

## ☞ What to Expect from Your Manufacturer's Warranty ☞

Recreational Vehicles and the RV business are a relatively young industry. The RV manufacturers assemble thousands of units a year, by people who assemble thousands of parts from hundreds of different suppliers. Coupling that with the complexity of the RV, it can create a difficult and trying warranty experience. Most RV buyers are accustomed to the auto manufacturer or power sport warranty experiences, which are quick, concise and responsive. Unfortunately the RV business is not capable of providing an experience that mirrors those industries. Unlike the auto industry, who builds and supplies their major components, the RV industry relies on many outside sources for their major components and each supplier has different warranties and supply capabilities. What this means to **you** is sometimes a specific part may be hard to procure and this can cause delays in repairs. RV manufacturers and dealers do the best they can to keep parts and supplies available during the warranty period but the average turnaround time is about 3-4 weeks, if the part has to come directly from the manufacturer. If the part is interchangeable, i.e. light bulbs or electronics, the turnaround time can be faster.

## ☞ What to Expect From Big Sky RV and the Service Department ☞

Please try to remember that Big Sky RV's service department can be very busy and we try to accommodate all of our customer's needs and issues we can experience scheduling conflicts. We will always make time to take care of our customers with pressing problems, like safety issues or problems that would prevent the use of the RV. We also try to keep our customers informed during the process and ask that you please be patient with us if we are not able to service your unit immediately.

Big Sky RV is proud to announce that we are operating a Warranty Service Center in Billings! This service center is an outlet WARRANTY SERVICE CENTER ONLY. It is a small Service Center with limited space and capabilities but employs experienced and trained RV Technicians that will be able to service any of your warranty needs. However, there are and will be times that Bozeman's RV Service Center is and will be more capable of servicing certain warranty issues. We will always try to keep you informed and discuss prior to your warranty service appointment.

***The busiest time for either Big Sky RV's service center is from April to August.***

During the summer months, our service schedule can be up to 5 weeks out, but if there is an emergency, we will do the best that we can to accommodate you. After August, you will find that we can more easily accommodate our customers for quick adjustments and repairs.

*Note: Many manufacturers do not cover a lot of the minor adjustment repairs under their warranty policy. Often, this will have to be discussed with the manufacturer prior to the repair. You can also refer to your owner's manual for more specific warranty information.*

To help the Big Sky RV service team fix any problem that you may have, try to be as specific as you can when describing the issues. Example: If you have a water leak, cite the circumstances the leak occurs under and the exact location you see the water leaking from. If the issue occurs intermittently, provide as much detail about the circumstances as possible. *Note: Big Sky RV is not responsible if the service department is unable to duplicate the problem at the time of service.* The more information you provide to the service writer, the more likely we will be able to duplicate the situation, and repair the problem. Please keep in mind that there are many easily identified common issues with RVs but many can be elusive and difficult to diagnose which can cause a frustrating service process.

A few things to keep in mind when it comes to **off-site** repairs:

1. Most RV manufacturers do not pay for any off-site repairs. Most RV manufacturers require that you deliver the unit to an authorized repair facility.
2. Service calls are reserved for emergency situations only, such as, safety issues or problems preventing the unit from being brought in to the dealership.

### ⌘ Service Policies and Disclaimers ⌘

1. The Service Department operates on a first come first serve appointment system; however, there are situations that do warrant a quicker response. Also, it is Big Sky RV's policy to serve our sales customers first, then other dealers' customers.
2. Any service performed by Big Sky RV is to be paid for when the service performed is completed, whether the RV is picked-up or not.
3. Big Sky RV is **not** a storage facility. Any service units left on the lot for more than **10 days** after the service is completed will be subjected to a **\$15.00** per day storage fee. Prior arrangements must be made with Big Sky RV management to leave the unit on the lot for extended periods of time.
4. Big Sky RV is not responsible for denied warranty claims. It is the customer's responsibility to fully understand their original manufacturer warranty. Refer to your owner's manual or the manufacturer for specific details regarding your warranty. We will do our best to pre-authorize the repairs and provide documentation in the case of an owners warranty reimbursement.
5. Big Sky RV is not responsible for any damage that occurs outside of our control while the RV is on our lot.
6. Big Sky RV is not responsible for delays caused by the unavailability of parts or shipping delays.

***All units will at some point need a varying degree of repair. Recreational Vehicles are "Homes on Wheels."***

***Big Sky RV is not responsible for refunding or replacing RVs for any reason; however, it is our responsibility to repair the RV in accordance with the manufacturer's warranty.***

***Big Sky RV does not provide warranty on used units unless stated in writing. Some used units may qualify for certified used programs, and extended warranty coverage.***

***Big Sky RV does not guarantee tire condition nor provide tire warranty. It is the customer's responsibility to check pressure and condition of tires before every trip.***

***Big Sky RV will test all the major systems, and appliances, and will show you the proper use and operation on the day of delivery.  
Big Sky RV provides no written or stated warranty.***

***Big Sky RV does not and will not preform Warranty Maintenance on any RV Product not sold by Big Sky RV. Please understand that we are a Jayco/Starcraft dealer and like your Ford you can not take it to a GM Dealership for warranty.***

## ❧ Winterization ❧

***All Recreational Vehicles must be winterized if they are going to be stored in cold climates!***

Some RV's do have the features that allow the unit to be used in cooler weather, however, YOU MUST HAVE THE FURNACE ON AND RUNNING AT ROOM TEMPERATURE (65 – 75 degrees Fahrenheit). If your RV is equipped with the electric tank heater option, the furnace still needs to be operating. The electric heater only heats the holding tanks, not the plumbing. If there is fluid in the plumbing, and it freezes, it can cause the water lines to break. *NOTE: It is the customer's responsibility to fully research and understand their RV's cold weather capabilities.*

**Big Sky RV is not responsible for freeze damage of any kind. Also, your manufacturer warranty does not cover freeze damage. Refer to your owner's manual or consult with a Big Sky RV sales consultant for a product's cold weather capabilities.**

Although most RV's do have the equipment and features to assist with the winterization process, some don't. It is Big Sky RV's recommendation that you read your owner's manual or ask a Big Sky RV service employee for product specific winterization procedures.

