T@B MANUAL

2017

nüCamp

PLEASANT VALLEY TEARDROP TRAILERS

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All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication approval. When new materials and production techniques are developed that can improve the quality of its product, or material substitutions are necessary due to availability, nüCamp RV reserves the right to make such changes

T@B Owner's Manual 2017

nüCamp RV

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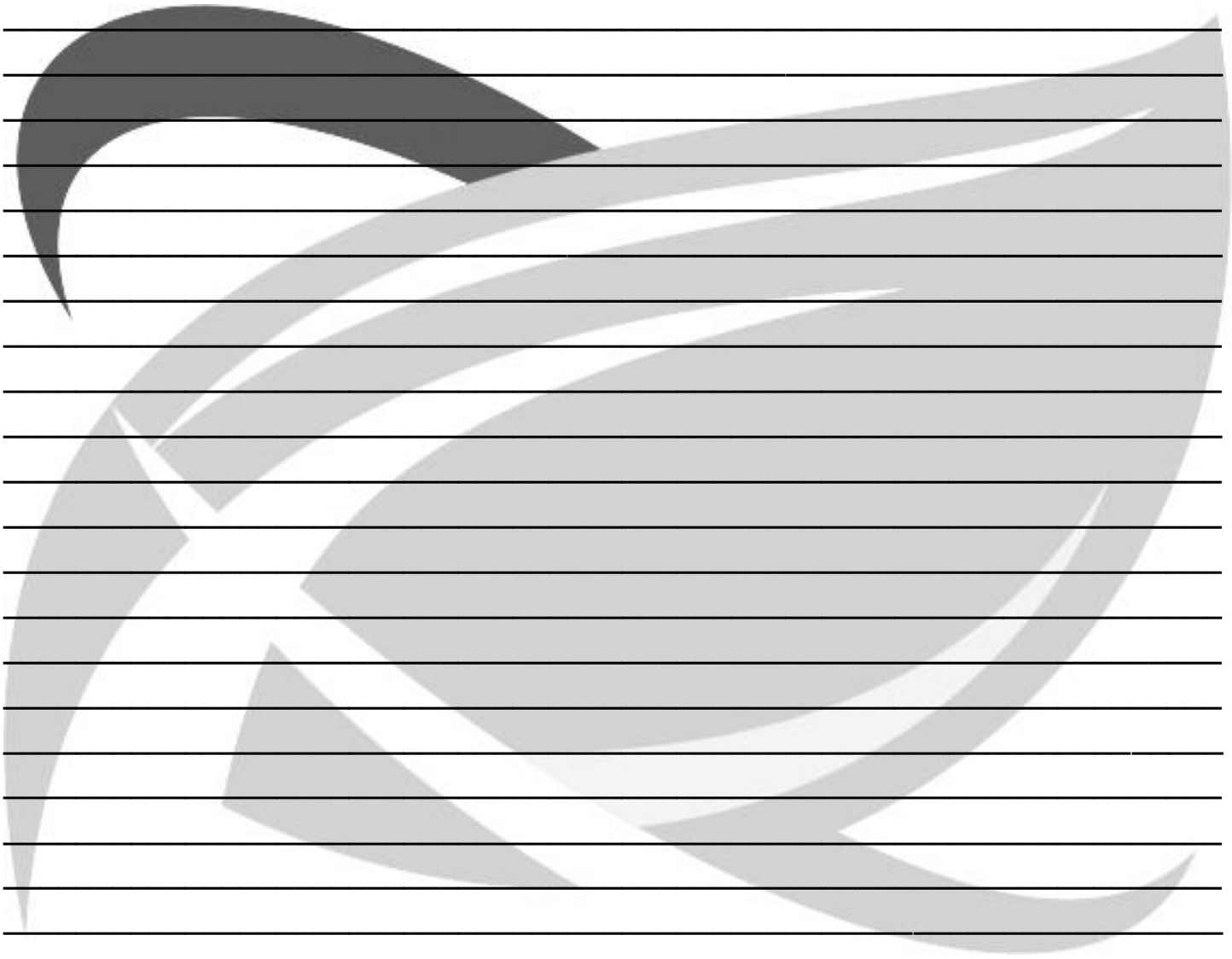

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INTRODUCTION

The Owner's Manual for your new T@B trailer is designed to respond to the most frequent inquiries regarding the operation, function, and care of the many systems that make modern trailering a joy.

nüCamp RV realizes our customers possess varying degrees of expertise in repairing and maintaining the appliances in their trailer. For this reason, the service information found in this manual is directed toward those with average mechanical skills.

We also realize that you may be more familiar with one area than you are with another. Only you know your capabilities and limitations. We want you to use this manual and hope you will find the information contained in it useful. However, should you ever feel that you may need assistance, please consult your nüCamp dealer for advice on repairs that may be required.

A brief explanation of the operation of the appliances such as refrigerator, furnace, water heater, and others, are explained in this manual. However, you will also find the manufacturer's information supplied in a packet included with this manual to be more detailed.

All information, illustrations, and specifications contained in this manual are based on the latest product information available at the time of publication approval. If new materials and production techniques are developed that can improve the quality of its product, or material substitutions are necessary due to availability, nüCamp RV reserves the right to make such changes.

We have provided many important safety messages in this manual. Always read and obey all safety messages.

WARNING

A warning is used for a hazardous situation which, if not avoided, could result in death or serious injury to persons

CAUTION

A caution is used to advise caution when performing actions that could result in minor or moderate injury to persons and/or damage to equipment.

NOTE

A note is used to address practices not related to personal injury. This applies to hazardous situations involving property damage only

Optional items may be available on all, or models. Additionally, some optional items can only be included during the manufacturing phase and cannot later be added to the trailer.

The inclusion of optional items information in this manual does not imply or suggest the availability, application suitability, or inclusion for any specific unit.

Purchaser's Responsibilities

IMPORTANT: The purchaser is required to read this document prior to signing it.

The checklist below, in addition to the individual component and owner's manuals, is designed to assist you in becoming familiar with your new recreational vehicle. You, the purchaser should not sign this form until:

(1) you have had the opportunity to fully inspect the entire camper;

(2) you have reviewed, read, and understand the limited warranty terms;

(3) you find the camper acceptable, complete, clean, and free of damage;

(4) all features and components have been demonstrated and explained to you;

(5) the dealer has answered any questions you may have regarding the camper.

I have received and read a copy of the **NüCamp RV/ Pleasant Valley Trailers** Limited Warranty, before completing my purchase of the vehicle and agree to the terms contained therein.

I acknowledge that certain appliances and components are warranted by their respective manufacturers and are excluded from the Limited Warranty.

I also understand the selling dealer is not an agent for **NüCamp RV**, but is an independent entity with no authority to make any promises or representations for or on behalf of **NüCamp RV**.

I acknowledge this form is for product registration purposes and failure to return this form does not reduce the warranty period.

Purchaser Signature:

_____

1) Regular and proper maintenance. As the owner, you have the responsibility to properly maintain your camper. Be sure you have service performed in a timely manner. Don't ignore a problem; sometimes a phone call is all that's needed. The service technicians will advise you if an appointment needs to be scheduled.
2) Familiarize yourself with your camper. Observe all the component manufacturers instructions regarding the use and service of their products.
3) Complete and return all the warranty cards to each respective manufacturer. Doing so may help you avoid the loss of warranty coverage.

NOTE: Modifications to your camper, without written authorization from **NüCamp RV**, could result in reduction or loss of warranty coverage. Contact your dealer before making such changes.

NOTE: NüCamp RV wants you to have the best possible adventure with your new camper. To get the most enjoyment out of your new camper and to ensure you fully understand how it operates, please discuss with your dealer, any questions or concerns you may have regarding your camper, before leaving the dealership or using your camper for the first time.

NOTE: Use your new camper responsibly. Your camper was not designed to be used as a permanent dwelling but for short term and recreational use. If you intend to use your camper as permanent housing, be advised that it could cause premature wear on your appliances, furnace, water systems, carpet, drapes, upholstery, bedding, and interior surfaces. Premature wear caused by permanent residency may be considered abnormal or abusive use and could reduce or in some cases, void your warranty coverage.

GENERAL INFORMATION

Welcome Home!

Welcome to the **nüCamp RV** family and thank you for selecting a **nüCamp RV** product. Congratulations for choosing a lifestyle that will provide you the freedom to enjoy recreation wherever you may choose.

This Owner's Manual is designed as a Quick Reference Guide for the operation and care of your new purchase. For more complete instructions regarding safety, maintenance and operation of the items used in the manufacturing of your RV, carefully read the booklets supplied by the component manufacturers. All information contained in this manual may not relate to your specific model; however, booklets supplied by the component manufacturers and included in your Owner's packet will provide any additional information needed.

Your dealership personnel should be able to answer any questions or concerns you may have regarding your new product. If your dealer is unable to do so, please feel free to contact our Customer Service department for assistance. Your dealership will provide you with the appropriate contact information.

Please carefully read the Limited Warranty in this manual. **nüCamp RV** has no other expressed or implied warranties of any type. You, as the owner, are responsible for providing proper maintenance as outlined in the manual and as set forth in the component manufacturer's booklets.

NOTE:

FAILURE TO PROPERLY MAINTAIN YOUR RV COULD RESULT IN LOSS OF WARRANTY COVERAGE.

Several of our component manufacturers carry their own warranties and require separate warranty information to be filed with them. Please read all component manufacturers' owner's manuals provided with your RV and file appropriate individual warranty cards as required.

You have joined an elite group, and as you begin making great memories using your new **nüCamp RV** Camper we wish you many exciting and adventurous days of camping.

Warranty Exclusions

Coverage Provided

Within the Warranty Period, **nüCamp RV** is obligated to repair or replace any part covered by this warranty proven defective. In the event of such an occurrence, the Owner should contact the selling dealer for a service appointment. If it is not possible to return to the selling dealer, call the **nüCamp RV** Factory Service Department, and they will provide you with the location of the nearest authorized dealer or repair facility. The cost of transporting the Camper to the dealer or service center shall be incurred and paid for by the Owner.

Owner's Obligation

The purchaser must notify nüCamp RV or a nüCamp RV authorized dealer of any defect promptly upon discovery.

Warranty repairs by a non- nüCamp RV Dealer or service center must be approved by the nüCamp RV Factory Warranty Department prior to any work being started. This is the only warranty given with the purchase of the Camper other than express or implied warranties given by the component manufacturers. Any warranties implied by law are limited to the Warranty Period. Any other warranty, express or implied, not provided for in this Limited Warranty is waived by the Owner, to the extent allowed by law.

Limited Warranty

nüCamp RV warrants to the original end user purchaser ("Owner") of this Camper, to be free of defects in materials and workmanship and for structural integrity, under normal use, with reasonable care and maintenance, for one (1) year from the date of purchase (the "Warranty Period"), subject to the exclusions given below.

This warranty is limited to only items constructed by **nüCamp RV. nüCamp RV** therefore makes no warranty with respect to component parts constructed or assembled by other manufacturers, including, but not limited to, all electrical devices (TV, sound systems, DVD player, antennas, batteries, etc.), the propane appliances, electrical appliances, heaters, refrigerators, plumbing fixtures, light fixtures, lights, entrance door and windows. Such component parts may be warranted by their respective manufacturers, and copies of such warranties are included with the Camper.

What Is Not Covered

1. Tires, batteries, range/stove, furnace/water heater, refrigerator, air conditioner, toilet, microwave, glass breakage, tents/visor, and other materials, parts and components warranted by persons or entities other than **nüCamp RV**, please refer to the warranties of component manufacturers for terms and conditions of coverage;

2. Accessories and equipment that are working as designed, but which you are unhappy because of the design

3. Any part or component of the camper that was not manufactured or installed by **nüCamp RV**;

4. Normal deterioration due to wear or exposure, including but not limited to upholstery, flooring rust, corrosion, oxidation, and cosmetic blemishes;

5. Normal maintenance and service items, including but not limited to light bulbs, fuses, lubricants, sealants and seals, and door adjustments;

6. After-market equipment or accessories installed on the camper after completion of manufacture by **nüCamp RV**, or any defects or damage caused by such items;

7. Campers not purchased through an authorized dealer of **nüCamp RV** and campers purchased directly or indirectly through auction, salvage, repossession, or other non-customary sale means;

Defects or damage caused by, in whole or in part, or in any way related to: Accidents, misuse (including off-road use), or negligence; Failure to comply with the instructions set forth in any owner's manual provided with the camper; Alteration or modification of the Camper except such alterations or modifications approved in writing by **nüCamp RV**; Acts of God or other environmental conditions, such as lightning, hail, salt causing rust, or other chemicals in the atmosphere; De-icing agents or other chemicals applied to the Camper; Failure to properly maintain or service the Camper, including but not limited to the maintenance of lubricants, sealants, and seals; Condensation and the results of condensation including water damage and the growth of mold or mildew. Mold and mildew are natural growths given certain environmental conditions and are not covered by the terms of this Limited Warranty; Use of the trailer other than for temporary recreation purposes, including but not limited to use of the trailer for residential, commercial, disaster relief, or rental purposes; The addition of weight to the Camper that causes the total weight to exceed applicable weight ratings, or addition of weight causing improper distribution of the weight of the Camper; Failure to seek and obtain repairs in a timely manner; Failure to use reasonable efforts to mitigate damage caused by defects; Failure to properly ventilate the Camper; Improper electric power supply or improper trailer hookup to other facilities; Acts or omissions of any person or entity other than **nüCamp RV**.

No payment or other compensation will be made for incidental expenses, including, but not limited to, towing, telephone, transportation, lodging, travel, gasoline, loss of pay or indirect or consequential damage including, but not limited to, loss of use of the Camper, inconvenience, damage or injury to person or property, or loss of revenue, which might be paid, incurred, or sustained because of manufacturer's defect covered by this warranty**.**

nüCamp RV does not warranty equipment or accessories installed at any dealership or other place of business, or by any other party.

This Limited Warranty is intended to comply with the requirements of both State and Federal laws. Any part of this Limited Warranty in conflict with any law shall be ineffective to the extent of any such conflict. This warranty gives you specific legal rights, and you may also have other rights, which may vary from state to state.

Making a Service Appointment

Always call ahead for an appointment unless you have a true emergency. Monday and Friday are usually the busiest days for the Service department, as well as just before a holiday. Give them ample time to schedule your Camper for service.
When you call to schedule your appointment, have the following information available:

1) VIN. or Serial Number containing 17 letters and digits.
2) Type of Unit (example; T@B Camper)
3) Date of Purchase
4) Description of Problem
5) Add photos of damage
6) History of repairs and repair center location (where the repairs were performed).
7) A calendar with your schedule noted, for convenience in coordinating a service date that works for you and the repair center.

If you believe a defect covered by this Limited Warranty still exists after an attempted repair by an authorized **nüCamp RV** dealer, you must contact **nüCamp RV** at the following address, warranty@nucamprv.com

nüCamp RV may direct you to an authorized **nüCamp RV** dealer, or may request that you bring your camper to the **nüCamp RV** factory in Sugarcreek, Ohio for repairs. **nüCamp RV** does not control the scheduling of repairs at its authorized **nüCamp RV** dealers, and repairs at the **nüCamp RV** factory may not be immediately available. Therefore, you may encounter delays in scheduling repairs and/or completion of repairs. All costs associated with transporting the camper for any warranty service shall be the sole responsibility of the owner.

