Owner's Manual

Index

1-Introduction

Welcome To "RV'ing" With Viking

Welcome to Viking's growing family of satisfied RV owners. Hours of relaxation, adventure and enjoyment await you in your new Shasta RV. Thousands of Viking RV owners have been enjoying their purchases for many years.

This Owner's Manual has been prepared to help you and your family enjoy your new Shasta RV by providing basic instructions for the operation and maintenance of the appliances, accessories and RV systems. Please read it carefully and follow the instructions. Also read and follow the instructions contained in the appliance and accessory manufacturers' instruction booklets provided with your RV.

If you have any questions regarding operation, maintenance, or service, please contact Viking RV or your Shasta dealer so we can assist you. Your complete satisfaction is of the utmost importance to your dealer and to Viking.

Operation and maintenance instructions regarding appliances in this manual were obtained from the manufacturers' booklets and are used with the permission of those various manufacturers. Viking Recreational Vehicle Company, LLC reserves the right to present edited portions of these materials. Viking offers a wide variety of recreational vehicle models and choices of standard and optional equipment; therefore, certain descriptions in this manual may not apply to your RV. Ask your authorized dealer, or see the current brochure for information on the availability of standard or optional equipment.

Thank you for selecting our product. The entire Viking family wishes you many safe and enjoyable journeys in your new Shasta RV.

Sincerely,
The Viking Team

Note: Viking Recreational Vehicle Company, LLC works year round to improve it's product. As a result, all specifications and equipment are subject to change without notice.

All information contained in this Owner's Manual is believed to be accurate at the time of publication, however; during the model year, it may be necessary to make revisions and Viking reserves the right to make all such changes without notice.

Taking Delivery

Congratulations on the purchase of your new Shasta recreational vehicle. We sincerely thank you for choosing our product. You'll find many useful tips for the basic operation and maintenance of your Shasta vehicle's systems and appliances in this Owners Manual.

If you are a first-time RV'er, we want you to learn to operate your vehicle correctly and be able to use components, appliances and any optional equipment in the most efficient manner and with confidence. If you are a veteran RV'er, you know that things change and a quick review of this manual will bring you up to date on what's new.

Note: Due to individual taste and optional floor plans offered, your vehicle may not have all of the components illustrated or described in this manual. Ask your dealer for details concerning the specifics of recreational vehicle.

Your recreational vehicle has been inspected by factory personnel throughout the manufacturing process. Our final factory check by quality control inspectors is not the last one. Your dealer performs additional pre-delivery inspections and systems checks. They will also help you understand the Warranty and complete any necessary forms.

Dealer Responsibilities

1. Orienting the customer to the recreational vehicle, it's systems and components as well as their operation.

2. Insuring the customer receives a complete Owner's Packet with warranty cards and registrations for the recreational vehicle and for separately warranted products, including operation and maintenance in structions.

3. Review Limited Warranty provisions with the customer, stressing the coverage. Assist the customer in completing these forms if needed and request that the customer read all warranty information as soon as possible, explaining any provisions not clearly understood.

4. Instruct the customer how to obtain local or out-of-town service for the recreational vehicle and its separately warranted components.

Owner Responsibilities

As a new recreational vehicle owner, you have the responsibility for regular and proper maintenance. This will help you avoid conditions arising from neglect that are not covered by your Viking Recreational Vehicle Limited Warranty. Maintenance services should be performed in accordance with this Owner's Manual and any other applicable manuals. As the owner, it is your responsibil-

ity and obligation to return the recreational vehicle to an authorized dealer for repairs and service.

Since the Authorized Dealer from whom you purchased your new recreational vehicle is responsible for its proper servicing before delivery and has an interest in your continued satisfaction, we recommend that inspection, warranty and maintenance services be performed by them.

Obtaining Service

Give thought to the appointment time...Monday and Friday are the busiest days at most dealerships. Therefore, try to make a mid-week appointment whenever possible.

Prepare For The Appointment

All work to be performed may not be covered by the warranty; discuss additional charges with the service manager. Keep a maintenance log of your vehicle's service history. This can often provide a clue to the current problem.

Prepare A List

Prepare a written list of issues or specific work you require to be done. Advise the Service Manager if work has been performed that is not listed on your Maintenance Log. It is important to keep the log accurate and up to date.

Be Reasonable With Your Requests

Appointments are made according to the type of repair scheduled, and the amount of time needed to complete the repair. If you add items after the appointment has been set, discuss the situation with the service manager and list your items in order of priority. Expect to make a second appointment for work not completed or for parts that may need to be ordered.

No Offense

Insurance requirements forbid the admission of customers to a service repair area.

Inspect The Work Properly

Inspect the completed repairs when you pick up your vehicle and notify the Service Manager of any dissatisfaction.

Important Documents

Always carry your vehicle registration, insurance policy card(s) and owner warranty registration. If you lend your vehicle, it is best to give the borrower a notarized letter authorizing him to be in possession of the vehicle.

Licenses

Vehicle licensing laws vary from state-to-state. Check with your state license bureau or the nearest licensing branch office for the requirements of your state.

Insurance

Consult your insurance agent about personal liability, property damage, collision and theft of contents insurance for your new recreational vehicle. Always carry your insurance policy and/or card with you when you travel. Obtain current road maps and tourists information for each state you'll visit or drive through.

Vehicle Certification/ID Tag

The vehicle certification/ID tag is located on the exterior wall. The tag contains important information on your coach:

Manufactured By - Viking RV Company, LLC.

Date - The month and year coach was built.

GAWR - The Gross Axle Weight Rating is the maximum gross weight that each axle can support.

Tires - The recommended tire size for your coach.

Cold Single/Dual - This is the tire pressure measured when cold (not driven for at least three hours).

Rims - The recommend rim size for each axle on your coach.

GVWR - The Gross Vehicle Weight Rating is the maximum allowable gross weight of the coach and its contents. The gross weight of the coach includes the weight of the coach and all of the items within it such as cargo, water, food and other supplies.

Model Number - The model number of your coach Vehicle ID Number - The vehicle identification number. You will need this number when you arrange for service or purchase parts for your coach.

Type - MPV.

Model - This is the model name of your coach.

Certification Statement - This vehicle has been completed in accordance with the prior manufacturers IVD where applicable. This vehicle conforms to all applicable Federal Motor Vehicle Safety Standards in effect.

2-Safety

This manual is for a Shasta travel trailer.

