



OWNER'S  
MANUAL

2026

Models:

LR58, LR59, LR510

Silverhorn, L

Talimena

ELK

## **INTRODUCTION**

Dear UkanCamp Owner,

Thank you for purchasing a UkanCamp Camper

We want the experience with your new camper to be enjoyable. To help get you started, please take a few minutes and review our owner’s manual. It is straightforward and will help you understand many of the functions and required maintenance of your new camper.

On behalf of everyone here at UkanCamp, we hope you will enjoy our product as much as we have enjoyed making it for you.

UkanCamp

[www.UkanCamp.com](http://www.UkanCamp.com)

## **WARRANTY**

UkanCamp has provided this manual solely for the purpose of providing instructions about the operation and maintenance of its recreational vehicle. Nothing in this manual creates any warranty, either express or implied. The only warranty offered by UkanCamp is set forth in the limited warranty applicable to your vehicle.

The Limited (non-transferable) Warranty and limited warranties issued by the component manufacturers require periodic service and maintenance, and the owner’s failure to provide these services and/or maintenance may result in loss of warranty coverage for that item. The owner should review UkanCamp’s limited warranty and the warranties of all other manufacturers.

Instructions included in this manual are for operating some components, which may be optional on your vehicle. This manual is devoted to instructions for travel trailers.

We hope you have many years of vacationing pleasure.

***Note:** This manual is based on the latest information available at the time of publication. Due to continuous product development and improvements, UkanCamp reserves the right to make changes in product specifications and components without prior notice.*

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### **Important Safety Precautions**

You'll find many safety recommendations throughout this section, and throughout this manual. The recommendations on these pages are the ones we consider to be the most important.

### **Do Not Allow Passengers to Ride in the Trailer During Travel**

The transport of people puts their lives at risk and may be illegal. The trailer does not have seat belts; therefore, it is not designed to carry passengers.

### **Reducing Fishtailing or Sway**

Sway or fishtailing is the sideways action of a trailer caused by external forces. Excessive sway of your travel trailer can lead to the rollover of the trailer and tow vehicle resulting in serious injury or death. Be sure to follow the instructions and warnings as outlined on page 16.

### **Mold**

There are mold and mold spores throughout the indoor and outdoor environment. There is no practical way to eliminate all mold and mold spores in the indoor environment. Indoor moisture needs to be controlled.

### **Towing and Weight Distribution**

Weight distribution is an important factor when loading your travel trailer. A recreational vehicle with the cargo distributed properly will result in efficient, trouble free towing.

### **Formaldehyde**

Formaldehyde is an important chemical used widely in building materials and numerous household products. It is also a by-product of combustion and certain other natural processes. Thus, it may be present inside the trailer with some individuals being sensitive to it. Ventilation of the unit normally reduces the exposure to comfortable level.

### **Lug Nut Torquing**

Being sure wheel mounting nuts (lug nuts) on trailer wheels are tight and properly torqued is an important responsibility that trailer owners and users need to be

familiar with and practice. Inadequate and or inappropriate wheel nut torque (tightness) is a major reason that lug nuts loosen in service. Loose lug nuts can rapidly lead to a wheel separation with potentially serious safety consequences. Mounting bolts should be torqued to 90–105-foot pound after the first 50 miles & every 1,000 miles thereafter.

### **Appliances and Equipment**

The appliances (stove, refrigerator etc.) operate on 110V or 12VDC electric. Be sure to follow all instructions and warnings in this manual as well as the specific owner’s manual of the appliances and equipment.

### **Tire Safety**

Properly maintained tires improve the steering, stopping, traction, and load-carry capability of your vehicle. Under-inflated tires and overloaded vehicles are a major cause of tire failure.

## **Chapter 1: Warranty Information**

As the owner of a new recreational vehicle, you are responsible for regular care and proper maintenance. Proper maintenance will help avoid situations where the Limited Warranty will not cover items due to neglect. Maintenance services should be performed in accordance with this manual, as well as the corresponding manufacturer’s warranties on components included within your camper.

As the owner it is your responsibility and obligation to return the recreational vehicle to the manufacturer for any repairs and service that may be required. The manufacturer is responsible for proper service before delivery and will have a continued interest in your satisfaction.

### **Owner’s Responsibilities**

1. Proper care and maintenance as outlined by this manual and the corresponding component warranty package.
2. Returning your vehicle to the manufacturer for any repairs or service that may be required.
3. Reviewing the information contained within this manual and all supplied component information.

### **UkanCamp Responsibilities**

1. Orient and familiarize the customer with the operation of all systems and components of the new recreational vehicle.

2. Explain and review the Limited Warranty provisions to the customer.
3. Assist the customer in completing all necessary registrations and warranty forms for their new vehicle and assist in locating serial numbers if they wish.
4. Instruct the customer on how to receive local and out of town service on the vehicle and its separately warranted components, whether in or out of warranty.
5. Service all UkanCamp Camper products.

**Warranty Exclusions –Limited Warranty Shall Not This Apply To:**

- Equipment, products, components, appliances, or accessories not manufactured by UkanCamp whether warranted, including but not limited to, tires, batteries, generators, washer, dryer, electronics and other installed equipment or accessories.
- Campers used for business, rental, commercial, residential, or disaster relief purposes, or any purpose other than recreational travel and family camping.
- Campers which are not originally sold by UkanCamp and those sold through auction, repossession, salvage or an otherwise damaged or distressed condition.
- Damage or loss caused in whole or in part by the acts or omissions of any kind by any party other than UkanCamp.
- Damage or loss caused in whole or in part by the misuse, abuse, neglect, theft, vandalism, product modification, improper customer or dealer installation, improper stowing of equipment, incorrect line voltage, unauthorized repair or failure to follow instructions supplied with the recreational vehicle.
- Routine maintenance including, without limitation, caulking, re-caulking and waxing of the body of the recreational vehicle, tightening screws, brake squeak/lock-up/adjustment, latches, locks, combustion systems, changing fuses, or light bulbs, and maintenance the air conditioning and heating systems.
- Adjustments to all doors, drawers, locks, latches, awnings, and windows beyond 90 days after retail sale.
- Damage or loss caused in whole or in part by the unauthorized attachments, modifications or alterations to the structure, body, pin box, or frame of the recreational vehicle including but not limited to trailer hitches for towing, or platform for supporting cargo.
- Any upholstery damage including, but not limited to tears, punctures, or misuse.
- Any fading or die lot changes of fabrics or carpet.
- Cosmetic issues with the rubber roof or its installation.
- Damage or loss caused in whole or in part by exposure to natural or atmospheric elements, corrosive chemicals, ash or fumes generated or released by vehicles, collision, road hazards, rock chips, condensation, or any other source;
- Damage or loss caused in whole or in part by any animals, including such as

rodents and/or insects.

- Damage or loss caused in whole or in part by the overloading or improper balancing of the load.
- Damage or loss caused in whole or in part by the willful or negligent acts of the driver of the vehicle pulling the recreational vehicle, an accident involving the recreational vehicle, the condition of any road surface over which the recreational vehicle is pulled, or the striking or driving over a curb or any other object.
- Damage or loss to the recreational vehicle caused in whole or in part by the tow vehicle selected by the owner to pull the recreational vehicle including but not limited to the improper selection or installation of towing hitch on tow vehicle, weight distribution or equalizer equipment;
- Any injury, loss or damage, beyond warranty repairs, due to mold or fungi.
- Damage or loss caused in whole or in part by the owner's operation, use, or misuse of the tow vehicle.
- Any and all damage or loss to the owner's tow vehicle.
- Rust or broken glass damage.
- Wheel or axle alignment.
- Redesign or Reconstruction.
- Damage to electronics due to voltage issues are not covered under warranty.
- Representations made by any person (including UkanCamp) beyond those stated in this Limited Warranty.
- Any trailer licensed, registered, or primarily used outside the USA or Canada; and
- Any incidental and consequential damages including, but not limited to, transportation, fuel, food, lodging, telephone calls, towing charges, bus and taxi fares or car rentals, and commercial use and loss of use. Further, any performance of repairs after the warranty coverage period has expired or any performance of repairs to component parts and appliances that are excluded from coverage shall be considered "good will" repairs, which shall not alter the express terms of this limited warranty.

### **Unit Information Packet**

In addition to this Owner's Manual, a unit information packet is located within your new recreational vehicle. Inside the packet are product manuals and information on systems and equipment in the coach. Individual product warranty registrations accompany this information and should be completed and mailed promptly. Some components in this manual or packet may be components of a differing product line and/or are optional equipment. Inclusion of these items do not suggest that they are or may be available for a specific recreational vehicle.

### **Obtaining Warranty Service**

UkanCamp's repair facility is located at 3200 Melcat Rd, Oklahoma City, OK. Transportation to and from the repair facility is at the owner's expense. Service must be obtained within a reasonable time after discovery of the defect and prior to the applicable warranty expiration period.

### **Get To Know Your Unit Before Heading Out**

Throughout the manufacturing process, your recreational vehicle has been inspected by qualified inspectors and then again prior to delivery. As the owners, however, you will be the first to camp and extensively use every system.

UkanCamp wants the first camping experience to be a happy one and recommends a "Trial Camping Experience" before heading out. Plan a weekend in the yard or driveway and really camp in your unit.

By camping for several days, full-time in your unit, you will have the opportunity to use and become accustomed to the systems within your unit and find out what items are needed/not needed while camping. Note any questions that arise, difficulties encountered or problems that occur. After your trial, call your UkanCamp and ask any questions that have arisen. Getting to know your unit before the first adventure can save a lot of frustration and leave more time for fun!

### **If You Need to Make an Appointment**

Please have the following available when you call:

- Vehicle Identification Number (17-digit Serial# - begins with 4T9) and located on the front tongue of the trailer frame or on the front driver side of the camper*
- Date of Purchase*
- Description of the problem*

### **Call Ahead**

Give thought to an appointment time and call ahead. The service center is open Monday and Friday from 8:00 am to 4:00 pm except on holidays. Generally the busiest time at the service center is right before seasonal holidays.

### **Be Prepared**

If warranty work is to be done, please have a copy of your warranty paperwork available and provide the service center with any helpful information on past

repairs that may pertain and help the technicians in diagnosing the problem.

### **Make a List**

Have a list ready and be reasonable with repair expectations. Some repairs may require special order parts or parts shipped from a manufacturer. Explain what you would like to have done over the phone or stop by ahead of time so that you and the service manager can discuss possible repair times.

### **While Waiting**

Drop your unit off if possible. UkanCamp may not be able to start or finish your repairs on the same day. If you wait on your repair, do not be surprised if you cannot enter the repair area. Many insurance policies prohibit customers or non-personnel from entering the work area for safety reasons.