Waiting at the Repair Facility

For safety reasons, most insurance policies prohibit non-employee personnel to be in the work area. If it is necessary for you to wait until the repairs are completed, most dealers provide you with a safe, comfortable customer lounge.

Service

Before leaving the factory, every vital part of the trailer is tested for performance. Each test is signed and certified by an inspector. After the trailer arrives on your dealer's lot, all vital parts and systems are again tested. When you take delivery of your new trailer, you will receive a complete check out.

At that time, a specified list of performance checks on your trailer equipment will be conducted, and any deficiencies you have experienced since taking delivery will be corrected

When you require service for your trailer from the **nüCamp RV** Factory Service Center, or a Certified Dealer Service Center, please contact the service manager for an appointment, and inform them if you are unable to keep the appointment date, or wish to change it. Service may be arranged at the Factory Service Center by contacting the Service Coordinator at:

Email: repairs@nucamprv.com

Phone: 330-852-4811

Safety

Safety Precautions

Many things can be construed as safety related, but the most important is your common sense. If you are careless with matches, cigarettes, flammable material, or any other hazardous material, you surely realize your potential for accidents is greatly increased.

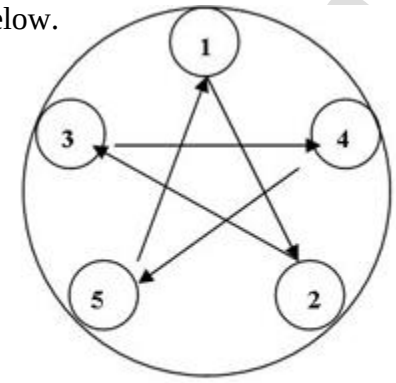
You will find many safety recommendations in this section and throughout the manual. The following recommendations are the ones we consider to be the most important.

Appliances and Equipment

The appliances (stove, refrigerator, etc.) can be operated on LP gas. LP gas is flammable and is contained under high pressure. Improper use may result in a fire and/or explosion. Make sure to follow all instructions and warnings in this manual as well as those in the specific owner's manuals of the appliances and equipment.

Lug Nut Torquing

Making sure lug nuts on trailer wheels are tight and properly torqued is an important responsibility that trailer owners and users need to understand and practice. Inadequate and/or inappropriate wheel nut torque (tightness) is a major cause of lug nuts loosening in service. Loose lug nuts can rapidly lead to a wheel separation resulting in potentially serious safety consequences. See torque pattern below.



Five-Bolt

Tire Safety

Properly maintained tires improve stopping, traction, and load-carrying capability of your vehicle. Also, be sure to read the Tire Safety Manual Addendum included with your owner's packet

Towing and Weight Distribution

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

Control Sway

Sway or fishtailing is the sideways action of a trailer caused by external forces. Excessive sway of your trailer can lead to the rollover of the trailer and tow vehicle, resulting in serious injury or death.

Reporting Safety Defects

If you believe that your vehicle has a defect which could cause an accident or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA), in addition to notifying **nüCamp RV**, Inc.

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

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

Administrator,

NHTSA,

1200 New Jersey Avenue, S.E.,

Washington, DC 20590.

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

Camping Pre-Travel Check List

Interior

1. Turn off water pump switch.
2. Check battery water level.
3. Close windows and vents.
4. Shut all interior cabinet doors.
5. Latch refrigerator door. (Seal containers first)
6. Hold down or stack securely all loose, hard, and sharp objects.
7. Turn off interior lights.
8. Zip up shades.
9. Secure and lock all doors.

Exterior

1. Disconnect and stow the electrical hookup cord, and water hookup hoses.
2. Turn off gas at LP tanks.
3. Retract stabilizing jacks.
4. Check hitch for proper attachment.
5. Check safety chains and breakaway switch cable.
6. Fully retract hitch jack. Remove and stow jack wheel or wood block.
7. Check clearance and stoplights.
8. Check lug nuts.
9. Check tires for correct pressure.
10. Adjust tow vehicle mirrors.
11. Pull forward about 50 ft., test brakes, and check site for forgotten objects and cleanliness.

Trailer Equipment and Accessories

1. Water hose, 5/8 in. high pressure, tasteless, odorless, non-toxic, (2 25-ft. sections)
2. Y connection - water hose
3. Power cord adapter, 30-amp capacity
4. 30-ft. electric cord, 30-amp capacity
5. Woodblocks for leveling
6. Wheel chocks
7. Cross-type lug wrench and a torque wrench
8. Quality tire gauge
9. Emergency road warning triangle
10. First aid kit

Alarms and Detectors

Smoke Alarm

A smoke detector is provided with your trailer. A manual pertaining to the detector is included in the paper work given to you at the dealership. Please read and follow all care, maintenance, and safety information contained in the smoke alarm manual. the smoke alarm will beep once a minute for at least 30 days when the battery is weak. The battery must immediately be replaced with a fresh one.

WARNING

Check your alarm for proper battery installation. To activate the battery, install included battery to proper orientation.

WARNING

Smoke alarms have a limited life. The unit should be replaced immediately if it is not operating properly. You should always replace a smoke alarm after 10 years from the date of purchase. Write the purchase date on the space provided on the back of unit.

Carbon Monoxide Alarm

Carefully read and understand the contents of the provided instruction manual before using the alarm.

Store the manual in a safe place for future reference. Pay attention to the safety warnings. Pass the manual on to any subsequent users of the alarm.

This Carbon Monoxide Alarm Is Not

• Designed to detect smoke, fire, or any gas other than carbon monoxide.

• To be used on an intermittent basis, or as a portable alarm for spillage of combustion products from fuel burning appliances.

WARNING

Failure to replace this product by the "REPLACE BY DATE" printed on the alarm cover may result in death by Carbon Monoxide poisoning. Replace by Date is six (6) years from the date of manufacture.

WARNING

Activation of your CO alarm's audible horn indicates the presence of carbon monoxide (CO) that can cause death. Leave the area immediately!

WARNING

This product is intended for use in ordinary, indoor locations of family living units. It is not designed to measure compliance with occupational safety and health administration (OSHA) commercial or industrial standards. Individuals who are at special risk from carbon monoxide exposure because of age, pregnancy, or medical condition may consider using warning devices which provide audible and visual signals for carbon monoxide concentration under 30 ppm. If in doubt, consult your medical practitioner.

NOTE

This carbon monoxide alarm is designed for indoor use only. Do not expose to rain or moisture. Do not knock or drop the alarm. Do not open or tamper with the alarm as this could cause malfunction. The alarm will not protect against the risk of carbon monoxide poisoning when the batteries are dead or missing. The alarm will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas may be present in other areas.

Important Safety Precautions

• Carbon monoxide is produced by the incomplete combustion of fuels such as wood, charcoal, coal, heating oil, paraffin, gasoline, natural gas, propane, butane, etc.

• Ensure that the alarm can be heard by all those who are intended to hear it. Seek medical help if it is suspected that a user of the camper is suffering from carbon monoxide poisoning.

• If the alarm sounds, make sure to investigate the problem. Ignoring the alarm may result in sickness, injury, or death. (CO may be present even if nothing is seen or smelled by the user.)

• Room spaces should be well ventilated when household cleaning supplies are used as these may cause a false alarm.

• Alarm should be tested once per week

What Is Carbon Monoxide

Carbon monoxide (CO) is a highly poisonous gas that is released when fuels are burned. It is invisible, has no smell, and is therefore, very difficult to detect with the human senses. Under normal conditions, in a room where fuel-burning appliances are well maintained and correctly ventilated, the amount of carbon monoxide released into the room by appliances is not dangerous.

These fuels include: wood, coal, charcoal, oil, natural gas, gasoline, kerosene, and propane. Common appliances are often sources of CO. If they are not properly maintained, are improperly ventilated, or malfunction, CO levels can rise quickly. CO is a real danger in air-tight campers with added insulation, sealed windows, and other weatherproofing that can trap CO inside.

The following conditions can result in potentially dangerous CO situations

Excessive spillage or reverse-venting of fuel burning appliances caused by outdoor conditions, such as:

• Wind direction and/or velocity, including high gusts of wind.
• Heavy air in the vent pipes (cold/humid air with extended periods between cycles).
• Negative pressure differential resulting from use of exhaust fans.
• Simultaneous operation of several fuel-burning appliances competing for limited internal air.
• Obstructions in or unconventional vent-pipe designs which can amplify the above situations.
2. Extended use of un-vented fuel burning devices.
3. Temperature increase that can trap exhaust gases near the ground.

Symptoms of Carbon Monoxide Poisoning

The following symptoms are related to CO POISONING:
• Mild Exposure - Slight headache, nausea, vomiting, fatigue (flu-like symptoms).
• Medium Exposure - Throbbing headache, drowsiness, confusion, fast heart rate.
• Extreme Exposure - Convulsions, unconsciousness, heart and lung failure. Exposure to carbon monoxide can cause brain damage and/or death.

WARNING

Many causes of reported CARBON MONOXIDE POISONING indicate that while victims are aware that they are not well, they become so disoriented that they are unable to save themselves by either exiting the building or calling for assistance. Also, young children and pets may be the first to be affected

WARNING

Test units used in RVs after the trailer has been in storage, before each trip, and once a week while in use. Failure to test units used in RV's as described may remove your protection.

Fire Extinguisher

The fire extinguisher should be checked for charge on a regular basis. Make sure your family, especially the cook, knows how to release the extinguisher storage bracket, and how to properly operate the extinguisher. Check with your local fire department for professional advice on its operation and use if you find the directions on the extinguisher unclear. They will be able and willing to assist you and your family

Chemical Sensitivity and Ventilation

Chemical Sensitivity

Immediately after the purchase of your new camper, and sometimes after it has been closed for a period, you may notice a strong odor and/or experience a chemical sensitivity. This is not a defect in your camper. Like your home, there are many different products used in the construction of camper, such as linoleum, plywood, insulation, upholstery, etc. Formaldehyde is also the by-product of combustion and numerous household products, such as some paints and coatings. However, campers are much smaller than your home and therefore, the exchange of air inside a camper is significantly less than in a home. These products, when new or when exposed to elevated temperatures and 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

Formaldehyde is a naturally occurring substance and is an important chemical used widely by industry to manufacture 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 and some people may be sensitive to it. Ventilation of the unit normally reduces the exposure to a comfortable level.

Your T@B trailer was manufactured using low formaldehyde-emitting (LFE) wood products, use of which is typical in the recreation vehicle industry. Formaldehyde has an important role in the adhesives used to bind wood products used in campers. The wood products in your trailer are designed to emit formaldehyde at or lower than industry guidelines and should not produce symptoms in most individuals.

While LFE wood products typically do not emit formaldehyde at a level that would cause symptoms in most individuals, it is possible, though not likely, for that to occur when the trailer is not properly ventilated. Ventilation is an essential requirement for trailer use, for many reasons. Any effects of formaldehyde can be greatly reduced by actions such as opening windows, opening roof vents, running the air conditioner, or some combination thereof. In addition, the emission of formaldehyde by these products naturally decreases rapidly over time.

nüCamp RV strongly suggests you take measures to properly ventilate your trailer on a regular basis. If you have any questions with respect to proper ventilation of your trailer, please do not hesitate to contact your nüCamp RV dealer.

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 purchase 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 recreational vehicle increases the formaldehyde level in the vehicle's indoor air.

Overnight Stop

nüCamp RV owners have parked virtually in every place imaginable, from filling stations to farmlands. In time, you'll develop a knack for spying wonderful little roadside locations by turning off the main highway and exploring.

There are many modern parks, including State, County, and Federal parks with good facilities where you might obtain hookups of electrical, water, and sewer connections. Directories are published which describe in detail these parks and tell what is available in the way of services and hookups.

When stopping for the night, your camper is built to be safely parked in any spot that is relatively level and where the ground is firm. Your facilities are with you. You are self-contained. Unless the tow vehicle is needed for transportation, it is not necessary to unhitch.

Choose the most level parking spot possible. Stabilizing jacks or blocks may not be required for an overnight stay. However, if you put the jack pad on the hitch jack and run the hitch jack down to take the weight off the tow vehicle's springs, it will provide some stability. If you must park on a slope, park facing downhill. It is easier to level the trailer this way.

Before moving on, check your campsite, both for cleanliness and, to be sure you haven't left anything behind. Turn off the gas supply and make sure everything is properly stowed. Use your pre-travel check list and you are ready for more travel adventure.

WARNING

At each campsite, make sure you have not parked in such a manner as to block the operation of the doors by being too close to trees, fences, or other impediments. Scenic views are one reason for traveling, but don't park so the beautiful lake or steep cliff is just outside your door.

Extended Stay

Making a long trip in your camper is not very different from making a weekend excursion. Since everything you need is right at hand, you are at home wherever you go. When packing for an extended trip, take everything you need, but only what you need.

When you plan to stay in the same place for several days, weeks, or months, you will want your trailer to be as level and steady as possible. To ensure that your trailer is level you can do so by using a small construction level and either set it on the A-frame of the trailer or on the inside of the trailer. (see diagram that follows under Leveling). If a correction is necessary, you must level from side-to-side first. This can be done easily by backing the trailer up onto one or more 2 x 6 boards (see diagram that follows under Leveling). We do not recommend placing tires in a hole for leveling.

Leveling

Level from front to rear by disconnecting the hitch from the tow vehicle, and adjusting the jack up or down until you are level. Block or chock the wheels to keep the trailer from rolling. Use stabilizing jacks at the two rear corners, as shown in the diagram, to eliminate the natural spring action of the axles.

Stabilizing Jacks

The stabilizing jacks are located at the rear corners of the trailer. Use the manual handle to hand crank the jacks into position. Stabilizers should only be lowered enough to contact the ground.

WARNING

Stabilizing jacks are designed to stabilize the trailer only. Misuse of the stabilizer jacks to level or lift the trailer may result in damage to the jacks and potentially the trailer.

WARNING

Whenever the trailer must be lifted with a jack, as when changing a tire or leveling on very rough terrain, always place the lifting jack under the main frame rail. Never use stabilizing jacks to lift the trailer.

Effects of Prolonged Occupancy

Your trailer was designed primarily for recreational use and short-term occupancy. If you expect to occupy the trailer for an extended period, be prepared to deal with condensation and the humid conditions that may be encountered.

Moisture can condense on the inside surfaces of the trailer during cold weather when relative humidity of the interior air is high. This condition is increased because the insulated walls of a camper are much thinner than house walls. Also, the relatively small volume and tight, compact construction of modern camper means that the normal living activities of even a few occupants will lead to rapid moisture saturation. Estimates indicate that a family of four can vaporize up to three gallons of water daily through breathing, cooking, bathing, and washing. Unless the water vapor is carried outside by ventilation, or condensed by a dehumidifier, it will condense on the inside of the windows and walls as moisture, or in cold weather, as frost or ice. It may also condense out of sight, within the walls or the ceiling, where it will manifest itself as warped or stained panels.

Appearance of these conditions may indicate a serious problem. When you recognize the signs of excessive moisture and condensation in the trailer, action should be taken to minimize their effects.

