will help avoid situations where the Limited Warranty does not cover items, due to neglect of the vehicle system. You should ensure that maintenance services are performed in accordance with this manual. Additionally, you should ensure that proper maintenance is provided in accordance with the corresponding manufacturers' warranties on any components included in your Travel Trailer.

It is your responsibility to return your Travel Trailer to an authorized *Cruiser* dealer for repairs and/or service as they are required. Please be assured that your *Cruiser* dealer will assume responsibility for proper service before delivery of the unit to you, and will also have an interest in your continuing satisfaction.

For this reason, we recommend that all warranty and maintenance services be done at your authorized *Cruiser* dealer.

WARRANTY INFORMATION

Delivery Inspection

The delivering dealer is responsible to review the Limited Warranty with you, the customer, and to inspect the unit with you at the time of delivery.

Product Information/Manuals

The unit comes from the factory with an Owner's Manual from Cruiser, and product information and manuals for equipment installed in your unit.

Warranty information and registration cards are included. Please take time immediately to complete and mail the warranty cards that are made available.

NOTE: Some information in these manuals may mention items that are not included in your unit (for example, they were options that you did not select). Any mention of these items does not suggest or imply availability for or in your unit.

Warranty Service

The warranty provided on your Cruiser unit is intended to support our customers, and to stand behind the workmanship and components in your unit.

Cruiser will provide support and assistance in finding a remedy, should a warranty issue occur during the warranty period.

Service is to be obtained by taking the following steps:

- 1) **Contact the selling dealer.**
- or
- 2) **Contact the nearest Cruiser dealer**
3. **In emergency situations (repairs required in order to use or move your unit), a local qualified service and repair facility can be contacted to assist in the repairs. In this type of instance, contact Cruiser to obtain approval for the repair facility and the specific repairs needed. Cruiser will not be responsible for repairs without prior approval.**

Warranty repairs must be done when a problem is discovered, and within the warranty period.

If you require assistance in locating a servicing dealer, you can access our dealer locator at www.cruiserrv.com or contact **Cruiser RV Customer Service** at

260-562-1075

When contacting Cruiser Customer Service, please have the following information available:

- 1) The last four (5) digits of the Vehicle Identification Number (VIN).
(The VIN is a 17-digit number starting with "5")
- 2) The date of purchase
- 3) The specific problem(s) you are experiencing

If you need to have service work done on your unit, we recommend the following:

- 1) Call the dealer and schedule an appointment. Have your Vehicle Identification Number (VIN) available.
- 2) Have available a list of the items you want repaired, that can be discussed with and given to the dealer.
- 4) Drop off your unit at the dealer location.
- 5) Inspect the repair(s) done to your unit. Once you are satisfied, sign the Repair Order of Warranty Claim Form. Should a problem arise regarding the repair, contact the repairing dealer or Cruiser RV immediately.

Responsibility of the Owner !

- ✓ Proper care and maintenance as outlined in this manual, and/ or the warranty packages provided by component manufacturers.
- ✓ Utilizing authorized *Cruiser* dealers for required repairs or service.
- ✓ Thoroughly reviewing this manual and information supplied with your Travel Trailer about components in your unit.
- ✓ **Complete and mail warranty registration materials within thirty (30) days from the date you take delivery of your new Travel Trailer.**

Responsibility of the *Cruiser* Dealer!

- ✓ Ensure that the customer is familiar with the operation of all the systems and components of the new Travel Trailer.
- ✓ Provide assistance to the customer in filling out all necessary registrations and warranty cards for the new Travel Trailer.
- ✓ Provide assistance in finding all serial numbers, as required.
- ✓ Review the Limited Warranty provisions to the customer
- ✓ Provide assistance to the customer in how to receive local and out-of-town service on their Travel Trailer and/or its warranted components.
- ✓ Provide excellent service on *Cruiser* Travel Trailer units.

Maintenance Schedule

Service to be Performed	Service Intervals					See Notes at bottom of this Page
	Each Trip or Weekly	Every 1,000 Miles or Monthly	Every 2,500 miles or Every 3 Months	Every 5,000 miles or Every 6 Months	Every 10,000 Miles or Annually	
Pack the Wheel Bearings						Note 1
Inspect brakes, suspension, shocks					X	
Inspect brake wiring	X					
Inspect tires – condition and inflation pressure	X					
Inspect Hitch Components	X					
Lubricate Locks					X	
Lubricate Coupler Latch and Socket		X				
Lubricate Hinges					X	
Inspect/Clean Vents					X	
Torque Lug Nuts		X				
Sanitize Water Tank (if unit has been stored)			X			
Clean drapes and interior fabric					X	
Clean battery cables and terminals; check fluid levels			X			
Check all top-sealed seams, including baggage doors, slide-out windows, patio lights, vents, awning rails, gutter rails, corner moldings, roof extrusions & rack/ladder brackets. Reseal as needed.				X		
Check water system for leaks					X	
Balance tires; (after 1 st 1,000 miles, as needed thereafter		X				
LPG check, pressure check						X
Inspect all LPG system components	X					
Lubricate slide-out tubes with Lithium grease				X		
Check spare tire					X	
Breakaway switch and cable					X	
GFI		X				
Smoke detector	X					
LP Gas detector	X					
Carbon monoxide alarm	X					

Note 1: Refer to your owner's packet for manufacturer's information

ITEM	MAINTENANCE
Counter Tops	Clean with damp, soapy cloth and dry immediately.
Refrigerator	Clean and remove all food after each trip.
Stove and Sinks	Clean with non-abrasive cleaners
Cushions	Use foam-type cleaners or warm soapy water
Vinyl	Use vinyl cleaner or soapy water
Living Room Drapes	Dry clean only
Bedroom Curtains	Hand wash with mild detergent, drip dry. DO NOT DRY IN DRYER.
Bedspread	Dry clean only
Carpet	Use a good quality carpet cleaner designed for <i>nylon carpet</i> ; vacuum.
Vinyl floor covering	Wash with soapy water, rinse, and wax
Pre-finished paneling	Use furniture wax or polish
LP Gas System	Check for crimped tubing or other damage. Test for leaks with soapy water or check tester. Paint LP bottle as needed. Have pressure regulator checked regularly.
Water System	Check all hoses, fitting and connections for leaks. Clean tank discharge filter and sanitize system when necessary.
Electrical	Examine all wiring and connections.
Fire Extinguisher	Check pressure regularly and note on inspection tag.
Air Conditioner	Clean evaporator and condenser coils, filter and pan. Cover outside when not in use.
Wood surfaces (furniture, trim and pre-finished paneling)	Use good quality furniture oil. Follow label directions.
Painted parts & Surfaces	Use a good quality, non-abrasive automotive wax.
Fiberglass Surfaces	See manufacturer's instructions
Wheels	Use a good quality non-abrasive automotive wax.

Towing and Leveling Your Travel Trailer

When loading your Travel Trailer in preparation for travel, how you distribute the weight of your cargo is very important. Proper distribution of the cargo in your unit will help ensure efficient and trouble-free towing.

Loading the Travel Trailer as evenly as possible, with the weight of the cargo distributed evenly throughout the unit, and then weighing the loaded unit can help greatly in achieving proper distribution of the weight of the cargo. Keep your heavier items lower within the unit and distribute them evenly throughout the unit, front to back and side to side. If possible, secure your cargo so that you avoid shifts in weight distribution during travel.