### **Inspecting Your Repairs**

UkanCamp and your dealer want you to be satisfied with any repair. After a repair is performed, inspect thoroughly. Check off your list and go over the repairs with the service center representative. Once satisfied, sign the UkanCamp Warranty Claim. In the event a problem should reoccur after you have left the dealership, contact the repair center or UkanCamp as soon as possible, so that the situation can be resolved expediently.

*Please note, your UkanCamp Camper's Limited Warranty covers warrantable repairs that are performed by UkanCamp at their service center or facility only. It is important for the owner to know that if you are unable to bring your unit in for repairs, UkanCamp is not responsible for performing service calls. Your unit is a recreational vehicle and not intended, nor manufactured, as a permanent residence.*

### **CAUTION! Tow Vehicle Disclaimer**

*In connection with the use and operation of UkanCamp campers, UkanCamp customers and owners of UkanCamp Campers are solely responsible for the selection and proper use of tow vehicles. All customers should consult with a motor vehicle manufacturer or dealer concerning the purchase and use of suitable tow vehicles for UkanCamp products, UkanCamp further disclaims any liability with respect to damages which may be incurred by a customer or owner of UkanCamp Campers as a result of the operation, use or misuse of a tow vehicle. NOTE: UkanCamp LIMITED WARRANTY DOES NOT COVER DAMAGE TO THE RECREATIONAL VEHICLE OR THE TOW VEHICLE AS A RESULT OF*

## *THE OPERATION, USE OR MISUSE OF THE TOW VEHICLE.*

### **Chapter 2: Effects of Prolonged Occupancy**

Your Camper was designed for recreational use and short-term occupancy. Full-time occupancy of recreational vehicle voids factory warranty. The relatively small volume and tight compact construction of modern recreational vehicles means that the normal living activities of even a few occupants will lead to rapid moisture saturation of the air contained in the travel trailer and the appearance of visible moisture, especially in cold weather.

Just as moisture collects on the outside of a glass of cold water during humid weather, moisture can condense on the inside surfaces of the camper during cold weather when relative humidity of the interior air is high. This condition is increased because the insulation in recreational vehicles is not as great as that used in our homes. Estimates indicate that a family of four can vaporize up to three gallons of water daily through breathing, cooking, bathing, and washing.

When you recognize the signs of excessive moisture and condensation in the coach, action should be taken to minimize their effects.

#### **To Avoid Condensation Problems, Follow These Tips**

- Do not hang wet clothes in the coach to dry.
- In hot weather, start the air conditioner early as it removes excess humidity from the air while lowering the temperature.
- Keep the temperature as reasonably cool during cold weather as possible. The warmer the vehicle the colder exterior temperatures and warm interior temperatures will collide on wall surfaces, creating condensation.
- Use a fan to keep air circulating inside the vehicle so condensation and mildew cannot form in dead air spaces. Allow air to circulate inside closets and cabinets (leave doors partially open). Please keep in mind that a closed cabinet full of stored goods prevents circulation and allows the exterior temperature to cause condensation.
- The natural tendency would be to close the vehicle tightly during cold weather. This will compound the problem. Simply put, you need to remove some of the warm air and allow some cool outside air to get inside the

vehicle so a heater will not recycle the humid interior air.

*Remember, your trailer is not designed, nor intended, for permanent housing. Use of this product for long-term or permanent occupancy may lead to premature deterioration of structure, interior finishes, fabrics, carpeting and drapes. Damage or deterioration due to long-term occupancy may not be considered normal and may, under the terms of the warranty, constitute misuse, abuse or neglect and may therefore reduce the warranty protection.*

## **About Molds**

### **What are molds?**

Molds are microscopic organisms that naturally occur in virtually every environment, indoors and out. Outdoors, mold growth is important in the decomposition of plants. Indoors, mold growth is unfavorable. Left unchecked, molds break down natural materials such as wood products and fabrics. According to the Center for Disease Control, exposure to damp and moldy environments may cause a variety of health effects, or none at all. Some people are sensitive to molds. For these people, molds can cause nasal stuffiness, throat irritation, coughing or wheezing, eye irritation, or, in some cases, skin irritation. People with mold allergies may have more severe reactions. Immune-compromised people and those with chronic lung illnesses, such as obstructive lung disease, may get serious infections in their lungs when they are exposed to mold.

### **What factors contribute to mold growth?**

For mold growth to occur, temperatures indoors or outdoors must be between 40 degrees and 100 degrees Fahrenheit and there must be a source of moisture such as humidity, standing water, damp materials, etc. Indoors, the most rapid growth occurs with warm and humid conditions.

### **How can mold growth be inhibited?**

By controlling relative humidity, the growth of mold and mildew can be inhibited. In warm climates, use of the air conditioner will reduce the relative humidity. Vents are in the bathing and cooking areas and constant use is advised during food preparation and bathing, even during colder weather. Additionally, opening a window during these activities will assist in ventilation. In extremely humid conditions, using a dehumidifier can be helpful. \*

Frequent use of your Campers or cleaning regularly is an important preventative measure. Further, any spills should be wiped up quickly and dried as soon as

possible. Avoid leaving damp items lying about. On safe surfaces, use a mold or mildew killing cleaning product. Check sealants regularly and reseal when necessary to avoid water leaks. Proper preventative maintenance to the Campers and its accessories, as described both in this manual and in accompanying literature, will provide the best protection to the Campers.

*\*If using a dehumidifier, please read and follow all manufacturer instructions and recommendations to the use and cleaning of the dehumidifier.*

### **Chapter 3: Towing and Leveling**

*NOTE: Passengers are not permitted in the coach while it is in motion.*

#### **Towing Guidelines**

Weight distribution is an important factor when loading your camper. A recreational vehicle with the cargo distributed properly will result in efficient, trouble-free towing. Loading the coach as evenly as possible and then weighing the loaded Campers can accomplish proper weight distribution. Keep heavier items as low as possible and distribute evenly (front to back and side to side). Securing your possessions can prevent damage from shifting during towing and maintain the weight distribution balance achieved during preparation for travel.

You must not exceed the GVWR or GAWR of the unit (see definitions). To verify GVWR, total the loaded hitch and axle weights. If this total exceeds GVWR, you must remove items until the vehicle weight is within this limit, then redistribute the item load.

#### **Weight Ratings – Definitions**

##### **GVWR (Gross Vehicle Weight Rating)**

The maximum permissible weight of this coach when fully loaded. It includes all weight at the unit's axle(s) and tongue or pin.

##### **CCC (Cargo Carrying Capacity)**

Is equal to GVWR minus each of the following: UVW, full fresh (potable) water weight (including water heater) and full LP gas weight.

##### **GAWR (Gross Axle Weight Rating)**

The maximum allowable weight that an axle system is designed to carry.

##### **Federal Certification Label**

#### **Location**

The Federal Certification tag on your Camper can be located on the road side (off-door side) near the front of the unit. This tag contains the GVWR, VIN, and tire pressure limits.

## **Weighing Your Unit Travel Trailer**

- Drive the loaded trailer onto the scales making sure that the hitch will be the only contact point with the scales after unhooking. Unhook and drive the tow vehicle off the scales. Level the trailer and record the axle weight.
- To determine overall weight, add the hitch weight plus axles.

## **Hitches and Towing**

### **Hooking up your Trailer**

1. Crank the tongue of the trailer jack up until the hitch coupler is high enough to clear the tow vehicle.
2. Back the tow vehicle to the trailer until the hitch ball is directly under the coupler on the trailer.
3. Set the parking brakes, raise the locking latch on the coupler and crank it down on the ball.
4. Move the locking latch down to lock it on the ball.
5. Engage the lock and the retainer clip.
6. Raise the tongue by cranking the jack down. (The tow vehicle will come up with it if the high coupler is properly latched.)
7. Connect the wire harness between the tow vehicle and the trailer.
8. Crank the jack up allowing the jack wheel to be just off the ground.
9. Remove the Pin in the jack wheel and let the wheel come off. (store the wheel in your tow vehicle for safety). **IMPORTANT: This step must be done prior to towing your camper in order not to damage the tongue jack.**
10. Continue to crank the jack all the way up until the handle is tight.
11. Install and adjust side mirrors.
12. Check all lights on the trailer and tow vehicle.

### **Before Towing**

- Disconnect all park connections and securely store them.
- Close and lock all doors, windows, awnings and roof vents.
- Refer to the “Pre-Travel Checklist” located in the appendix.

*Excessive sway or fishtailing of your travel trailer can lead to the rollover of the trailer or tow vehicle. Serious injury or death can occur. It is important that you read and understand the information in this section.*

*Check tires for proper inflation and wheel lug torque to meet manufacturer's specifications.*

## **Towing**

Towing recreational vehicles can be enjoyable and worry-free if special attention toward safety is applied every time you hit the road and before heading out on your first camping trip, practice turning, stopping and backing in low traffic areas or large parking lots. In time, traveling with a recreational vehicle in tow will be as easy as driving the family car.

## **Controlling Sway or Fishtailing**

Sway or fishtailing is the sideways action of a trailer caused by external forces. It is common for travel trailers to sway in response to strong winds or crosswinds or when passed by or passing a semi-tractor and trailer or driving downhill. Sway or fishtailing of your recreational vehicle can be controlled and is primarily impacted by four factors:

- Equipment
- Tongue weight
- Driving
- Corrective measures

**Equipment** – When hitched together, the trailer and the tow vehicle must be level. The tires of both the trailer and tow vehicle should be in good condition and inflated to the pressure recommended as noted on the exterior of the trailer and in the owner's manual of the trailer and tow vehicle.

**Tongue Weight** – The tongue weight should be between 10% to 15% of the total travel trailer weight. See weight distribution in next section of this manual regarding the proper weight distribution of your recreation vehicle.

**Driving** – This is the most important component. The tendency for the vehicle to sway increases with speed therefore, obey all speed limits and reduce speed during inclement weather or windy conditions.

**Corrective measures** – If sway occurs the following techniques should be used:

1. Slow down immediately, remove your foot from the accelerator. Avoid using the tow vehicle brakes unless there is a danger of collision. Reduce speed gradually whenever possible. This will help to keep the vehicles aligned. Steer as little as possible while maintaining control of the vehicle. Because of natural reaction lag time, quick steering movements to counter trailer sway will cause increased sway and loss of control. Keep both hands on the wheel. Hold the wheel as straight as possible until stability is regained.
2. Do not jam on the brakes or attempt to press on the accelerator to speed your way out of the fishtailing. Both actions make the situation worse and could cause severe injury or death.
3. Once the swaying is under control, stop as soon as possible. Check tire pressures, cargo weight distribution and look for any signs of mechanical failure. Travel at reduced speeds that permit full control until the problem can be identified and corrected.