Tips to Controlling Condensation

Allow excess moisture to escape to the outside when:

• Cooking

Avoid dead air spaces by:

• Using a fan to keep air circulating.

• Keep the temperature as reasonably cool during cold weather as possible.

• Allow your trailer to breath; do not make it airtight.

• Allow some warm air to be removed and some cool outside air in.

• In hot weather, starting the air conditioner early will help remove excess humidity from the air while lowering temperatures.

NOTE

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.

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. Protect your investment by understanding the potential risks that mold imposes.

Contributing Factors to Mold Growth

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

Inhibiting Mold Growth

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. even during colder weather. Opening a window during these activities will assist in ventilation. In extremely humid conditions, the use of a dehumidifier can be helpful.

Frequent use of your trailer, or cleaning regularly, are important preventive measures. Additionally, any spills should be wiped up quickly and dried as soon as possible. Avoid leaving damp items lying about. On safe surfaces, use mold or mildew-killing cleaning products. Check sealants regularly, and reseal when necessary to avoid water leaks. Proper preventive maintenance to the trailer and its accessories, as described both in this manual and in accompanying literature, will provide the best protection to the camper.

For more information concerning controlling moisture in the trailer, read Tips to Controlling Condensation in this section.

NOTE

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

Safety

As always, safety should be a top priority. Ensure that you and everyone traveling with you, can operate the main and rear door rapidly without light. Contemplate other means of escape in case the designated exit is blocked.

The side windows can be vented to allow fresh air in and stale air to escape. However, the windows were not designed as escape windows. Be sure to keep both doors unblocked for means of escape if necessary.

WARNING

The window operation should be checked before each trip and the latches lubricated with WD-40® or an equivalent lubricant every six months.

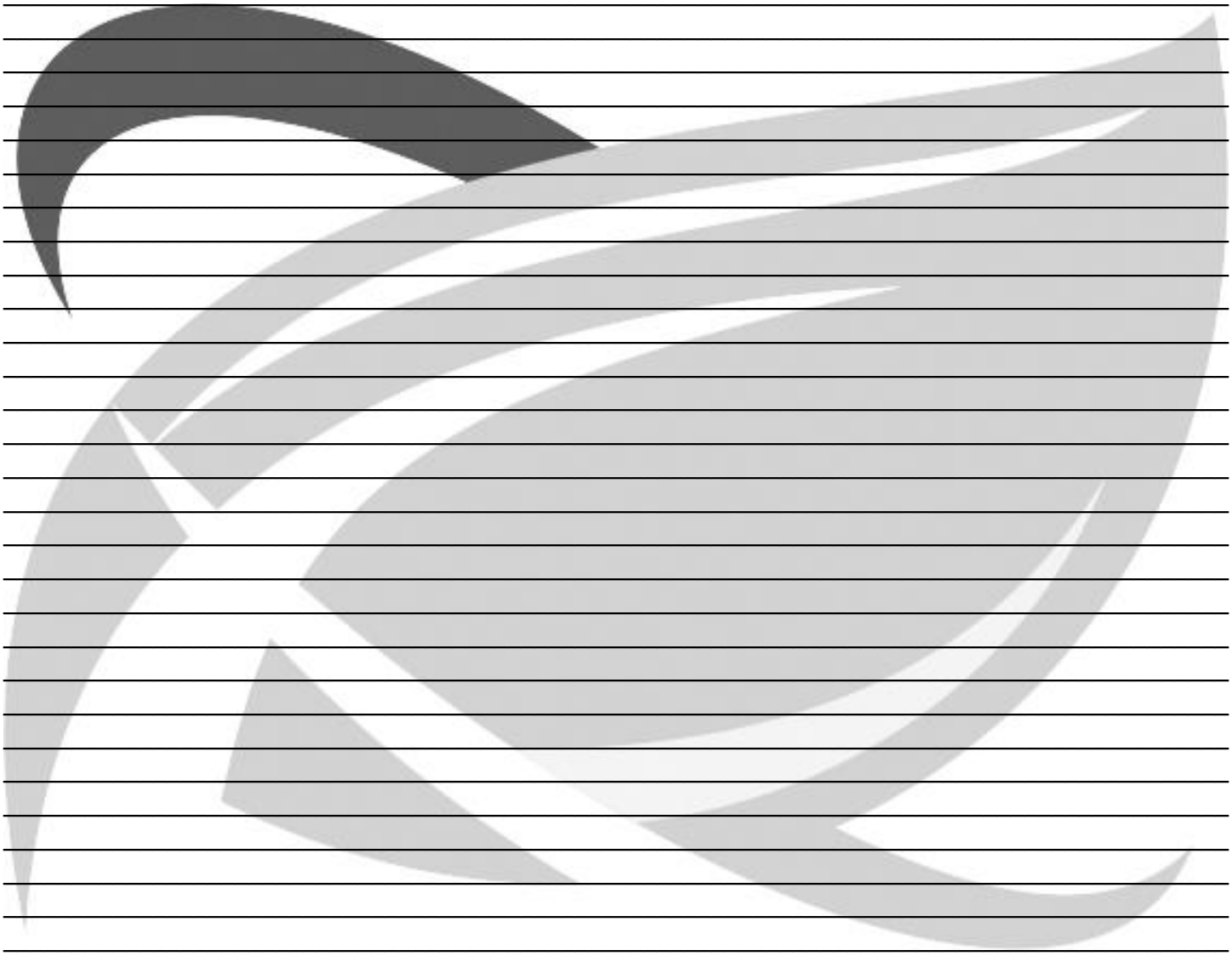
WARNING

Read the directions on the fire extinguisher carefully. If you have any doubts as to its operation, you and your family should practice, then replace or recharge the extinguisher. Your local fire department will be able to assist you and answer any questions.

WARNING

Do not smoke inside the camper. Keep matches out of reach of small children. Don't clean with flammable material. Keep flammable material away from open flame. Always shut off the LPG gas at the tanks when fueling a tow vehicle.

NOTES



Interior

General Information and Cleaning

The interior of all nüCamp RV campers has been designed for comfort, convenience, durability, and appearance. How you use it and how you take care of it, naturally, depends on you. However, if you learn to operate the interior components, and take care of them and the trailer properly, this knowledge will add to your pleasure, as well as the life term of your trailer.

Interior Skin

Interior skin can be cleaned by washing with any mild non-abrasive soap or detergent. Cleaning should be followed by a thorough clean water rinse. Drying the unit with a soft cloth to prevent spots and streaks. Do not use abrasive cleaners or utensils.

Interior Woodwork

The finish on the interior woodwork is a high-quality furniture finish and should be treated as any fine furniture finish. Use a high-quality furniture cleaner which does NOT contain ammonia or bleach. One good choice is Murphy Oil Soap Clean and Shine.

Counter Area

The counter tops are made of a high-pressure laminate and can be cleaned with soap and water, or you can use a common solvent on tough spots. Do not use abrasive cleaners since they could scratch the surface. A protective pad should always be used under hot utensils or pans.

Vinyl Flooring

General Cleaning

Use a soft broom to sweep the floor. A vacuum cleaner may damage the flooring. In most cases, a clean damp cloth or mop will suffice to clean dirty flooring. When necessary, a solution of mild detergent or domestic floor cleaning emulsion can be used to clean the flooring. Do not use a wire brush or nylon scouring pads, furniture polish, spirit-based polish, powder or liquid abrasive cleaners, bleach or other strong detergents. Scuffs, dirt, and spillages should be cleaned up as soon as possible.

Electrical

Ceiling and Porch Lighting

A switch just inside the door on the ceiling controls the ceiling lights, and the porch lights by each side door. There are two adjustable reading lights in the front above the head board, these lights have two settings, if you press the button once you have a blue night light, if you press and hold the button you will have a cool white reading light. a light has been installed on the hatch door that is operated by pressing a button on the light itself.

Fantastic Roof Vent

The high-volume roof vent system is designed to quickly exhaust stale, hot air and draw in fresh air. It is great to use when the outside temperature does not call for air conditioning, but heat has built up in your trailer.

Operation

1. Open dome approximately 3 in. or more (ceiling fan has a built-in safety switch that will not allow motor to operate unless dome is partially open).

2. Turn 3-speed knob to desired performance level (1-Low, 2-Medium, 3-High, O-Off).

3. Open window(s) or door for airflow. The source of airflow is determined by the number of window(s) or door(s) opened. For best results, close all roof vents and open one window that is the greatest distance from the ceiling fan.

NOTE

Never cover the ceiling fans. This will greatly restrict airflow and increase sound levels.

Cleaning Instructions

1. Turn fan motor off.

2. Remove screen insert.

3. Clean screen with soap and water solution, dab dry with a soft cloth, and reinstall.

Battery/12-Volt System Information

The major portion of electrical power in your camper is 12-volt.

All 12-volt current comes through the battery system. The battery is in the front compartment by the propane tank on the tongue of your trailer.

If you replace a blown fuse and it immediately blows again, do not replace the fuse again until a qualified service technician can correct the problem.

If the replacement fuse holds for a week or more and the gap in the fusible metal is barely melted apart, this usually indicates an overload condition. Reducing the number of lights or appliances used on that circuit at the same time could prevent any further fuse failure.

Battery Disconnect Switch

The battery disconnect switch is used to separate the batteries from the 12-volt distribution panel and converter charging system.

When the switch is turned to ON and the trailer is plugged into a 120-volt shoreline, the 12-volt distribution panel will receive power from the converter and the batteries will be charged through the converter charging system.

When the switch is turned to OFF and the trailer is plugged into a 120-volt shoreline, the 12-volt distribution panel will still receive power from the converter, but the batteries are disconnected from the system. The batteries will not be drained with the switch in the OFF position. The converter will not charge the batteries with the switch in this position.

The charge in the 12-volt batteries can be replenished, depending on the tow vehicle, from the tow vehicle alternator through the 7-way cord. This charge will flow to the batteries regardless of the battery disconnect switch position. Likewise, if on or off, the solar panel is still charging the batteries.

Converter

The converter transforms 120-volt AC into 12-volt DC. The converter/charging system is the interior low voltage electrical system that enables you to use the interior lights, fans, pumps, and 12-volt appliances, whether operating on self-contained battery power or 120-volt city power. The 12-volt light bulbs give off the same light as regular household bulbs, so that when operating on self-contained battery power, everything works normally except the 120-volt convenience outlets and 120-volt appliances. The converter system is designed to maintain constant output voltages regardless of the variances that occur in city power systems.

The converter is energized only when the trailer is hooked up to external AC power.

To test the converter, observe the following:

• Confirm 120-volt power is going into the converter.

• Disconnect the 12+ wire from the master switch.

• Using a voltmeter, check voltage output between heavy gauge positive and negative wires coming out of the converter.

• The voltage should be within 13.8 and 14.0 volts. (The meter of the tester should be calibrated periodically.)

• If converter is not within these voltages, have it serviced by a qualified technician or replace it.

A label on the inside of the converter door lists the circuits and what each fuse powers.

Converter Operation

The electronic power converter is designed to supply the nominal 12-volt-filtered DC power for all 12-volt operated devices encountered in RV service. Although the converter is an excellent battery charger, the converter does not require a battery to be connected to it for proper operation.

NOTE

When installing a battery (s), always observe polarity. Connecting a battery in reverse polarity will blow the power converter main fuses located on the 12-volt DC distribution fuse block

120-Volt AC Panel Board

The AC panel board section contains the 120 VAC branch circuit breakers for your RV. One of the breakers controls the 120-volt power to the 12-volt converter section. This breaker may also control another branch circuit. Check the label next to each breaker for what each branch circuit breaker controls.

The 120-volt circuits may be turned on by setting their breaker handle up, to the ON position, or off by setting the handle down, to the OFF position. To reset the tripped breaker, move handle to OFF then ON.

The system incorporates GFCI breakers that implement an auto self-test functionality. When turned off, these breakers require external AC power to be present, or the AC inverter enabled, before they can be turned back on. If AC power is present from one of these two sources, and the breaker refuses to stay on consult an electrician or certified RV technician.

Fuses and Breakers

Breakers

The distribution panel was designed to use a 30 Amp 120Volt main breaker with branch circuits. Double breakers may be used for the branch circuits. Should a breaker become faulty replace with the same type breaker only. Use only approved circuit breakers and 12V fuses.

NOTE

When replacing circuit & breakers replace with the same type and rating as the original.

12 VDC Fuses

Each 12 VDC circuit in the distribution panel was designed for a maximum of a 20-amp automotive style fuse. Should one need to be replaced, be sure to replace it with the same type and Amp rating as originally supplied by nüCamp RV. Replacing it with either a higher or lower Amp fuse could result in the panel not functioning properly.

Reverse Polarity Fuses

The power converter is equipped with reverse polarity fuses, should these fuses “blow” either during the manufacturing process or while connecting the battery, replace with the same type and rating fuse as originally provided with the equipment.

The power converter is not weather resistant nor designed for installation in wet locations. The power converter must be protected from direct contact with water.

120-Volt Electrical System

Shore Power

When your trailer is hooked up to external AC power, the converter system automatically charges the trailer battery(s) with the battery disconnect switch in the ON position. If the 7-way cord is hooked up and depending on your vehicle, your tow vehicle battery as well. The speed and degree of charge depends on how much power is used for lights and appliances, as only the surplus goes to charging the battery. If you are making an extended stay, then you should keep your trailer hooked up to a 120-volt current if it is available.

While you are connected to the 120-volt receptacle, the wiring is protected by circuit breakers in the breaker panel. The circuit breaker panel for the 120-volt system is in the converter. Open the converter door. In the event of a failure of a 120-volt circuit, first check your trailer circuit breakers and the breaker for the outlet into which your trailer shoreline cord is plugged. If a breaker continues to trip after you have reset it several times, your circuit may be overloaded with appliances or there may be a short in the circuit. Try lessening the load on the circuit. Perhaps an electric griddle, hair dryer, or an electric heater can be turned off. If that does not solve the problem, consult an **nüCamp RV** Service Center.

The 120-volt electrical system provides power to operate the air conditioner, converter, and 120-volt receptacles for portable appliances. The power is carded through the 120-volt city power flexible cord to the 120-volt distribution panel, and then is distributed to each appliance or receptacle.

All wire, components, and wiring methods conform to federal and state requirements.

Converter

The converter system enables you to use the 12-volt lights and equipment whether operating on self-contained battery power or hooked up to 120-volt city power. The 12-volt light bulbs give off the same light as regular household bulbs, so that when operating on self-contained battery power, everything works normally except the 120-volt convenience outlets and 120-volt appliances.

NOTE

When operating with city power, make very certain that the service is 120-volt and not 240-volt.

The converter system is a transformer designed to maintain constant output voltages regardless of the variances that occur in city power systems. The design eliminates the need for complex electronic sensing systems to charge the batteries, minimizing the possibility of failures and greatly increasing its overall reliability.

In some older parks and other locations where three pronged outlets are not available, certain precautions to ensure proper grounding and polarity must be taken. These precautions are listed below:

1. Attach the three-pronged plug to a two-pronged adapter. The third conductor line of this adapter has a short wire lead, that must be grounded.

2. For proper grounding, connect the short ground lead to a grounded outlet box or to a cold-water pipe. When no water pipe is available, drive a metal rod two feet into the ground and attach the ground lug to it, thus, providing the unit with proper grounding.