DO NOT EXCEED the *Gross Vehicle Weight Rating (GVWR)* or the *Gross Axle Weight Rating (GAWR)* of your Travel Trailer. (The definitions of these items appear below.) If you wish to verify your *GVWR*, add the hitch and axle weights of the loaded unit. If this total exceeds the *GVWR*, then you must remove cargo until your unit weight is within the limit. If you wish to verify the *GAWR*, determine the axle weight of the loaded unit and compare with the *GAWR*. If you are above the limit, then you should re-distribute your load.

Weight Ratings: Definitions

GVWR: Gross Vehicle Weight Rating

This is the maximum weight allowable for your unit when it is fully loaded. It includes all weight at the unit's hitch and the unit's axles.

UVW: Unloaded Vehicle Weight

This is the weight of the trailer as manufactured. It includes all the weight of the unit at the hitch and the axles. If applicable, it also includes all generator fluids, generator fuel and any coolants required.

CCC: Cargo Carrying Capacity

This is equal to the *GVWR* less all the following: the *UVW*, full fresh water weight (include the water heater here!!), and full LP-gas weight.

GAWR: Gross Axle Weight Rating

This is the maximum weight that a complete axle system is designed to carry.

FEDERAL CERTIFICATION TAG

5RXTA182981016173

TIRE AND LOADING INFORMATION
The weight of cargo should never exceed 1083 Kg or 2385 Lbs.

TIRE	SIZE	COLD TIRE PRESSURE	SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION
FRONT	205/75R14C	50	
REAR	205/75R14C	50	
SPARE	205/75D14C	50	

FD-302

RECREATION VEHICLE TRAILER CARGO CARRYING CAPACITY
VIN: 5RXTA182981016173
THE WEIGHT OF CARGO SHOULD NEVER EXCEED
1083 kg or 2385 lbs.
CAUTION:
A full load of water equals 94 kg or 208 lbs of cargo @1 kg/L (8.3 lb/gal)

MANUFACTURED BY: CRUISER RV, LLC
HOWE, IN
DATE: 06/2008

GVWR 2660 KG(5860 LB)
GAWR ALL 1460 KG(3215)LB PER AXLE WITH 205/75R14C TIRE 14X5 RIM
AT 345 KPA(50 PSI) COLD SINGLE

THIS VEHICLE CONFORMS TO ALL APPLICABLE US FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

VIN: 5RXTA182981016173 TYPE: TRAILER MODEL X-189FBR FF

RVIA WEIGHT LABEL

TRAILER WEIGHT INFORMATION

VIN OR SERIAL NUMBER: 5RXTA242281015457

GVWR (GROSS VEHICLE WEIGHT RATING) IS THE MAXIMUM PERMISSIBLE WEIGHT OF THIS TRAILER WHEN FULLY LOADED. IT INCLUDES ALL WEIGHT AT THE TRAILER AXLES AND TONGUE OR PIN.

UVW (UNLOADED VEHICLE WEIGHT) IS THE WEIGHT OF THIS TRAILER AS MANUFACTURED AT THE FACTORY. IT INCLUDES ALL WEIGHT AT THE TRAILER AXLES AND TONGUE OR PIN, IF APPLICABLE. IT ALSO INCLUDES FULL GENERATOR FLUIDS, INCLUDING FUEL, ENGINE OIL, AND COOLANTS.

CCC (CARGO CARRYING CAPACITY) IS EQUAL TO GVW MINUS EACH OF THE FOLLOWING: UVW, FULL FRESH (POTABLE) WATER WEIGHT (INCLUDING WATER HEATER), FULL PROPANE WEIGHT.

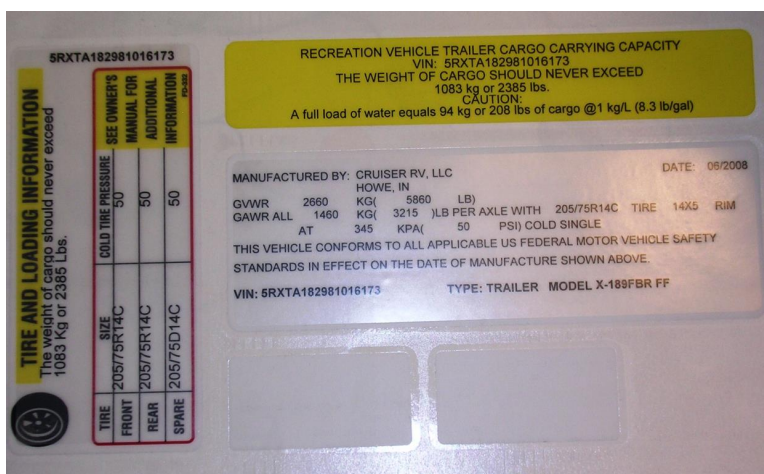
CARGO CARRYING CAPACITY (GVW MINUS EACH OF THE FOLLOWING)	POUNDS	KILOGRAMS
GVWR	7840	3556
MINUS UVW	Approx. 5080	2304
MINUS FRESH WATER WEIGHT OF 36 GALLONS (136 LITER)	299	136
MINUS PROPANE WEIGHT OF 14.28 GALLONS (54 LITER)	40	18
= CCC FOR THIS TRAILER	Approx. 2421	1098

*DEALER INSTALLED EQUIPMENT WILL REDUCE CCC
CONSULT OWNER MANUAL(S) FOR SPECIFIC WEIGHING INSTRUCTIONS AND TOWING GUIDELINES. CD-132

WEIGHT RATINGS LOCATIONS

Federal Certification Tag

The federal Certification tag, which contains the **GVWR**, **GAWR** (both front and rear), and tire pressure limits, can be located on the Road Side of the Travel Trailer hitch (see the diagram below).



RVIA Weight Label

The RVIA weight label is located in a kitchen cabinet above and usually to the right of the cook top, on the inside of the cabinet door. This tag indicates the **GVWR rating**, the **UVW** (unloaded vehicle weight), and the computation for **CCC** (cargo carrying capacity).



HOW TO WEIGH YOUR TRAVEL TRAILER UNIT

To determine the weight of a loaded Travel Trailer:

1. Locate a public weight scale.
2. Park your unit and disconnect it on the scale. Both wheels and jack(s) should be on the scale.
3. The reading will be the **Gross Vehicle Weight** of the Travel Trailer and should not exceed the **GVWR** as indicated on the manufacturer tag.

To determine Gross Axle Weight - Both Axles:

1. Leave the unit connected to the tow vehicle.
2. Be certain the unit is level.
3. Leave the tow vehicle off the scale.
4. Roll forward far enough so both the unit axles are on the scale.
5. The reading will be the total Gross Axle Weight for both axles.

To determine Gross Axle Weight - Each Axle

1. Leave unit connected to the tow vehicle.
2. Be certain the unit is level.
3. Leave the tow vehicle off the scale.
4. Roll forward far enough so only rear unit axle (two tires) is on the scale.
5. The reading will be the Gross Axle Weight for the rear axle.
6. Subtract the total Gross Axle Weight from the rear axle weight to calculate the front axle weight.

To determine hitch weight:

1. Subtract the total Gross Axle Weight reading from the Gross Vehicle Weight reading. This figure is the loaded hitch weight.

IMPORTANT: Determine hitch and axle weights with both the unit and the tow vehicle level.

- Hitch weight will be affected by leveling the trailer and tow vehicle.
- Have tire pressure up to specifications as indicated on the tire sidewall.

Consider load weights when determining weight distribution. Proper Travel Trailer positioning and loading are important not only for ease of hauling, but also for safety.

Heavier items should be placed over the axles. Avoid placing too much weight at the front or rear of the Travel Trailer. Excess weight in/on the rear of the unit can have a negative effect on the stability of both the unit and the tow vehicle.

Stability and weight can be affected if waste is in the holding tanks or water in the fresh water holding tank.