Read this manual before using your travel trailer, and follow all of the safety precautions and instructions. This manual does not cover the chassis of your travel trailer. Refer to the chassis owner's manual, this manual and the owner's manual for each item installed in your travel trailer for operation, maintenance and safety information.

This manual does not describe or teach how to drive a travel trailer. If you have never towed a vehicle of this size and weight, it is recommended that you take a driving course for recreational vehicles. To find a driving school in your area, contact the Department of Motor Vehicles or search the internet for a driving school that specializes in RV training.

Primary hazards relating to towing and operating a travel trailer include, but are not limited to:

- Loss of control due to driving too fast for conditions.
- Failure to inspect tires and wheels and to maintain tire pressure.
- Lapse in awareness of height, width and length.
- Towing.
- Improperly sized and/or overloaded trailer.
- Electrocution or fire from the generator or shore power.
- Fire or explosion due to release of LP gas.
- Death from carbon monoxide poisoning from operation of the travel trailer engine, generator and gas appliances or equipment.
- Fire due to electrical system.
- Injury due to operation of the slideout.
- Injury due to operation of the generator.
- Injury due to operation of the shore cord reel.

These are the safety alert symbols: 

It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

The following signal words are used to indicate the level of risk:

DANGER

DANGER INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

WARNING

WARNING INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

CAUTION

CAUTION INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD MINOR OR MODERATE INJURY.

NOTICE

NOTICE INDICATES A SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN PROPERTY DAMAGE.

Tires And Wheel Lugs

Inspect the tires and wheels, and tighten lug nuts before each trip. If a tire has a bald spot, bulge, cut, cracks or is showing any cords, replace tire before driving. If a tire has uneven tread wear, take your travel trailer to a service center for diagnosis.

Tires with too little tread will not provide adequate traction and can result in loss of control, leading to death or serious injury.

Improper tire pressure causes increased tire wear and an unstable travel trailer, which can result in a tire blowout or possible loss of control. The tire pressure is listed on the VIN label. Allow 3 hours cool-down after driving as much as 1 mile at 40 mph before checking tire pressure.

WARNING

LOSS OF CONTROL HAZARD.

IMPROPER TIRE PRESSURE MAY CAUSE TIRE BLOWOUT AND LOSS OF CONTROL MAY OCCUR.

INFLATE TIRES TO PRESSURE INDICATED ON THE VIN LABEL BEFORE EACH TRIP.

The wheels and lugs are subjected to greater side loads than automobile wheels. This may cause the wheel lugs to become loose. The wheel lugs must be tight to keep the wheels properly seated to the hub. Before each tow, check to make sure they are tight.

The proper tightness (torque) and tightening sequence for lug nuts is listed in the maintenance section of this manual. Use a torque wrench to tighten the lug nuts and use the crisscross star pattern. Lug nuts are also prone to loosen after first being assembled or remounted. On a new travel trailer (or after wheels have been remounted), check to make sure they are tight after the first 10, 25

and 50 miles of driving and before each trip thereafter.

Failure to perform this check can result in a wheel separating from the travel trailer and a collision, leading to death or serious injury.

Improper wheel lug nut torque can cause a wheel to part from the travel trailer while driving, leading to death or serious injury.

Lights

The lights on your travel trailer are essential for you to see and for others to see you and be alerted of your intended moves. Before towing, make sure all lights on your travel trailer are functioning properly.

Hazards From Installed Accessories And Optional Equipment

This manual contains information on equipment and optional accessories that may be installed in your travel trailer.

Read the instruction manual for each of the accessories before operating them. Follow all of the instructions and warnings in those manuals and in this manual.

Primary hazards from operation of accessories include, but are not limited to:

- Death by carbon monoxide poisoning from operation of the generator and LP gas appliances.
- Fire or explosion from accumulated, unburned LP gas.
- Electrocution or fire from the generator or shore power.
- Injury due to improper operation of the slideout.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, tasteless, odorless gas that can cause brain damage or death.

Carbon monoxide comes from the exhaust of fuel burning engines and appliances such as the water heater, furnace, stove, oven and refrigerator.

Never operate these type of engines or any of these appliances while the travel trailer is in a building or confined area.

A building or confined area will not allow proper ventilation and carbon monoxide fumes may enter the travel trailer.

Never operate portable fuel burning appliances or equipment inside the travel trailer.

Never use a cooking appliance to provide comfort heating in the travel trailer.

Test the carbon monoxide detector in your travel trailer after periods of storage, before each trip and at least once per week during use.

Symptoms of carbon monoxide poisoning are:
- Headache
- Drowsiness
- Dizziness
- Nausea
- Vomiting
- Shortness of breath
- Unconsciousness

⚠ DANGER

RISK OF DEATH FROM CARBON MONOXIDE.

DO NOT OPERATE ANY GAS APPLIANCE, GENERATOR OR TRAVEL TRAILER ENGINE WHILE THE TRAVEL TRAILER IS IN A BUILDING OR CONFINED AREA.

DO NOT OPERATE ANY GAS APPLIANCE, GENERATOR OR TRAVEL TRAILER ENGINE UNLESS THE CARBON MONOXIDE DETECTOR IS WORKING.

TEST THE CARBON MONOXIDE DETECTOR:
- **AFTER PERIODS OF STORAGE.**
- **BEFORE EACH TRIP.**
- **AT LEAST ONCE PER WEEK DURING USE.**

Procedures to take during an alarm.

Actuation of your CO alarm indicates the presence of carbon monoxide which can kill you.

If the alarm sounds:

1. Operate the reset/silence button;
2. Call your emergency services (Phone Number _____ _____) (fire department or 911);
3. Immediately move to fresh air - outdoors or by an open window. Do a head count to check that all persons are accounted for. Do not reenter the premises or move away from the open door/window until emergency responders have arrived, the premises have been aired out, and your alarm remains in its normal operation.
4. After following steps 1-3, if your alarm reactivates within a 24 hour period, repeat steps 1-3 and call a qualified appliance technician, (Phone Number _____) to investigate for

sources of CO from fuel burning equipment and appliances, and inspect for proper operation of this equipment.

If problems are identified during this inspection, have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturer instructions or contact the manufacturer directly for more information about CO safety and this equipment.

Make sure that the motor vehicles are not, and have not been, operated in an attached garage or adjacent to the residence.