NOTE

When the three-pronged plug can be used, there will be no problems with proper polarity or grounding with a properly wired shoreline outlet.

Ground Fault Circuit Interrupter

Most states require trailers with exterior 120-volt receptacles and receptacles close to a water sources, such as a faucet, to have a ground fault-circuit interrupter. When properly installed, the GFCI circuit breaker provides reliable overload and short-circuit protection, plus protection from ground faults that might result from contact with a HOT load wire and ground. Each GFCI circuit breaker is calibrated to trip with a ground current of 5 milliamperes or more. Since most persons can feel as little as 2 milliamperes, a distinct shock may be felt if the need for protection exists. However, the shock should be of such short duration that the effects would be reduced to less than the normally dangerous level. However, persons with acute heart problems or other conditions that can make a person particularly susceptible to electric shock may still be seriously injured.

While the GFCI circuit breaker affords a high degree of protection, there is no substitute for the knowledge that electricity can be dangerous when carelessly handled or used without reasonable caution.

WARNING

The GFCI circuit breaker provides protection only to the circuit to which it is connected. It does NOT provide protection to any other circuit.

GFCI(s) are proven lifesavers, however, consumers need to take a few minutes each month to perform this simple test. By acting, you can help protect your family from the risk of electric shock.

GFCI Receptacle

To properly test GFCI receptacles:

1. Push the Reset button located on the GFCI receptacle first to assure normal GFCI operation.

2. Plug a device, such as a night light, with an ON/OFF switch into the GFCI receptacle and turn the product to the ON position.

3. Push the Test button located on the GFCI receptacle. The device should turn off.

4. Push the Reset button, again. The device should come on again. If the device remains on when the Test button is pushed, the GFCI is not working properly or has been incorrectly installed (wired wrong). If your GFCI is not working properly, call a qualified, certified electrician who can assess the situation, rewire the GFCI if necessary, or replace the unit.

NOTE

All GFCI breakers implement an auto self-test function, however, we recommend a manual test be conducted every month.

Appliances

All appliances come with in-depth owner's manuals. Those manuals are included in the delivery case supplied by your dealer. The manuals may contain warnings, cautions, and operating instruction that should be read and followed before operating the appliances.

The information contained in the appliances manuals supersedes any information contained in the **nüCamp RV** camper Owner's Manual on appliances. If you believe contradictory information on appliances is contained in this manual, or if any appliance manual(s) have not been provided with your trailer, contact your dealer, the respective appliance manufacturer, or **nüCamp RV** Customer Service at 330-852-4811

Air Conditioner

The air conditioner operates on 120-volt power, which is supplied through the 30-amp power cord, from an outside 120-volt power service, if equipped. The factory installed air conditioner is a high efficiency, power saver unit.

The air conditioner will provide cooled air for your comfort. However, it is the largest single load of

electrical usage. It is important to manage your electrical usage when you have an air conditioner Be sure the air conditioner is OFF before connecting electricity.

1) When the air conditioner has been shut down, wait at least five minutes before restarting.
2) Do not operate without a filter installed.

If your AC unit doesn't turn on and is not a Cool Cat brand, check the GFI on the plug, press the TEST button then the RESET button. If the unit still doesn't turn on check the 20-amp breaker in the converter box. Turn the breaker to OFF then back to ON. If the unit still doesn't turn on consult your air conditioner manufacturer.

If your AC unit doesn't turn on and it is a Cool Cat brand check the digital thermostat control to see if it is lit. If it is, watch to see if it displays an error code. If it does display an error code reference the Cool Cat manual to diagnose the problem.
NOTE: This unit requires both 110V & 12V to function. Also, check that the 12V fuse is not tripped as this will lead to product failure. If the fuse is intact lastly check that the 20-amp breaker is not tripped. Turn the breaker to OFF then back to ON to reset it. If the unit still doesn't turn on consult the air conditioner manufacturer.

NOTE:
Always ensure that the trailer is level before operating the air conditioner as this may lead to condensation, drainage issues and water damage.

Helpful Notes When Using the Air Conditioner;
Keep window curtains closed.
Air conditioner removes moisture from the air and it is normal to have water discharge off the road.
Experience has shown that some RV parks may experience reduced power (low voltage) on days with high heat or humidity, commonly referred to as a "brown out". This condition may result in the air conditioner circuit breaker tripping in your power distribution center. This protects your air conditioner motor from damage and is necessary during low voltage conditions. This breaker tripping is sometimes perceived as a fault in your camper, but it is a necessary "safety valve".

NOTE
Review the air conditioning literature supplied in your owner's packet before proceeding

Refer to the air conditioner manufacturer's users' manual for complete operating and service instructions. Efficiency when using the air conditioning can be increased by closing all windows and curtains and parking your camper in the shade. Air conditioning consumes a large portion of the electric power available in the recreational vehicle and efficient operation can be an important consideration. Even though your recreational vehicle is equipped with 30-amp capabilities, be aware that some campgrounds may offer less than 30-amp service. Check with the campground before utilizing excessive power, which may create a fire hazard or trip breakers, in either the recreational vehicle or the outside power source.

NOTE:
Always turn off the air conditioner (and all electrical appliances) before disconnecting the camper from its 120VAC power source.

NOTE:
If you cover the outside portion of your air conditioner during periods of storage, be sure to remove protective cover before reusing.

Stove

The stove in your camper is a (Manual Ignition) 2 Burner Stove.


To Prevent Fire or Smoke Damage

1) Keep area around appliance clear and free from combustible materials, gasoline, and other flammable vapors and materials.

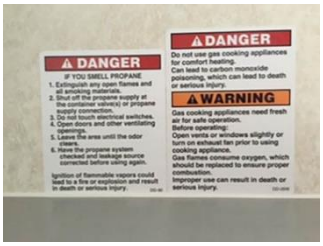
2) If appliance is installed near a window, take proper precautions to prevent curtains from blowing over burners.
3) Never leave any items unattended on the cooktop. The hot air from the vent may ignite flammable items and may increase pressure in closed containers, which may cause them to burst.
4) Avoid use or storage of aerosol cans near an appliance. Many are explosive when exposed to heat and may be highly flammable.
5) Do not leave plastic items on the cooktop as they may melt or soften. If this occurs, discard the container and contents as the food could be contaminated.

Read all instructions before using this appliance. The following instructions are based on safety considerations and must be strictly followed to eliminate the potential risks of fire, electric shock or personal injury. Have the dealer show you the location of the gas shut off valve and how to shut it off in an emergency. To ensure proper operation and avoid possible injury or damage to the camper, do not attempt to adjust, repair, service, or replace any part of your appliance. All other servicing should be referred to a qualified installer or service center. Always disconnect power to appliance before servicing. It is not safe to use cooking appliances for comfort heating. Do not use open flames to warm the living area.

Cooking appliances need fresh air for safe operation.

Before operation:

1) **Open overhead vent or turn on exhaust fan.**
2) **Open window.**



This warning label is in the cooking area to remind you to provide an adequate supply of fresh air for combustion. Unlike homes, the amount of oxygen supply is limited due to the size of the recreational vehicle, and proper ventilation when using the cooking appliance(s) will avoid danger of asphyxiation. It is especially important that cooking appliances not be used for comfort heating as the danger of asphyxiation is greater when the appliance is used for long periods of time. Never use portable fuel-burning equipment, including wood and charcoal grills and stoves inside the vehicle because a fire or explosion may result.

WARNING

Do not turn the oven or burner control knobs ON, allowing gas to escape before lighting a match or using an electronic igniting device. DO NOT try to light the stove if you smell propane.

Match lit Ignition

1) Hold a lighted match next to the desired surface burner head.
2) Push in and turn the surface burner control knob to the LIGHT position.
3) After the burner lights hold the knob in for a few seconds, then adjust the knob between HI and LOW to select the desired flame size.
   NOTE: If the stove doesn't light and you smell gas shut off the gas immediately and have the gas system pressure tested.
4) After cooking, turn the surface burner knob to the OFF position.

WARNING

An operation manual for the range is provided in the owner's packet. If this has not been provided with your trailer, contact the manufacturer listed to obtain. Their manual contains specialized warnings and cautions that should be reviewed prior to operating the appliance.

Refrigerator

NOTE: New propane tanks or empty tanks that have been sitting with the valve open for a period must be purged of air and moisture prior to filling. Air trapped in the propane lines may delay the initial lighting of any appliance. It could take several seconds or minutes for the propane to reach the appliance. To purge some of the air from the

propane system, first light a burner on the range. The other appliances will then light more quickly. The first time the furnace or oven is operated, paints and oils used in manufacturing may generate some smoke and fumes. If this occurs, open doors and windows to air out the camper. These materials should burn off in a short time. Always follow the appliance manufacturer's lighting and operating instructions.

Read instructions before running. Please consult the Norcold Refrigerator's Owner's Manual.

Leveling

Leveling is one of the requirements for proper operation with refrigerators. Any time the vehicle is parked for several hours with the refrigerator operating, the vehicle should be comfortably leveled to prevent loss of cooling. If the refrigerator is operated when it is not level and the vehicle is not moving, liquid ammonia will accumulate in sections of the evaporator tubing. This will slow the circulation or in severe cases completely block it, resulting in a loss of cooling. When the vehicle is moving, the rolling and pitching movement of the vehicle will help to keep the liquid ammonia from accumulating.

Propane Mode

This mode provides propane only. The control system activates the ignition system and attempts to light the burner for a period of approximately 45 seconds, at 2 minute intervals. To use the 3-Way refrigerator on Propane Mode, if possible turn the refrigerator on AC Mode or DC Mode for 15 to 20 minutes before lighting on propane, this will allow the refrigerator to light easier. To light, turn the selector switch to the flame symbol (propane) and push in the red button (gas safety valve) until the green light at the right side of the refrigerator comes on. Hold the red button (gas safety valve) in for about 30 seconds, DO NOT hold in for more than 30 seconds. When releasing the button, the green light should stay on to indicate that the refrigerator is on. If the refrigerator doesn't light or stay on, contact your Dealer or Norcold. The battery must have a decent charge before you can start the refrigerator on propane mode.

NOTE: Do not travel with your refrigerator on propane as it may blow out causing the refrigerator to stop cooling. When using the refrigerator on propane turn on the additional fan to help the refrigerator cool. This will draw out the hot air allowing the refrigerator to cool better.

AC Mode

To use the 3-Way refrigerator on AC Mode (electric) turn the selector switch to the AC Electric setting and adjust the dial to the desired temperature. Turn the thermostat to the "5" position. Allow the refrigerator to operate at this setting for 6-8 hours before changing to the desired temperature setting. If the refrigerator doesn't cool check the breaker in the converter box and make sure that the refrigerator cord is plugged into the outlet in the cabinet next to the refrigerator under the sink.

DC Mode

To use the 3-Way Refrigerator on DC Mode (12-volt power), turn the selector switch to DC Mode setting and adjust the dial to desired temperature. If the refrigerator does not cool check the fuse located in the converter box.

When DC mode is chosen, the refrigerator will operate by pulling power from the battery/s. In most cases, the refrigerator controls will continue to operate when the battery is down to 9.6V DC, causing a drain on the battery. WHEN IN AUTO MODE, IF THE REFRIGERATOR FAILS TO OPERATE, REFER TO THE MANUFACTURER'S

USER MANUAL PROVIDED WITH THE NÜCAMP RVOWNER'S PACKET.
For more information, please consult the individual owner's manual.
NOTE: DO NOT turn on DC mode unless you are plugged into the tow vehicle and the tow vehicle is running. Turn off the refrigerator before turning off the car. Running on DC will run down the battery quickly.

Dry Camping
While dry camping, instead of using DC mode, you can also use the refrigerator as a cooler. Using ice or frozen cold packs.

Purging Air from The Lines
If the refrigerator has not been used for a long period or if the propane tanks have just been refilled, air may be trapped in the supply lines. Purge the air from the lines by pressing the ON/OFF button to OFF and then back to ON 3-4 times. If repeated attempts fail to start the propane operation, check to make sure the propane tanks are not empty and that all manual shutoff valves in the lines are open. When refueling, or parked near gasoline pumps, shut off all propane appliances. Failure to heed this warning could cause a fire or explosion, resulting in death or severe personal injury as well as damage to the camper and/or surrounding area.
NOTE: Keep the vent underneath the refrigerator unobstructed.

Alde Heating System

Operating the Alde Heater

The Alde heater comes with its own owner's manual. Please read its instructions on how to operate the heater.

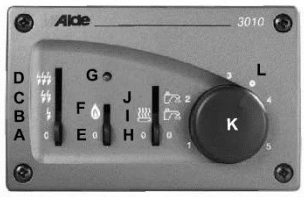
Please NOTE: If you have properly drained the Alde heater from any RV winterizing fluids you are safe use the Alde heater for winter camping while the system has been winterized and you will not damage the Alde heater or any of its components. The proper winterization for the Alde heater so that is it safe to use is "if you did not use RV anti-freeze to winterize the camper but instead used air to blow out the system" then there is nothing you need to do to use the Alde heater for heat. If you did use RV anti-freeze to winterize you will need to open the Alde relieve valve to drain the anti-freeze out from the tank.

Alde Controllers
The Alde system will be operated either by a Digital Touch Screen Panel or a 214 Manual Controller. If you have the digital touch screen panel you can find the operating instructions on page 9 to 15 in the Alde Operator's Manual that comes with the Alde system.

Digital Control

To light the Alde system on propane, press the Propane icon "On", on the thermostat. The On icon is activated and changes color to green. As seen in the photo.
To switch off gas operation, press "Off" icon.
If the gas failure code appears, make sure the gas is connected and turned on. If this is the first time you are lighting the Alde since connecting the propane tank, then the gas might not be at the Alde system yet as it takes a few minutes for it to flow through the regulator and to the appliances. If the gas failure code does appear, turn off the Alde for a few seconds then turn it back on.

Manual Control



If you have the manual control thermostat, the boiler is controlled by the slider switches on the control panel. The desired temperature in the trailer is set and controlled by the control panel's thermostat.
Functions on the control panel:

a) Electrical cartridge OFF.
b) Electrical cartridge ON at 1050 Watts power.

c) Electrical cartridge ON at 2100 Watts power.
d) Electrical cartridge ON at 3150 Watts power (If the boiler is equipped with this power level).
e) LP gas burner OFF.
f) LP gas burner ON.
g) Red LED flashes if the voltage to the boiler goes below 10.5 V (automatic resetting at higher voltage). Fixed light, the LPG boiler has become blocked (resetting by the central switch for LPG) or overheated (resetting by the main switch of the vehicle). The temperature sensors of the boiler could be defective as well (resetting not possible).
h) Electrical cartridge/LP gas Boiler/Circulation pump switched OFF.
i) (Normal mode) Circulation pump ON and controlled by the thermostat on the control panel. The boiler's built-in thermostat controls the operation of the electrical cartridge/LP gas boiler. This mode is used when both heat and warm water (55° C or 131° F) are required. NB! If both the electrical cartridge and the LP gas boiler are ON, the electrical cartridge heats up first and the LP gas boiler only starts when the room temperature has gone down by 1-2° C.
j) Only the warm water (65° C or 149° F) circulation pump is switched off. NB! If both the electrical cartridge and the LP gas boiler are ON, only the electrical cartridge heats up.

k) Dial for setting the desired room temperature.
l) Guide for setting the room temperature to approximately (22° C or 71.6° F).