## ❧ Winterization Procedure ❧

You will need approximately 2 gallons of RV antifreeze.

See diagram below for assistance (pg. 6)

1. Drain all tanks including the fresh water, grey water and black water tanks.
2. Drain the hot water tank by pulling the drain plug. Make sure you release the pressure ring while draining. The plug size varies with brand, but usually is between 7/8" and 1-1/8". *NOTE: If the hot water tank is a 110 volt, it must be turned off prior to draining the tank. Failure to do so will cause the 110 volt element to fail.*

**Tip:** To locate your water heater, find the a door that looks similar to the one photoed here on the exterior of the RV. To locate your water heater valves, go inside the RV where the back side of the water heater should sit. You might need to remove a basic screwed in or a slide panel to access the water heater.



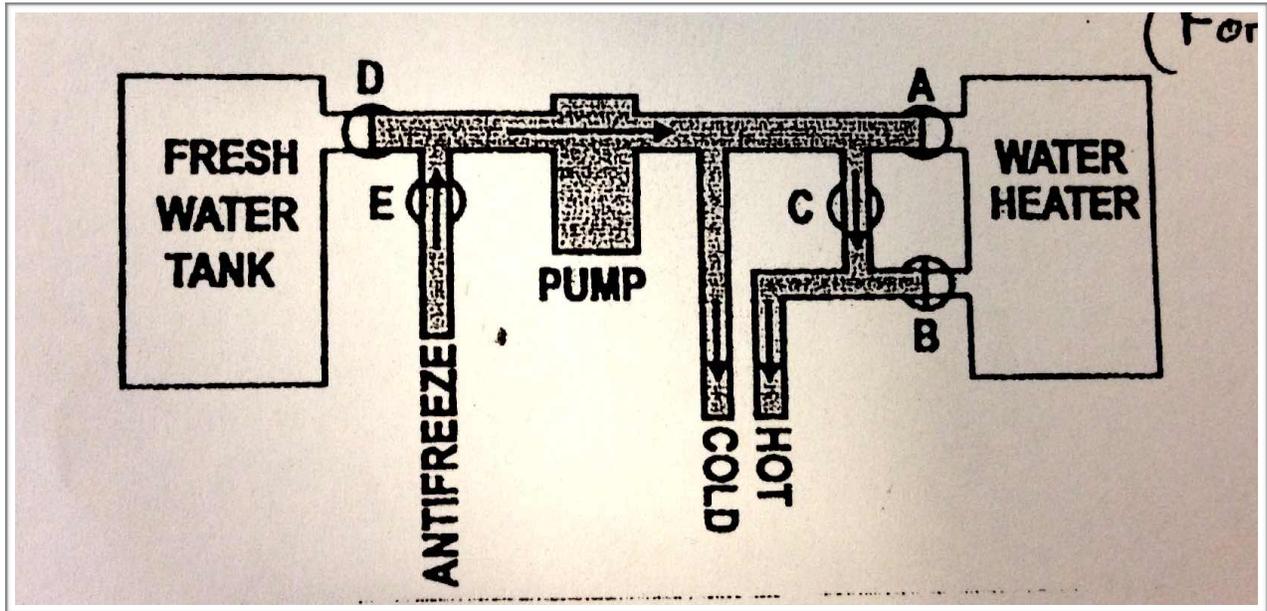
3. By-pass the hot water heater. The Hot Water Heater by-pass is designed to allow the water system to isolate the hot water heater. This allows water to flow through the system, but does not allow fluid into or out of the hot water heater. Most products have a provision for this. If yours does not, consult a Big Sky RV service or parts employee for by-pass options.
4. Find the water pump and do one of the following. (1) If the pump has a by-pass, place the clear vinyl tube into a gallon of RV antifreeze and start the water pump. (2) If the pump does not have a by-pass, disconnect the hose from the suction or tank side of the pump.

Attach a hose to the suction side or tank side of the pump, and place the end of the hose into a gallon of RV anti-freeze. Start the water pump. *NOTE: Never put RV antifreeze into the fresh water tank. It is very difficult to completely remove the antifreeze.* Consult your owner's manual or a Big Sky RV service employee for more specific hose location and operation.

5. Turn on both the hot and the cold water on the kitchen faucet. Run the water until pure antifreeze come out of the faucet. Turn off the faucet.
6. Continue the process in Step 5 to all the faucets in the RV. Make sure you do each sink on at a time, and don't forget the outside shower.
7. Open the toilet ball valve until pure antifreeze comes out of the valve.
8. Take the hose out of the antifreeze.
9. Let the water pump run until you hear a gurgling noise.
10. SHUT OFF THE WATER PUMP.
11. Open all the faucets in the coach.
12. Block the toilet valve open.
13. Drain off all water in holding tanks completely.
14. Open all gate valves.
15. Place cap on sewer connection.
16. Pour some extra RV antifreeze down the P-traps, approximately 1 pint per P-trap.