Conditions that can redirect carbon monoxide fumes are for example:

- Being drawn in by fans or vents operated in the travel trailer.
- The wind may blow fumes into the travel trailer.
- Being trapped between adjacent coaches, other vehicles, buildings or other materials.

Shore Power Cord And Reel

WARNING

RISK OF ELECTROCUTION OR FIRE.

A MODIFIED OR ALTERED SHORE POWER CORD OR ELECTRICAL SYSTEM MAY MALFUNCTION.

NEVER MODIFY OR ALTER THE SHORE POWER CORD OR ELECTRICAL SYSTEM FOR ANY REASON.

NEVER USE AN EXTENSION CORD.

NEVER REMOVE PRONGS FROM THE SHORE POWER CORD.

SERVICE AND MAINTENANCE MUST BE PER FORMED BY A QUALIFIED TECHNICIAN.

WARNING

RISK OF SEVERED FINGERS.

THE MOVING SHORE CORD CAN PINCH OR SEVER FINGERS IN THE REEL AND ROLLERS.

KEEP HANDS AWAY FROM THE REEL AND ROLLERS WHILE EXTENDING AND RETRACTING SHORE CORD.

Inverter

WARNING

RISK OF ELECTROCUTION OR FIRE.

A MODIFIED OR ALTERED INVERTER OR ELECTRICAL SYSTEM MAY MALFUNCTION.

NEVER MODIFY OR ALTER THE INVERTER OR ELECTRICAL SYSTEM FOR ANY REASON.

SERVICE AND MAINTENANCE MUST BE PERFORMED BY A QUALIFIED TECHNICIAN.

Appliances

WARNING

RISK OF FIRE OR ASPHYXIATION.

NEVER USE PORTABLE FUEL BURNING EQUIPMENT INCLUDING WOOD AND CHARCOAL STOVES INSIDE THE TRAVEL TRAILER OR ANY OTHER VEHICLE.

FAILURE TO COMPLY COULD RESULT IN DEATH OR SERIOUS INJURY.

Water System

CAUTION

RISK OF CONTAMINATED WATER.

BE CERTAIN YOUR TANK IS FILLED FROM AN APPROVED POTABLE WATER SOURCE OR A SOURCE YOU KNOW IS SAFE.

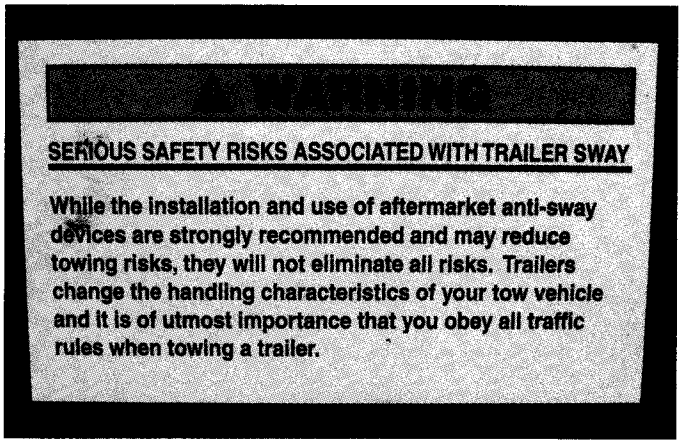
ALWAYS USE A POTABLE (WHITE) WATER HOSE TO FILL YOUR TANK.

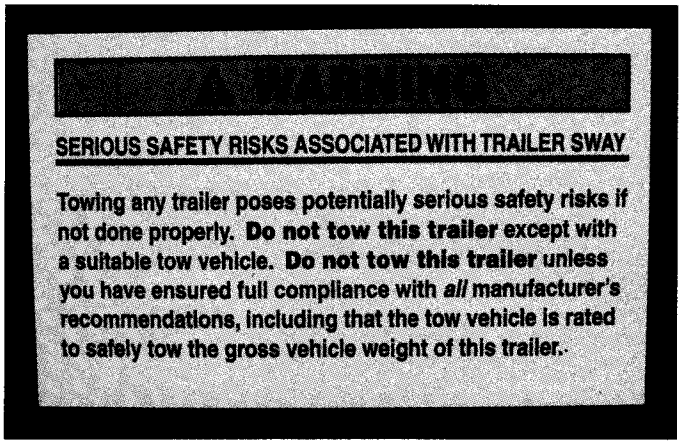
Hazards From Modifying Your Travel trailer

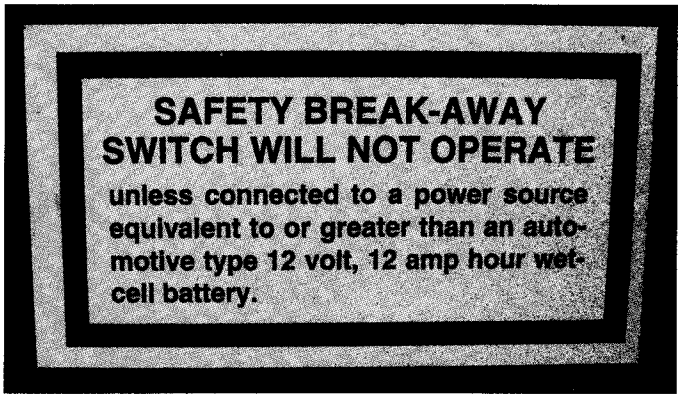
Altering or modifying your travel trailer can damage safety and structural items and may void the warranty.

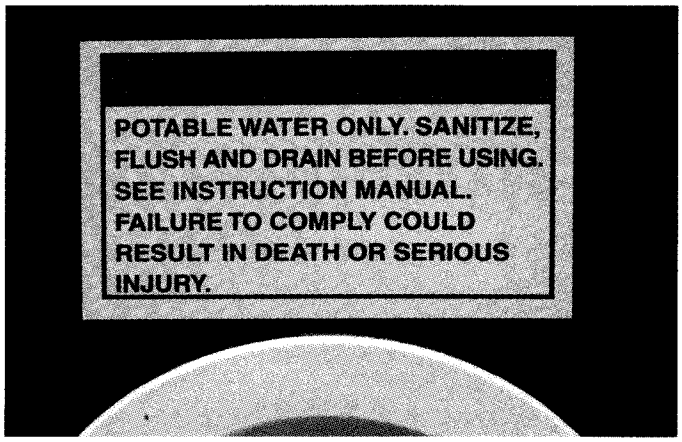
Before making any alteration to your travel trailer, contact your dealer or Viking and describe the alteration you are contemplating. Alteration of your travel trailer must be performed only by qualified technicians who are familiar with your travel trailer and with the approval of Viking.