### **Before Heading Out Weight Distribution**

Proper weight and load distribution is essential to safe towing. It is necessary to maintain a certain percentage of gross vehicle weight on the tow vehicle. Common recommendations place approximately 20-25% of a loaded weight on a travel trailer hitch as the weight comes out of the tow vehicle payload capacity. Too much or too little weight upon the hitch leads to dangerous driving conditions such as sway and reduced tow vehicle control. In no circumstances should the loaded weight ever exceed the GVWR OR THE GAWRs.

### **Safety Chains**

Always use safety chains when towing. They maintain the connection between the travel trailer and tow vehicle in the event of separation of the ball and trailer coupling. Safety chains are included with every travel trailer and in most states are required when towing a travel trailer. Hook them in the frame of the tow vehicle (not the hitch), crossing them under the trailer tongue. Inspect the length of the chains once attached to the tow vehicle frame. They should be long enough to allow for turns, but short enough to avoid any drag.

## **Tire Pressure**

Maintaining proper tire pressure is another key to safety. The Cold Inflation Pressure for each axle is located on the Federal Certification Label. Inflation pressure refers to the pressure in the tire prior to traveling. Always check your tire pressure before traveling. Under-inflated tires will cause excessive sidewall flexing and produce extreme heat, leading to early tire failure and possible loss of control. Over-inflated tires can cause uneven tire wear and also lead to early failure. More information on tires and maintenance can be found in the Care and Maintenance section.

## **Level Towing**

Having the tow vehicle and recreational vehicle level with each other will help improve towability as well as safe driving. A hitch that is too low can cause the front to drag. A hitch that is too high can cause the rear to hit those high spots in the road.

## **Lights**

Check all electrical connections to ensure all lights on the tow vehicle and travel trailer are functioning properly. The brake lights, hazards and turn signals should be in synchronization with the tow vehicle.

## **Mirrors**

Adjust the mirrors on the tow vehicle prior to departure. Having someone to assist you will make this safety step quick and easy. First line up the tow vehicle and trailer. Next, sit in the driver's seat and adjust the left mirror to where you can see the entire left side of the trailer and well beyond. Finally, while still sitting in the driver's seat, have someone adjust the right mirror until the same result is achieved.

## **While Driving**

Driving with a trailer in tow is different. Start out slowly, checking the traffic after signaling and being sure the road is clear. Accelerate slowly and evenly, checking the mirrors frequently as you move into the proper lane. Try to drive with an anticipation of problems that may occur way ahead and prepare for them, even though they may never happen. As a motorist sharing the road, you are taller, heavier, longer and require more time and distance to stop. Weather and road conditions will require adjustments to speed. Anticipate dips, gutters, and depressions in the road, slowing down well in advance, these are the hardest jolts

of any kind on your vehicle, hitch, recreational vehicle, and items stored inside the unit. Take dips and bumps slowly and be certain the trailer wheels have passed the point before accelerating.

### **Backing**

Back with care. Having a person outside to assist is a good idea. If no one is available to help, the driver should inspect the area behind the vehicle to avoid any unseen obstacles and unpleasant surprises.

### **Braking**

Start sooner to prevent any loss of control of your vehicle or camper. Remember you are a heavier object and will need a longer distance to stop safely.

**WARNING: If your trailer is equipped with Autowbrake electric brakes, turn on your vehicle's driving light. do not leave them in auto mode. The lights must be turned on to activate the brake system.**

### **Passing and Accelerating**

Remember when you pass another vehicle that it takes longer to accelerate, and additional time must be allowed due the added length of the trailer. Passing should be done on level terrain and downshift if necessary for added acceleration. Whenever deciding to pass another vehicle, exercise caution and always use the turn signals.

### **Sharply Winding and Narrow Roads**

Keep well to the center of the lane, equally away from both the center line and pavement edge. This allows the trailer to clear the edge of the pavement without the likelihood of the wheel dropping onto the shoulder causing potentially dangerous sway. Do not overcrowd or cross the center line.

All sharp turns should be taken at slow speeds. Professional drivers, when rounding turns, slow down well in advance of the turn, entering it at reduced speed and then accelerating smoothly as they come out again into the straightaway.

### **Steep or Long Grades**

Downshifting into a lower gear or range in advance assists braking on descents and adds power on the climb. Avoid situations that require excessive and prolonged use of the brakes. Apply and release brakes at short intervals to give them a chance to cool.

### **Slippery Pavement**

On slippery and icy pavement, reduce speed and drive slowly. Hydroplaning can

occur with little water on the pavement. If skidding begins, remove your foot from the throttle.

### **Freeways and Highways**

Try to pick the lane in which you want to move and stay in it, preferably keeping to the slower lane on the right.

*Note: Due to slower speeds, cars can become trapped behind you on a two-lane road. It is courteous and practical to signal and pull onto the shoulder when possible and allowing them to pass. This reduces passing hazards and saves tempers.*

### **Turning Corners**

Here is where you find a basic difference when towing. The trailer wheels do not follow the path of your tow vehicle's wheels. The trailer will make a closer turn than the tow vehicle. Compensate by pulling further into the intersection so that the trailer will clear the curb or clear any parked vehicles along the road. Left turns require a wider than normal swing into the new lane of traffic to keep the trailer from edging into the opposing lane. Use the turn signals early to communicate to traffic behind and slow down well in advance.

### **Parking**

Whenever possible avoid parking on a grade with a recreational vehicle in tow. If it is necessary, turn the front wheels of your tow vehicle into the curb and set the parking brake. For added safety, place wheel chocks under the trailer wheels on the down roadside.

### **Travel Trailer Leveling Procedures**

1. Choose a site that is level as possible (some sites are equipped with a prepared surface such as concrete or asphalt.) Ensure the ground is not soft and will support the weight of the trailer on the stabilizing jacks or other support devices.
2. Before uncoupling, level the trailer from side to side with suitable lengths of 2"x6" wood blocks under the trailer wheels. Place the wood blocks on the ground forward of the wheels and tow the trailer onto the blocks. Block the wheels to be sure the trailer cannot roll.
3. Put the Jack Wheel back on the jack post and uncouple the trailer from the tow vehicle and crank the jack until the hitch is off the vehicle.
4. Pull the Vehicle forward out from underneath the trailer.
5. Crank the jack down so the front of the camper is slightly lower than the

- rear.
6. A (Standard Flip down Jacks). Pull the rear stabilizing jacks forward and let them swing down into position. Squeeze the lever at the bottom of each stabilizer and extend it to reach the ground. You may find it necessary to place a sturdy 2"x6" wood block under the jack post foot pad to support the jack post on soft ground surfaces.  
B (Scissor Jacks). With the supplied crank handle, lower the scissor jacks to make contact with the ground. You may also use the scissor jack to level the camper left to right as needed.
  7. Crank the Jack up until the Camper is level and the rear stabilizing jacks are fully intact with the ground.
  8. Check the level of the trailer with a carpenter's level both crosswise and lengthwise on the trailer floor.
  9. After stabilizing the trailer, be sure the trailer frame is not twisted, bucked, or stressed. Check that all doors and windows operate freely and do not bind.
  10. Before resuming travel, be sure all stabilizers are removed or fully retracted.

### **Stabilizing Jacks**

*Note: Stabilizing jacks are designed to level and stabilize your coach. Do not attempt to lift the unit to change a tire or for any other purpose.*

Dependent upon the type, product and model purchased, the stabilizer jacks included will vary. Although stabilizer jacks come in different types and sizes, all perform the same function: To stabilize the front and rear of all recreational vehicles while parked for camping.

Always Park the recreational vehicle on level ground and use tire chocks. It is extremely important to level the trailer front and rear using the tongue jack.

*After-market stabilizer stands must be placed only under chassis frame rails. Stabilizer jacks should not be placed at extreme corners of the frame. Locating stabilizers in these locations can cause slide-room damage if leveling blocks were to shift or settle. Do not attempt to level, raise or otherwise place all of the weight of the unit on the stabilizer jacks. Do not use stabilizer jacks for tire changing.*

## **Chapter 4: Appliances and Equipment**

### **Air Conditioner (Optional)**

Air conditioners are operated by a 110-volt AC power source. Keep in mind that typically Campers electrical systems are designed to handle 30 amps and that the

air conditioner takes a sizable portion of that when the compressor starts. Reduce other loads as much as possible when using air conditioning.

*Never run the A/C without the filter. This could plug the unit evaporator cell, substantially affecting performance.*

### **Capability vs. Environment**

The capability of the air conditioner to maintain the desired inside temperature is directly affected by the heat gain of the Campers. During extreme high outdoor temperatures, the heat gain of the vehicle may be reduced by:

1. Parking in a shaded area
2. Keeping blinds down or drapes shut
3. Keeping windows and doors shut and minimizing usage
4. Operation on High Fan/Cooling mode will provide the maximum efficiency in high humidity or high temperatures
5. Using awnings to block direct sunlight exposure on the unit
6. Avoiding use of heat producing appliances
7. Giving the A/C a “head start” by turning the air conditioner on early in the morning

### **Care and Maintenance**

Periodically remove the return air filter and wash with hot soapy water. During extended use situations, cleaning is recommended after two weeks of daily usage.

### **Cable / Antenna HookUp**

At many commercial campgrounds, cable access is provided. To utilize the cable access, locate the exterior hookup on the side of the recreational vehicle. Attach cable to access hook-up and trailer hook-up or use an outdoor Antenna for local channels.

If your camper has a HDTV antenna installed. Connect your TV to the coax connection inside the camper, push the small black button on the coax plate so the green light is on and scan for channels on your TV.

### **Cooktops**

Never use the range or oven for extra comfort heating. Cooking appliances are not directly vented to the outside as are the furnace/air conditioning systems.

### **Operation –**

If your camper is equipped with an induction cooktop. This is to be used with

only induction cooking ware. The basic rule is if the pot or pan you are using is magnetic, then it will work with the induction cooktop.

The range or cooktop installed is an electrical appliance. Carefully read the manufacturer's manual provided in the unit packet for complete operational and safety instructions prior to using the appliance.