If your RV has a washer/dryer and /or an icemaker, please consult a Big Sky RV service employee. The above procedure above will not be adequate.

## Basic Winterization Valve Diagram



Valve A - Cold Water Intake

Value B - Hot Water Out

Valve C - By-pass valve

Valve D - Shut off for fresh water

Valve E - This is the pick up valve and hose (in available on your RV) for Anti-freeze.

*Note: If you are experiencing hot water for a moment then cold or just lukewarm water when your hot water faucet is turned on, check that you By-pass Valve (or Valve C in the diagram) is closed.*

**Big Sky RV is not responsible for damage resulting from improper winterization of the water system. This serves only as a guide to basic procedure.**

## ❧ Hitching and Towing ❧

### **Brake Control:**

*It is Big Sky RV's policy that every unit bought from Big Sky RV that is equipped with brakes, **must** be towed with a vehicle that has a operating brake control.*

Please keep in mind, that brake controls do require adjustments to suit the combination of the tow vehicle and trailer and the driver's preferences. Please consult your brake control manual or a Big Sky RV service employee for further questions about adjustments.

### **Break Away Switch:**

The breakaway switch is a small electrical black box that is connected to the tow vehicle with a cable. It is designed to apply the brakes on the unit if the RV should ever disconnect while towing. By pulling the cable, the brakes will automatically activate. Typically, the switch box can be found on the pin-box for a fifth wheel or on the A-frame for a travel trailer. *NOTE: For the brake away switch to work, the cable **must** be connected to the tow vehicle **and** the battery cables must be connected to the RV.*

TIP: If you are having trouble with the electric brakes, always check the breakaway switch first.

### **Travel Trailers:**

Today most travel trailers are well balanced for travel, however many tow combinations (tow vehicle and trailer) still require a weight distribution hitch. *Big Sky RV's strong recommendation to all travel trailer owners is, **all travel trailers should be towed with a weight distribution hitch.*** A weight distribution hitch is designed to equalize the tongue weight between the trailer and the tow vehicle. If properly used, the hitch can help to eliminate sway, but in some cases; a sway control may be needed. Refer to your owner's manual or a Big Sky RV service employee about weight distribution hitch adjustments and other available towing products.

*TIP: If you experience "swaying" while towing, you may need to adjust your weight distribution hitch. If the adjustment is unsuccessful, ask about a sway control.*

*NOTE: Turning too sharply and/or over rotation can cause damage to the trailer. **It is the owner's responsibility to be fully aware of the tow vehicle and the travel trailer's turning capabilities.***

### **Fifth Wheels:**

There are many products available when selecting the right towing equipment for you. However, many of the same rules and tips for travel trailers apply to fifth wheels. First, some truck and trailer combinations have a limited turning clearance. Again, **it is the owner's responsibility to be fully aware of the tow vehicle and the trailers capabilities.** Big Sky RV is not responsible

for any damage resulting from over rotating the truck/fifth wheel combination. *NOTE: If you have a **short box pick-up**, often, you will experience a smaller turning radius. You may also require special towing equipment.* Secondly, always test your fifth wheel hitch for full positive engagement. To hook up to your fifth wheel:

1. Back-up the truck until the hitch engages the king pin.
2. Lock the hitch into the engaged or locked position. *Note: Some styles of fifth wheel hitches will automatically lock in the engaged position.*
3. Before lowering the trailer weight on to the hitch, put the truck into drive and *ever so slightly* check that the hitch is in fact fully engaged.
4. Lower the fifth wheel and raise the jacks making sure you **don't** run the jacks all the way up. Doing so may cause damage to the jack gears.

Refer to your owner's manual or a Big Sky RV service/parts employee for specific questions about your brand of fifth wheel hitch.

### **Fifth Wheel Clearance:**

Each fifth wheel – truck combination clearance (the distance from the truck box to the fifth wheel) is going to vary from combination to combination. It is up to the customer to properly research the proper match. Consult a Big Sky RV sales/service representative for hitch and/or axle adjustments. *Big Sky RV is not liable for damage caused by improper clearance. Even with the proper clearance it is **possible** for the trailer to come in contact with the truck.*

## **↻ Stabilizer Jacks or Electric Stabilizer Jacks ↻**

Many travel trailers and fifth wheels come equipped with stabilizer jacks. **Stabilizer jacks are not leveling jacks!** The jacks are designed to stabilize the unit, not raise or lower the unit. To achieve proper leveling, you may need to use leveling blocks. *NOTE: Recreational Vehicle refrigerators require the unit to be level for optimum performance (see LP System).* Refer to your owner's manual or a Big Sky RV service employee for proper operation of your stabilizer jacks

Electric Stabilizer Jacks offer RVers quick set-up or tear down at camp sites. Simply park your RV, level the unit, plug in to your electrical system (if applicable) and press the button till the foot pads come in contact with the ground and the unit is stabilized. Do not press the button longer than needed. Always remember to retract your rear stabilizer jacks prior to operating the front tongue jack or fifth wheel landing jacks. Similar to the manual jacks, electric jacks will not level the RV. Doing so can and will cause damage to the electric motor and/or will bed the jacks themselves. If for some reason you loose power to your jacks or they are not operating correctly, cut power to the motor, insert the manual crank handle and operate manually.