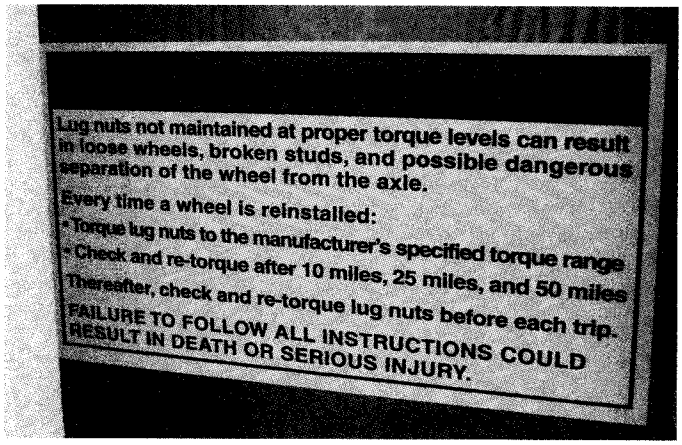
Safety Decals

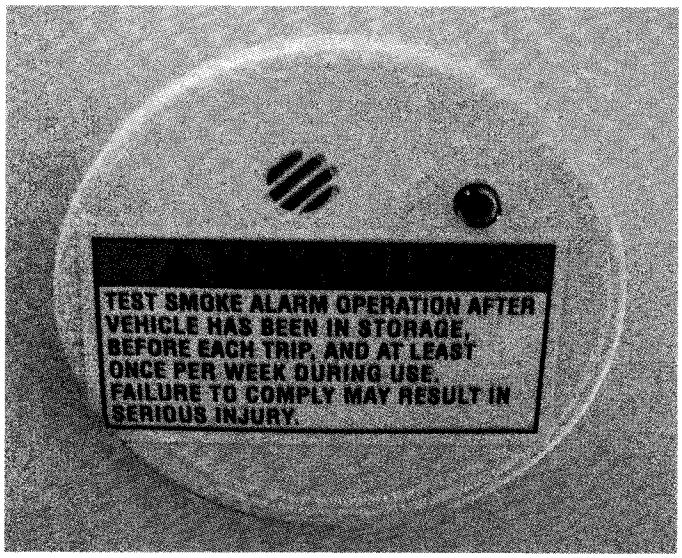












Reporting Safety Defects

If you believe that your vehicle has a defect that could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Viking.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, a component supplier or Viking.

To contact NHTSA, you may either call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153), go to http://www.safercar.gov; or write to:

Administrator
NHTSA
1200 New Jersey Avenue SE
Washington, DC 20590

You can also obtain other information about motor vehicle safety from http://www.safercar.gov.

3-Pre-Trip Inspection

Exterior

1. Disconnect from shore power. Verify that the shore power cord is disconnected.
2. Verify black and gray tanks have been drained and flushed if applicable.
3. Verify that the waste drain hose is removed and stowed, black and gray dump valves are shut and end cap installed on drain pipe.
4. Fill fresh water tank with clean potable water.
5. Visually verify that any antennas are in the stowed or travel position.
6. Verify that all windows (skylights/vents) are shut.
7. Verify that there are no flammable liquids such as gasoline, diesel fuel, LP gas or any other combustible fluid stored in the bays.
8. Inspect storage bays to ensure stored material is secured for traveling.
9. Verify that all awnings are fully retracted.
10. Verify all storage doors are closed and locked.
11. Verify that all leveling devices have been retracted or removed.

Interior

1. Check that all cabinet doors and drawers are closed and latched.
2. Be sure that all closet doors are closed and latched.
3. Place the toilet lid in the down position.
4. Close bathroom door.
5. Secure, tie down, or put away any materials that could move around while traveling.
6. Remind yourself of the locations of the emergency exit windows.
7. Place items in refrigerator so they do not move around and fall out when you open the door.

3-Pre-Trip Inspection

4-Air Quality

Condensation

Condensation is "the process by which a gas or vapor is changed to liquid". This process occurs when there is too much moisture in the air and not enough air movement. It can be a problem in modern, tightly-constructed, well insulated RVs. Certain amounts of condensation should be expected, especially on cool surfaces such as windows, roof vents, and metal door frames.

However, excessive condensation can cause water damage and infiltrate the RVs' insulation causing it to become damp, thus reducing its' insulation properties.

Condensation can appear as fog, frost or ice on the inside of windows indicating moisture is trying to escape to mix with drier air. It may also occur inside the walls and ceilings where it is hidden from view. Evidence of trapped water vapor or hidden condensation could be water stains on the ceiling, warped moldings or trims, water running down the walls, dripping from fixtures or softened wall or ceiling materials. Other indicators of excessive moisture could be damp carpet, paint failure, mold or mildew and damage to furniture.

If any of these situations listed above should occur, be sure to check all the normal functions of your RV, such as plumbing, seals, windows and roof, before assuming it is condensation. Just like your home, inspections and maintenance should be performed on a regular basis.

Formaldehyde Emissions

Some of the construction materials used in recreational vehicles emit formaldehyde. Eye, nose, and throat irritation, headache, nausea, and a variety of asthma-like symptoms, including shortness of breath, have been reported as a result of formaldehyde exposure. Elderly persons and young children, as well as anyone with a history of asthma, allergies, or lung problems, may be at greater risk. Research is continuing on the possible long term effects of exposure to formaldehyde.

Reduced or limited ventilation may allow formaldehyde and other contaminants to accumulate in the indoor air. Ventilation is available in your recreational vehicle through screened windows, roof vents, power roof vents and range vents. Additional ventilation to dilute the indoor air may be obtained by ventilation systems available through your dealer. In addition, aftermarket products such as air purifiers, or natural odor control products are readily available and can be very effective.

High indoor temperatures and humidity raise formaldehyde levels. When your recreational vehicle is located where it will be subjected to extreme summer temperatures, use your air conditioner to control indoor temperature levels. When storing your RV in extreme summer temperatures, be sure your RV is properly ventilated. Always allow your RV to "air out" or ventilate before leaving on a trip. Proper ventilation is essential while traveling or camping in your RV. If you have any questions regarding the health effects of formaldehyde, consult your doctor or local health department.