HITCHING YOUR TRAVEL TRAILER TO YOU'RE TOWING VEHICLE

Before towing, always be sure that:

- ✓ The TV antenna is down and in the correct position
- ✓ All park connections are disconnected and stored
- ✓ All doors, windows and awnings are closed and secured
- ✓ The entry step is returned to the "Travel" position
- ✓ Termination valves are closed and locked
- ✓ Check your tire pressure and the torque on your wheel lugs to meet manufacturers' specifications

Steps For Hitching Your Travel Trailer

1. Adjust the jacks until the Travel Trailer is level for hooking to the towing vehicle.
2. Place wheel chocks behind unit wheels.
3. Ensure that the lock is closed.
4. Connect the power cord between the Travel Trailer and the towing vehicle.
5. Connect the Breakaway Switch cable.
6. Check the lock, brakes, and all lights on the Travel Trailer.
7. Completely raise all the jacks.
8. Pick up and store your wheel chocks.

Tips for Safe Towing

Towing your Travel Trailer can be enjoyable and trouble-free if you pay special attention to safety each time you travel.

Before you head out on your first trip, practice turning, stopping and backing in a large parking lot, or a low-traffic area.

As you gain experience and confidence, traveling with a Travel Trailer in tow will be as easy for you as driving the family car.

Breakaway Switch

The Breakaway Switch is a safety device that provides a means of automatically slowing and stopping your Travel Trailer, should it become completely detached during travel. The cable from the breakaway switch should be attached to the towing vehicle so that it remains connected in the event that the Travel Trailer coupling detaches from the hitch ball. The Travel Trailer's 12-volt battery powers the breakaway switch. If separation occurs, the pin is pulled out of the switch and current from the unit's battery is applied to the unit's brakes, bringing it to a stop.

Tire Pressure

Another key to safe travel is maintaining proper tire pressure. The **cold inflation pressure** for each axle can be found on the *Federal Certification Label* (see page 10 in this Manual).

Cold inflation pressure means the pressure in the tire(s) prior to travel. **Always check your tire pressure before traveling. Under-inflated tires will cause extreme heat in the tire, leading to a shortened tire life and possible loss of control. Over-inflated tires can cause uneven wear on the tire and lead to early tire failure.**

Level Towing

Ensuring that the Travel Trailer and the towing vehicle are level with respect to each other will improve your towing and increase your safety. A hitch that is positioned too low can cause the front to drag. A hitch that is too high can cause the rear of the unit to hit high spots in the road.

Lights

Thoroughly inspect all your electrical connections to ensure that all lights on both the towing vehicle and the Travel Trailer are working properly. Brake lights, hazard lights, and turn signals should be synchronized with the identical lights on the towing vehicle.

Mirrors

Prior to your departure, adjust the mirrors on your towing vehicle as follows:

Line up the towing vehicle and the Travel Trailer Unit.

Sit in the driver's seat; adjust the left (road-side) mirror so that you can see the entire left side of the Travel Trailer and well beyond it.

Remain in the driver's seat. Have someone assist you by adjusting the right (off-road side) mirror so that you can see the entire right side of the Travel Trailer and well beyond it.

General Tips for Safe Towing

Driving with a Travel Trailer in tow is different than ordinary travel.

We recommend you *start out slowly*. Check the traffic after signaling your intention to enter the traffic flow, and *ensure that the road is clear*.

Accelerate slowly and evenly, checking your mirrors frequently, as you merge into the traffic lane. Try to drive in anticipation of potential problems ahead, and prepare for their eventuality even though they may not happen.

As a Travel Trailer driver sharing the road with other traffic, you are taller, longer, heavier, and you require more time and more distance to come to a stop. Road conditions and inclement weather will also require you to adjust your speed.

Anticipate dips, gutters, or depressions in the road, slowing down well in advance. These are the hardest jolts of any kind on your Travel Trailer, the hitch, or items stored in the unit. Drive over dips and bumps slowly, ensuring that the unit's wheels have passed the point in question before accelerating.

Backing Your Unit

Back up with care. Using an "outside person" for assistance is a helpful idea. If no one is available, we recommend that the driver closely inspect the area behind the unit in order to avoid any obstacles not seen through the mirror(s).

Braking

Always allow extra distance for braking and / or stopping. Ensure that the brake control is properly adjusted prior to the beginning of travel. **See the literature you received when you purchased your towing vehicle.**

Passing and Accelerating

Keep in mind that, when you are passing another vehicle, it will take you longer to accelerate. Additional time must also be allowed due to the added length of your Travel Trailer unit. **Passing should only be done on level terrain.** When making the decision to pass another vehicle, always exercise caution and **always use your turn signals.**

Steep and / or Long Grades

As you approach either a steep upgrade or downgrade, we recommend that you downshift into a lower gear in the towing vehicle. This adds needed power (in the case of a steep upgrade), and assists the braking process (in the case of a steep downgrade). *Avoid excessive and/or prolonged use of your brakes.* Apply and release your brakes in short intervals to provide them an opportunity to remain cool.

Narrow Roads and/or Sharply Winding Roads

Stay well in to the left, toward the center of your lane, equally away from both the road edge and the center line. This will help you ensure that your Travel Trailer does not “drop off” the edge of the pavement, potentially causing your unit to sway dangerously. *Do not overcrowd or cross the center line.*

Drive through all sharp turns at low speed. Begin slowing down well in advance of the turn, enter the turn at reduced speed, and then accelerate as your Travel Trailer has completely cleared the turn and is back on the straightaway.

Slippery Roads

When you are traveling on wet roads, remember that hydroplaning can occur with very little water on the paved surface. If you begin to skid, take your foot off the accelerator pedal and gently apply *the Travel Trailer brakes only.*

On pavement that you know to be icy, reduce your speed and drive slowly.

Traveling on Interstate Highways and Freeways

When traveling on multi-lane highways, either limited access or those with cross traffic, it is better to pick the lane in which you want to travel and remain in it. *For ultimate safety, we recommend keeping to the slower lane on the right.*

Cornering with your Travel Trailer

You must be aware of the fact that the wheels of your Travel Trailer unit *will not* follow the path of your towing vehicle's wheels when cornering. Your unit will make a turn of a smaller radius than your towing vehicle.

You will need to compensate for this by pulling the unit further into the intersection before beginning your turn. In this way, the Travel Trailer will clear the curb, or any parked vehicles along the roadway. Left turns will require a wider than normal swing into the new lane of traffic. This will keep your Travel Trailer from edging into the lane of oncoming traffic. *Use your turn signals* to communicate to traffic following you, and *slow down well in advance of the actual turn*.

Driving Through Mud and/or Sand

When driving through muddy or sandy areas, allow the momentum of the towing vehicle and your Travel Trailer, to carry you through the area. Gently add power as you travel through the mud or sand, and *stay in the tracks of previous vehicles*.

If you become stuck, tow the Travel Trailer and the towing vehicle out together, without unhitching.

Parking your Travel Trailer and Towing Vehicle

When possible, do not park on a grade with your Travel Trailer in tow. If it is necessary to park on a grade, turn the front wheels of your towing vehicle into the curb, and set your towing vehicle's parking brake. For added safety, it is advisable to put wheel chocks under the wheels of the Travel Trailer unit on the downgrade side of the wheels.

CRITICAL NOTE!!!

It is essential for safety that all wheels be torqued every 50 miles during the first 200 miles of road travel. Even though the wheels have all been torqued at the manufacturing plant before delivery to you, the settling-in of components during the first few miles of operation may cause some loosening of the wheel nuts. CHECK YOUR WHEEL NUT TORQUE!!!