**Warning: Before putting away the cooktop, allow the temperature to cool to prevent any fire.**

**Warning: Before Traveling, make sure that you have CLOSED any propane bottles that are in or on the camper.**

### **LR/Silverhorn L/Talimena Refrigerator/Freezer**

The refrigerator operates on either 120-volt AC or 12V DC. During towing you may use the 12V adapter to keep the cooler operating; however, keep in mind that this is pulling from your campers battery and may drain the battery if used for an extended period of time

### **Refrigerator (only on ELK Models)**

The Refrigerator is a 12V appliance that runs off your Battery when you cannot connect to shore power. When you are plugged in to a shore power source, the converter in your camper will supply 12V power. Carefully read the Refrigerator manufacturer's manual for complete operational and safety instructions, provided in the unit packet, prior to using the appliance.

### **Freshwater Storage (only on Talimena and ELK Models)**

Your campers are equipped with a gravity fed freshwater tank system in the Talimena or a 12V pump with Faucet in the ELK. Fill the tank with freshwater through the Water inlet on the Driver side of the camper. To access your water, use the spigot on the outside of the Talimena or use the Faucet in the ELK. It is a good idea after each trip to empty the freshwater storage tank and allow it to dry-out so it is fresh the next time it is to be used. To empty the Water, open the spigot and let the water drain. There is a spigot under the ELK near the axle.

**Warning: During Freezing temperatures, empty the tank so that the water does not freeze.**

### **Roof Vents (optional)**

Manual and/or power roof vents are installed on UkanCamp Campers. Operate the roof vents, when possible, as it allows moisture to escape. Ventilation is extremely important in reducing condensation formation.

### **Safety**

Fire safety is important whether at home or in a recreational vehicle. The best way to limit fire risk is by prevention. Follow the manufacturer's instructions on the use of all appliances and observe all safety warnings and instructions included.

Before camping, make sure you are aware of the locations of all safety equipment inside the camper and all exit doors. An escape plan for emergencies whether at home or camping is always a good idea.

### **Egress Windows**

Egress or "Emergency Exit" windows are labeled from the factory with the word EXIT. All egress windows can be distinguished by red operational handles or levers. Dependent upon the window type, an egress window may be a large section or an entire window. Review the locations and operational instructions posted upon the window with all passengers.

### **Fire Extinguisher**

Each recreational vehicle includes a fire extinguisher, which is located near the main entry door. The fire extinguishers are rated for Class B (gasoline, grease, and flammable liquids) and Class C (electrical) fires. Test and operate according to manufacturer instructions.

### **Smoke and Carbon Monoxide Detector**

For safety, a smoke detector and a Carbon Monoxide detector is installed in the living area. Smoke and Carbon Monoxide (CO) detectors should be tested prior and during each camping trip, or weekly during the season. . Keeping fresh extra batteries on hand is a good idea.

### **Indication of CO poisoning are (but not limited to):**

Mild exposure

- Symptoms of the flu (minus a fever)
- Slight headache

- Dizziness
- Fatigue

#### Medium Exposure

- Severe Throbbing Headache
- Drowsiness
- Confusion
- Fast Heart Rate

#### Extreme Exposure

- Unconsciousness
- Convulsions
- Respiratory Failure
- Death

For your safety and to keep your carbon monoxide alarm in good working order, follow the steps below.

- Verify the unit alarm, lights and battery operation by pushing the “Test” button weekly
- Vacuum the CO alarm cover with a soft brush attachment once a month to remove accumulated dust
- Instruct children never to play with the CO alarm. Warn children of the dangers of carbon monoxide poisoning
- Never use detergents or solvents to clean the carbon monoxide alarm ●

Avoid spraying paint, hairspray, air fresheners or other aerosols near the CO detector

- Do not paint the CO detector. Paint will seal the vents and interfere with the sensor ability to detect CO
- Do not place near a diaper pail
- Test the alarm operation after your coach has been in storage, before each trip and at least once a week during the camping season

*If the alarm sounds, provide ventilation by opening windows and doors. The Carbon monoxide buildup may dissipate before help arrives but may be only temporarily solved. It is crucial that the source of the Carbon monoxide is*

*determined and repaired.*

*The Carbon monoxide alarm can only warn you of the presence of Carbon monoxide. It does not prevent Carbon monoxide from occurring nor can it solve an existing Carbon monoxide problem.*

*Carbon monoxide can be fatal! When the device detects carbon monoxide in the air it will sound. Consult the individual detector's user manual for specific instructions and/or audible warning meanings.*

## **Chapter 5: Electrical System**

The electrical system in recreational vehicles is a combination 12-volt DC (Direct Current) and 120-volt AC (Alternating Current) system. Every facet of the electrical system is carefully engineered and installed to comply with the "American National Standard #A119.2" and the "National Electric Code." To understand this system, simply put, the 12-volt system is what an automobile uses and 120-volt system is what most households use.

**NOTE:** *Before plugging in the Campers shore cord, turn off all electrical appliances so as not to start under a "load", which could cause a breaker to open. Reverse this process before unplugging.*

*The power cord prongs should always be clean and solid. Clean with a contact cleaner, emery cloth or a nail file. Electrical connections work better when clean.*

### **12-Volt System – DC**

The 12-volt system can be powered in three different ways: a separate Campers battery or the converter changing 120-volt AC. The lights, power vents, and other appliances are powered by the 12-volt system.

The heart of the 12-volt system is the battery. Batteries are essentially storage devices for electrical energy. Most batteries used in Campers are Campers/Marine Deep Cycle, Lead-Acid types. These batteries contain lead plates and liquid sulfuric acid electrolytes in sections called cells.

Electrolytes are lost whenever a battery discharges energy or is recharged. The level of the electrolytes must stay above the plate in each cell. Many premature battery failures occur because the electrolyte level was not maintained. For maintenance and storage information see the Care and Maintenance Section.

**110-Volt System** (Also referred to as 120) – AC The 120-volt system is supplied by plugging the power cord (shore cord) into an outside source. It furnishes current to the 120-volt appliances and fixtures like air conditioners, the

refrigerator, and all 110-volt receptacles. It also supplies power for the 12-volt trailer system through the converter on models that have a converter. The AC circuits are protected by circuit breakers and can handle from 15-30 amps depending upon the circuit. The most common cause of a circuit breaker to open is an overloaded circuit. An example of an overloaded circuit is when a space heater is plugged into the same outlet as the toaster. If this happens, reduce the load on the circuit and reset the breaker.

### **Fuse Blocks and Circuit Breakers**

Your camper is equipped with a converter with fuses and circuit breakers. All fuses and circuit breakers are located behind the front panel door.

Each fuse is labeled with the purpose they serve. If a fuse has blown, a red indicator light will be present, and the fuse will need to be changed. Only change the fuse with the same size fuse to avoid an overloaded circuit.

If a fuse has blown, a red indicator light will be present, and the fuse will need to be changed. Only change the fuse with the same size as you have removed to avoid an overloaded circuit.

Circuit breakers are in place to protect the circuits inside your camper. Working from the Left to the Right you have 4 Switches. They are Listed in the chart below:

Main Service	30A
DC convertor	20A
Cabin and Galley Outlets	15A
AirConditioner Outlet	15A

### **Power Cord/Shore Cord**

The power cord, often referred to as shore cord or shoreline, is a heavy-duty cable with a 3- or 4-prong grounding plug on one end and connects directly to the power converter inside the unit on the other end. This cord is used to plug into an external 120-volt source. Most cords are typically 30-amp plugs (3-prong) on campers with a converter installed and 15-amp cords when no converter is supplied, Do not plug shore cord in while under load. Make sure all appliances are

turned off prior to connecting the shore power cord.

### **30-Amp,**

*Never replace circuit breakers or fuses of higher current rating than those originally installed. This could overheat the wiring and start a fire.*

### **30-Amp Capability**

Your camper is equipped with 120-volt service limited to a total draw of 30-amp. The power cord from the Campers is three-pronged. 30-amp service is the most common in the Campers industry and used widely in campgrounds through the United States. With 30-amp service any appliance in the Campers can operate by itself. However, due to the 30-amp service limitations, you may not be able to run a certain group or all appliances at the same time. For instance, most air conditioners will draw up to 16 amps on startup and about 11 amps when running continuously. While running the microwave and pulling 15 amps, if you decide to turn on the air conditioner, the initial draw of up to 16 amps may overload the circuit, causing a breaker to trip. A reference chart has been supplied below to show typical amperage draw on common appliances and fixtures.

### **Available Power**

Despite the power system built into a recreational vehicle, the power system is only as good as the power supply. If the campground had only 30 amps of service, a camper with 50-amp service will only be able to use 30 amps of service. Some campgrounds have only 15-amp service available, which is not adequate to properly run an air conditioner or certain other appliances. See chart below. The best way to know what amperage is available is to call ahead to the campground. There are special adapters available to make these connections to campgrounds with lower service ratings.

<b>APPLIANCE</b>	<b>AMPERAGE CONSUMED</b>
Conditioner (continuous)	11.4
Air Conditioner (Initial start)	Up to 16
Electric Water Heater	12
Microwave	13
Converter	8

Refrigerator	3.5
TV or VCR	1
Hair Dryer	2
110 Volt Light	1

### **Adapters**

These devices connect to the end of a 30-amp shore cord to allow it to plug into a 15-amp outlet. When using adapters, your available electrical power for the entire unit is reduced to the rating of the adapter. For example, if using a 30- to 15-amp adapter, the entire unit only has 15 amps available for power.

### **Extension Cords**

It may be necessary to use an extension cord to extend your recreational vehicle shore cord to the available campground electrical outlet. It is critical the correct size cord is utilized, i.e. 30-amp service – 30-amp extension cord.

If using an extension cord rated less than the Campers shore cord, it reduces the available electrical power. Do not use ANY adapter with an extension cord and do not plug multiple extension cords together at one time. Your local UkanCamp dealer can assist you in obtaining the proper extension cord for your needs.

### **Converter**

The main purpose of the converter in your Campers is to provide 12-volt power to the unit while plugged into an AC outlet, such as at a campground. The converter will, as its name indicates, convert the incoming alternating current to direct current so as to operate the appliances and fixtures requiring 12-volt DC power. In essence, utilization of the converter will reduce the usage of the Campers battery.

The converter installed helps by trickle charging the Campers battery when the trailer is plugged into AC power. When using AC power and having the Campers battery hooked up, check the electrolyte level more often if staying connected to AC for a lengthy period.

If remaining plugged into AC power for extended periods, check the electrolyte level often in the Campers battery.