Keep in mind that your RV is a confined space and unlike a permanent dwelling, has limited venting capacity. Activities such as cooking, dish washing, cleaning, laundry and bathing add moisture to the air, so when performing these functions remember to keep your RV well ventilated to allow moisture to escape. By being aware of the causes, you may also be able to decrease the risks.

Your recreational vehicle was designed primarily for recreational use and short term occupancy, not a permanent dwelling. If you use your RV as a permanent dwelling or for prolonged periods of time, it is more susceptible to this condition. The number of inhabitants and pets residing in your RV are also a factor, as breathing and perspiration are impossible to avoid but do add to the moisture content in your unit.

If you intend to use your RV for an extended period, be prepared to take steps to prevent condensation, mold or mildew. Prevention can be a scheduled event, on your time frame; an unexpected repair is not only inconvenient, but can be more costly.

Note: Damage or deterioration due to long term occupancy may constitute an "unintended use" of your RV and will not be covered under your warranty.

Controlling Condensation

- **QUICK ACTION** - If leaks or spills occur indoors, clean it up quickly. In most cases, mold and mildew do not grow if the area is dried within 24-48 hours.
- **REPAIR** - Regularly clean and repair any items installed on the roof. Check for debris or blockages in the vents. (If roof vents are properly maintained and sealed, yet you still have water dripping from the vents, it could be condensation.) Be sure all seals are tight, and check for loose screws or moldings.
- **LOWER THE HUMIDITY INSIDE YOUR RV** - Keep indoor humidity below 60 percent relative humidity, (ideally between 30-50 percent). Relative humidity can be measured with a humidity meter, which is available at most hardware stores. The meter is an inexpensive way to avoid the far more costly repairs of water dam age.

4-Air Quality

Note: Even if it is raining or snowing, opening a vent for more air circulation will decrease moisture. Ventilated air from outside is drier than interior air.

Reducing Humidity Level

- When bathing, open the bathroom vent to allow steam and moisture to escape.
- Avoid hanging wet clothing inside to dry.
- Remove and dry wet shoes and rain gear. Avoid allow ing them to air dry inside causing rain or snow to soak into the structure.
- When cooking, avoid boiling. As an alternative, use the microwave when possible. Many items can be cooked in the microwave with minimal water.

Note: If you follow these guidelines and continue to have an excessive amount of moisture, you may want to consider using a dehumidifier.

REMINDER: Left unchecked, these repairs could become very costly and this type of preventable damage is not warrantable.

DANGER

RISK OF CARBON MONOXIDE POISONING.

THE COOK TOP AND OVEN PRODUCE DEADLY CARBON MONOXIDE GAS.

DO NOT ATTEMPT TO USE THE COOK TOP AND/OR OVEN TO ELIMINATE THE EFFECTS OF CONDENSATION.

IN ADDITION TO PRODUCING CARBON MONOXIDE GAS, THE FLAME WILL ADD MOISTURE TO THE AIR, THUS INCREASING THE CONDENSATION LEVEL.

Reducing Moisture

This following information outlines important recommendations to manage moisture in your new RV to avoid moisture-related damage, such as mold, which is caused by moisture. The materials and methods used to construct your RV were selected in part to minimize air leakage and to create a weather tight exterior shell. However, in order to protect your investment and reduce the risk of moisture-related damage and costly repairs, attention and care has to be taken to manage moisture inside your RV.

These suggestions are intended to minimize moisture-related issues with your RV. To maintain the of your investment, please read and follow the suggestions. Contact your manufacturer if you have any questions.

Interior Care of Your RV

Signs of excessive moisture can be obvious, such as water droplets forming on surfaces or wet carpet. Conversely, signs of excess moisture can be subtle, such as condensation forming on metal surfaces. When symptoms appear it is important to timely determine the cause of the excess moisture and take appropriate corrective action to prevent moisture related damage.

Control Relative Humidity

Monitoring and controlling relative humidity within the RV is one of the most important steps to minimize the risk for moisture-related damage. Ideally, relative humidity should be at 60% or less. Relative humidity can be monitored utilizing a portable hygrometer, a small device that measures temperature and relative humidity. Hygrometers are available at electronics or building supply stores. Use exhaust fans, the air conditioner, and /or a portable de-humidifier to manage moisture inside the RV to maintain relative humidity at 60% or less. In cold climates, relative humidity may need to be at 35% or less to avoid window condensation issues. If the RV is used the majority of the time in a hot-humid climate, it may be difficult to keep relative humidity below 60%. A de-humidifier will help, but it is important to check the condensation (water) collection bucket regularly or discharge the condensation (water) directly to a drain.

Avoid Drastic Thermostat Setbacks

Cooler surface temperatures increase the potential for condensation and surface mold growth. To minimize the opportunity for condensation to form on interior surfaces, maintain a comfortable temperature in your RV, and avoid nighttime setbacks of 10 degrees or more. Drastic setbacks that reduce the indoor air temperature quickly can increase the chance for airborne moisture to condense on cool surfaces such as windows. If you are away from your RV for an extended number of days, we recommend that you do not set the temperature back without taking other measures to manage relative humidity, including operating a de-humidifier with a continuous drain.

Manage Window Condensation

Window condensation issues can be identified by water or ice-build up, usually at the base of the window. The majority of these problems can be addressed by managing moisture generated inside the RV. Minor condensation issues are not unusual, especially for RV's used in colder climates. The key is to manage this small amount of moisture if evident by wiping the surface, and as discussed above, maintaining a reasonable rela-

tive humidity within the unit. To help minimize window condensation, use exhaust fans vented to the outside, avoid drastic changes in thermostat settings, do not use 'vent-free' heaters and use window coverings wisely. For example, make sure to open curtains or blinds during the day to allow air to circulate and warm the window surface.

Cleaning Tile and Wood Floors

Please refer to your owner's manual or warranty information for cleaning instructions for the tile or wood floor installed in your RV. Most floors only require a mild detergent and warm water for cleaning. More water on the floor is not always better for cleaning. Use a damp cloth to clean on a regular basis rather than wet mopping each time.

Storage & Other Isolated Areas within the RV

Storage areas are more difficult to condition since the areas are isolated from the main body of the RV. The surfaces of these areas are more at risk for condensation and surface mold growth. To minimize this risk, clean storage areas regularly, and allow an air space between stored items and the exterior wall to promote air circulation.