How To Properly Level Your Travel Trailer Unit

Place your Travel Trailer on a site that is level, as much as possible. If you can find a site that is asphalted or otherwise paved, this will be of great help. Be sure that the ground is firm enough to support the full weight of the unit on the stabilizing jacks.

Before uncoupling the Travel Trailer from the towing vehicle, level the unit from side to side, by putting blocks on the ground in front of the unit wheels, and then tow the unit onto the blocks. *Chock the wheels to ensure that the unit does not roll when uncoupled.*

NOTE: It may be necessary to place pre-cut 2" X 6" blocks under the footpads to support the Stabilizer Jacks or A-Frame Jack, if the ground is not firm.

Using a carpenter's level, check the "level" of your Travel Trailer inside on the floor, both side-to-side and front to back.

After the unit is stabilized, take care to ensure that the unit frame is not stressed or twisted. Check that all doors and windows operate freely, without binding.

Before traveling, ensure that all the stabilizers are either removed or are fully retracted.

Equipment and Appliances in Your Travel Trailer Unit

What To Do If You Smell LP Gas!

- 1. Do NOT light any appliances!**
- 2. Immediately put out any cigarettes.**
- 3. Immediately extinguish any open flames.**
- 4. Do not touch any electrical switch.**
- 5. OPEN all windows and doors.**
- 6. Exit the Travel Trailer unit as quickly as you can.**
- 7. SHUT OFF the LP gas supply at the container (whether bottle or other source).**
- 8. Immediately call a Service Center or LP Gas Supplier from an OUTSIDE TELEPHONE, and follow their instructions.**
- 9. DO NOT turn the gas supply back on until you are assured that the leak(s) are repaired.**

WARNING!**WARNING!****WARNING!**

- ✓ **Do not use portable fuel-burning equipment, such as wood or charcoal grills or portable camp stoves, inside your Travel Trailer. Use of this type of equipment inside the unit may cause fire or asphyxiation.**
- ✓ **Shut off all your LP appliances when refueling your towing vehicle. Since most LP gas appliances are vented to the outside, gasoline fumes can enter the appliance through the venting system; ignite from the appliance burner flame, and cause explosion or fire.**
- ✓ **DO NOT STORE or use gasoline or other vapor-producing flammable materials in the vicinity of any of your unit's appliances.**
- ✓ **DO NOT place or store LP gas containers inside your unit. LP gas containers are equipped with safety features that relieve excess pressure by discharging LP gas into the atmosphere. An automatic safety discharge of LP gas inside your unit can cause explosion or fire.**

Air Conditioner (Optional Equipment)

Always refer to the equipment manufacturer's Owner's Manual for specific operating instructions on the Air Conditioning equipment.

Roof-mounted air conditioners are operated by the 120 volt AC power source, through a separate breaker. Remember that your Travel Trailer electrical systems are designed to handle 30 amperes of electrical current. When the air conditioner compressor starts up, it will use most of the 30 amperes available.

Because of this, it will be helpful to you to reduce other electrical loads as much as possible when using your air conditioning, to reduce the chance of circuit overload and trip the breaker.

The Capability of your air conditioning system in your Travel Trailer Unit

The capability of your AC unit to maintain the cool temperature that you desire is directly affected by the “heat gain” of your Travel Trailer unit.

During periods of extremely high outdoor temperatures, you can reduce the total heat gain of your Travel Trailer in the following ways:

- ✓ *Park your unit in the shade*
- ✓ *Close your blinds and drapes*
- ✓ *Keep windows and doors shut, and minimize usage*
- ✓ *Use your awnings to block direct sunlight onto the unit*
- ✓ *Avoid the use of heat-producing appliances as much as possible*
- ✓ *Turn the AC on early in the morning to give your unit a head-start in cooling.*

Care and Maintenance of the Air Conditioner

Approximately every thirty (30) days during normal use periods, remove the return air filter and wash it with hot, soapy water. During periods of heavy and extended use, we recommend cleaning the return air filter every two weeks.

Never run the air conditioner without the filter in place. The unit's evaporator cell can plug and reduce performance considerably.

Ensure that the air conditioner is "OFF" before plugging the Travel Trailer shore cord into an external receptacle.

Television Antenna

Always refer to the equipment manufacturer's Owner's Manual for specific operating instructions for the Television Antenna system.

The Television Antenna installed is designed for either color or black and white television reception. If your reception is poor, ensure that the Power Supply switch is "ON," and that all connections are tight. If reception remains poor, consult your local authorized dealer.

WARNING!!	WARNING!!	WARNING!!
Don't raise your TV antenna near overhead electrical wiring. Accidental contact may cause personal injury or death!		

Patio Awning (Optional)

Always refer to the equipment manufacturer's Owner's Manual for specific operating instructions for the Patio Awnings.

Your patio awning will be a very popular option on your Travel Trailer unit. It will provide protection, and additional living area at your campsite. The instructions for the awning option are included in your customer packet.

Please review the manufacturer's instructions carefully before using your patio awning.

Maintenance of Your Patio Awning

Keeping your awning clean and operating smoothly will be critical to obtaining an extended life for the awning. At the beginning of every camping season, and after extensive travel, inspect both the top and bottom brackets and tighten if needed.

Moving parts, such as the lift handle, rafter and support arms may become difficult to operate due to exposure to weather and use. Spraying these parts with a silicone spray will help greatly. To keep your awning operating smoothly, repeat this process on a periodic and regular basis.

A periodic cleaning of the fabric with a non-abrasive cleaner, and inspecting it for leaves or other debris before closing the awning can avoid mold and mildew on the fabric itself.

After cleaning your awning, allow it to dry completely before rolling it up. When it is raining, lower one end of the awning and allow the water to run off and not pool up on the fabric.

DO NOT ROLL UP YOUR AWNING WHEN IT IS WET. If necessary, unroll the awning as soon as conditions permit, and allow the awning to dry completely.

Whenever you leave your awning unattended, it is best to close the awning completely. Any damage to your awning caused by inclement weather is not covered under the terms of ^{the} Cruiser Limited Warranty.

An authorized repair center or Cruiser dealer should only perform repairs to your awning.

CABLE TELEVISION HOOKUP



If you wish to avail yourself of cable hookup during your travel, find the exterior hookup on the side of your unit. Attach cable to access hook-up and to the unit hook-up.

Ensure that the antenna power booster is set on “Cable” and not “Antenna.”

FANTASTIC VENT (OPTION)



The Fantastic vent operates on your 12 volt electrical system. Depending on your model, control of the vent may be by means of a thermostat-type control switch, or by controls that are mounted directly on the vent itself. *Refer to the instruction manual included with your informational packet for specific operating instructions.*

When you use your vent, close all other vents and open the windows on the shaded side of the unit. Air flow direction will be determined by which window(s) you choose to open.

NOTE: The vent dome must be opened at least three (3”) inches in order to activate the motor. A safety switch prevents motor operation if the vent is closed or open less than three (3”) inches.

FURNACE

Note: The furnace is a LP gas appliance. Please read the manufacturer's manual for all safety and operational instructions. This manual is included as part of your informational packet with your unit. Failure to read the user's information manual and follow the instructions could cause fire or explosion causing property damage, personal injury or death.

The furnace installed with your unit uses a sealed combustion system. The combustion chamber is completely sealed off from any contact with the interior atmosphere of your unit. All air for combustion is drawn from the outside, and all products of combustion are vented to the outside.

New furnaces may emit smoke and an odor during the first few minutes of your initial operation of your unit's furnace. This is the result of paint burning off the surface of the heat chamber. *This is not a malfunction, but is to be expected in a new unit, and may actually not occur, since the furnace may have already received a test run during Pre-Delivery Inspection at the factory.* Opening windows and the door prior to your initial lighting of the furnace will help you vent any odor or smoke.