*Exceeding the amperage rating of an adapter can cause low voltage, which may cause damage to the appliances or other components. It may also cause the*

*adapter or the shore cord to melt, leading to fire which could cause property damage, personal injury or death.*

*Exceeding the amperage rating of an extension cord can cause low voltage, which may damage appliances or other components. It may also cause the extension cord to melt, leading to fire which could cause property damage, personal injury or death.*

### **GFCI (Ground Fault Circuit Interrupter)**

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

### **Testing**

The GFCI receptacle should be tested at least once a month or prior to every trip. To test the GFCI, push the TEST button. The RESET button will pop out. Power is now off at all outlets protected by the GFCI receptacle. Push in the RESET button to restore power. The test is complete when the reset button remains pushed in. If the RESET button does not pop out when testing, the GFCI is malfunctioning and no outlets should be used on this circuit, as protection is lost. Call UkanCamp if the GFCI malfunctions.

### **Maintenance**

This item requires no maintenance other than periodic testing as described above. If for any reason this switch malfunctions, do not attempt to repair yourself. Contact an authorized repair facility.

## **Chapter 6: Care and Maintenance**

The instructions and recommendations located within this manual and the accompanying manufacturer’s component literature should be read, as failure to perform necessary or preventative maintenance may limit or void all or part of a specific warranty.

Care and maintenance of the recreational vehicle is an important step in maintaining the safety, dependability, and appearance, both interior and exterior, of the unit. Keep good records of all maintenance performed as these may be necessary for warranty information or may assist in possible repairs needed.

Operational usage and climates may affect the frequency of maintenance needed on certain components. Preventative maintenance is important to the life and enjoyment of any recreational vehicle as many problems can be caught before

they occur. Please do not hesitate to call your dealer with a question on the maintenance or care of any item.

The care and maintenance of appliances are discussed within the appliance chapter. Always refer to the manufacturer's recommendations located within the literature contained in the unit packet.

### **Winterization**

Because your Camper does not include any permanent plumbing (holding tank, water lines, sinks, toilets, showers etc.) no Winterization is required; however in some models there is a removable fresh water tank that will need to be emptied prior to freezing.

### **Exterior Metal**

The aluminum exterior has a baked-on enamel finish. Washing frequently with an automotive or Camper wash or solution will help avoid staining from debris and soil buildup. Always rinse unit with clear water prior to washing to remove any loose dirt. Waxing two to three times a year with a good automotive paste wax will help preserve the finish.

### **DO'S and DON'TS**

- Do use automotive/marine grade non-abrasive waxes.
- Do use soft cloths to clean and wax.
- Do be careful around graphics. Wax and wash with the graphics, not against them.
- Do not use products containing ammonia or caustic harsh cleaners as they may cause discoloration to the fiberglass surface.
- Do not use high-pressure washers or rotating brushes such as in car washes, and power buffers. Use of these products can damage graphics and/or paint finishes.
- Do not dry wipe surfaces
- Do not use rubbing compounds
- Do avoid spraying directly into doors, vents, windows.

### **ABS Plastic/Molded Parts**

Some components of UkanCamp Campers are constructed of strong ABS molded plastic. A mild solution of soap and water should be used when cleaning. When using any product, make sure the product is recommended for use on plastics. Avoid harsh abrasive cleaners, ammonia, or citric-based products as discoloration may result.

## **Roof**

Wrinkles may develop in the material due to expansion and contraction from heating and cooling but this does not affect the integrity of the roof and is not a cause for concern.

## **Maintenance**

Inspect the roof at least every 90 days, paying particular attention to the seams where the areas of sheet metal, moldings, rubber and/or fiberglass are joined. Carefully inspect the sealant around any vents, skylights, air conditioners, etc.

Exposure to the elements will cause sealants to deteriorate over time. Variations in climate and weather may accelerate deterioration. Inspections and periodic resealing are essential as preventative maintenance. If cracks or shrinkage is noticed, immediately reseal with a Lap-Sealant. We Recommend Dicor 501LSW-1 for the Roof Vent and Dicor 551LSB-1 for around the roof, sides, doors, windows.

## **Seals and Adhesives**

The seals and adhesives used perform an important job, keeping out an Campers enemy – water. Close inspection and routine maintenance are crucial to the longevity of the trailer. While many types are used, none have a pre-set lifetime, as exposure to the elements and regional variances of the climates can accelerate any sealants deterioration. Therefore, every six months, inspection of all seals is recommended and a quick inspection prior to every trip will help reduce potential problems down the road.

When inspecting, check for cracks, voids, shrinkage, or any sign of deterioration. If any of these signs are noticed, have your dealer inspect and replace the sealant if necessary. It is important to use the same kind of sealant that was previously used.

## **Windows (Exterior)**

As with seals, check the sealant around the windows at least once every six months. If any interior leaks are noticed, contact UkanCamp immediately. To ensure window operation, adjust and lubricate latches and any moving parts annually. A light oil or powdered graphite can be used for lubrication. Periodically use a vacuum attachment to clean any debris out of the window weep holes, which are necessary to drain any condensation or moisture from hard driving rains that may collect.

## **Frame and Chassis**

Over time, weather, and climate such as rain, snow, salt, etc. lead to corrosion. Rinse the undercarriage, wheel wells, hitch and bumper when needed to remove dirt, oil, tar, salt, and other debris. Periodically inspect for rust. Near coastal regions, inspect more frequently. If needed, lightly sand and repaint with a rust proof enamel.

### **Hitch Couplers**

Inspect prior to each trip. The ball socket and clamp should be cleaned and lubricated monthly with wheel bearing grease. If coupler or coupler components appear damaged or worn, contact your dealer upon notice of the problem.

### **Safety Chains**

Safety chains should be inspected monthly. If chains are damaged or weakened, replace them immediately. Never tow without the use of the safety chains.

### **Jacks**

Tongue Jacks, Manual (travel-trailers)

Whenever preparing to travel, inspect the jack for any damage and test operation. If your jack is difficult to operate, clean and oil lightly. If the jack is still difficult to operate or freezes, you should have it serviced. Service on any jack should be performed by qualified service personnel only.

### **Tires and Wheels**

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

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

*Some procedures require the use of special tools for safe and correct maintenance. Do not attempt to service, repair or work on any axle, brake, or wheel system unless you have appropriate knowledge. Lack of proper training, failure to follow*

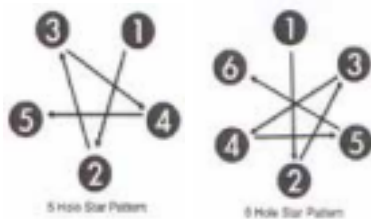
*procedures or use special equipment could result in property damage, serious injury or loss of life.*

### **Tire Changing Basics**

1. Use emergency flares when near a road or highway.
2. Block the wheels on the opposite side from the tire you wish to change to prevent accidental movement.
3. Position a jack on the frame close to the spring hanger. (Never attempt to use a stabilizer jack to lift the unit)
4. Raise the trailer until the tire clears the ground.

Tire Inspections: The chart below is a useful guide for use during inspections. When replacing tires consult the wheel and tire manufacturers' specifications for compatibility.

### **Wheel Nut Torque**



The information contained in these printed instructions outlines the most recently recommended processes involving Lug Nut Torque and takes precedent over any information regarding Lug Nut Torque shown in your UkanCamp, Lippert, or DEXTER owner's manuals.

The axle and wheel assemblies of your Campers are designed differently than those on your car. The overall size, weight, and center of gravity of a recreational vehicle subject the wheels to pressures unique to trailering. During normal cornering the tires and wheels experience a considerable amount of stress called "side-load." Therefore, the lug nuts on your recreational vehicle require periodic re-torquing.

These instructions will show you how to maintain proper lug nut torque by following these important steps:

1. Check torque before every trip
2. Use proper tools
3. Follow the appropriate ANSI TSIC-1 recommended practice
4. Torque lug nuts in the correct stages and follow-up intervals after any wheel reinstallation.

Remember, torque is the amount of rotating force applied to a fastener, such as a

lug nut. Proper torque of lug nuts can only be achieved by using a torque wrench and a socket

-Dial indicator or

-Adjustable dial torque wrench

-7/8" or 13/16" socket

### **Using Torque Wrenches:**

Most torque wrenches are required to be set at "0" when not in use to maintain calibration.

Setting torque value on a dial indicator wrench:

1. Make sure your indicator needle is set to "0".
2. As you apply clockwise pressure to the lug nut, both needles will show the current amount of torque being applied.
3. When you reach your desired torque value, stop applying pressure and your indicator will stay at the highest torque value reached.

Setting Torque Value of Adjustable Dial Wrench:

1. Unlock the handle and set the dial to your desired torque value. 2.

Lock the handle back in place.

3. As you apply clockwise pressure to the lug nut, you will hear and audible "click" when the desired torque wrench value is reached. Do not apply further pressure once you hear the "click."

Always Remember:

-Check lug nut torque before every trip. UkanCamp recommends this maintenance procedure to ensure proper torque has been applied to lug nuts before heading out on the road.

-Lug nuts should be torqued to 90-120 ft/lbs on all units.

-Always follow the appropriate star pattern as indicated on the previous page.

***NOTE:** Some wheel assemblies require an extension. DO NOT USE a flexible extension. Also, DO NOT USE a 4-way socket or any other type of wrench, which does not measure the actual pressure applied to the lug nut.*

### **Pre-Trip Procedure:**

1. Set your torque wrench to 90-120 ft/lbs.
2. Begin with the appropriate bolt for your wheel (2 o'clock position for 5-hole wheels, as illustrated) and apply torque to all lug nuts following the star pattern indicated.
3. Complete the procedure on each wheel. Before moving to each new wheel, be sure to verify your preset torque wrench value.

After removing a wheel from your Campers for any reason, you must carefully follow a 2-step process:

- 1) Wheel reinstallation
- 2) Follow-up

### **Step 1) Wheel Reinstallation**

During wheel reinstallation the lug nut torque must be applied in 3 stages. This will ensure the wheel studs are centered in the wheel holes and will help the lug nuts maintain proper torque.

1. Start all lug nuts by hand.
2. Stage 1: Set your torque wrench to 20-30 ft/lbs.
3. Begin with the appropriate bolt for your wheel (2 o'clock for 5-hole wheels, as illustrated) and apply torque to all lug nuts following the star pattern indicated on the previous page.
4. Stage 2: Increase your torque wrench setting to 55-60 ft/lbs.
5. Begin with the appropriate bolt for your wheel and apply torque to all lug nuts following the star pattern indicated previously.
6. Following stage 2, the wheel can support the weight of the trailer and can be lowered off of the jack stands.
7. Stage 3: Increase your torque wrench setting to 90-120 ft/lbs.
8. Begin with the appropriate bolt for your wheel and apply torque to all lug nuts following the start pattern indicated on the previous page.