***Tip: Carry with you stackable leveling blocks to help you level at uneven camp sites and to use underneath your jack foot pads if the ground is soft.***

## ⌘ Electric Tongue Jacks ⌘

Electric Tongue Jacks are a common feature on today's RVs and allows RVers to hitch and un-hitch from their RV with very little physical exertion. Simply press the button to quickly and effortlessly raise or lower the trailer. Electric Tongue Jacks do require 12 volt power and depending on how your jack was installed, there might be a OEM 30A fuse attached. If your jack does not have power make sure you check the fuse. Also, take note that many electric tongue jacks will blow the fuse if you run the jack to max height. If you have lost complete power, each jack has a small rubber plug on the side that can be removed and a manual crank handle can be used. Always turn off your Jack when not in use to prevent a drain on your batteries. *NOTE: Always release the up/down switches when the clutch noise occurs. Failing to do so will cause damage to your Electric Tongue Jack!*

## ⌘ Awnings ⌘

RV awnings are a great option to have on your RV. They provide a shady, dry place to enjoy the outdoors during camping. However, many owners fail to understand the ability of their awning to withstand wind. Imagine your extended awning as a large sail, any gust or type of wind will push on the awning cloth, just like a sail. This can cause **damage** to the awning cloth and/or the awning hardware. For this reason, awning manufactures do NOT warranty wind damaged awnings under any circumstances. Another mistake often made is improperly storing or retracting the awning for travel or storage. Failure to do so may cause damage while traveling and in some extreme cases damage can occur while the unit is parked.

### Caring for Awning Fabric

One of the best ways to keep the fabric looking good and to delay the need for a deep or vigorous cleaning is to hose the awning fabrics off on a monthly basis with clean clear water. This practice will help prevent dirt from becoming deeply imbedded in the fabric. In most environments, a thorough cleaning will be needed every two to three years. When it is time for a deep clean, you can leave the fabric on the awning frame. Use either cold or warm water that is never more than 100 degrees Fahrenheit with a mild, natural soap, not detergent. *Note: Do NOT use oil based cleaner or any caustic, granulated, or abrasive type cleaners on your awning fabric.* Then gently scrub the awning fabric. If you have a Vinyl Fabric Awning use a soft brush. If you have a Acrylic Fabric Awning use a stiff brush. After you are finished scrubbing, rinse off the soap and allow the fabric to dry thoroughly before rolling up the awning.

Watch for Mildew. Mildew is a fungus that looks like dirt. Vinyl-coated polyester fabrics are mildew resistant due to a chemical biocide in their coating and under normal circumstances and conditions, mildew will not appear. However, in areas where high temperatures and humidity are common, mildew will appear and will require the material to be washed more frequently. Use the tips above to clean the mildew from the RVs awning.

### Tips and Checks for Using and Storing the Awning

All manual awnings have a drum ratchet (imagine a socket ratchet) designed to allow the awning to “retract” or “extend”. To extend the awning, this lever has to be placed in the proper position. The awning should be labeled at the lever to indicate which position is for “unlock” or “locked.”

**Extending Your Awning:** When the lever is in the extend position, the drum will rotate in one direction only, allowing the awning to roll out but not back in. As the awning is extended, you will hear a ratchet/clicking noise. Keep in mind, the awning has a powerful spring inside the drum that will assist in the retraction of the awning; therefore you will experience some resistance as you pull to extend your awning. Always keep a firm grip on the awning strap. You should only release the strap once the extending process is complete and you have checked that the ratchet is catching and the awning does not try to roll back in. Once the awning is fully extended, follow the procedure to raise the support arms.

**Retracting Your Awning:** First, loosen and slide the support arms from the extended position and back to the storage position. Firmly grasp the black awning strap and then reverse the position of the awning drum ratchet to allow the drum to retract or roll in. Keep in mind you may need to pull down on the strap in order to release the pressure on the ratchet, which will allow the ratchet lever to change positions. Once the ratchet direction is reversed, the awning will retract automatically. Depending on the age, brand and style, the awning may have a lot of spring or just enough for the awning to retract. **Never** let go of the awning strap, doing so may cause damage to your awning and/or hardware. Once the awning is fully retracted, replace all the travel security locks. Remember to leave the ratchet lever in the locked position! Refer to your owner’s manuals or to a Big Sky RV service employee for operation of the travel/security locks and support arm operation.

Remember wind damage and/or travel damage is **NOT** covered by warranty even if you have an electric awning that has a wind sensor! If you have any questions about the proper operation and use of your RV awning, ask a Big Sky RV service employee for clarifications.

## ⌘ Batteries ⌘

Recreational vehicles employ a two part electrical system. The first system is the 12-volt system. This system will operate almost all the electrical systems (i.e. lights, furnace, water pump etc). The second system is the 110-volt system, which runs the microwave, air conditioner and any other 110-volt appliances. This system also includes the converter, which is designed to convert 110-volts into 12-volts. This enables the 12-volt system to run, and also charges the batteries in the process. Don't confuse RV batteries with the batteries in your car or truck. Auto batteries are designed for a quick, large power draw (i.e. starting the engine), where as RV batteries are designed for a slow, and small power draw (i.e. running the lights for hours). Therefore, RV batteries need to be charged slowly. On average, it will take anywhere between 6-18 hours, figure approximately 3-5 amps per hour for a battery to completely recharge.