Use of Un-Vented Combustion Equipment

Un-vented combustion equipment, such as propane stove tops are a source of moisture within the RV. For every gallon of fuel consumed, approximately one gallon of water vapor is evaporated into the air. Operate an exhaust fan in combination with the use of any un-vented combustion appliance within the RV. Water vapor and other combustion by-products should be vented to the exterior of the RV. The RV owner should strictly follow use and maintenance instructions for safe operation of any combustion equipment, particularly un-vented equipment.

Exterior Care of Your RV

The exterior shell of the RV is the primary weather and moisture barrier. Over the life of the vehicle, the shell will require regular care and maintenance in accordance with the owner's manual. The shell includes the roof, sidewalls, windows, doors, and under-floor of the vehicle. Particular attention needs to be devoted to ensure these components are maintained to ensure a tight barrier against water intrusion.

The shell should be inspected periodically for tears, gaps, and condition of sealants. Areas that require maintenance should be re-sealed utilizing a similar, high quality sealant used by the manufacturer. Particular attention should be devoted to ensure the slide-outs are functioning properly. Each time a slide-out is used it should be inspected to ensure proper operation and sealing. The slide-out gaskets should also be inspected to ensure proper sealing when the slide-out is operated.

Use of Your RV

It is important to remember that the square footage of an RV is significantly less than that of a single family residence. This fact alone will elevate the relative humidity because there is less volume of air to help absorb or dissipate the humidity. For example, showering and cooking create a lot of humidity in a small area. In these instances, use of an exhaust fan and opening windows should reduce the relative humidity, particularly when living in the RV for an extended period.

Severe Environments

Prolonged use of your RV in severe environments - for example in extremely cold or hot-humid climates, will require extra care and maintenance to avoid moisture-related issues.

In both extremely cold and hot-humid climates, more attention needs to be focused on controlling relative humidity within the RV. It also may require the use of a portable dehumidifier to manage relative humidity within an acceptable range. This is discussed further in Interior Care Of Your RV section.

If you have any questions about moisture-related issues in the environment you plan to use the RV in for a majority of the time, contact your manufacturer's representative.

Storage of Your RV

During those periods when your RV is not in use, care must be taken to ensure moisture sources are addressed. Ideal storage of your RV would be in an enclosed climate controlled environment. When this is not possible, the following steps should be taken to ensure moisture is controlled:

- Turn off all water sources;
- Turn off all combustion appliances;
- Drain the water tanks;
- Drain the water heater;
- Open all closets, cabinet doors and drawers;
- Close all windows and entrance doors;
- Open a vent or a window enough to allow for some limited ventilation air flow, but not so far as to allow snow or rain to enter;
- When storing the RV in high humidity climates (ambi ent relative humidity is greater than 60% year round), add a dehumidifier drained to exterior to control

humidity inside the RV during storage.

Modifications to your RV

Consult your manufacturer for guidance and approval prior to making any modifications to your RV. It is very important that changes be completed by a qualified service technician to ensure moisture intrusion or accumulation problems do not occur.

Wet Areas

Areas that are exposed to water spills or leaks should be dried as soon as possible and definitely within 24-48 hours. Drying areas quickly minimizes the chance for moisture damage and possible mold growth, which can begin to form colonies in 48 hours. A variety of methods can be used to help the drying process:

- Remove excess water with an extraction vacuum
- Use a dehumidifier to aid drying
- Use portable fans to move air across the surface
- Because moisture is key to mold issues, treat all signs of condensation and spills seriously and deal with promptly. Failure to deal with a moisture issue promptly may cause more severe issues where none initially existed, or may make a small problem much worse.
- Learn to recognize signs of mold - don't paint over or cover up suspicious discoloration until you are sure it is not mold. The affected surface must first be cleaned and dried; residual staining may be painted;
- Be sure to understand and eliminate the source of moisture accumulation as a part of the clean-up. Other wise, the same issues will simply reoccur; and
- Small amounts of mold should be cleaned as soon as it appears. Small areas of mold should be cleaned using a detergent/soapy solution or an appropriate household cleaner. Gloves should be worn during cleaning. The cleaned area should then be thoroughly dried. Dispose of any sponges or rags used to clean mold.

Additional Resources

If you are interested in more information on moisture management, here are some resources to review:
A Brief Guide to Mold, Moisture, and Your Home, by the U.S. Environmental Protection Agency, Office of Air and Radiation Indoor Environments Division (6609 J) 1200 Pennsylvania Ave., NW, Washington, DC 20460 EPA Publication #402-K-02-003.

Moisture Problems in Manufactured Homes: Understanding Their Causes and Finding Solutions,
by the Manufactured Housing Research Alliance, 2109 Broadway, Suite 200, New York, NY 10023. (212) 496-0900.

Mold in Residential Buildings, by the National Homebuilder's Association Toolbase Technote July 2001 c/o NAHB Research Center, 400 Prince George's Blvd, Upper Marlboro, MD 20774. 301-249-4000.

Mold Remediation in Schools and Commercial Buildings, by the U.S. Environmental Protection Agency, Office of Air and Radiation Indoor Environments Division (6609J) 1200 Pennsylvania Ave., NW, Washington, DC 20460 EPA Publication #402-K-01-001.

5-Safety Alarms

Safety Alarms and Fire Extinguisher

Your travel trailer is equipped with a:
- Carbon monoxide detector
- Smoke detector
- Fire extinguisher

Test each of the detectors and verify the fire extinguisher is functional after periods of storage, before each trip, or at least once per week.

Carbon Monoxide Detector

DANGER

RISK OF DEATH CARBON MONOXIDE.

DO NOT OPERATE ANY GAS APPLIANCE, GENERATOR OR TRAVEL TRAILER ENGINE UNLESS THE CARBON MONOXIDE DETECTOR IS WORKING.

TEST THE CARBON MONOXIDE DETECTOR:
- **AFTER PERIODS OF STORAGE.**
- **BEFORE EACH TRIP.**
- **AT LEAST ONCE PER WEEK DURING USE.**

Procedures to take during an alarm.

Actuation of your CO alarm indicates the presence of carbon monoxide (CO) which can kill you.