GENERATOR (OPTIONAL) ON THE FUN FINDER XTRA

All maintenance or service of the optional generator you selected in your unit should be performed at an authorized service center, and in strict accordance with the manufacturer's recommendations.

Please refer to your manufacturer's manual, enclosed in the packet of information delivered with your unit.

NOTE: Be certain that the interior of your unit is adequately ventilated when your generator is in operation. Your generator produces Carbon Monoxide, an odorless and tasteless toxic gas. Although your unit contains a Carbon Monoxide detector, you should always take care that air flow is available from the outside when your generator is in operation.

MICROWAVE OVEN OR MICROWAVE / OPTIONAL OVEN

Depending on which Cruiser model you have purchased, you have received either a microwave oven, or a microwave/convection oven.

Many Cruiser Travel Trailers are equipped with microwave ovens. See manufacturers' instructions for operating and cooking details. These full feature ovens are made available to provide convenience. The camper must be powered through the 120-volt supply cord for ovens to work. If unit has an electrical water heater, it may be necessary to shut the water heater off when using microwave oven. Most vehicles do not have enough 120-volt power to supply the microwave oven and electric water heater simultaneously.

Maintaining your Microwave or Convection Oven

To clean the exterior surface of your oven or microwave, or the interior of your convection oven, apply a non-abrasive soap or detergent with a soft cloth or sponge. **Do not operate the microwave when it is empty.**

RANGE / COOKTOP

Your range or cooktop is an LP gas appliance. Please take care to read your Manufacturer's instruction manual contained in the information packet in your unit.

IF YOU SMELL GAS

- 1) **Do not light any appliance.**
- 2) **Immediately extinguish any flames, including lit cigarettes.**
- 3) **Open windows and doors**
- 4) **Do not touch any electrical switch in your unit.**
- 5) **EXIT THE UNIT.**
- 6) **Shut off the LP supply at the LP bottle or source.**
- 7) **Immediately call an authorized service center or gas supplier. USE AN OUTSIDE PHONE. Follow their instructions.**
- 8) **Do not turn ON the LP supply until the leak has been repaired.**

RANGE HOOD

Above the gas range is a 12-volt power exhaust hood with exterior vent. **OUTSIDE VENTS MUST ALWAYS BE OPEN WHEN COOKING.** The power range hood has a filter that must be cleaned or replaced periodically for efficient operation.



REFRIGERATOR

NOTE: The refrigerator installed with your unit is a LP gas appliance. Please carefully read the manufacturer's manual for all operating and safety instructions that are provide to you in the informational packet with your unit.



Operation of the Refrigerator

The appliance operates on either 120VAC or LP gas (with 12Volts required for lighting the pilot light). The cooling system is gravity-based.

For the most efficient operation of the refrigerator, the unit must be leveled. Failure to level your unit while using the refrigerator will result in a loss of cooling, due to the design and location of the cooling coils.

The refrigerator will continue to cool sufficiently during towing, even though the unit does not remain level at all times. The movement of your unit will ensure that cooling liquid is adequately circulated.

When starting up the refrigerator for the first time or after a period of extended storage, allow up to four hours for the cooling cycle to become completely operational.

Controls

See the manufacturer's manual for this appliance, in your informational packet with your unit, for complete instructions on controlling your refrigerator.

Auto Mode: The refrigerator control system will automatically select between 120VAC and LP gas operation. If 120VAC is available, it will always override the LP selection, and your appliance will operate on 120VAC. When 120 volts becomes unavailable, the appliance will automatically switch to LP operation.

LP Mode: When selected, this mode provides LP Gas operation only.

Maintenance of the Refrigerator

Appliance Exterior: Adequate ventilation of the appliance is essential. Ensure that your vents are free of obstructions of any type.

Approximately every ninety days, clean the coils on the back of the appliance. **Never store any combustible materials near the appliance.**

Appliance Interior: Clean the interior lining of the appliance with warm water. This includes the evaporators, shelving and ice trays. **Never use harsh chemicals to clean this area, or you may damage the surface of the area or the part.**

Defrosting the Appliance: Shut off the power to the appliance. Remove all contents of the refrigerator, and leave the drip tray under the evaporator area. Remove the light bulb from the appliance, and cover the switch with a piece of scotch or electrical tape. Leave the door open and empty the drip pan as required. Dry the interior with a soft cloth when finished.

A quality repair technician must perform all Service to the refrigerator.

ROOF VENTS

Cruiser RV installs manual and/or power roof vents on our Travel Trailer units.

For instructions on the proper use of the *FanTastic roof vent*, see the information provided in your packet of manufacturer's manuals.

Note: We recommend always operating the roof vents whenever you shower, bathe, and wash dishes or generally whenever hot water is in use. This will allow moisture to escape the interior of your unit. This proper ventilating is very important in reducing or eliminating the formation of condensation.

TIPS ON SAFETY

Egress Windows for EMERGENCY EXIT



“Egress” or emergency exit windows are installed, and are labeled from the window manufacturer with the word “exit.” Egress windows can be easily distinguished by the fact that the handles for operation are RED in color.

Depending on the type of window, an egress window may be a large section of a window, or an entire window.

ALWAYS instruct your guests in the location and use of these windows.

Emergency Escape Plan

You should develop an Emergency Plan for escaping the interior of your unit. Always make your guests aware of this plan, and it is a good idea to do a “run-through” of the plan before traveling.

Fire Safety

Fire safety is very important as you travel. Always follow the manufacturer’s instructions on the proper use of all your appliances, and observe the safety warnings that are included as a part of the instructions.

Fire Extinguisher

Each Cruiser unit includes a fire extinguisher, which is always located near the main entry door. Cruiser extinguishers are “multi-use” units, suitable for putting out fires that are caused by gasoline,

hot grease, flammable liquids, or electrical in nature. Always test and operate your extinguisher according to the manufacturer's instructions.

Smoke Detector

Cruiser units have a smoke detector in the living and cooking area. Always test your smoke detector prior to travel or camping, or weekly during the season. A standard 9-volt battery powers detectors.

ELECTRICAL SYSTEMS

The electrical systems in your Cruiser unit are 12 volt DC and 120V AC systems. Both systems are completely designed and installed to comply with ANSI codes for energizing recreational vehicles.

12 Volt DC System

The 12 volt system can be powered in three ways. You can use a separate RV battery; you can use the electrical converter in your unit that converts 120 volt AC to 12 volt DC; you can also use the towing vehicle's 12 volt DC system.

Certain lights, power vents, and some other appliances are powered by the 12 volt DC system.

The battery is the heart of the 12 volt DC system. Batteries store electrical energy, and release it on demand to energize your 12 volt appliances or lights. Batteries used in recreational vehicles are "Lead-acid" types. They contain lead plates and liquid acid in sections called cells.

Each time a battery is either charged or discharged, its total potential to store electrical energy decreases somewhat, because some of the liquid in the cells is lost. The level of the liquid (electrolyte) in

the cells must be kept above the plate in each cell. If the level of electrolyte is not maintained, battery failure can occur.

120 Volt AC System

The 120-volt system is energized by plugging your power cord (shore cord) into an outside source of electrical power. This furnishes required current to your 120V appliances, such as your roof air conditioners, refrigerators, some lighting and all 120V receptacles. It also supplies power to the converter, which changes the voltage to 12V DC for your 12 volt system.