Most converters do not have a charge controller. Therefore, if the unit is left plugged in for an extended period of time, the battery will be subjected to a 3-5 amps per hour charge. This can cause the battery to lose battery fluid, which will decrease the battery's ability to retain a charge. Consider also RV batteries can go dead in 3-4 weeks if not plugged in. This is caused by the constant small draw on the battery by the LP Gas/Propane detector and clock radio. If your TV antenna booster is left on, your battery can go dead in a few days. Consult your batteries manufacturer for more specific information about storage and warranty.

*Big Sky RV is not responsible for any failure not covered under the batteries **original** warranty.*

If you remove the battery(s) while you are storing the unit, make sure the batteries are on a piece of wood in a heated area. Batteries that are exposed to extreme cold will freeze and will be damaged as a result. Typically, if properly stored, a RV deep cycle battery should last 3 or more seasons.

**Helpful Tip:** Today's RVs run a 30 amp Fuse at or near the battery or battery boxes. You can typically find it on the positive cable that runs to your battery. If you are sure your batteries are charged, yet you do not have power to your RV, double check that your fuse is still good.

**Reminder:**

*Don't forget to check the water level in the batteries during the camping season!*

## ☞ Holding Tanks – Fresh Water System, Sanitation and Flush ☞

Your new RV has a three part Water System. (1) A portable fresh water holding tank with a pressure demand 12-volt water pump. (2) A city water (water hose) connection that provides water to the system which bypasses the fresh water holding tank and the water pump to supply your fresh water. (3) Waste water holding system designed to capture and hold all waste water.

**Portable Water Tank System:** The portable water tank system is a relatively simple system. It consists of a plastic holding tank which is filled by either a gravity fill system and/or a pressure fill system, which requires a hose to be connected to a fitting and a valve turned to the fill position. Regardless of how the tank is filled, the tank will be drained by gravity. There will always be a valve to drain your tank. Normally, it will be located by a white plastic petcock style drain. If you are having trouble locating the valve, find the tank itself, which will often be positioned very close to the fill receptacle. The drain will be in one of two locations: (1) under the trailer in the approximated location of the tank itself, or (2) in the compartment where the tank is located. If the tank is above the floor of the RV, 95% of the time the drain will be inside the RV next to the tank. If the tank is below the floor, the drain will be underneath the RV. If you are still having trouble, ask a service employee of Big Sky RV. Always remember to drain your fresh water tanks between each use. This will prevent any stagnation that can cause water to taste and/or smell bad.

*TIP: You can sanitize/shock your RV fresh water tank with a small amount of chlorine bleach, 1-tsp for every 40-gallons of water. Running the solution through the entire fresh water system can prevent or reverse the bad taste or odor caused by stagnation. **DO NOT mix bleach with ammonia! As this combination can create a toxic/poisonous gas!** Always make sure your water system is ammonia free prior to using chlorine bleach for sanitization. Also, remember to flush the bleach solution out **completely** prior to using the water system.*

**NOTICE:** water left in the RV's fresh water tank can smell or taste bad after a week or two. DO NOT be alarmed! Simply run the water through the system until the odor is gone, 6-10 gallons for the hot water and 1-3 gallons for the cold. If the odor does not go away, simply follow the directions in the "tip" above for the sanitize/shock procedure.

The second component of the portable fresh water system is the pressure demand 12-volt pump. The water pump supplies pressure and flow to distribute the fresh water from the holding tank. *A 12-volt water pump does have an on/off switch!* When the faucet is in the "on" position, the pump will draw fresh water out of the water tank, and create pressure throughout the water system. If the water lines are empty, it will take several minutes for the system to push out the air pockets. To bleed out the air pockets, turn on a hot water faucet until pure water flows. Then shut off the water faucet, and the water system should pressurize properly. Once the proper pressure or PSI is reached, the pump will automatically shut off. When the water pressure drops, i.e. you run the faucet or shower, the water pump will automatically turn on to retain the desired pressure. Due to the design of the pressure demand water system, the water pressure may surge

during use. Unfortunately there is not much you can do about this. However, some RVs do have the provisions for an additional pressure accumulator tank. Contact a Big Sky RV service/parts representative for options that are available for you. Keep in mind, the water pump can be noisy. The water lines are made of a hard pex plastic, and sometimes the vibrations from the water pump can be transferred into the structure of the RV creating a vibrating noise. Generally, the noise does not come from the pump itself, but the water lines. There is no way to completely remove the vibrating noise; however, you can buy a high-end water pump that will create less vibration to reduce the noise.

*TIP: Never leave the RV unattended with the water pump on for any length of time! If a leak develops, the pump will run until the tank is empty, and in the worst case, into your RV. After the tank is empty, the water pump can continue to run, which will burn out the pump and will need to be replaced.*

**City Water – Fresh Supply:** The city water system is a simple set up. Simply connect a hose to the city connection, and turn on the water at the hose source. *NOTE: If you suspect the pressure at the source of the water to be high, use a RV pressure regulator to ensure a PSI of 40.* The system will automatically pressurize, although you should bleed the system by turning on a hot water faucet until the water runs smoothly and there is no air present. **WARNING: High water pressure can damage your water system!** Even though you are on city water stagnation can still occur. If stagnation does occur, run the hot water for 6-7 gallons and 1-gallon of the cold. You can also follow the directions of the shock/sanitize tip above.