If the Alde system stops working check the fuses located in the converter box and in the Alde system. The fuses in the Alde system are in the green fuse holders under the black lid on the top of the Alde system. Also, check to make sure that the 110 Power Cord is plugged in, and the breaker for that outlet is on.

For more troubleshooting tips see page 8 in the Alde manual.
Turn on the water pump and open hot water at the kitchen sink, and at the shower, when water flows continuously the heater is full. For more details, see the water pump section of this manual.
When you're setting up the heater for the first time you will want to test the water temperature coming out of the faucet and adjust it by using the mixing valve located close to the Alde unit. This adds cold water to hot water before it gets to the faucet to avoid getting water burns.

LK 550 Mixing Valve

Technical Data
Working temperature
Min. +5° C/Max. +90° C
(Min. 41° F/Max. 194° F)
Operating temperature Min. +38° C/Max. +65° C (Min. 100.4° F/Max. 149° F)
Max. working temperature 1.0 MPa (10 bar)
Material, valve body: DZR Brass EN 12165 CW602N
Material, sealing's EPDM

LK 550 is a mixing valve for water heating with a thermostatic element that regulates the supply of cold water to achieve the desired temperature.
Valves with male thread G ½" and 15mm compression fitting have an air vent for simple draining of smaller water heaters.
Arrows on the body valve indicate the direction of the flow:

- **KV** = incoming cold water
- **VV** = incoming hot water
- **BV** = outgoing warm water

When fitting to a male thread connection adapter LK 373 is used – see under Accessories.
The valve knob is used to set the desired warm water temperature within the range of 38° C to 65°

C (100.4° F to 149° F). The maximum temperature can be calibrated as follows:

Increasing the Maximum Temperature:
Turn the knob anticlockwise to (+). Loosen the screw and move the knob out to the side. Then turn the knob clockwise to (-) without it being engaged. Adjustments are carried out in small steps. A ¼ turn corresponds to approximately 7° C (44.6° F). Reinstall the knob and check that it engages with the teeth. Tighten the screw and then turn the knob to max (+). Max. calibration for increasing the temperature is a ½ turn.

Reducing the Maximum Temperature:
Do the procedure in reverse. Turn the knob clockwise to (-) and the disengaged knob anticlockwise to (+).

CAUTION

Please use caution water can be extremely hot coming out of the heater.
Occasionally you may experience "weeping" of the pressure/temperature relief valve. This is normal operation. The normal expansion of the water causes it while being heated. The tank is designed with an internal air gap at the top to reduce this weeping phenomenon. In time, though, the heating and expansion of the water will absorb this air.
To replace the air and reduce relief valve weeping:
Wait until the water in the heater tank is cool before performing the following steps.

1) Turn off the water heater.
2) Turn off the incoming water supply.
3) Open a faucet in the camper.
4) Pull the handle of the relief valve straight out and let water flow until it stops.
5) Release the relief valve handle and let the valve snap shut.
6) Turn on the water supply.
7) Close the faucet when water flows continuously without sputtering.
8) Turn on the water heater.

These procedures will re-establish the air pocket at the top of the tank. If the relief valve weeps again, repeat the above procedure.

CAUTION

Do not plug the pressure-temperature relief valve under any circumstances.
If the water heater will be "out of service" for some time, it should be drained. See **"Storage"** chapter for more information.
When using hot water faucets in the camper for the first time after heating water, open the valve slowly to reduce water splattering from pressure build up.

Entertainment/Electrical

Antennas (if equipped)
The optional roof-mounted antenna control is in the ceiling of the lounge/kitchen area and/or in the bedroom. The antenna can only be used when the recreational vehicle is parked.

Television

Due to the large selection of televisions used in the manufacturing of **NüCamp RV** campers, it is impossible to list all of them in this manual. Therefore, you will find general information that will be applicable to almost all televisions.
For more detailed information regarding the specific television installed in your camper, please refer to the television manufacturer's user guide included in your **NüCamp RV** Owner's packet. For more information, please consult the individual owner's manual.
Your camper is prewired for cable. Televisions run on 12VDC and 120VAC power. Your recreational vehicle must be connected to shore power have the generator (optional) connected for the TV to operate. For more information, please consult the individual owner's manual.
Audio Visual (DVD, Cable box.)

Stereo CD Player

1) Power
   Press the power button or any other button on the front of the radio (except the eject button) to turn the unit on. Press the power button again to turn the unit off.
2) Mode
   Press MOD to select a different mode of operation as indicated on the display panel.

Available modes include Radio, CD, and CDC. CD mode will only appear in the menu if a CD is loaded. CD changer mode (CDC) will only appear if a CD changer is connected to the unit.

3) Audio Mute
   Press MUT to momentarily mute the audio volume. Press MUT again to restore volume to the previous setting.
4) Volume
   To increase the volume, rotate the volume control clockwise. To decrease the volume, rotate the volume control counter-clockwise.
5) Sound Adjustment
   Press PUSH/AUDIO to step through the following sound adjustment options: BAS (bass), TRE (treble), BAL (balance) and FAD (fader). When the desired option appears in the display, rotate the volume control to adjust that audio feature. When no adjustments have been made for five seconds, the unit will resume normal operation.

NOTE: If the battery has been disconnected or is dead, all settings must be reset.

Exterior

General Information and Operation

Doors

The doors of the camper are manufactured with a built-in, keyed dead bolt and door lock. The door lock is engaged from the outside by use of a key. The dead bolt is engaged from the inside by turning the red knob or from the outside by a key.

A main door hold-back is mounted on the trailer's exterior side skin. The hold-back secures the door to the side of the trailer.

CAUTION

When towing, all locks must be secured. The constant vibration of travel may cause the door to open resulting in possible damage.

Hatch Door

The hatch door provides access to the rear kitchen area, the hatch door is opened by turning the T-handles, these can also be locked.

Water Pump

CAUTION

The pump is not equipped with a dry tank shut-off switch. Turn the pump switch OFF if water in tank becomes depleted or when system is not in use. The pump operates when water pressure within outlet plumbing drops below a predetermined pressure. A drop-in pressure occurs when a faucet or a toilet valve is opened. When the faucet is closed, the pump shuts off as soon as the system is re-pressurized.

Turn the pump ON to pressurize the water system. When the faucet is opened, the water may sputter for a few seconds. This is normal and no cause for alarm. The water flow will become steady when all air is bled from the water lines. If a faucet is open slightly, allowing water to flow slowly, the pump may pressurize the plumbing faster than the water is released, causing the pump to cycle on and off.
A built-in check valve prevents back flow and protects the pump and fresh water tank from excessive city water system pressures. The pump operates at 3 GPM and 55 PSI. At free flow the pump draws approximately 7.5 amps. A 10 AMP fuse in the power center protects the water pump circuit. When traveling, always turn OFF the water pump. This will reduce the possibility of water flowing during travel. If the pump cycles on and off when no water is being used, you may have a partially open faucet, a leak in the water system or an empty water tank. Never attempt to service the pump without first turning off the power and opening all faucets to relieve pressure in the water system. Consult the installation and operation manual for full details in the Owner's Information Package.

Initial Start-up System

1) Be sure the tank is filled with water.
2) Open all faucets in the recreational vehicle, both hot and cold.

3) Place the pump control switch in the ON position.
4) Allow time for the hot water tank to fill. Shut off each faucet as the flow becomes steady and free of air. When the last faucet is turned off, the pump should turn off as well.
5) The system is now ready for use.

The water pump supplied with your camper is designed to deliver a smooth, consistent flow of water at all ranges of operation while drawing only a low current.

Operation

Pump cycling may be caused by excessive pressure created by one or more of the following, within a plumbing system:

- Low flow from partially open faucet.
- Water filters not on separate feed lines.
- Clogged water filters.
- Restrictive elbows and valves are possible in the first 2 feet after the pump.
- Flow restrictors in faucets and shower heads.
- Long lengths of small I.D. (inside diameter).
- If replacing pipe/tubing, be sure it is at least ½" I.D. for main lines.

To minimize cycling, consider removing plumbing restrictions or install an accumulator after the pump. Cycling should be minimized to prevent pulsing flow and to achieve maximum pump life. DANGER do not use automotive antifreeze to winterize potable (drinkable) water systems. Such solutions are highly toxic. Ingestion may cause serious injury or death.

Water Tank Fill

The fresh water system should be sanitized at the initial filling, after a period of storage or if contaminated. Fill tank slowly. Do not overfill. Do not leave unattended while filling. Structure damage may occur.

Filling the fresh water tank:

1) Close water tank drain petcock located at the rear or rear side of the camper.
2) Open cap on fresh water fill inlet.
3) Using a 3/8" hose adapter, fill the water tank through the exterior fill spout slowly at a low volume until water overflows out of the vent. Do not force water into spout since air in the tank must be released during filling. Do not put the potable water hose into the mouth of the fill.
4) Set pump control switch to ON.
5) Open each faucet one by one until water flows evenly, and no air bubbles are evident.
6) Top off water tank through the exterior fill spout to replace water used in filling the water heater and purging the water lines of air.
7) Close cap and lock the access door.

City Water Connection

External Hook-Up

Water provided from outside the recreational vehicle is pressurized by the system from which it is delivered. When you connect your recreational vehicle to an outside source, the fresh water tank and the water pump are kept separate from the remainder of the system by in-line check valves. Your camper is outfitted with a system designed to provide fresh (potable) water service from an onboard water tank or a city water connection with a fresh water tank fill located on the roadside of the camper.

When connecting to the city water hookup, use only a non-toxic water hose, available at most camper supply stores. Since water pressures at campgrounds and household hookups vary, you should install an inline pressure regulator at the water supply faucet. This will protect both the camper water system and supply hose from excessively high water pressure. (This comes supplied with the camper)

Water provided from outside the recreational vehicle is pressurized by the system from which it is delivered. When you connect your recreational vehicle to an outside source, the fresh water tank and the water pump are kept separate from the remainder of the system by in-line check valves.

CAUTION

DO NOT turn the pump on if the fresh water tank is empty. Doing so could cause damage to the pump or blow a circuit.

Attaching to an Outside Source of Water

1) Remove the cap from the fresh water inlet on the side of the camper.
2) Attach one end of the fresh water hose to the outside source of water.
3) Connect the other end of the hose to the camper city water inlet.
4) Turn on the outside source of water. Gradually open the hot & cold water at the sinks and shower to clear air from the lines.
5) Close the faucets when the water is flowing freely.

NOTE: Do not turn on the water pump when using water from an external source. Only use the water pump when obtaining water stored in your fresh water tank.

To Disconnect from the Outside Water Source

1) Turn off the outside source of water.
2) Disconnect the hose from the supply valve and the recreational vehicle inlet.
3) Remove the hose and store it.
4) Reinstall the cap on the recreational vehicle inlet.

When an outside source of water is unavailable, water can be drawn from the fresh water storage tank in the camper. The tank is filled through a gravity controlled water spout on the exterior of the vehicle.

It's a good idea to purchase a pressure regulator to protect your camper from possible damage due to excessive water pressure.

To supply city water to your camper's water system and bypass the water pump:

1) Attach a potable water hose to the exterior city water inlet connection.
2) Pump switch should remain in OFF position.
3) Open each faucet until water flows evenly.

Traveling with Water

When traveling, you may want to drain the tank or keep the quantity of water to a minimum. This will reduce the total weight of the camper for travel. The location of the fresh water drain is next to the entrance step and the waste water tank drain valve is in the front left corner of the camper.

NOTE: When draining the entire onboard fresh water system, be sure to open faucets, water heater drain and system low-point drains to remove all fresh water from the system. Be sure the water pump is turned OFF.

NOTE: When leaving the camper for extended periods, it is advisable to shut off the water supply at the park spigot.

Water System Drain

The water system should be drained if it will be out of service for more than one week. This will prevent algae and bacteria contamination of your fresh water system.

To Drain Your Camper:

1) The camper should be level and pump control switch in OFF position.
2) Open all faucets and shower-head.
3) Open water tank drain valve
4) Open water line low point drains usually located in or under shower area.
5) Open water heater drain and relief valves. (see Winterization and Storage section for more info.)

Sanitizing Fresh Water System

Sanitize the fresh water system and piping at initial use, at least once a year and whenever the camper sits for a prolonged period. This will help keep the tank and lines fresh and will discourage the growth of bacteria and other organisms that can contaminate the water supply. Rinse the tank with a chlorine/fresh water solution as follow:

1) Drain water system.
2) Prepare a chorine solution using a gallon of water and ¼ cup of liquid household bleach (5% sodium hypo-chlorinate solution). Use one gallon of solution for each 15 gallons of tank capacity.
3) With an empty tank and all faucets and drains closed, pump into the tank, via the

potable tank fill, either with a manual or electric water pump. Or pour 1/2 cup of bleach (1/4 cup per 15 gallons of capacity) into the hose before connecting it to the water source. The water source pressure will push the chlorine and water into the tank, making the correct solution when the fresh water tank is full.

4) Completely fill the tank with fresh water.
5) Switch on the water pump. Open all faucets one at a time until all air is purged and the water flows freely.
6) Again, add fresh water to the tank until the water level reaches the fill spout.
7) Allow the solution to stand in the tank, undisturbed, for at least three (3) hours.
8) Drain the system by opening all faucets and the fresh water tank drain valve while flushing the system with fresh water of drinking quality.
9) Continue flushing the system, allowing the water to flow for several minutes.

Close the tank drain valve and all faucets. Refill the system with water of known drinking quality.

WARNING

Potable water only. Sanitize, flush and drain before using. Failure to comply could result in death or serious injury.

Water Filter

An in-line water filter attached to the inlet side of the water pump filters dirt, mineral scale, or organic matter out of the fresh water system. If you suspect a clogged filter, it is easily removed and cleaned. Disconnect the supply riser from the filter. Unscrew the filter from the water pump.
Flush out and clean screen.

- Reverse procedure to install and check for leaks.
- Inspect the filter after the first 90 days of use, clean it if necessary, and inspect annually thereafter.

Shower

The shower-head is removable for hand-held use and equipped with a water flow control device to allow you to conserve water while showering. After showering, there may be some water discharge at the sink faucet. This water is draining from the shower hose through an anti-siphon valve in the faucet and is normal.

NOTE: For your protection, this faucet is equipped with a vacuum breaker (back-flow preventer) to prevent contamination of your potable water supply. The water in the hand-held shower hose will drain through this vacuum breaker when the faucet is turned OFF. This is not a leak. This drainage is inherent in the design of the vacuum breaker, and is evidence that it is functioning.
Due to design precautions, hand held shower-heads, when in the "hold" position must have a built-in leak rate of less than 1 gallon per 30 minutes of time. This leakage is not a defect but is an attempt to reduce the possibility of scalding accidents due to temperature changes from fluctuating water pressure.

Exterior Shower

The exterior wash station is in the sidewall on the roadside compartment for exterior use. It uses water from the fresh water tank or when connected to the city water hookup.