The 120 volt AC circuits are all protected by circuit breakers and can handle from 15 to 20 amperes, depending on the circuit. The most common cause of a circuit breaker opening is an overloaded circuit (attempting to draw too many amperes of current through the circuit). If this occurs, reduce the total load on the circuit and reset the breaker.

Power Cord / Shore Cord

The power cord supplied with your unit (often referred to as the “shore cord,” is a heavy-duty detachable electrical cord. This cord is rated at 30 amperes.

Before plugging in your shore cord, be sure to turn off all electrical appliances so you are not starting under an electrical load. This could cause a breaker to open. Likewise, before unplugging your shore cord, turn off all appliances.

Keep your cord’s electrical terminals clean and rust-free. You can clean them with a contact cleaner or an emery cloth. All electrical connectors work best when clean.

NOTE: Be sure that the cord is completely unplugged before cleaning the contacts.

WARNING!**WARNING!****WARNING!**

DO NOT REPLACE THE FUSES OR CIRCUIT BREAKERS SUPPLIED WITH YOUR UNIT, WITH FUSES OR BREAKERS OF HIGHER CURRENT RATING. THIS CAN CAUSE WIRING OVERHEATING, AND IS A POTENTIAL FIRE HAZARD!!

WARNING!**WARNING!****WARNING!**

DO NOT ADD EXTENSION CORDS TO INCREASE YOUR TOTAL LENGTH OF SHORE CORD. THE SHORE CORD LENGTH PROVIDED IS DESIGNED FOR MAXIMUM SAFETY.

USING YOUR 30 AMPERE SERVICE EFFECTIVELY

The table below lists the approximate amperage requirements of your appliances. Note that if you choose to operate appliances that total more than the total available 30-ampere rating of the main breaker, the breaker will open to protect you and your unit. You can choose to use LP to power some of your appliances, in order to make more electrical power available for the operation of other appliances that are only electrically powered.

You may choose to call ahead to your selected campground to determine the electrical service available.

APPLIANCE USED	AMPS USED
Convection Oven	16
Microwave	10
Converter (depends on 12V load)	5-10
Electric Water Heater	10
Roof Air Conditioner	13-16
Refrigerator	3-5
Washer / Dryer	10
TV / VCR	1
120V light (2 – 60 watt bulbs)	1
Hair dryer	9
Curling Iron	3-5
Space Heater	10-15
Toaster	8-13
Coffee Maker	7

A Note about Campground Electrical Service

Electrical service varies between campgrounds. Do not assume that your unit is immediately compatible with the wiring at the campground. Check the polarity before plugging in. (Polarity checkers are available from your dealer). When reserving a site, ask what service is available. Maintain adapters for your own convenience. Ask your dealer or check at any RV supply store.

Low voltage can also be a problem, and can damage your unit's electrical systems like air conditioners, televisions, microwaves, etc. Voltage meters, and surge or brownout protectors are readily available from electrical supply stores and RV accessories stores. These will help you properly monitor the electrical service available to you at the campgrounds you select.

Electrical Converter



The purpose of the electrical converter supplied in your unit is to provide 12 volt DC power to your unit while you are plugged into a 120 volt AC outlet at a campground. The converter changes the incoming 120 volt electricity to 12 volt direct current (DC) to permit the operation of appliances and fixtures requiring 12 volt DC power. Utilizing the converter will reduce the load on the 12 volt DC battery.

The converter provides a slow charge to your unit's battery when the unit is plugged into shore power. When you are connected to the towing vehicle, the unit's battery will also be charging.

When you are using 120 volt AC power and the unit's battery is hooked up, check the level of liquid (electrolyte) in the battery more often than normal if you are staying connected to 120 volt AC for a long period of time.

Ground Fault Interrupter (GFI)



A "Ground Fault Interrupter" protects your unit's bathroom and all exterior receptacles. This device is designed to detect any sign of a

short to ground at these receptacles and will then instantly disconnect the current before any personal injury can occur.

Testing GFI Receptacles

All your GFI receptacles should be tested monthly, at a minimum, or prior to every trip you take. To test the GFI, push the TEST button. The RESET button will pop out. Power should now be OFF at all outlets protected by the GFI receptacle. Push in the RESET button to restore power. The RESET button should remain in the “in” position.

If the RESET button does not pop out when testing, the GFI is not functioning correctly and you should not use any outlets on this circuit until protection is restored. Call your dealer if you experience a GFI malfunction. Do not attempt repair yourself.

NOTE: The GFI protects against fault currents only. It does not offer protection against overloaded circuits.

Brakes

Included in your packet of manufacturers' information is an extensive manual provided by the maker of your unit's braking system, including axles, hubs and drums. Refer to this manual for information on any of these components or systems.

Breakaway Switch

The breakaway switch is designed to work in the unlikely event that separation occurs between the towing vehicle and the unit while traveling. As separation occurs, the pin is pulled from the switch. A circuit from the unit battery to the unit brakes closes, and the unit's brakes are activated immediately.

This switch is for emergency use only.

Maintenance of your Breakaway Switch

Do not allow the lanyard, which is connected to the pin, drag on the ground. Always inspect the condition of the lanyard prior to traveling. Ensure that your unit's battery is fully charged prior to travel, and the terminals are clean, since the breakaway feature operates from this energy source.

We recommend testing the breakaway feature prior to travel, as follows:

Testing the Breakaway Switch

- ✓ Be sure that the unit is properly connected to the towing vehicle.
- ✓ Disconnect the power cord from the Travel Trailer unit to the towing vehicle.
- ✓ Pull the lanyard pin out.
- ✓ Move the towing vehicle forward slightly, to ensure that the Travel Trailer's brakes have engaged and locked, and are operating properly.

LP SYSTEM

Be sure to read all the information on your LP appliances, including the LP bottles and regulator. These are provided in the packet of manufacturer's information that comes with your unit. Follow all the instructions.

Helpful Information about LP and its Use

LP gas, also called LPG (liquefied petroleum gas or liquefied propane gas) is a very clean-burning and dependable source of energy for operating many of the appliances found in your unit.

The LP gas system includes the bottle(s), also referred to as cylinder(s), regulators, valves, supply lines and appliances.

LP bottles contain liquid under high pressure, which vaporizes into gaseous form and passes through the regulator to reduce the pressure. Low-pressure gas is then delivered to your appliances and points of use, through the lines in your unit.

The amount of LP gas used depends on the frequency of use of your LP – energized appliances, and the duration of their use as well. The furnace and oven have the highest consumption rates.

During cold weather in your unit, it is recommended to keep one LP bottle full at all times, and check your level often.

Strict safety methods must be observed at all times when using your LP system. LP gas is colorless and odorless in its natural state. An odor (similar to rotten egg odor) is added to the gas for consumer safety purposes, to help you detect any leaks and provide warning of the potential presence of the gas.

WARNING!!

LP gas is very flammable and is contained under pressure in your tanks. The improper use of LP gas may cause fires or explosive situations. If you can smell a “rotten egg” odor (the odor of sulfur) in or around your Travel Trailer unit: DO THE FOLLOWING IMMEDIATELY:

- 1) SHUT OFF all operating appliances. Do NOT try to light any appliances.**
- 2) Immediately extinguish any open flames, including cigarettes.**
- 3) DO NOT TOUCH any electric switch.**
- 4) Open all windows and doors.**
- 5) EXIT the unit.**
- 6) SHUT OFF the gas supply at the gas container (your bottle or other source).**

- 7) Immediately, call a service center or supplier of LP gas from an outside phone, away from the unit. Follow their explicit instructions. DO NOT turn on the gas supply until the gas leak(s) have been repaired.**

The LP Regulator



The regulator is the heart of your LP system. LP gas is always under pressure in the bottle or source, and the regulator reduces the pressure to allow the safe use of the gas in the appliances in your unit.