### **Step 2) Follow-Up: Re-torque after 10, 25, and 50 miles:**

1. After the first 10 miles of your trip, pull your recreation vehicle off the road into a safe work area.
2. Set your torque wrench to 90-120 ft/lbs.
3. Begin with the appropriate bolt for your wheel and apply torque to all lug nuts following the star pattern indicated previously.
4. Reapply torque and repeat steps 1, 2, & 3 again at 25 miles and at 50 miles of your first trip.
5. The follow-up process is complete, and you should refer to the general lug nut torque maintenance process described in section C "Pre-Trip Maintenance."

### **Summary**

1. Check torque before every trip
2. Use proper tools

3. Follow the appropriate star pattern sequence
4. Torque lug nuts in the correct stages and follow-up intervals after any wheel reinstallation

#### *WHEEL SEPARATION CAN OCCUR*

*On the first trip, check for the proper torque every 10, 25 and 50 miles traveled in your camper. This procedure should also be repeated every time a wheel is replaced. Always torque wheel nuts to the wheel manufacturer's specifications. Over- or under-torqued wheel nuts can cause the wheel to separate from the wheel mounting surface during operation, causing property damage, personal injury, or loss of life.*

#### **Wheel Bearing Lubrication**

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

Prepare bearings by cleaning with solvent to remove the old grease. Repack by pressing fresh bearing grease into bearing roller area. Repack bearing more often if subject to extremely wet conditions. If trailer has not been used for more than 2 months, the wheel bearings should be inspected and repacked if necessary. Repack bearings using a high temperature, automotive type wheel bearing grease produced by a reputable manufacturer. The soap type should be polyurea, lithium complex or equivalent. Use a NLG1 Grade 2 product with a minimum dropping point of 440F.

*Do not tow the trailer with missing lug nuts or faulty lug bolts.*

*It is critical that the wheels be properly torqued every 50 miles during the first 200 miles of road operation. Although the wheels have been properly torqued before leaving the manufacturing plant, settling and wearing in of components during the first few miles of operation may cause some loosening of the wheel nuts.*

*Installation of wheels which are not compatible with the manufacturer installed axle assembly could result in wheel separation, which can lead to property damage, serious injuries, or loss of life.*

## **EZ Lube Hubs**

If the recreational vehicle is equipped with EZ Lube Hubs, there is no need to lift the Campers prior to greasing the axles. To grease follow these simple steps: 1. Remove the rubber plug from the grease cap.

2. Insert grease gun on the grease zerk.
3. Pump until new grease begins to appear.
4. Replace rubber plug.

Hubs and components still need to be inspected and maintained per the manufacturer's guidelines.

## **Battery**

Before performing any maintenance on the battery, always disconnect. To inspect the electrolyte level, remove the vent covers and visually ascertain the electrolyte level in each cell, using a small flashlight may help. (If a maintenance-free battery has been purchased – no way exists to check these levels.) If the level needs to be replenished in any or all cells, carefully pour in distilled water only. Never use acid or tap water. Tap water contains minerals and chemical impurities that will permanently damage the battery.

Besides maintaining the electrolyte level, visually inspect the battery for loose terminals, corrosion, or any damage to the vent covers or case. Tighten any loose clamps on the terminals of the battery and clean any corrosion off the terminals. An inexpensive device for cleaning these terminals can be purchased at automotive stores.

When working with batteries, be extremely careful. The acid in batteries is highly corrosive and flammable. Batteries produce a flammable hydrogen gas that will explode if ignited. Never place batteries in any compartment or near anything that could spark, even a 12-volt switch. Never smoke or use open flames anywhere near the battery. Secure batteries in a battery box or in a compartment specially designed for battery storage. Wear splashproof goggles and appropriate clothing when performing any maintenance on a battery. In case of a spill or splash, immediately flush the affected area with cold water for 15 minutes and call the poison control center for further instructions. We do not cover batteries under warranty.

*The acid in batteries is highly corrosive and hydrogen gas is produced which is extremely flammable. Avoid placing near a possible ignition source such as open*

*flame or potential spark producing wiring.*

*Before performing any maintenance on the battery, always disconnect the battery, removing the negative (-) cable first and then disconnecting the positive (+).*

*Always disconnect the negative (-) cable prior to working near batteries to reduce risk of arcing and igniting.*

### **Battery Storage**

When storing the Campers for an extended period, fully charge the battery before storage. Batteries will self-discharge over time and are subject to freezing, especially if in a discharged condition. Inspect batteries while in storage every 2 to 3 weeks. Hook up a battery charger at least once a month to prevent discharge and sulfate. An easy solution is to remove the battery completely from the unit during storage and place it at home in a warmer location, such as a garage, so that the battery condition can be monitored and charged as needed during storage periods.

*NOTE: When storing a battery, do not place the battery directly on concrete, as the battery will discharge more rapidly.*

### **Appliances – See Chapter 4**

### **Wood**

The countertop, shelves and drawer fronts are solid wood and should be cared for like the fine furniture in your home. Using a quality furniture polish will help maintain the beauty and luster of the wood as well as keep the wood from drying out. The accidental scratches can be covered satisfactorily with a good quality commercial furniture scratch remover.

### **Ceilings and Walls**

Clean only with a mild detergent in warm water, using a damp cloth to clean the ceiling. Never use strong chemicals or excessive water/moisture, as either can damage the ceiling or walls.

### **Glass and Mirrors**

Clean glass and mirrors as you would at home using a cleaner designed for glass. To reduce “spotting” on outside windows, use a squeegee promptly after rinsing with water. For stubborn spots, cleaning with a mixture of vinegar and water is recommended and is safe for most finishes.

## **Chapter 7: Chemical Sensitivity; Ventilation**

### **Chemical Sensitivity**

After you first purchase your new recreational vehicle and sometimes after it has been closed up for an extended period of time you may notice a strong odor and chemical sensitivity. This is not a defect in your recreational vehicles such as carpet, linoleum, plywood, insulation, upholstery, etc. Formaldehyde is also the by-product of combustion and numerous household products, such as some paints, coatings, and cosmetics. However, recreational vehicles are much smaller than your home and therefore the exchange of air inside a recreational vehicle is significantly less than a home. These products, when new or when exposed to elevated temperatures and/or humidity, may “off-gas” different chemicals, including formaldehyde. This off-gassing, in combination with the minimal air exchange, may cause you to experience irritation of the eyes, nose, and throat and sometimes headache, nausea, and a variety of asthma-like symptoms. Elderly persons and young children, as well as anyone with a history of asthma, allergies, or lung problems, may be more susceptible to the effects of off-gassing.

### **Formaldehyde**

Most of the attention regarding chemical off-gassing surrounds formaldehyde. Formaldehyde is a naturally occurring substance. It is also a key industrial chemical used in the manufacture of the numerous consumer products which we referred to above and used in the construction of recreational vehicles. Trace levels of formaldehyde are also released from smoking, cooking, use of soaps and detergents such as carpet shampoos, cosmetics, and many other household products. Some people are very sensitive to formaldehyde while other may not have any reaction to the same levels of formaldehyde. Amounts released decrease over time.

### **Ventilation**

To reduce or lessen exposure to chemicals from off-gassing, it is of utmost importance that you ventilate your recreational vehicle. Ventilation should occur frequently after purchasing and at times when the temperatures and humidity are elevated. Remember off-gassing is accelerated by heat and humidity, open windows, exhaust vents, and doors. Operate ceiling and/or other fans, roof air conditioners, and furnaces and use a fan to force stale air out and bring fresh air in. Decreasing the flow of air by sealing the recreation vehicle increases the formaldehyde level in the indoor air. Please also follow the recommendations contained in Chapter 2 regarding tips to avoid condensation problems. Many of the recommendations contained in Chapter 2 will assist in avoiding exposure to chemicals that off-gas.

## **Do Not Smoke**

We recommend that you do not smoke inside your recreation vehicle. In addition to causing damage to your recreational vehicle, tobacco smoke releases formaldehyde and other toxic chemicals.

## **Medical Advice**

If you have any questions regarding the health effects of formaldehyde, please consult your doctor or local health department.

## **Warranty Exclusion**

CHEMICAL OFF-GASSING IS NOT A “DEFECT” IN YOUR RECREATIONAL VEHICLE AND IS NOT COVERED BY THE LIMITED ONE-YEAR WARRANTY. PLEASE FOLLOW THE RECOMMENDATIONS IN THIS SECTION TO ADDRESS THIS CONCERN.

## **Chapter 8: Tire Safety Information**

### **The Importance of Proper Tire Inflation**

Your trailer tires and wheel and tongue or fifth-wheel hitch support the entire weight of the trailer and its contents. The tires are also the only contact the trailer has with the road surface. Determining and maintaining proper inflation is the most important factor in maximizing the life of your tires. Driving on a tire that does not have the correct inflation pressure for the trailer load is dangerous and may cause premature wear, tire damage, tread delamination and/or loss of control of the trailer and/or tow vehicle.

An under-inflated tire will build up excessive heat that may go beyond the limits of the tire materials. This could result in sudden tire failure. An under-inflated tire will also cause poor vehicle handling, rapid and/or irregular tire wear, and an increase in rolling resistance which results in decreased tow vehicle fuel economy. The maximum cold inflation pressure for your tires is stated on the tire sidewalls and Federal certification label. Keep your tires inflated to this maximum cold pressure. This reduces the chance of a failure and improves towing stability. Maintaining correct tire pressure for your trailer is of the utmost importance and must be a part of a regular vehicle maintenance.