Monitor Panel/Command Center

The display is the only system component that is accessed by the user. All user input to the display is done using the four buttons along the bottom of the display. Operation of the display is as follows:
To read a water or sewer tank level:
1. Press the button corresponding to the tank to be checked and release it, the display will show the level in percent on the LED display. If no other button is pressed, then the display shut off after approx. 5 seconds.
2. If another button (including BAT) is pressed before the 5 second time is up for the first button, the display will immediately switch to showing the

new level or voltage. The 5 second timeout is restarted every time a button is pressed.
3. To continuously display a reading, press and release the desired button, and then press the same button a second time. When the button is released, the display will be in hold mode, which is indicated by the decimal point on the right-hand side turning on. While the display is in the hold mode it will recheck the level once per second so the user can watch the level change while the tank is being filled or drained. The display will automatically shut off after 5 minutes in hold mode. To end the hold mode before the 5 minutes is up, press any tank button, and the display will shut off.

To read the battery voltage:
1. Press the BATT button and release it, the display will show the battery voltage on the LED display.
2. If no other button is pressed, then the display will shut down after about 5 seconds. If the BATTERY button is held down, the display will continuously recheck the voltage and show the updated value. The reading may flicker back and forth between two values, for example, 12.6 and 12.7 volts. This is normal behavior for a digital voltage display.
3. If another button is pressed before the 5 second time is up for the BATTERY button, the display will immediately switch to showing the value for the new button. The 5 second timeout is restarted every time a button is pressed.
4. There is no hold mode for the battery voltage.
For more info, refer to the SEELEAVL II operator's manual.

Waste System

The waste holding system in your camper is made up of sinks, shower, toilet plumbing drain and vent lines, "gray water" holding tank, and "black water" holding tank. The holding tanks make the system completely self-contained and allow you to dispose of wastewater at your convenience. A flexible sewer hose is used to connect the holding tank outlet to the inlet of an approved wastewater dump station or sewer system.
The holding tanks are made of seamless plastic that will not corrode. On most units with dual tanks, one retains toilet waste and the other retains liquid waste from the sinks and shower. Drain all wastes at an approved site.

Waste Water/Holding Tanks

The waste water system in your recreational vehicle can be described as two separate systems. A gray water system that consist of the drain lines and holding tank for waste water from the sinks and tubs, and a black water system which includes the holding tank and drain for toilet wastes.
Each system is self-contained and allows disposal of waste water at designated dump stations at your convenience.
Residue in the drain water lines can also produce odors. To combat gray water holding tank odors, an approved deodorizing agent should be used. An agent that dissolves grease and fats and contains a detergent will help keep tanks and the lines clean and free flowing. You can obtain the deodorizer at most campgrounds and stores that carry camping equipment.

Toilet

The toilet installed in your recreational vehicle is connected to the pressurized fresh water system. A single lever arrangement controls the flushing and the flow of water into the bowl.

- To add water to the toilet before using, lift the flush lever until the desired water level is reached. (As a rule, more water is required only when flushing solids.)
- To flush the toilet, push the lever all the way down until the sewage leaves the toilet.
- Release the flush lever. A small amount of water should remain in the bowl.

Be sure to hold the flush lever down long enough to release the contents of the bowl, but not longer than necessary as this will result in excessive water usage.
Unnecessary, frequent flushing of the toilet will quickly deplete your fresh water supply and fill your holding tank. If the black water tank becomes full, you will no longer be able to flush the stool until the tank can be drained. Be sure all occupants and guests understand this operation.

Always use deodorizing agents specifically designed for use in holding tank systems and a good biodegradable tissue paper. These products are available directly from your dealer or any store that sells camping supplies. Never use chlorine or caustic chemicals such as drain opener or laundry bleach in your toilet.
Never allow foreign objects (non-dissolving items) to be flushed through the toilet.
Don't allow a problem to go unsolved. As soon as you detect a problem, take the necessary steps to correct it. It is also a good idea to carry a few spare parts that will correct a small problem that may develop. These parts can be obtained from your dealer or larger campground stores. Refer to the toilet manufacturer's information in your Owner's packet to determine which part you may need, its correct name and part number. (If you have a different toilet than the one described, follow the manufacturer's recommendations for cleaning and maintenance.)

Dumping the Holding Tanks
The holding tanks terminate in a valve arrangement that permits each tank to be dumped separately or together. The valves are called "knife valves". A blade closes the opening in the sewer drain pipes. The blade is connected to an extension handle that is pulled to release the contents of the tanks(s). During self-containment use, the sewer outlet line should be securely capped and valves closed to prevent leakage of waste material on the ground or pavement.
Holding tanks are enclosed sewer systems and as such must be drained into an approved dump station. Both black and gray water holding tanks must be drained and thoroughly rinsed to prevent accumulation of harmful or toxic materials.
Dump the holding tanks only when they are about 2/3 full. If necessary, fill the tanks with water to 2/3 full. This provides sufficient water to ensure complete flushing of waste material into the sewer line. Whenever possible, dump the holding tanks before traveling.
The holding tanks outlet is set up to be used with a removable fitting that locks onto the outlet with clockwise twist. The sewer drain hose is clamped on this fitting when you need to drain the holding tanks. When you are operating self-contained, or you store the camper, install the protective cap in place of the removable hose.
The sewer (dump) hose is compressed and stored in the camper's hose carrier.
Draining the holding tanks:

1) Attach the sewer hose to the dump outlet.
2) Extend the hose and insert the hose end into the sewer or dump station inlet, pushing it firmly into the opening to be secure. In some cases, adapters may be necessary between the hose and inlet.
3) Arrange the sewer hose so it slopes evenly and is supported to maintain the slope.
4) Dump the black water holding tank first. Grasp the handle of the black water knife valve firmly and slide the valve open with a steady pull.
5) Allow enough time for the tank to drain completely. Rinse and flush the tank and drain hose through the toilet with a bucket of water or a hose.
6) When the tank flow stops, push the handle in to close the valve.
7) Pull the handle for the grey water holding tank. Repeat steps 4 through 6. This tank is dumped last to aid in flushing the outlet and drain hose.
8) Remove the sewer hose and replace the outlet cap.
9) Rinse out the sewer hose with fresh water and remove the sewer hose from the dump station.
10) Replace sewer or dump station cover(s).
11) Store the sewer hose.

NOTE: Follow these guidelines to ensure trouble-free operation:

- Never put anything in the black tank other than biodegradable RV toilet paper.
- Do not put automotive antifreeze, household toilet cleaner or drain cleaners, or any solid materials into the waste water system.
- Always use chemicals in the black water system that are made especially for this purpose.
- When cleaning components of the waste water system, use cleaners made for camper systems.

- Always keep the drain cap in place and termination valves closed.
- After every third time the holding tanks are emptied, fill and flush both tanks with clean, fresh water a few times to keep them clear and clean.

NOTE: To facilitate draining, the camper should be slightly lower in the front to allow drainage toward drains located on the driver's side front.
If you are parked at a site with a sewer hookup, keep the black water knife valve closed to allow the waste level to build up. The outlet will probably clog if you leave the knife valve open continually. Run enough water into the tank to cover the bottom. This will aid the breakup of solid wastes. The gray water knife valve may be left open.
Keeping the black water tank clean allows the monitor panel to accurately assess the status of the tank. Always remember to clean up the dump site before leaving. Never empty your holding tanks directly on the ground or into a river or stream. DO NOT pollute!

Holding Tank Care
Since holding tanks don't rely on any sophisticated mechanical devices for their operation, they are virtually trouble-free. The most common problem is also an unpleasant one, clogging. You can minimize chances of clogging by keeping the following considerations in mind:

- Keep the black water tank knife valve closed. Be sure to cover the tank bottom with water after dumping.
- Movement while driving will help liquefy the solids.
- Use only toilet tissue formulated for use in septic tank or camper sanitation systems.
- Keep both knife valves closed and locked, and the drain cap tightly in place when using the system on the road.
- Use only cleaners that are approved for use in septic tank or camper sanitation systems.
- Use a special holding tank deodorant chemical approved for septic tank systems in the black and grey water holding tanks. These chemicals aid the breakdown of waste and make the system much more pleasant to use.
- Do not put facial tissue, paper, grease, ethylene glycol-based or other automotive antifreeze, sanitary napkins or household toilet cleaners in the holding tanks.
- Do not put anything solid in either tank that could scratch or puncture the tank.

If the drain system does get clogged:

- Use a hand-operated probe to loosen stubborn accumulations.
- Seriously clogged P-traps may require disassembly. Be careful not to over tighten when reassembling.

Do not use harsh household drain cleaners. Do not use motorized drain augers.
Sometimes the holding tank valve will get clogged. In this case, a hand-operated auger may be necessary. Be ready to close the valve quickly once the clog is cleared. If the seal gets damaged, it must be replaced.

Water System Maintenance and Troubleshooting

As with any mechanical system, your plumbing is subject to the development of problems. Most of these problems can be greatly reduced, if not eliminated, by following a schedule of planned inspections and maintenance. Neglect of proper maintenance procedures is the usual cause of most water system problems.

Road vibrations and shocks, as well as excessive pressure from some city water sources, are the main physical causes of water system damage. It is important to inspect all plumbing joints and fittings often for cracks and leaks. If left unchecked, water leaking from a plumbing joint can cause considerable damage.
A leak in the fresh water system should be suspected if the pump is running and all faucets and valves are closed. When the leaking fitting has been identified, attempt to stop the leak by tightening the fitting. DO NOT over-tighten. Plastic fittings rarely need to be tightened with a wrench. If these fittings leak after tightening by hand, disconnect the fitting and check for dirt, scale, or other foreign substances which may be causing the leak. Clean the fitting thoroughly and reinstall. If leaking persists, shut off

the water supply until the fitting can be properly replaced. Check with your dealer for the correct method of replacement and replacement parts.
Proper winterization procedures of plumbing systems will normally be all that is necessary to prevent the damage caused by freezing. Freezing damage can harm any component of the system, including the water tanks, toilet, pump, and all piping. Be sure to follow the winterization procedures outlined in this manual. Also, be sure to discuss with your dealer or repair center any additional precautions that should be taken to winterize your camper's plumbing system. Local climates vary and winter maintenance needs may be affected.
Be sure to read the literature supplied with plumbing components, such as the water pump, for troubleshooting tips. Also, remember that it is possible for an electrical problem to cause water system problems. Lack of power to the pump can be caused by a variety of reasons.

If you are unsure of how to locate and/or repair a plumbing problem, it is best to have your dealer or a qualified plumber who is familiar with the camper water system to inspect the system and perform any repairs needed.

L P Gas (LPG)

Fill Valve

The LPG tanks are equipped with fill valve connections RV Type I Acme. The large, green, nylon swivel nut is a right-hand thread and is designed for hand operation only.
The valve features an internal spring-loaded module that will not allow gas to flow from the cylinder until a positive seal has been made at the connection. The valve outlet has 1-5/16 in. Acme threads on the outlet exterior, and female POL, left-handed threads on its interior. This feature allows for connection of the new wrench less, right-handed, Acme RV connection while still accommodating the standard left-handed POL fittings used for filling propane cylinders.

The mating, green swivel nut and brass nipple also incorporate new features: the green nylon nut swivels on a black bushing that is heat-sensitive. Between 240 and 300°F, the bushing will yield (melt) allowing the spring-loaded module in the valve to push the brass nipple back (approximately 1/4 in.), closing the module and stopping the flow of gas from the cylinder. Inside the brass nipple is a flow-limiting device designed to sense excessive gas flow. If an excessive flow is sensed, the flow-limiting device shuts the flow down to a maximum of 10 SCFH (Standard Cubic Feet per Hour) or less. This is also referred to as the bypass flow.

Bypass flow is extremely important in the proper operation of this connection. The flow-limiting device may activate if the cylinder valve is opened quickly. When all appliances are off, the bypass flow allows the pressure downstream from the flow-limiting device to equalize. When pressure is equalized, the flow limiting device will supply

normal flow to the system. Equalization occurs in approximately 5 seconds and, in most cases, goes completely unnoticed. If, however, an appliance is left on or there is a leak or open flow in the system, the bypass pressure will not be able to equalize and allow the flow-limiting device to reopen. Symptoms of this condition would be appliances that light but have lower than normal flame or starve out from lack of gas, a substantial reduction in the flame when another appliance is operating, or pilots that are difficult to light. If this should happen, the following steps should eliminate the condition:

1. Close LPG cylinder valve.
2. Extinguish all flames and smoking materials.
3. Be sure all gas appliances, including their pilot lights, are off.
4. Open LPG cylinder valve slowly. Do not snap open.
5. Wait at least 15 seconds before lighting appliances.
6. If operational difficulties continue, there may be a leak in the system. Immediately close the LPG cylinder valve and have the system inspected by a qualified RV service technician.

WARNING

Leaking LPG may ignite, causing a fire or explosion, which could result in serious bodily injury, property damage, and/or death.

How long a full tank of gas will last is dependent on usage. when you are doing extensive cooking, you will naturally use more gas than you will on the average, with normal cooking

Propane Regulator

Propane is under high pressure in the tank. The purpose of the regulator is to reduce the pressure inside the tank to allow for safe use.

WARNING

- To avoid potential problems, have your propane system checked at least once a year by an authorized service center after each extended trip.
- NEVER test for a leak by lighting a match or having an open flame where you suspect a leak. Take your recreational vehicle to an authorized service center.

Regulator Freeze-Up

The term ‘regulator freeze-up’ is a misleading one. Regulators and propane do not freeze. However, the moisture that can be contained in the propane will freeze as the propane expands and cools passing through the regulator. This freezing of the moisture in the propane can build up and partially or totally block the passage of the propane through the regulator. Freezing can also occur when outside temperatures are low enough to contribute to the freezing of the moisture in the propane. The source of the moisture is varied. It can occur at the refinery or propane bulk plant, in the cars used to transport the propane, or even within your own propane tanks. Moisture in a propane tank can occur when a tank service valve is left open, allowing moist air to enter and become trapped. A two-stage regulator helps reduce the possibility of freeze-up because of its larger orifice size and that heat is being transferred through the walls of two regulators instead of only one.

NOTE: If freeze-up does occur, shut the propane off at the tank. A frozen regulator may permit propane to flow at high pressure, resulting in leaks at appliances or in the lines. Never attempt to thaw with an open flame. A small light bulb can sometimes be useful to provide heat and aid the thawing process. Once thawed, be sure to take the proper steps to prevent a reoccurrence. Have the system checked by your propane supplier.

WARNING

Your LPG tanks must be filled as directed by the tank manufacturer. Instructions are located on a decal near the fill valve. The decal must not be defaced.

WARNING

The LPG tanks are securely mounted on the front A- frame of your trailer. If these tanks must be removed for service or replacement, it is important that they be reinstalled correctly to prevent any possibility of their falling off or becoming dislodged during travel.

WARNING

Use only the LPG tanks furnished with your trailer. If replacement is required, it must be a bottle of the same size and design.

Basic Rules for LPG Safety

A warning label is displayed in the cooking area reminding you to provide an adequate supply of fresh air for combustion. The amount of oxygen supply in a trailer is limited due to its compact design. When using the cooking appliances, proper ventilation will prevent dangers of asphyxiation. It is especially important that cooking appliances not be used for comfort heating as the danger of asphyxiation is greater when the appliance is used for long periods of time.