This gas, under reduced pressure, is distributed to all the appliances that use it. The arrow on the gas regulator will always point to the gas bottle that is currently in service. When the red flag appears in the inspection glass, the bottle is empty. In systems with an automatic changeover, the arrow should be turned toward the other bottle, and the empty bottle should be replaced with a full bottle (or filled) as soon as possible.

Maintaining Your Regulator

Your regulator operates with a vent. Check the vent frequently. Keep it clean and free of corrosion, or any obstruction or debris. A clogged regulator will result in pressure elevating in the LP system, loss of fuel or outright failure of regulator components.

A toothbrush is a good tool for cleaning your regulator vent. Your regulator should also be checked periodically by a qualified LP service center.

DO NOT attempt to adjust or repair your regulator. Training and specialized tools are required for successful adjustments or repairs. Always contact a qualified LP service technician. **Failure to follow these instructions could result in fire, explosion, or injuries including loss of life.**

LP Pigtails

The LP bottle is connected to the unit's system with a simple connector that is to be hand-tightened (right-hand threads). **DO NOT** tighten using tools, and do not over tighten. The safety features of our system prevent LP gas from flowing unless the connection is sufficiently tight, and will limit the excessive flow of gas. (NOTE: In cases where extreme heat is present at the connector, the connection to the cylinder is automatically shut down.

WARNING!!

NEVER fill an LP bottle more than 80% full. Overfilling can lead to uncontrolled flow of gas, which can cause fire or explosion!

NEVER attempt to use natural gas with this system. USE Liquefied Petroleum (LP) gas only!

LP Gas Lines

Lines carrying LP gas to the various appliances in your unit are copper, and reach from the primary manifold to the appliance. If repairs are ever needed to these lines, or any component of the LP system, **DO NOT ATTEMPT** to repair yourself. Trained technicians at a qualified LP service center should perform repairs.

Although your LP gas system was thoroughly inspected for leaks before delivery, gas fittings can loosen from vibration during travel. The LP gas system should undergo a complete inspection at least annually.

LP Leak Detector



Be sure to read the operating instructions for the leak detector installed in your unit. These instructions are found in your packet of manufacturers' instructions.

The LP gas leak detector is a safety device that is mounted near the floor and is powered by 12 volt DC (either through the RV battery or the converter). The detector is operable only so long as sufficient power is available. If the power is disconnected, this unit will not operate.

If an LP leak occurs, the alarm on the detector will sound and continue until the gas has dissipated, or until the mute button is pressed. The alarm will continue to sound after a period of muting, if gas is still detected.

In very new units, it is sometimes possible for the alarm to sound, due to the odor produced by glues and other materials used in the manufacture of the unit. The alarm may also sound at times when no LP is present, due to the presence of some household products such as aerosol cleaners, hairsprays, or alcohol. **Ensure that your unit is aired out thoroughly after delivery, or when using these products.**

We recommend using a solution of mild dish detergent and water when checking for leaks in the LP system.

The LP gas leak detector has a self-checking circuit that runs continuously while under 12 volt power. In the event that this circuitry fails, a failure alarm will sound and the operating indicator will not be lit.

Testing Your LP Gas Detector

We recommend testing your leak detector on a weekly basis, or before each trip you take, or if you experience a power interruption. **The LP gas detector must be operational for at least 60 seconds before it can be tested.**

PLUMBING SYSTEM

General Information

There are actually two plumbing systems in your unit, one for the proper handling of fresh water, and the other for the proper disposal of waste water.

Fresh water for drinking and other uses is supplied by either the fresh water tank on your unit, or from an outside source connected through the city water or campground connection. When using the fresh water tank, the water is moved through the lines by the water pump. When you are hooked up to an exterior source, the pump is not used because the water is already under pressure and will easily flow through the supply lines in your unit.

The Water Pump



The 12 volt DC water pump is self-priming and completely automatic. It is designed to operate on demand. When a fixture is opened to draw water through the system, the pump draws water from the fresh water tank and provides pressure to the lines, bringing water

to the open fixture. **DO NOT** turn on the pump if your fresh water tank is empty.

Before You Turn ON the Pump Switch:

- 1) Check the level in the fresh water tank. If empty, refill.
- 2) Open your kitchen and bathroom faucets, hot and cold valves, and any shower / tub fixtures.
- 3) Check to ensure that the water heater by-pass valve is set to “Normal” to allow water to flow into the hot water heater.
- 4) Turn ON the switch for the pump. The pump will fill the water lines and the hot water heater tank.
- 5) After each faucet delivers a steady stream of water, close the faucet(s).
- 6) After the faucets are all closed, the water pump will automatically shut off.
- 7) The pump will now run “on demand” when a faucet is opened, and will stop when the faucet is closed.

WARNING!

Do NOT let the water pump run while your fresh water tank is empty. The pump can be damaged.

Fresh Water Tank



Your unit is equipped with a fresh water tank, usually gray in color. Tanks may vary in size according to product or model. The capacity of your fresh water tank appears on the RVIA Trailer Weight Information Label on your unit.

NOTE: The capacity rating for your unit includes the total of the tank, lines and hot water heater tank.

Filling With Fresh Water



Remove the cap on the exterior connection for “Fresh Water” and insert a garden hose. Check your Monitor Panel to determine the water level in the tank during filling. When the tank is full, water may spill out back through the valve; there is no automatic cutoff.

While you are filling the fresh water tank, you should also fill the hot water heater and the lines to provide yourself the maximum storage capability.

Remember - - when traveling with the water tank full, the capacity for carrying other cargo is reduced.

Also - - you should drain the fresh water system when it is not in use for more than one (1) week.

City Water Fill



The city water fill allows a direct connection to an outside source, such as the water source at your campsite. The water pump will not be used since the incoming water is already under pressure, and will bypass the tank and the pump.

Connect to the city water fill using a hose specifically manufactured for providing potable water. Open your faucets to purge any air in the lines or system.

Your city water fill is marked with a label.

Sanitizing Your Fresh Water System

It is critical to your full enjoyment of your unit to keep the fresh water system clean and free of any potential contaminants. We recommend sanitizing your system before your initial use, and annually thereafter. Also, if your fresh water system is unused for any prolonged period of time, we recommend sanitizing before reusing. This degree of care will help minimize the growth of potentially harmful bacteria in your system.

Sanitize your system as follows:



- 1) Completely drain the tank by opening the low-point drain on the fresh water tank.**
- 2) Using a chlorine bleach solution composed of $\frac{1}{4}$ cup of bleach to one gallon of water, for every 15 gallons of tank capacity, add the solution to the tank and then fill the tank with water.**
- 3) Open all faucets and leave them open until you can smell a distinct chlorine odor. Close all faucets and let stand for four hours.**
- 4) Drain the system and flush with fresh water until the chlorine odor is completely gone. (NOTE: If you have added a water filter, change it at this time.)**

Although your fresh water system was thoroughly inspected for leaks before delivery, fittings can loosen over time as you travel, from the vibrations of traveling. We recommend that you periodically check the fittings at the faucets and other visible connections and tighten them when necessary.

Water Heater

Depending on which model (DSI, Gas/Electric or straight LP) your Travel Trailer is equipped with will determine the proper lighting instructions. Please read the manufacturer's instruction manual for complete safety and operational instructions. This manual is found in your packet of manuals provided with your unit.

The water heater is a 6-gallon capacity heater on all Cruiser units. Prior to operating the water heater, be certain that there is water in the fresh water tank and in the water heater itself. Even a short period of operation of the water heater without water present can burn out the heater element.