**Waste Water Holding System:** The waste water holding system contains at least two holding tanks and often three. The tanks are generally mounted below the floor level of the RV and covered with an “underbelly” material. The first tank is called the “black” tank or holding tank. This tank will hold the body waste or toilet water only. A few things to know about your black tanks are: (1) 99% of the time, the black tank will only hold toilet waste. (2) Black tanks require a waste digester/deodorant. There are many products available on the market. Ask a Big Sky RV service or parts clerk for recommendations. And (3) black tanks **require** RV toilet paper. RV toilet paper is specially designed to break down fast. This allows the water to flow out during the dumping process. **WARNING:** The black tank level indicator is easily affected by debris caught on the electronics. Any piece of TP on a sensor can cause an incorrect reading. This is a common occurrence with RVs, and flushing your black tank regularly can help prevent false readings. Refer to your owner’s manual or a Big Sky RV service employee for flushing options and procedure.

*NOTE: Even with proper care, the black tank is not odorless, and if left unattended or undumped, the odor may fill the inside of the RV.*

**Grey Water Holding Tanks:** The Grey Water Holding Tank or tanks “2” and “3” are for holding the sink and shower waste water. Please be aware of which sink/shower drain goes to which grey

water tank and the capacity of each tank. You will often find that you may have to budget your waste/gray water use.

Refer to your owner's manual or a Big Sky RV service employee for you dump locations, products, and procedure for evacuation the waste tanks. *QUICK TIP: Always dump the grey tanks last (preferably the shower tank). This will help clean the drain after you dump the black water tank.*

## ❧ LP System ❧

Always remember to turn the LP System off at the bottles during durations of storage!

It will be necessary to bleed the air out of your LP System after it has been off or opened to refill the LP tanks. To do this, first turn on the LP bottle(s) depending on your RV you may have one or two tanks. On top of the tanks, there is a shut-off valve that will need to be opened to supply gas to the appliances. This shut-off valve also contains an OPD safety valve that will automatically shut off the flow of gas from the tanks if the gas is released too quickly. To prevent the safety valve from shutting off the gas supply, you will need to open the tank valve slowly. You should hear a “PFFFT” noise when opening the valve, once that sound is heard; you can open the valve the rest of the way at your normal speed. Next, go inside your RV to the range or stove top burner and turn on the main burner. Try to light the burner, if it does not light right away, try again until the burner lights. Once the burner lights, the majority of the air should be bled out of the system. *Note: Air in the LP System can cause an appliance to function improperly. An example would be the refrigerator. The refrigerator will not light until the LP System is properly bled out.* Refer to your owner’s manual or a Big Sky RV service employee for specific appliance help questions. Another thing to keep in mind when using a LP System is a new RV furnace will have an odor for the first several hours of operation. This is completely normal, and will go away.

### **LP Gas/Propane Detector:**

The detector is designed to sound an alarm if any LP Gas/Propane is detected. Please keep in mind, that any strong cleaning chemicals, perfume or hairspray may set the detector off. The detector may also sound if the coach batteries are low. In any case the alarm sounds immediately exit the RV and shut propane valves off, ventilate and then investigate cause for alarm.

### **LP Gas/Propane Regulator Valve:**

The LP Gas/Propane Regulator Valve is designed to maintain a certain pressure in the LP Gas/Propane appliances. The valve is connected by hoses between the LP tanks and the LP gas line.

If you have two LP tanks, you might have an automatic switch over. Refer to your owner’s manual or a service representative. The regulator will have a tank selection lever, which allows you to select which tank you would like the gas to come from. It will also have a small window or gauge that will show “green” if there is gas available from that tank. When the selected tank is empty, the regulator will automatically switch to the other tank for an uninterrupted gas supply. Although the regulator switched tanks, the small window or gauge will show “red,” indicating that the original tank is now empty and needs to be refilled. Please keep in mind the tank selection lever does not automatically move when the tank is empty. The lever will remain in the original position that was selected; however, you can switch the tank selection lever to show that the gas is coming from the other tank. When you move the selection lever; the indicator will turn back to “green.” Three things to remember: (1) if you move the selection lever from the empty tank to the full one, you still have an empty tank, (2) both tanks will have to be open for the

automatic change over to occur and (3) DO NOT put the lever in the center! If you do, the indicator will never show if a tank is empty, and you don't want to end up with 2 empty tanks.

### **Air Conditioners:**

Air conditioners are another great addition to your RV. Air Conditioners are available in 8000 BTU, 11000 BTU, 13500 BTU or 15000 BTU. The bigger the unit the larger the BTU requirements. If you are running too many appliances and the A/C you can trip the breaker at the generator, or if you are plugged in, at the power source. *Note: If the RV is new, debris from the duct work may be blown out. This is not uncommon, and will dissipate with time.* Another thing to keep in mind is RV Air Conditioners are only capable of about a 15–20 degree Fahrenheit differential, which is based on the size of the A/C unit and size of the space being cooled. This means the air conditioner is not likely to cool the air inside the RV more than 15-20 degrees lower than it is outside. If it is 90 degrees outside, inside it will be about 70-75 degrees. This is due to the fact that RVs typically only have R-7 wall insulation. Refer to your owner's manual or Big Sky RV service employee for A/C operation. ***Big Sky RV is not a certified refrigerant repair facility, and cannot perform AC repairs in house. All AC repairs have to be sublet out to a certified repairman.***