*Check tire pressures before traveling. Always check tire pressure when tires are cold. Do not exceed the maximum recommended pressure.*

*Keep tires properly inflated. A tire that is run long distances or at high speeds while seriously under-inflated will overheat to the point where the tire may lose air suddenly and/or catch fire, possibly resulting in damage to the vehicle and its*

*contents and/or personal injury.*

**You must weigh your trailer when fully loaded as you expect to use it.** You need to weigh all axles together and calculate the hitch weight. You may find that even though the total weight is within the GVWR, one side may be overloaded. For this reason, you must know the weight on each side of the trailer. When you know the weight on each side of the trailer, the combined axle assembly, and the hitch weight, you will be able to manage your loading to be able to maintain good balance and assure good and safe handling on the road. There are some tips to help plan your loading:

- Do not overload. Experiment with various loads starting with light loads and working up to heavier loads. Take into consideration the load of the freshwater system. The tow vehicle and the terrain will affect the true weight you should carry.
- Distribute the load evenly over the axles as much as possible. Keep heavy items low and forward, preferable in the lower storage areas. This will produce a lower center of gravity and improve road stability.
- Distribute the load evenly on each side of the trailer. Place heavier objects opposite the heavier appliances, cabinets, furniture, etc. when possible. Experiment with various load positions until you find the best distribution.
- Avoid loading heavy items in or on the rear of the trailer. This can cause both total weight problems and hitch weight distribution problems.
- Secure items so they won't move around while traveling. Make sure all items and materials are properly stored. Close and latch all drawers, cabinet doors, and closet doors. Pull all loose furniture away from cabinets and walls, lay on their side or secure to prevent rubbing during travel.
- Carry only as much water as you think you will need while traveling. Water weighs over eight pounds per gallon. Whenever possible, empty the holding tanks before getting on the road.
- If you are heading for rough terrain, use heavy packing material in the cupboards to hold plates, glasses, etc. Put a non-skid material beneath heavier items to prevent shifting. Expensive and breakable belongings should be well packed and placed on the floor in the center of the trailer, as the center rides the best.
- Store emergency items such as fire extinguisher, first-aid kit, highway warning devices, gloves, etc. in a readily accessible place. Don't bury these items beneath other cargo.
- When you have properly loaded your trailer with the things you need for your trip, make a diagram that outlines where things are stored. With this diagram, your list of items and the weight of items, you will be able to find specific items easily and have a handy reference for determining proper weights.

-Weigh your trailer after you have loaded it. You may have to do this several times to get it right.

Check the trailer tires frequently. Tires can lose air over a period. In fact, tires can lose 1-3 PSI per month. This is because molecules of air, under pressure, migrate through rubber from the inside to the outside. A drop in tire pressure could cause the tire to become overloaded, leading to excessive heat buildup. If a trailer tire is under-inflated, even for a short period of time, the tire could suffer internal damage. A flat can go unnoticed on a multiple-axle trailer while it is being towed. Running with a flat tire can cause it to catch fire and burn up your rig. With a flat tire, the other tires are supporting the weight of the rig and the flat tire is less noticeable. A quick check can be made by “thumping” each tire with tire iron or rod to make sure they all sound the same. Each time you gas up, walk around the trailer, and give a quick check by feeling each tire with your hand. A tire that is getting low

will be hotter than the rest. There is no substitute, however, for measuring tire pressures to make sure they are all within safe limits. Always check the cold tire inflation pressures before each trip and at least once a week during the trip for proper inflation levels.

**The most common causes of tire failure are overloading and under-inflation.** Both result in excess flexing of the sidewall which can cause heat buildup and eventual tire failure. **Continuing to run with a flat tire can cause it to catch fire.**

The most important things you can do to avoid tire failures are:

- maintain proper tire pressure
  - stay within tire and vehicle load limits
  - avoid road hazards if possible
  - inspect tires for cuts, slashes, and other irregularities

Properly maintained tires improve the steering, stopping, traction, and load carrying capability of your vehicle. Make tire safety a regular part of your vehicle maintenance routine. Recognize that the time you spend is minimal compared to the inconvenience and safety consequences of a flat tire or other tire failure.

*Tire load ratings are dependent on tire inflation pressures. Under-inflated tires can be damaged and result in loss of inflation pressure.*

*All tires on your trailers should be the same type, size, construction, and load rating – do not mix bias-belted and radial tires.*

**Understanding Tire Pressure and Load Limits** Tire inflation pressure is the level of air in the tire that provides it with load-carry capacity and affects the overall performance of the vehicle. The tire inflation pressure is a number that indicates the amount of air pressure that a tire requires to be properly inflated. It is difficult to obtain the recommended tire pressure if your tires are not cold. Because tires are designed to be used on more than one type of vehicle, tire manufacturers list the “maximum permissible inflation pressure” on the tire sidewall. This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

### **Checking and Adjusting Tire Pressure**

It is important to check your vehicle’s tire pressure at least once a month, always before a trip, and at least once a week while on the road. Not only do tires naturally lose air over time, but they can lose air suddenly if you drive over a pothole or other object, or if you strike the curb. It is difficult to determine tire inflation pressure by looking at the tire. Purchase a tire pressure gauge to keep in your vehicle. Gauges can be purchased at tire dealerships, auto supply stores, and other retail outlets.

*NOTE: The air pressure recommended on the tire information placard is the original standard equipment tires only. Your trailer may be equipped with optional sized tires. Always follow the pressure recommendations stamped in the tire sidewall for any replacement tire.*

The recommended tire inflation pressure is the proper pressure when a tire is cold. A “cold” tire is one that has not been driven on for at least three hours. When you drive, your tires get warmer, causing the air pressure within them to increase. Therefore, to get an accurate tire pressure reading, you must measure tire pressure when the tires are cold.

- Refer to the tire sidewalls for the recommended tire pressure. Your trailer may be equipped with optional tires. Always refer to the tire sidewalls for recommended tire pressure.
- Check and write down the pressure in all tires.
- If the pressure is too high in any of the tires, slowly release air by gently pressing on the tire valve stem with the edge of your tire gauge until you get to the correct pressure.
- If the tire pressure is too low, note the difference between the measured tire pressure and the correct tire pressure. You will need to add air to get to the correct pressure.
- Add air to each tire that is under-inflated.

-Check all the tires again to make sure they have the same air pressure.

If you have been towing your trailer and think that a tire is under-inflated, fill it to the recommended cold inflation pressure. Remember to recheck and adjust the pressure in all tires when you can obtain a cold reading.

### **Tire Tread**

The tire tread provides the gripping action and traction that prevents your trailer from slipping or sliding, especially when the road is wet or icy. In general, tires are not safe and should be replaced when the tread is worn down to 1/16 of an inch. Tires have built-in tread-wear indicators that let you know when it is time to replace your tires. These indicators are raised sections spaced intermittently in the bottom of the tread grooves. When they appear “even” with the outside of the tread, it is time to replace your tires.

*There is a danger of serious injury or death if a tire of one bead diameter is installed on a rim or wheel of a different rim diameter. ALWAYS replace a tire with another tire of the same bead diameter designation and suffix letters.*

### **Tire Life**

Trailer tires may be worn out even though they still have plenty of tread left. This is because trailer tires may have to carry a lot of weight all the time, even when not in use. It is better for the tire to be rolling down the road than to be idle. During use, the tire releases lubricants that are beneficial to tire life. Using the trailer tires often also helps prevent flat spots from developing. The average life of a trailer tire is about five years, trailer tires may be degraded to the point that they should be replaced even if they have minimal use. Exposure to sunlight (ultraviolet damage) and high-speed towing in hot conditions also reduces tire life. As heat builds up during driving, the tire’s internal structure starts to break down, compromising the strength of the tire. Have your tires inspected by a tire supplier to determine if your tires need to be replaced.

### **Replacement Tires**

To maintain tire safety, purchase new tires that are the same type, size, construction, and load rating as the original tires. Look at the tire information placard or the sidewall of the tire you are replacing to find this information. If you have any doubt about the correct size to choose, consult your tire dealer.

### **Tire Safety Information**

This portion of the Owner’s Manual contains tire safety information as required

by 49 CFR 575.6.




The National Highway Traffic Safety Administration (NHTSA) has published a brochure (DOT HS 809 36) that discusses all aspects of Tire Safety, as required by CFR 575.6. It can be obtained and downloaded from NHTSA, free of charge, from the following web site:

[http://www.NHTSA.gov/cars/rules/TireSafety/ridesonit/tires\\_index.html](http://www.NHTSA.gov/cars/rules/TireSafety/ridesonit/tires_index.html)




Studies of tire safety show that maintaining proper tire pressure, observing tire and vehicle load limits (not carrying more weight in your vehicle than your tires or vehicles can safely handle), avoiding road hazards, and inspecting tires for cuts, slashes, and other irregularities are the most important things you can do to avoid tire failure, such as tread separation or blowouts and flat tires.

These actions, along with other care and maintenance activities, can also:

- Improve vehicle handling
- Help protect you and others from avoidable breakdowns and accidents.
- Improve fuel economy
- Increase the life of your tires

	Condition	Possible Cause	Remedy
	Even Center Wear	Over-inflation	Check & Adjust Pressure When Cold
	Inside & Outside Wear	Under-inflation	Check & Adjust Pressure When Cold
	Smooth Outside Wear (One Side)	Loss of Camber or Over-Loading	Check & Unload as Necessary and Have Alignment Checked

	"Feathering" Across the Face	AGE WEAR SQUARE TO FRAME or Incorrect Toe-In	Square Frame and Have Alignment Checked
	Cupping	Loose Bearings or Wheel Balance	Check Bearing Adjustment and Wheel & Tire Balance
	Flat Spots	Wheel Lock-Up	Adjust Brakes

Use this information to make tire safety a regular part of your vehicle maintenance routine. Recognize that the time you spend is minimal compared with the inconvenience and safety consequences of a flat tire or other tire failure.

### **Safety First – Basic Tire Maintenance**

Properly maintained tires improve the steering, stopping, traction, and load-carrying capability of your vehicle. Under-inflated tires and overloaded vehicles are a major cause of tire failure. Therefore, as mentioned above, to avoid flat tires and other types of tire failure, you should maintain proper tire pressure, observe tire and vehicle load limits, avoid road hazards, and regularly inspect your tires.

**Finding Your Vehicle’s Recommended Tires Pressure and Load Limits** Tires information and vehicle certification label contain information on tires and load limits. These labels indicate the vehicle manufacturer’s information including:

Recommended tire size

Recommended tire inflation pressure

Vehicle capacity weight (VCW-the maximum occupant and cargo weight a vehicle is designed to carry)

Front and rear gross axle weight ratings (GAWR-the maximum weight the axle systems are designed to carry)

Labels are permanently attached to the trailer on the forward half of the left side, and are easily readable from outside without moving any part of the vehicle.

### **Tire Repair**

The proper repair of a punctured tire requires a plug for the hole and a patch for the area inside the tire that surrounds the puncture hole. Punctures through the tread can be repaired if they are not too large, but punctures to the sidewall should not be repaired. Tires must be removed from the rim to be properly inspected before being plugged and patched.

### **Tire Fundamentals**

Federal law requires tire manufacturers to place standardization information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides tire identification number for safety standard certification and in case of a recall.

### **Tire Label Information**

**P** – The “P” indicates the tire is for passenger vehicles.

**NOTE: Passenger car tires are not recommended for use on trailers.**

**LT** - “LT” indicates the tire is for light trucks.

**NOTE: Light truck tires are not recommended for use on trailers.**

**ST** - “ST” is an indication the tire is for trailer use only.

**Next number** – this three-digit number gives the width in millimeters of the tire from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

**Next number** – This two-digit number, known as the aspect ratio, gives the tire’s ratio of height to width.

**R** – The “R” stands for radial. Other tire designs may be “bias ply” or “bias belted” and are designated by other letters.