If the alarm sounds:

1. Operate the reset/silence button;
2. Call your emergency services (Phone Number _____) (fire department or 911);
3. Immediately move to fresh air - outdoors or by an open window. Do a head count to check that all persons are accounted for. Do not reenter the premises nor move away from the open door/window until emergency responders have arrived, the premises have been aired out, and your alarm remains in its normal operation.
4. After following steps 1-3, if your alarm reactivates within a 24 hours period, repeat steps 1-3 and call a qualified appliance technician, (Phone Number _____) to investigate for sources of CO from fuel burning equipment and appliances, and inspect for proper operation of this equipment.

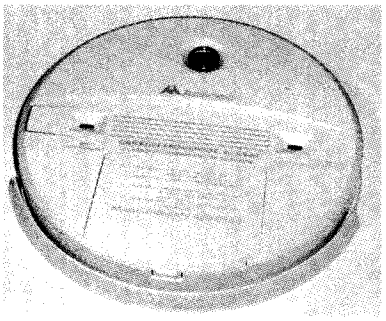
If problems are identified during this inspection, have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturers' instructions or contact the manufacturer directly for more information about CO safety and this equipment.

Make sure that the motor vehicles are not, and have not been, operated in an attached garage or adjacent to the residence.

Press the test button until alarm sounds, then release.

If alarm does not sound, replace the batteries and test again. If the carbon monoxide detector does not work, replace it before using any gas appliance, generator or coach engine.

Refer to the Owner's Manual provided with your carbon monoxide detector for additional safety, operating and maintenance information.



5-Safety Alarms

Smoke Detector

WARNING

RISK OF DEATH FROM SMOKE INHALATION OR FIRE.

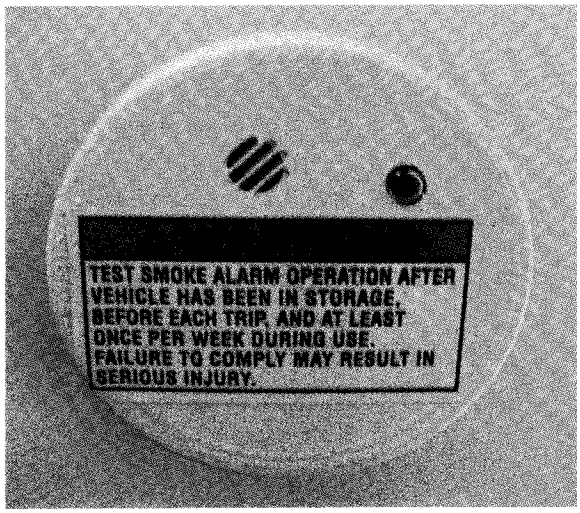
DO NOT USE YOUR COACH UNLESS THE SMOKE DETECTOR IS WORKING.

TEST THE SMOKE DETECTOR:
- **AFTER PERIODS OF STORAGE.**
- **BEFORE EACH TRIP.**
- **AT LEAST ONCE PER WEEK DURING USE.**

REPLACE THE BATTERY AT LEAST ONCE EVERY YEAR.

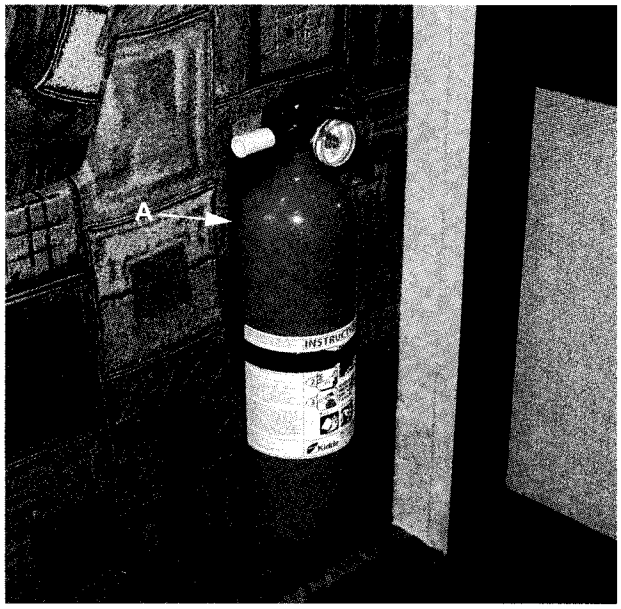
Press the test button on the smoke detector until alarm sounds, then release. If alarm does not sound, replace the batteries and retest. If the detector still does not work, replace it before using the trailer.

Refer to the Owner's Manual provided for your smoke detector for additional safety, operating and maintenance information.



Fire Extinguisher

Refer to the Owner's Manual provided for your fire extinguisher (A) for recommended replacement, recharging information, safety, operating and maintenance information.



6-Towing

Tow Vehicle Requirements

If you plan to tow your RV with an automobile or truck you already own, you might wish to upgrade your vehicle by adding heavier-duty shocks, heavier-ply tires, larger battery, larger alternator, etc. Contact your tow vehicle dealer to find out your vehicle's towing capacity. If you plan to purchase a new tow vehicle, some atuomotive manufacturers publish brochures that discuss towing considerations. Ask your dealer how you can obtain this information. **To operate the electric brakes installed on your RV, a brake control system must be installed in your tow vehicle.**

Engine Size

The engine must have enough horsepower to handle the tow vehicle, passengers, the RV unit and all of its cargo. Most automotive manufacturers offer a trailer towing package that usually includes the following: larger engine and transmission cooling systems. Consult your tow vehicle's owner's manual for specific recommendations for your particular vehicle.

Note: Use of heavier suspension components, springs, shocks, axles or heavier-ply tires does not increase the weight ratings printed on the tow vehicle's "certification" plate.

The Gross Axle Weight Rating (GAWR) of each axle is determined by the axle system components with the lowest weight-carrying capacity. To avoid overloading your vehicle, check the Gross Vehicle Weight Rating (GVWR) and the GAWR.

Hitch Selection

WARNING

LOSS OF CONTROL HAZARD.

EXCEEDING THE LIMITS OF THE HITCH AND COACH MAY RESULT IN LOSS OF CONTROL.