### **Refrigerator:**

***The refrigerator will not run properly if the RV is not level when parked!***

RV refrigerators are very different from household refrigerators. First, RV refrigerators can operate on both LP Gas/Propane and 110 volt electric power. Smaller refrigerators can operate on 12-volt battery power. Secondly, RV refrigerators have no moving parts. That means there are no fans to circulate the air, and no compressor to circulate refrigerant. So plan ahead and start your refrigerator early, 12-24 hours before you fill it with food is a good rule of thumb. It is also a good idea to put in cold food and not over-fill the refrigerator. As mentioned before, RV refrigerators do not have a fan to circulate the cold air. Consider asking a Big Sky RV parts representative about a small battery operated fan that sits on a shelf. These fans will help keep all the food cold by circulating the cold air. *NOTE: For every minute the door is open, it will take 1-hour to replace the cold air.*

You should run the refrigerator in the Automatic Mode. When the camper is plugged into shore power (see additional information) the refrigerator will run on 110-volt electric power. If you unplug the RV, the refrigerator will automatically switch over to LP Gas/Propane ( when the LP tanks are open), and if the unit is plugged in again, the refrigerator will automatically switch back to 110-volt.

Refrigerators can safely run while the RV is moving, but it is a good idea to shut off the refrigerator when refueling the tow vehicle. Also, keep in mind, if you stop and park the RV and

it is not level, it is best to shut off the refrigerator and restart it when you start moving again. Check your states laws regarding pilot lights and travel prior to traveling.

If you are not using your refrigerator, it is a good idea to prop open the door and wipe-up any water that may have dripped from the coils when the refrigerator defrosted. This will help to prevent any mold or mildew from growing inside. Propping the door open will also prevent damage due to expansion from hot weather. Check your owner's manual for other operational tips.

### **Furnace:**

Furnaces are a must have for cold weather campers or just those cool Montana mornings. The type of furnace in your RV is likely to be a Forced Air LP Furnace. This type of furnace uses a combustion chamber that is heated by burning a propane and air mixture. As air moves around the combustion chamber, the air is heated to the desired temperature and then is blown throughout the camper. To operate a modern RV furnace, simply ensure there is propane in your tanks, turn your thermostat on, and then set the thermostat to the desired temperature. The furnace will automatically cycle on and off to maintain the desired temp.

*Note: If you have a brand new camper, the first few times the furnace runs it may emit a burnt smell. **This is NORMAL and will be temporary.** The smell can be intense and may even set off the smoke alarm. To help eliminate the odor, Big Sky RV recommends opening all the windows and doors, then set the thermostat to 90 degrees and let the furnace run for 1 hour. This process should thoroughly burn off any residue left from the Furnace Manufacturer.*

An RV furnace is a 12 Volt/Propane appliance. Which means it will draw on your batteries if left on. Once the battery power starts to get low the burner will quit operating however the furnace motor will continue to run and will run until it completely drains your batteries. So always remember to turn off your furnace at the thermostat while leaving the coach unattended in storage.

A couple things to know about furnaces. First, the furnace must exhaust burnt combustion gases to the exterior of the RV. This means the vent on the outside of the RV is **VERY HOT** during furnace operation. So when you set up camp, keep in mind of this area and do **not** block the vent with any obstruction or allow kids to touch it. *If the furnace vent becomes blocked, it can be a fire hazard.* In some states, insects and/or birds can build a nest in the vent causing a blockage, so if your trailer has been sitting for any period of time, it is a good idea to inspect the exhaust vent for blockage. If there is a sign of any blockage, we recommend you call an RV Service Department for further instructions. Secondly, the furnace has an internal thermal limiting system. If the internal temperature of the furnace becomes too high, the furnace will shut itself down. Most of the time, this problem can be eliminated by not blocking the vents. When you put rugs or storage bins over vents it blocks the air flow necessary for the furnace to function properly. If this happens to you, remove everything blocking the vents, let the unit cool for 10-20

minutes and then restart the furnace. If the furnace continues to limit out, please call the Service Department for further instruction.

If your RV is equipped to handle below freezing temperatures, it is likely that your plumbing and holding tanks rely on the forced air furnace for heat. To minimize freezing your tanks or lines always insure that you have propane and adequate 12V power, wether it is battery power or you are plugged in. If your RV has other heat sources like heat pumps, electric heaters or catalytic radiant heaters, you must also run the forced air furnace to protect your water system.

An RV Furnace has no real scheduled maintenance and should give you years of trouble free operation; however it is possible for components to fail. If you have any questions or concerns or should your furnace fail to operate normally, please contact the service department at 406.587.0039 or 800.877.9606.

## ❧ Pre-trip Checklist ❧

Before you hit the road with your RV from either your home or your camping spot, make sure you have done the following...

### **Interior Checklist:**

- ✓ Lower your TV antenna
- ✓ Close all roof vents
- ✓ Turn off your water pump
- ✓ Turn off all range top (pilot lights)
- ✓ Close the Range/Cook top cover
- ✓ Turn off the furnace
- ✓ Turn off the water heater
- ✓ Retract slide out and install slide out Transit Bars if applicable
- ✓ Close all doors, drawers and windows
- ✓ Turn off all interior lights, radios, and TV equipment. This is to help prevent a draw on your batteries.

### **Exterior Checklist**

- ✓ Retract awning and secure in “locked” position if applicable.
- ✓ Disconnect and store all water hoses, electrical cords and drain lines.
- ✓ Check and secure roof top or rear cargo carriers if applicable.
- ✓ Remove all wheel chocks and blocks. Check the condition of the tires, tighten/torque lug nuts and check tire pressure.
- ✓ Retract and stow step.
- ✓ Raise and stow stabilizer jacks and close/lock all exterior compartment doors.
- ✓ Check batteries. This is important to check *before* you leave home because you do not want to get stuck in the wilderness with bad batteries.
- ✓ Verify proper hitching procedures and check all running, turn and brake lights are functioning properly.
- ✓ Check the brakes before you leave your location and especially before you leave home.