**Next number** – This two-digit number is the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.

**Next number** – this two- or three-digit number is the tire's load index. It is a measurement of how much weight each tire can support. You may find this information in your owner's manual. If not, contact a local tire dealer. Note: you may not find this information on all tires because it is not required by law.

**Speed Rating** – The speed rating denotes the top speed at which a **passenger car** tire is rated. A speed rating will not be found on "ST" tires used on trailers. All "ST" tires are speed restricted to 65 mph. Never operate a vehicle in an unsafe or unlawful manner. Tire speed ratings (if indicated) should never be associated with the ability of the vehicle to handle the speed for which the tire is rated.

**U.S. DOT Tire Identification Number** – This begins with the letters "DOT" and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, and the last four numbers represent the week and year the tire was built. For example, the numbers 3197 mean the 31<sup>st</sup> week of 1997. The other numbers are marketing codes used at the manufacturer's discretion. This information is used to contact consumers if a tire defect requires a recall.

*Your trailer is equipped with tires designated as "ST". This designation means that the tires are built specifically for trailer applications. They are correct for your trailer and the maximum loads the trailer was designed and rated to carry. Tire industry standards require that tires with the ST designation are speed restricted to 65 MPH under normal inflation and load conditions. Unless a different speed restriction is indicated on the sidewall of the tire, it is best that you do not operate your trailer at speeds above 65 mph.*

**NOTICE:** *Although tires designated "LT" are sometimes used on trailers, they are not recommended for use on your trailer and should not be considered as replacements for the original equipment "ST" designated tires.*

**Tire Ply Composition and Materials Used** – The number of plies indicates the number of layers of rubber-coated fabric in the tire. In general, the greater the number of plies, the more weight a tire can support. Tire manufacturers also must indicate the materials in the tire, which include steel, nylon, polyester, and others.

**Maximum Load Rating** – This number indicates the maximum load in kilograms and pounds that can be carried by the tire.

**Maximum Permissible Inflation Pressure** – This number is the greatest amount of air pressure that should ever be put in the tires under normal driving conditions.

### **Vehicle Load Limits**

Determining the load limits of a vehicle includes more than understanding the load limits of the tires alone. A Federal Certification Label is located on the screen door of the unit. The certification label will indicate the vehicle's gross vehicle weight rating (GVWR). This is the maximum weight a particular axle can carry. In the front of-door side of the unit is a vehicle placard which shows a statement regarding maximum cargo capacity.

### **Cargo Capacities**

Cargo can be added to the vehicle up to the maximum weight specified on the placard. The combined weight, up to the maximum weight specified on the placard. The combined weight of the trailer and the cargo is provided as a single number. In any case, remember: **the total weight of a fully loaded vehicle cannot exceed the stated GVWR.**

Water and propane also need to be considered. The weight of fully filled propane containers is considered part of the weight of the Campers before it is loaded with cargo and is not considered part of the disposable cargo load. Water, however, is a cargo weight and is treated as such. If there is a freshwater storage tank of 100 gallons, this tank when filled would weigh about 800 pounds. If more cargo is being transported, water can be off-loaded to keep the total amount of cargo added to the vehicle within the limits of the GVWR so as not to overload the vehicle.

Understanding this flexibility will allow you, the owner, to make choices that fit your travel and camping needs.

When loading your cargo, be sure it is distributed evenly to prevent overloading front to back and side to side. Heavy items should be placed low and as close to the axle positions as reasonable. Too many items on one side may overload a tire. The best way to know the actual weight of the vehicle is to weigh it at a public scale.

**How Overloading Affects Your Campers and Tires** The results of overloading can have serious consequences for vehicle safety. Too much weight on your vehicle's suspension system can cause spring, shock absorber, or brake failure, handling or steering problems, irregular tire wear, tire failure or other damage. An

overloaded vehicle is hard to drive and hard to stop. In cases of serious overloading, brakes can fail completely, particularly on steep hills. The load a tire will carry safely is a combination of the size of tire, its load range, and corresponding inflation pressure. Excessive loads and/or under-inflation cause tire overloading and as a result, abnormal tire flexing occurs. This situation can generate an excessive amount of heat within the tire. Excessive heat may lead to tire failure. It is the air pressure that enables a tire to support the load, so proper inflation is critical. Since Campers can be configured and loaded in many ways, air pressures must be determined from actual loads (determined by weighing) and taken from the load and inflation tables provided by the tire manufacturer. These air pressures may differ from those found on the certification label. However, they should never exceed the tire limitation for load or air pressure. If you discover that your tires cannot support the actual weights, the load will need to be lightened.

## **Tire Safety Tips**

### **Preventing Tire Damage**

Slow down if you must go over a pothole or other object in the road. Do not run over curbs or other foreign objects in the roadway and try not to strike the curb when parking.

### **Tire Safety Checklist**

Check tire pressure regularly (including the spare), at least once a month and before going on any trip. Inspect tires for uneven wear patterns on the tread, cracks, foreign objects, or other signs of wear or trauma. Remove bits of glass and foreign objects wedged in the tread. Make sure your tire valves have valve caps. Do not overload your vehicle. Check the Tire Information and Loading Placard or user's manual for the maximum recommended load for the vehicle.

## **STEPS FOR DETERMINING CORRECT LOAD LIMIT**

1. Locate the statement "The weight of cargo should never exceed XXX lbs." on your vehicle's placard.
2. The figure stated on the placard is the available amount of cargo load capacity. The weight of all cargo loaded in the vehicle may not safely exceed this figure.

Determine the combined weight of cargo being loaded in the vehicle. That weight may not safely exceed the available cargo capacity.

For further information about wheel and tire safety:

1-888-327-4236 (TTY: 1-800-424-9153)

<http://www.safecar.gov> and  
NHTSA  
1200 New Jersey Avenue S.E.  
Washington, DC 20590

## **UkanCamp Warranty Information :**

**Warranty Terms: 1 Year (12 months) from Delivery Date.**

### **Warranty Information**

As the owner of a new recreational vehicle, you are responsible for regular care and proper maintenance. Proper maintenance will help avoid situations where the Limited Warranty will not cover items due to neglect. Maintenance services should be performed in accordance with this manual, as well as the corresponding manufacturer's warranties on components included within your camper.

As the owner it is your responsibility and obligation to return the recreational vehicle to the manufacturer for any repairs and service that may be required. The manufacturer is responsible for proper service before delivery and will have a continued interest in your satisfaction.

### **Owner's Responsibilities**

1. Proper care and maintenance as outlined by this manual and the corresponding component warranty package.
2. Returning your vehicle to the manufacturer for any repairs or service that may be required.
3. Reviewing the information contained within this manual and all supplied component information.

### **UkanCamp Responsibilities**

6. Orient and familiarize the customer with the operation of all systems and components of the new recreational vehicle.
7. Explain and review the Limited Warranty provisions to the customer.
8. Assist the customer in completing all necessary registrations and warranty forms for their new vehicle and assist in locating serial numbers if they wish.
9. Instruct the customer on how to receive local and out of town service on the

vehicle and its separately warranted components, whether in or out of warranty.

10. Service all UkanCamp Camper products.

**Warranty Exclusions** – Limited Warranty Shall Not This Apply To:

- Equipment, products, components, appliances, or accessories not manufactured by UkanCamp whether warranted, including but not limited to, tires, batteries, generators, washer, dryer, electronics and other installed equipment or accessories.
- Campers used for business, rental, commercial, residential, or disaster relief purposes, or any purpose other than recreational travel and family camping.
- Campers which are not originally sold by UkanCamp and those sold through auction, repossession, salvage or an otherwise damaged or distressed condition.
- Damage or loss caused in whole or in part by the acts or omissions of any kind by any party other than UkanCamp.
- Damage or loss caused in whole or in part by the misuse, abuse, neglect, theft, vandalism, product modification, improper customer or dealer installation, improper stowing of equipment, incorrect line voltage, unauthorized repair or failure to follow instructions supplied with the recreational vehicle.
- Routine maintenance including, without limitation, caulking, re-caulking and waxing of the body of the recreational vehicle, tightening screws, brake squeak/lock-up/adjustment, latches, locks, combustion systems, changing fuses, or light bulbs, and maintenance the air conditioning and heating systems.
- Adjustments to all doors, drawers, locks, latches, awnings, and windows beyond 90 days after retail sale.
- Damage or loss caused in whole or in part by the unauthorized attachments, modifications or alterations to the structure, body, pin box, or frame of the recreational vehicle including but not limited to trailer hitches for towing, or platform for supporting cargo.
- Any upholstery damage including, but not limited to tears, punctures, or misuse.
- Any fading or die lot changes of fabrics or carpet.
- Cosmetic issues with the rubber roof or its installation.
- Damage or loss caused in whole or in part by exposure to natural or atmospheric elements, corrosive chemicals, ash or fumes generated or released by vehicles, collision, road hazards, rock chips, condensation, or any other source;
- Damage or loss caused in whole or in part by any animals, including such as rodents and/or insects.
- Damage or loss caused in whole or in part by the overloading or improper balancing of the load.
- Damage or loss caused in whole or in part by the willful or negligent acts of the driver of the vehicle pulling the recreational vehicle, an accident involving the

recreational vehicle, the condition of any road surface over which the recreational vehicle is pulled, or the striking or driving over a curb or any other object.

- Damage or loss to the recreational vehicle caused in whole or in part by the tow vehicle selected by the owner to pull the recreational vehicle including but not limited to the improper selection or installation of towing hitch on tow vehicle, weight distribution or equalizer equipment;
- Any injury, loss or damage, beyond warranty repairs, due to mold or fungi.
- Damage or loss caused in whole or in part by the owner's operation, use, or misuse of the tow vehicle.
- Any and all damage or loss to the owner's tow vehicle.
- Rust or broken glass damage.
- Wheel or axle alignment.
- Redesign or Reconstruction.
- Damage to electronics due to voltage issues are not covered under warranty.
- Representations made by any person (including UkanCamp) beyond those stated in this Limited Warranty.
- Any trailer licensed, registered, or primarily used outside the USA or Canada; and
- Any incidental and consequential damages including, but not limited to, transportation, fuel, food, lodging, telephone calls, towing charges, bus and taxi fares or car rentals, and commercial use and loss of use. Further, any performance of repairs after the warranty coverage period has expired or any performance of repairs to component parts and appliances that are excluded from coverage shall be considered "good will" repairs, which shall not alter the express terms of this limited warranty.