WARNING

A warning label has been located near the LPG container. This label reads: DO NOT FILL CONTAINER(S) TO MORE THAN 80 PERCENT OF CAPACITY. Overfilling the LPG container can result in uncontrolled gas flow, which can cause fire or explosion. A properly filled container will contain approximately 80 percent of its volume as liquid LP gas.

WARNING

Do not bring or store LPG tanks, gasoline, or other flammable liquids inside the vehicle because a fire or explosion may result.

WARNING

Portable fuel burning equipment, including wood and charcoal grills and stoves, shall not be used inside the recreational vehicle. The use of this equipment inside the recreational vehicle may cause fires or asphyxiation.

WARNING

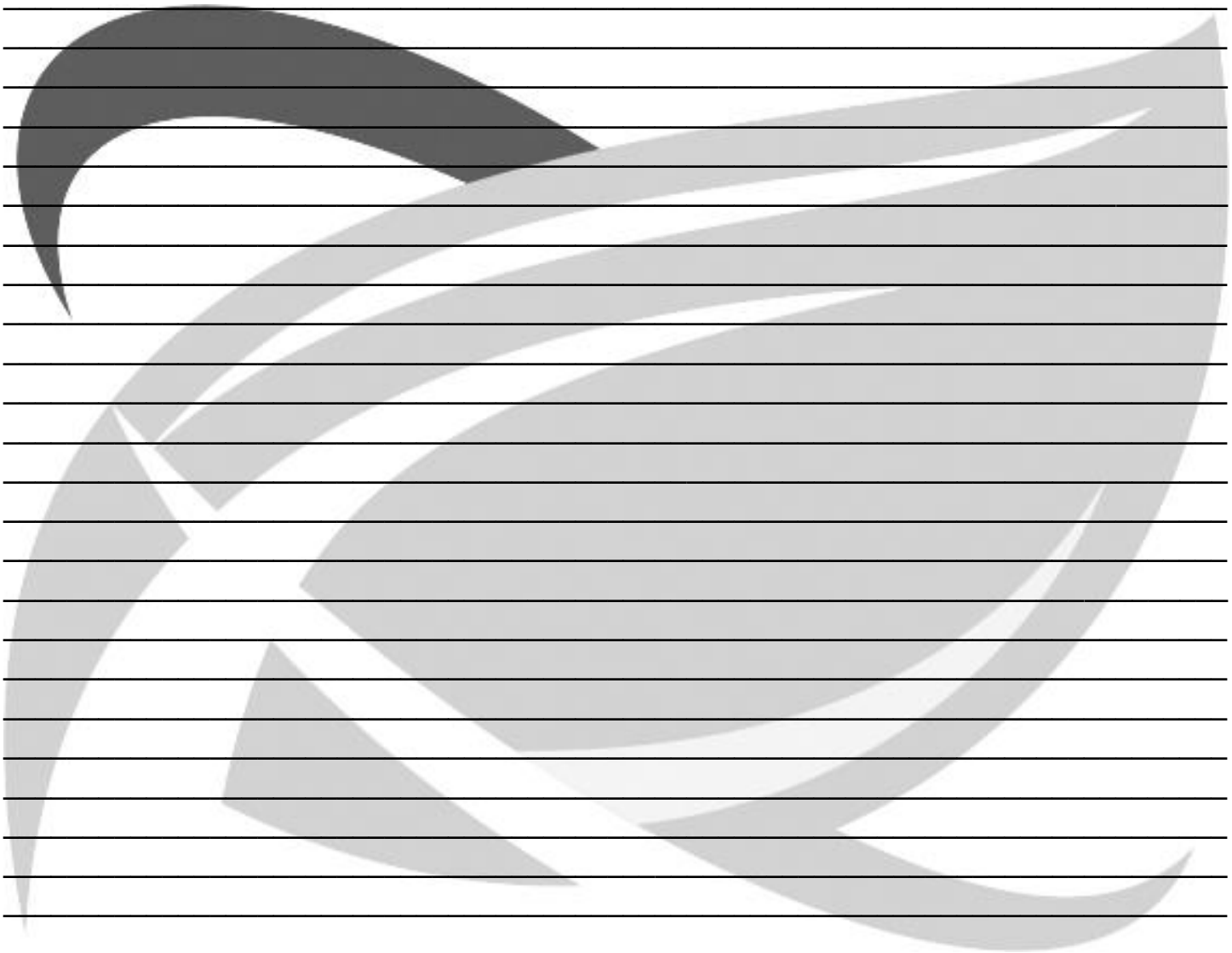
Do not store LPG tanks within a vehicle. LPG tanks are equipped with safety devices that vent gas should the pressure become excessive

Twice a year, or after a long storage period, we suggest you take your unit in for a checkup and cleaning of the gas-operated appliances.

If You Smell Gas

1. Extinguish any open flames, pilot lights, and all smoking materials.
2. Do not touch electrical switches.
3. Shut off the gas supply at the tank valve(s) or gas supply connection.
4. Open doors and other ventilating openings.
5. Leave the area until odor clears.
6. Have the gas system checked and leakage source corrected before using again.

NOTES



General Maintenance

Periodic maintenance and cleaning of your recreational vehicle are necessary to retain the dependability, safety and appearance that will provide you with many miles of trouble-free operation as well protecting your investment. Keep good records of maintenance functions performed and be sure to follow all owner obligations as may be required by the chassis manufacturer to keep your warranty in force.

It is also important to note that operating conditions will affect service timetables. Driving in extreme conditions, such as heavy dust, continuous short trips, or start-and-stop heavy traffic, means that the length of time between service appointments will be shortened. Discuss service timetables with your dealer.

Preventative maintenance will pay for itself many times over by catching or preventing problems before they occur. Many repair costs are greatly increased by ignoring problems when they are small ones, allowing them to build into larger problems and possibly voiding your warranty due to neglect, misuse, or abuse. If left unattended, small problems may also begin to affect other parts and systems of the recreational vehicle.

Exterior Maintenance

Some exterior parts of your camper are made of fiberglass, metal, rubber, and plastic materials. The finish on these parts is durable, but not indestructible. Any material and finish will deteriorate over time. Exposure to sunlight, moisture, and airborne pollutants can chemically alter the composition of the base and finish materials and cause dulling and fading of the finish. Generally, changes in the finish due to the weather are cosmetic. There are on the surface of the part and do not affect its strength. the best insurance against these effects is routine maintenance. If the finish is not washed thoroughly and waxed, the surface can deteriorate very rapidly. The following guidelines can help you reduce these weathering effects:

Wash the exterior at least once a month using a mild liquid detergent. Never use strong abrasives to clean the exterior surfaces. Wash your camper in a shady area, not in direct sunlight. If the camper is parked in the sun, move it into the shade and let the exterior cool down before you start. Chemical solvents and strong cleaners can damage the siding, roofing, metal, and plastic trims on your camper. Rinse the camper thoroughly with cool water to remove loose dirt. Fill a bucket with cool water. Mix in a mild detergent, such as dishwashing liquid or a product made especially for auto or camper washing. Wash the camper using the water and mild detergent solution and a soft-bristle brush, sponge, or soft cloth. Start at the top and work your way down. Rinse frequently. Check the surface for road tar, tree sap, etc. Remove these stains with tar remover or turpentine. Rinse it off immediately so it does not harm the finish. Remember to re-wax these areas, even if the rest of the camper does not need waxing. When you have washed, and rinsed the whole exterior, dry it with a chamois or soft towel. Letting it air-dry will cause dulling and water spots. As you dry your camper, inspect around the seals and repair as necessary. Wax the exterior at least once a year, preferably twice. Use automotive waxes or cleaners/polishes developed for use on fiberglass boats, showers, and tubs. Be sure to follow the directions on the wax container. Some cleaners and waxes are recommended for use on only certain types of surfaces. Exterior streaking is reduced with more frequent waxing. Do not use abrasive cleaners or rubbing compounds. Always wash and dry the whole camper before waxing it. Rubbing alcohol can be used on caulking that show signs of yellowing.

Exterior Graphics

The pressure sensitive vinyl graphics installed on the exterior surface of your camper require little maintenance and should be treated similarly to a painted surface. The following cleaning and maintenance recommendations should be followed to ensure the maximum appearance and performance of your exterior graphics.

Wash your graphics with the same solution as noted above for washing the exterior of your camper. Be sure to rinse thoroughly.

Test any cleaning solution on a small section of the graphic before using the cleaning solution on a larger surface. A non-abrasive cleaner, suitable for

high quality painted surfaces, is recommended. The cleaning solution should be neither high acidic nor highly alkaline; a pH range of 3 to 11 is recommended. The cleaning solution should be free of strong solvents or alcohol. Avoid contact of window cleaners that contain ammonia.

Damage Checks

It is important to periodically check the exterior for damage. Pay attention to the following areas:

- Waste tanks and plumbing lines.
- Propane tanks and assembly.
- Sealants around doors, roof, vents, and window.
- Exterior lighting.

Sealant Renewal

The adhesives and sealants used in the construction of your camper were developed to remain waterproof under sustained effects of weather and vibration. However, even the finest materials will eventually dry out and lose their effectiveness under the constant heat of the sun, attack by other elements and road vibration. This section outlines the procedures that you must follow to maintain the weather-resistant integrity of your camper.

WARNING

Leak damage caused by neglecting to follow these procedures may affect your warranty.

Your **NüCamp RV** Dealer can perform the resealing inspection and work for you, and has current information on sealants used in your camper and can recommend the appropriate sealants if you prefer to do this work yourself. Always use the recommended sealants.

To protect your camper from possible water intrusion damage, your unit should be inspected thoroughly and resealed bi-annually. Inspect the sealant around the roof moldings, windows, and doors at least every six months. If any of the following are evident during inspection, the affected areas must be resealed:

- Weathering or drying of sealant.
- Sealant cracked or peeling.
- Voids in sealant.
- Shrunken or separated sealant.
- Clean all areas to be resealed with mineral spirits. Make sure that all areas to be resealed are dry before new sealant is applied.
- Mineral spirits are a flammable liquid. Use extreme care when handling. Do not expose to open flame, sparks, or smoking materials. Do not use in unventilated areas.
- Check and tighten any loose fasteners. Be careful not to over-tighten, or stripping will occur.

If you find any of the above:

If areas on the roof need to be resealed, remove any loose or cracked sealant being careful not to damage the roof. Use a wooden or plastic scraper that will not gouge, pierce, or otherwise damage the roof. The roof can be cut or punctured by sharp objects. Apply the new sealant in a continuous bead along the seams and flanges, being careful not to leave any voids. Apply enough sealant to flow over the heads of all fasteners.

Allow at least 48 hours for the sealant to set completely (firm and tack-free when pushed with the thumb) before washing or waxing the camper.

Doors and Windows

Lubricate door hinges, locks, and window mechanisms periodically or as need be with powdered graphite if it becomes difficult to close or squeaks. Be sure to inspect seals around the door seal for tears or excessive dirt at least every 6 months or more often depending on usage. Clean window frames and tracks to ensure easy operation. Clean the glass windows inside and out, with a commercially available glass cleaner. You can also use a mixture of one part white vinegar to ten parts water. This will remove the haze that builds up on the inside of the glass windows. Use a soft cloth or paper towels to clean all glass. Clean the seals with a damp cloth or mild detergent every three to six months, taking care not to use strong solvents, as they will damage the seals. A coat of natural silicone lubricant applied after the seal has dried will keep it flexible. This is a good practice for all the rubber seals in your camper. If the camper is exposed to salt air, more frequent lubrication will be required.

Acrylic Windows/Skylight

Keep your acrylic windows and/or skylight vent looking and performing like new by using the proper care, products, and techniques, and by understanding a little about the material you are working with. Acrylic windows and/or skylight vents can be scratched with a rough cloth, harsh soaps, or cleaning products and these must be avoided. When cleaning a window/skylight vent always remove as much abrasive dirt as possible without touching the surface. It's also a good idea to remove jewelry, which can cause deep scratches. Ideally this would involve flushing the surface with water and allowing the accumulated bug residue to soak, possibly with a mild dish washing liquid added to the water. Use a non-abrasive soap or detergent and water. Use a soft sponge, cloth or chamois and rinse often to keep it free of grit. Wash up and down or side to side, never in a circular motion. After a final flushing with more water carefully dry with a clean soft cloth, a good rule of thumb is to gently (let the weight of the cloth do the work) wick up the excess water on your first pass which will also wick up any residual loose particles. With windows, start at the top of the window and work down turning the cloth to a fresh side after each pass. Again, do not use a circular motion on the windows/skylight vent. Acrylic Cleaning Kits are available from your **NüCamp RV** Dealer.

NOTE: Never use abrasive, caustic cleaners, alcohol, or solvents as they can cause permanent damage to the finish.

DO NOT use Windex as it will damage the acrylic. Never use any petroleum based cleaners, or caustic chemicals on your windows/skylight vent.

DO NOT use WD-40 (as it is petroleum based). Never use a razor blade, putty knife, or abrasive pad to clean your windows/skylight vent. Do not use a high-pressure spray nozzle when rinsing your windows/skylight vent after washing. Avoid washing windows/skylight vent in direct sunlight.

Freezing Weather

Vinyl seals around windows and doors should be cleaned regularly and kept pliable by using a silicone spray or lubricant. Follow the directions on the product container. Keep screens, exit latches and window slides clean and free of debris. Periodically test the operation of all windows and their components. If you are unsure about the correct methods of lubrication and adjustment, check with your dealer.

WARNING

DO NOT cover emergency window(s). These exit windows must remain accessible always. Be sure all occupants and guests know which windows are the emergency exit windows and understand how to use them.

Frame/Extrusions/Aluminum Surfaces

Check the condition of the frame regularly. Keep it clean and repaint as necessary, to help avoid rust. It is especially important to keep underbody components clean when driving your recreational vehicle in the winter, in areas where road salts are used. To help avoid surface pitting, clean and wax all extrusions, when waxing camper sidewalls. Special aluminum cleaners are available to restore the original luster to aluminum surfaces. Be sure to follow the instructions as outlined on the product package.

Roof

Inspect the roof components at least twice a year, it is important to make sure seams and seals are not cracked or worn. Proper maintenance of seals is necessary to keep moisture from entering and causing severe damage such as rot, mold, or mildew. If you encounter dry, cracked or weathered seals, reseal or replace as necessary. Check with your dealer for the type of caulking required for rubber roofs and correct methods of resealing or replacing. A mild household soap solution and a soft brush can be used to clean a roof.

WARNING

If your roof should become punctured or ripped, cover the puncture or tear to seal out moisture and have it repaired immediately.

Exterior Lights

Check the operation of your camper's exterior lights prior to each trip. This should also include your truck's lighting. An inoperative bulb or fixture can create an unsafe condition by reducing your ability to signal your intentions to other drivers. When replacing exterior bulbs, take care that the sealant around the light is not disturbed. When replacing exterior LED fixtures, ensure the new fixture is installed using a recommended sealant. Your **NüCamp RV** Dealer can assist you with a replacement of the fixture and/or provide information on the appropriate sealants if you prefer to do this work yourself.

Air Conditioner

It is recommended to clean the filter at least once a month to ensure the unit is operating at its full potential. To clean the filter, gently slide the filter out of the unit. Wash the filter with mild dish soap and warm water and gently dry the filter before reinstalling it.