This checklist is only a guide and will not cover everything for each type of RV from all manufacturers. Use you owners guide or contact a Big Sky RV Service Representative if you have any questions.

## ❧ Maintenance Suggestions ❧

Refer to your Owner's Manual for the Manufacturer's Suggested Maintenance Schedules

### **After Every Trip:**

- ✓ Drain all the tanks (black, grey, and fresh) including the hot water heater.
- ✓ Take perishable foods out of the refrigerator if you are not going to leave the fridge on.

### **Monthly:**

- ✓ Check the battery water level to verify there is enough fluid for battery to take a proper charge. Skip this step if the unit is in storage and not plugged in.
- ✓ Check the tires for tire wear and/or damage. Also, make sure the tires have the correct tire pressure.

### **Regularly:**

- ✓ Clean the inside of the air conditioner filter. (They are washable)
- ✓ Visually inspect the air conditioner unit from the roof. Make sure the fins are clean and straight.
- ✓ Check the refrigerator roof vent to verify there is nothing blocking the vent. Birds have been known to make nests behind or in the vent.
- ✓ The roof should be washed regularly to remove any dirt and/or tree sap. This is also a good time to check for damage from the weather and cracked caulking.

### **Yearly:**

- ✓ Lubricate the awning slide arms.
- ✓ Lubricate the slide room rails and slide mechanism.
- ✓ Lubricate the plastic worm gears on the TV antenna.
- ✓ Refrigerator – Check in your owner's manual for the Owner's Maintenance sheet that explains what needs to be checked and recorded.

### **Spring:**

- ✓ Thoroughly clean water lines and water tanks of antifreeze. Also, inspect and clear tubes of any blockage on water heater.
- ✓ Install new batteries in the smoke detector and carbon monoxide detector.
- ✓ Check the LP Gas/Propane detector. Verify that the detector works if there is LP Gas/Propane is present.
- ✓ Check the roof for any damage and/or cracked caulking around vents, antennas, rear and side roof moldings. If you have a rubber roof, follow your operators manual for cleaning.
- ✓ Check for cracked caulking around windows, doors, and side moldings.

**Every Fall:**

- ✓ Remove the batteries in the smoke detector and carbon monoxide detector. If the batteries are not removed, the detectors will start beeping sometime during the winter.
- ✓ **Winterize the camper to prevent damage to the water system.** Refer to the winterization section of this handbook, your owner's manual or a Big Sky RV service representative for the winterization procedure.
- ✓ Check the roof for any damage and/or cracked caulking around vents, antennas, rear and side roof moldings.
- ✓ Check for cracked caulking around window, doors, and side moldings.

**Every Year or sooner if you have traveled extensive miles:**

- ✓ Repack the wheel bearing and check the brakes.

**General Maintenance:**

- ✓ Lubricate the door hinges and locks in the spring and fall.
- ✓ Tighten the lug nuts to the specs listed in your owner's manual.
- ✓ Lubricate your fifth wheel hitch. Refer to your owner's manual or a Big Sky RV service representative.
- ✓ Check your weight distribution hitch and lubricate the ball and bar sockets. Refer to your owner's manual or a Big Sky RV service representative.
- ✓ Lubricate the entry steps hinges and pins.
- ✓ Inspect the power cord and clean contacts if necessary.

## ❧ Additional Information ❧

### **Slides or Glide Rooms:**

To ensure proper operation of the slide, make sure the battery is connected and fully charged and if it is possible connect to shore power. ***Make sure there are NO obstructions before extending the slide.*** Obstructions can be inside or outside the coach, check for open cabinet doors and drawers, furniture that has moved in transit and/or exterior poles, trees and any other potential hazards. Press and hold the slide button until the slide is fully extended, then release the button. When you are going to glide the room in, follow the same procedure. Make sure there are no obstructions for a smooth glide process. Press and hold the slide button until the slide is fully retracted, release the button.

*Note: If your RV comes equipped with Schwintec Slide Motors, always run your slides completely in or out. Failing to do so or stopping partial way will cause the motors to become unsynchronized and will need to be reset.*

### **TV Antenna:**

Prior to traveling *always* store the TV antenna to avoid damages. Before lowering the antenna, pull the rotator lock ring down and rotate the knob to align the arrows. This will assure that the antenna will be lowered into the holder/cradle on the roof. Now turn the crank handle to lower the antenna. One thing to remember; when you are **not** using the power booster make sure you turn the booster off. Leaving the booster on can run your batteries dead in a few days. Typically, you will find the power booster next to the coaxial cable connection and has a LED indicator light next to the booster switch.

### **A Special Note:**

All new recreational vehicles will have a formaldehyde odor. The intensity many vary from model to model and can intensify in the heat. Do not be alarmed, the smell will go away.  
*TIP: Turn your furnace on, and raise the temperature on the thermostat to its highest setting. Let the furnace run for 2-3 hours, turn off the furnace and air out the trailer. Repeat as necessary. This process will expedite the removal of the formaldehyde odor.*

As in all things in life experience and education will enhance your RV adventures. There are many websites, schools, circulars, videos and magazines available to further your personal knowledge of the RV experience and lifestyle. Please know that we are committed to improving your experience and appreciate your business. Please call on us with any further concerns or questions and we will help you as best we can.