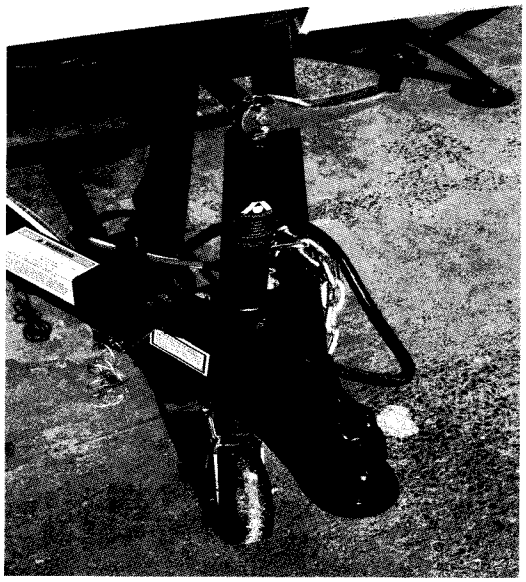
Hitch selection is important because it affects the towing and handling characteristics of your RV. Ask your dealer about the proper class and type of hitch for your unit. Sway-control devices are available to reduce sway caused by crosswinds, other vehicles passing you or the RV tires dropping into the shoulder of the road. You may also want to discuss this option with your dealer.

Be certain your tow vehicle can carry the hitch weight. The required hitch ball diameter is stamped on the trailer coupler. Read the information supplied by the hitch manufacturer to achieve the best performance possible.

Coupler

Be certain the travel trailer coupler fits a ball hitch. A weight-distributing (load-equalizing/leveling) hitch may be recommended for your unit. This type of hitch helps keep both the tow vehicle and the RV level by distributing part of the hitch weight forward to the tow vehicle and the RV level by distributing part of the hitch weight forward to the tow vehicle's front axle and back to the trailer's axle(s).

- Turn the front jack handle clockwise and raise the coupler above the hitch ball.
- Position the tow vehicle so that the ball is directly under the coupler. Lift the coupler lever up as far as possible.
- Turn the front jack handle counterclockwise and lower the coupler onto the ball.
- Secure the connection by pushing the coupler lever down until the latch shoulders rest on the top surface of the coupler. Insert safety pin or lock in coupler latch.



7-Electrical System

Electrical System

Your travel trailer is equipped with a 12 volt direct current (DC) electrical system and 120 volt alternating current (AC) electrical system.

Shore Power

WARNING

RISK OF ELECTROCUTION OR FIRE.

A MODIFIED OR ALTERED SHORE POWER CORD OR ELECTRICAL SYSTEM MAY MALFUNCTION.

NEVER MODIFY OR ALTER THE SHORE POWER CORD OR ELECTRICAL SYSTEM FOR ANY REASON.

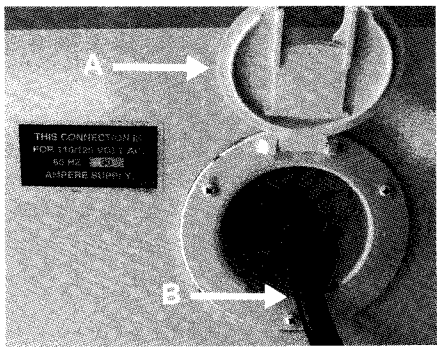
NEVER USE AN EXTENSION CORD.

NEVER REMOVE PRONGS FROM THE SHORE POWER CORD.

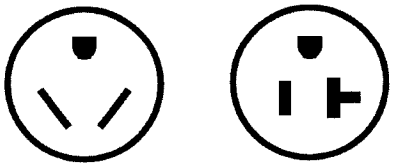
SERVICE AND MAINTENANCE MUST BE PERFORMED BY A QUALIFIED TECHNICIAN.

Connect To Shore Power

1. Locate the power cord hatch (A) on your travel trailer.
2. Open the hatch and pull out the desired length of cord (B).
3. Open cord slot in door and close door with cord in the slot.



4. The power cord is equipped with a 30 amp connector. A 20 amp adapter is provided in case your site does not have 30 amp power available. The following illustration identifies the 30 and 20 amp connectors.



30 Amp 20 Amp

The shore power available at your site and weather conditions will dictate the electrical loads used in your travel trailer and also determine if the generator is required. The two types of shore power are described below:

- 30 Amp - The air conditioner can be used along with other necessary loads in the travel trailer.
- 20 Amp - This power can used when no air conditioning is needed and for travel trailer storage when only the battery chargers will be operated.

You may need to move your travel trailer to new site if the available shore power does not meet your power requirements.

5. Connect the shore power cord to the source of shore power.

Disconnect From Shore Power

1. Turn off all major loads in the travel trailer.
2. If you will be operating the generator to power the travel trailer, see Generator Operation in this section.
3. Disconnect the shore power cord from the power source.
4. Open the power cord door, stow the cord and close power cord door (A).

Power Converter

WARNING

RISK OF ELECTROCUTION OR FIRE.

A MODIFIED OR ALTERED POWER CONVERTER OR ELECTRICAL SYSTEM MAY MALFUNCTION.

NEVER MODIFY OR ALTER THE POWER CONVERTER OR ELECTRICAL SYSTEM FOR ANY REASON.

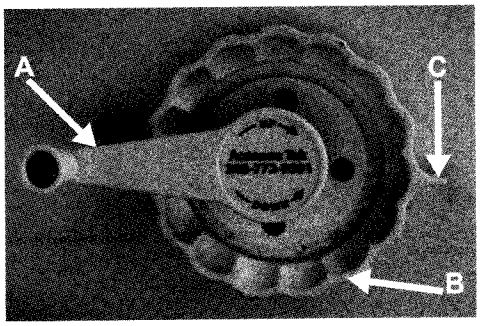
SERVICE AND MAINTENANCE MUST BE PERFORMED BY A QUALIFIED TECHNICIAN.

The power converter takes 120 volt AC power and converts it to 12 volt DC power which allows you to operate 12 volt loads in the travel trailer and not deplete the 12 volt battery. The power converter will also charge the 12 volt battery while connected to shore power or running the generator.

3. To lower the antenna, rotate the antenna until the pointer (C) aligns with the pointer on the ceiling plate. Push the rotating ring until it engages in the ceiling plate.

4. Turn the crank handle (A) counterclockwise until resistance is felt.

5. Verify that the antenna is fully lowered.



To our Valued Customer:

If you have a problem obtaining satisfactory and timely warranty service that may substantially impair use, value or safety of your Shasta® product, please call our Service Support Department toll free at 1-800-239-6157 so that we may assist you in resolving your concerns.

All information contained in this brochure is believed to be accurate at the time of publication. However, it may be necessary to make changes without notice. Refer to the product information literature provided with your unit for specific warranty details for component and chassis information applicable to your recreational vehicle.

Viking Recreational Vehicles, LLC
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