Proper Maintenance of the Water Heater

Periodical inspection and awareness of the heater's condition is critical to proper maintenance. A qualified technician should do any repairs that need done. If soot is present anywhere, immediately shut down the unit and contact a qualified technician. (Soot is a sign of incomplete combustion and must be quickly corrected before continued operation of the water heater.)

Draining and Storage of the Water Heater

When not in use for prolonged periods, or during the winter months, the water heater must be drained to avoid freeze damage or deterioration of the tank from minerals found in water supplies.

To drain the water heater:

- 1) Turn OFF the power to the water heater, either at the switch or at the main breaker.**
- 2) Shut OFF the gas supply.**
- 3) Shut OFF the water pump.**
- 4) Open all fixtures throughout the unit (both cold and hot).**
- 5) If equipped with a by-pass valve, put the valve in the "Bypass" position.**



- 6) **Open the exterior door to the water heater.**
- 7) **Drain the heater.**

Monitor Panel

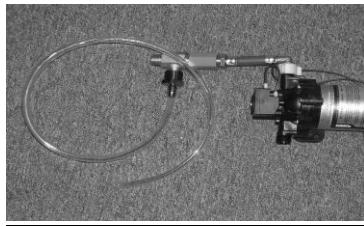


The Monitor Panel allows you to check the approximate level of liquid in the fresh water tank and the holding tanks. Several tanks can be monitored at the Panel, along with the battery charge condition.

Operation

Depress the proper button for the desired reading. The readout of different approximate levels for the tanks are “Empty,” 1/3, 2/3, or “Full.” All lights will be lit when the tank being checked is full.

Winterization of the Plumbing System



Certain components in your unit can be severely damaged from the effects of freezing. Proper protection of the plumbing system and its related components are crucial. Damages due to weather is not covered under warranty at any time.

WARNING!!

Do NOT use automotive anti-freeze for winterization of your unit. Automotive antifreeze is poisonous and not for use in potable water systems.

Many owners of Cruiser units elect to have their dealer perform winterization of their Travel Trailer. Others choose to do it themselves. Winterization of your unit can be done as follows:

1. Purchase and use **only RV approved, non-toxic anti-freeze** in a quantity sufficient to fulfill the following requirements.
2. Drain all tanks, fresh water and sewage, and low point drains both hot and cold.
3. Turn the water heater by-pass valve to the “by-pass” position.
4. Drain the water heater.
5. If you have a water filter, remove it from the assembly and discard.
6. Fill the fresh water tank to a level that is above the minimum water pump operating level, using RV non-toxic antifreeze. During the procedure, if it becomes necessary, add more to maintain this minimum level.
7. Turn ON the pump switch, and open the cold water side of all faucet fixtures. Leave the cold faucets open until anti-freeze comes out.
8. Repeat (7) for the hot side of all faucets.
9. Flush the toilet until anti-freeze begins to flow into the bowl. Pour about one gallon of anti-freeze down the toilet to winterize the black tank.

10. Pour anti-freeze down each shower/tub, lavatory sink, and kitchen sink in order to fill the P-traps.
11. Pour about one gallon of anti-freeze down each sink drain to winterize the grey tank.

De-Winterization: (Removal of Anti-freeze)

If you have purchased a winterized unit, or if you have winterized your unit and now wish to prepare your plumbing system for use, then follow the steps listed below to flush and sanitize your system.

NOTE: Do NOT turn on your water heater if your system is winterized.

1. Drain all fresh water and sewage tanks.
2. Attach a garden hose to the fresh water fill and fill the fresh water tank.
3. Turn ON the pump and open the cold water side of all faucets and shower fixtures. Leave them open until the water runs clear.
4. Repeat (3) for hot water.
5. Flush the toilet until the water runs clear into the bowl.
6. Empty all tanks again.
7. *Sanitize* your system. (See instructions on previous pages of this manual).
8. If a water filter is installed, drain all lines, remove the filter assembly, clean and reinstall with a new filter.

9. When you are ready to use the hot water heater, turn the by-pass valve to the “Open” position so water can enter the hot water heater tank. Fill according to instructions.

NOTE: Wastewater tanks must always be dumped at state approved locations.

The Waste Water System

The waste water system inside your unit is self-contained while you are on the road or set up at a campsite. The main components of the system are the toilet, holding tanks, and tank dumping valves.

As in residential systems, the drainage system also includes P-traps and vents to allow for the escape of odors and gases.

Toilet

The toilet operates either from water from the fresh water tank or from an exterior supply connected at the city water hook up of your unit. When you are using the water from the fresh water tank, the pump must be turned ON.

The toilet flushes directly into the black tank. Instructions for the care of the model installed are found in your unit’s packet of manufacturers’ information.

Build-up Of Solids in Your Waste System

One of the most common problems associated with the waste system of a Travel Trailer unit is build-up of solid material. Using a lot of water when flushing the toilet and keeping the tank valves closed until you are ready to flush the system can help reduce solids build-up.

Avoid putting any of the following into your toilet or drains:

1. Paper towels, facial tissues or sanitary products, including those that are labeled flushable.
2. Bleach or detergents. Use a sewage tank deodorizer, available from your dealer.
3. Automotive anti-freeze, ammonia, alcohols or ketones.
4. Cooking grease, table scraps or other similar solid material.

Holding Tanks

Wastewater can be divided into two categories; *black water* and *grey water*. The term *black water* refers to waste that is flushed down the toilet and is stored in a separate tank called the *black tank*. *Grey water* is the wastewater from sinks, shower and tub drains and is stored in the *grey tank*.

The dump valves should be left closed even if connected to an exterior sewer hook-up. **Empty your tanks only when they are full or nearly so.**

This will help facilitate flushing solid waste, by sending the largest volume of water possible through the tanks and hose.

Instructions for Dumping

1. Twist off the outlet cap.
2. Connect the sewer hose by turning counterclockwise, thus locking the end levers over the termination end.
3. Place the other end of the sewer hose into a state-approved dump station inlet.
4. OPEN the black tank termination valve and drain the tank.
5. OPEN the grey tank termination valve and drain the tank.
6. CLOSE the termination valves.
7. Disconnect and store the sewer hose.
8. Replace the cap on the outlet.
9. Add chemical breakdown agent and/or deodorizer approved for RV use.
10. Add about 5 gallons of water into the sewage holding tank. This will help prevent build-up of solids.

SLIDE-OUT ROOMS

Tips About Slide-out Rooms

Always be sure that your batteries are all properly maintained and fully charged. This will avoid generating problems associated with low voltage. Try to limit the amount of 12 volt lights and appliances in use when you are operating slide-out rooms.

The unit must be level to avoid binding the slide rooms. *Leveling jacks are not capable of supporting the weight of your unit, but are intended to maintain a level condition.* If your unit is not level, damaging strains can be put on the slide-out mechanisms.

Over time, atmospheric conditions can cause your rubber seals around the slide-out rooms to deteriorate. These seals should be regularly inspected and replaced at the first sign of any problem. This routine maintenance is the responsibility of the owner.

Slide room adjustments and leveling are the responsibility of the owner. Professional setup, adjustment, and the regular replacement of the rubber seals will greatly extend the life of your unit.

Maintenance and Proper Care of Slide-Out Rooms

Questions about proper maintenance of the slide-out mechanism should be directed to the manufacturer of the hydraulic system. The instructions provided by this manufacturer are included in your packet of information, provided with your unit.

The Optional Home Entertainment Center

If you have selected the optional Sony Home Entertainment Center for your unit, please see the detailed instructions for operation of the components that are found in your packet of information provided with the unit.