Propane System

To ensure proper operation, have the propane system checked frequently for leaks and road damage. The entire system, including regulator pressure, should be checked annually or sooner if you suspect a problem. Have the system checked by a qualified propane service technician using proper equipment. The method of checking the system for leaks and propane safety precautions can be found in the Identification and Safety section.

NOTE: Line pressure for propane appliances should be checked at least every six months. Most propane suppliers have equipment to test the lines. The optimum line pressure for all camper propane appliances is 11 inches of water column pressure.

Wiring

Make sure the connector-plug prongs and receptacles are clean. Lightly coat all electrical terminal connections with non-conducting (dielectric), light waterproof grease. Clean the prongs with very fine sandpaper, being careful not to damage the contact area.

Battery(s)

Your camper is outfitted with a battery(s) that operates lighting or other accessories. The battery(s) may be kept charged either by the truck, by the generator, or shore power.

A disconnect switch is provided to disconnect the battery(s) when you do not plan to be using the camper for an extended period, such as seasonal storage.

The battery must be kept in a charged condition during storage. The battery could freeze and break if it becomes discharged.

Interior Maintenance

Interior Odor

New campers may have a strong odor and even cause eye irritation when closed in hot weather. This is due to glues used in the cabinetry and paneling. This condition passes with time but in an extreme condition open the entry door and all windows and allow the inside to air out for several hours.

Upholstery and Drapes

Draperies, mattress covers, upholstery and wall pads are manufactured from quality materials and should be dry cleaned only. Some dry-cleaning methods will damage vinyl or plastic found on cushions and drapes. Be sure to consult your local cleaners. Frequent vacuuming or light brushes between cleanings will help prevent accumulation of dirt and grime. Use of water based or detergent based cleaners may cause shrinking. Water stains may become permanent. Minor spills should be cleaned up quickly to avoid staining. The affected area should be blotted, not rubbed, to prevent the stain from working deeper into the fabric. On vinyl upholstery, remove dirt and dust with a vacuum cleaner. Wipe the vinyl with a soft cloth and dampen in a solution of mild soap and water. Use the same solution with a soft-bristle brush on more difficult spots. You can also use commercially-available spray or foam-type vinyl cleaners.

WARNING

Do not use lacquer thinner, nail polish remover, carbon tetrachloride, gasoline, or naphtha for any cleaning purposes. These products may cause damage to the material being cleaned, and are highly flammable or poisonous.

Wall & Ceiling Panels

The paneling and ceiling of your camper may be any of several finishes and textures. Never use harsh detergents or abrasive cleaners on walls or ceilings. Most surfaces will clean with a soft cloth moistened with mild liquid detergent in warm water. Do not use large amounts of water, which could saturate the material.

Floors

Vinyl flooring requires only washing and periodic waxing.

Wood Product Care

Remove dust with a clean slightly damp cloth. Apply a quality furniture polish and buff with a soft, dry cloth. Never use harsh detergents and solvents.

Fiberglass Top Care

Do not use abrasive cleaners or scouring powders. Use of abrasive cleaners will dull or damage the surface of this product and could leave scratches. If material gets scratched, easy polishing brings back the original shine. It is recommended you use a gel cleaner or household cleaner made for fiberglass and acrylic. Do not use scouring pads, steel wool, “scotch brite” type scratch pads, or any other abrasive scrubbers. Wipe only with a soft cloth or sponge. Always use a cutting board when using knives or sharp objects. Always allow pans to cool before setting them on the counter top surface.

Laminate Top Care

Use a mild dishwashing liquid with warm water to clean your laminate tops. Use a soft cloth for both washing and drying. Abrasive cleaners, steel wool or gritty cleaners will damage the surface.

Refrigerator

Clean interior with mild soap and water after each trip. Defrost freezer and empty ice trays. When defrosting, place dry towels in the refrigerator to absorb the water. Place trays containing hot water into freezer compartment. After defrosting (when the freezer compartment and condenser are frost-free), remove the damp towels and water trays and use a clean cloth towel to dry off refrigerator. Leave the door open for a few hours after cleaning.

Alde System

The LP gas system must be checked regularly (suggested once a year) by a professional, to ensure that there are no leaks from connections or hoses. Regularly check the heating system fluid level in the expansion tank. The fluid should be 0.5 inches above the minimum indicated in a cold tank. The glycol mixture should be changed every second year to ensure maximum corrosion inhibitor effectiveness.

Drains

If a stoppage develops in the sink or shower drain, DO NOT use lye or any strong chemicals. Strong chemicals can harm the plastic in your waste system. A standard wire drain cleaner is recommended.

Shower Care

For routine cleaning use a non-abrasive cleaner. Household fiberglass cleaners are recommended. Never use harsh detergents or abrasive cleaners. Never use a razor blade or steel wool to clean the surfaces.

Sink Care

DO NOT use scouring pads, steel wool, “scotch brite” type scratch pads, or any other abrasive scrubbers. Wipe only with a soft cloth or sponge. Use of abrasive cleaners will dull or damage the surface of this product and could leave scratches. If material gets scratched, easy polishing brings back the original shine. It is recommended you use a gel cleaner or household cleaner made for fiberglass and acrylic.

Always use a cutting board or a sink protector when using knives or sharp objects. It is recommended

that you use protective mats, racks, or dishpans to help protect your sink. Always allow pans to cool before setting them in your sink.

Storage Tips

Winter Precautions

- Water Systems - In cold weather, it is wise to monitor the water temperature in the tank and take steps to drain and winterize if necessary. It is also a good idea in severe cold to open lower cabinet doors in the kitchen and bath to allow warm air to circulate around water fixtures. To minimize freezing damage, insulate drain lines exposed to the outside.
- Food Storage - If left in an unheated camper for a period, canned goods and other foods packed in water should be stored as high as possible since heat rises. Refrigerators can also be used for storage, even when unplugged, as they are well insulated.
- Heating - Use only the Alde heating system for heating as it is properly vented to the outside.
- Condensation - Moisture can collect on inside surfaces during cold weather when inside humidity is high. While the camper is in use, a family can vaporize up to three gallons of water daily through daily living. Consider using a dehumidifier to remove moisture.

Storage Tips

1) Park your camper on a level surface.
2) Winterize the water system.
3) Clean your recreational vehicle thoroughly, inside and out, as previously outlined in the section.
4) Turn off all electrical switches and appliances.
5) Close all shades and curtains. Consider protecting the curtains from sun fade by placing foil or paper between the windows and the screens.
6) Be sure all windows, doors and vents are securely closed. Cover exterior appliance vents to prevent moisture and insects from entering during storage.
7) Check the interior of the camper periodically to be sure leaks have not developed or that condensation has not formed, causing damage to interior components. Condensation can most readily be observed as moisture accumulation on windows and mirrors. To reduce the possibility of condensation, air out the camper occasionally during storage.
8) Be sure that the auxiliary batteries have the proper electrolyte level and that they are fully charged. A discharged battery will freeze and crack the case. In storage, a battery will gradually lose charge after 30–45 days, even when disconnected by the battery disconnect switch. We recommend that you check the battery for charge once a month. If the charge is 80% or less, it must be recharged. You may wish to remove the battery and store it in a heated area. However, even when warm, the battery level must be maintained.
9) Be sure the tires are inflated to correct pressure and check periodically.
10) Keep the roof free from snow and ice. Check it periodically and after a heavy snowfall.

Winterize the water systems and protect exterior hoses and lines from freezing. Follow the winterizing procedure outlined in the Plumbing section. Also, follow all component manufacturers' instructions regarding their products. (If their procedure differs from this manual, follow the component manufacturer's instructions.)

Storage Preparation

When storing your camper for the winter, certain precautions need to be taken to protect your camper. Be
sure, to talk with your local dealer concerning any special requirements, for storage, in your geographic location. The following steps are general and your dealer can help you choose those which are most appropriate for your needs.

Care and Maintenance Chart

Item	Each Trip	Monthly	Every 3 Months	Every 6 Months	Every 9 Months	Yearly	As Required	**Maintenance Procedure** please see appropriate section in owner's manual for specific procedure instruction.
Appliances	•							Check for obstruction on exterior vents
Battery			•					Check battery condition
Bearings						•		Repack wheel bearings yearly
Brakes			•				•	Check and adjust
Cabinets				•			•	Apply furniture polish as needed
Carpeting	•							Vacuum after each trip
Chassis, Components						•		Follow chassis lubrication & maintenance procedures
Electrical System			•				•	Proper operation and free of damage
Exterior Lighting	•							Verify proper operation of all lighting
Exterior Protection				•				Apply automotive/marine wax
Exterior Roof		•						Wash with mild car wash type soap
Exterior Wall		•						Wash with mild car wash type soap
Doors & Windows	•							Check seals, lubricate hinges
Frame			•					Inspect and touch-up paint as needed
Hitch Coupler	•							Verify proper operation and free of damage
Hitch Jack	•							Verify proper operation and free of damage
Interior Surfaces				•				Clean as needed
Lug Nut Torque	•						•	Check lug nut torque prior to trip
Propane System	•					•	•	Check for leaks and damage
Safety Chains	•							Verify attachment and free of damage
Safety Equipment	•							Verify operation of all safety detectors
Sealants, Roof			•					Inspect caulking seals and reseal as needed
Sealants, Wall			•					Inspect caulking seals and reseal as needed
Sealants, Window			•					Inspect caulking seals and reseal as needed
Tires	•							Check tire condition and inflation pressure
Upholstery, Carpet								Clean as needed
Water System	•						•	Proper operation and leak free
Weight Distribution	•							Verify proper weight distribution
Wheel Bearing				•				Inspect and add grease as required
Window Drain		•						Verify drains are free of obstruction
Window						•		Lubricate with graphite based lubricant
Wood Surfaces		•						Clean prefinished panels & wood with wood cleaner
Annual Inspection						•		Complete annual inspection by your dealer

Maintenance Schedule

Date	Maintenance/Repair Schedule	Service Center Name/Address

Winterization

Operating in Freezing Conditions can damage piping and equipment if camper is not winterized. Always winterize your camper if you are camping in below freezing temperatures.
Propane for the appliances will work down to 44 degrees below zero (-44°).
The windows have weep holes, which drain water from the window tracks. In heavy rain and wind, water could be blown into the camper through these holes. Put a piece of sponge in the track over the hole to prevent this from occurring.

Storage

The following checklists will help you perform the steps necessary to prepare your camper for storage. Use the checklist that applies to the storage conditions you anticipate. These checklists do not include every detail required, and you may want to expand them to suit your needs.

Short-Term Storage

(less than 45 days – Above Freezing)

1) Wash the exterior.
2) Park the camper as level as possible front to rear and side to side.
3) Before disconnecting the battery cables, check the charge in the battery. Recharge as necessary. Clean terminals, top and sides of battery and battery box. Leave the battery disconnected or switch the battery disconnections switch to the "STORE" position.
4) Drain the holding tanks, toilet, and fresh water tank. Turn off the water pump and water heater.
5) Turn off the propane at tank valve.
6) Turn off the refrigerator, furnace, all range and oven burner valves and pilot.
7) Remove all perishables from refrigerator and galley cabinets. Leave the refrigerator door open to reduce odor buildup. An open box or tray of baking soda in the refrigerator will help absorb odors.
8) Slightly open (1/4") a roof vent.
9) Close and lock all windows. Be sure the vent fan and range hood fan switches are off.
10) Cap and close the holding tank drain, city water inlet and fresh water fill spout.
11) Turn off all radios, TV's, interior and exterior lights.
12) Close the mini blinds and day/night shades.
13) Disconnect the 120-volt power cord and store in compartment.
14) If removing the camper from the truck, see procedure and warning in the "Loading and Unloading Camper" section.
15) Check the camper weekly.

Long-Term Storage

(Above Freezing)

1) Perform all the preceding short-term storage steps.
2) Operate air conditioner periodically to lubricate compressor seals.
3) Remove and place the battery in a cool, dry area. Check the battery charge every 30 days. Recharge as necessary.
4) Check the sealants around all roof seams, body seams, and windows. Reseal if necessary. See "Sealant Renewal" section.
5) Prepare the generator (if equipped). See generator Operating Manual included in the Owner's Information Package.
6) Remove the smoke detector's battery. Leave the cover open as a reminder to replace the battery.
7) Cover exterior vents; Alde, air conditioner shroud, refer, to prevent insects and small animals from getting in the camper. Be sure to remove all covering materials before using appliances and vents.

Storage Below Freezing

To avoid damage to the plumbing fixtures and other components, we recommend that your camper plumbing systems be properly drained and have antifreeze protection. The following is a procedure checklist you can follow if you prefer to winterize your camper yourself. Many owners prefer a **NüCamp RV** Dealer Service Center perform this service.

1) Perform all steps in the short and long term storage procedures.
2) Drain the fresh water tank by opening the water tank drain and leaving open.

3) Turn the water pump ON and open all hot and cold water faucets. When the flow of the water stops, turn the pump OFF. Open the low point drains on the hot and cold water pipes.
4) Drain the water heater by opening the drain plug at the bottom of the heater and open the pressure relief valve.
5) Depress the toilet flush pedal or hand-operated lever. Shut OFF all faucets, close the water line drain valves, fresh water tank drain valve, water heater drain and pressure relief valve.
6) Drain the showerhead and hose by disconnecting the hose at the faucet from the inside and outside shower.
7) Drain the waste water system by following the normal procedure for draining the holding tanks. See "Waste System" section.
8) Be sure ALL water from ALL plumbing has been drained.

Draining the water system alone will not provide adequate cold weather protection. If the camper is to be unheated during freezing temperatures, consult your dealer for the best winterizing procedure for your climate. Your dealer can supply you with one of the special non-toxic antifreezes that are safe and approved for use in RV water systems. Follow the instructions furnished with the antifreeze.

WARNING

Do not use automotive or windshield washer antifreeze in the camper water system. These could be harmful if swallowed.

Steps to Winterizing Your T@B

To Winterize with air, Blow Out Plug follow steps 1-2-3-4

1. Open all Drain Valves shown in Page 2, 3 and the fresh water tank drain valve shown on page 4, then look at the Pic on page 4 and disconnect both hose fittings so water can drain away from the pump. (have a rag ready to catch the water coming out of the pump) Now open all Faucets and Shower valves to allow water to drain from the system. After the water, has stopped coming out of the drain valves shown in page 2 and 3 you can attach the hose fittings back on the pump.

2. Leaving the drain valves and faucets open, attach the "Blow Out Plug" to the city water connection, attach air supply to blow out the left-over water from the system. "Pressurize Water Line Slowly" "MAX 50 PSI" Flush the Toilet a few times after the Blow out Plug is attached to get the water out of it.

3. After you are satisfied that the water is blown out of the system disconnect air supply and then close all valves and faucets. 4. Now pour some RV antifreeze down your sink and shower drains. Drain access water from Black and Grey water tanks.

To Winterize with RV Antifreeze, follow steps

1. Open all Drain Valves shown in Page 2 and 3, now open all Faucets and Shower valves to allow water to drain from the system once the waters all drain out, close all the faucets and drain valves.

2. Now put the valves in winterizing mode as shown in page 2.

3. Now add 3 gal. RV antifreeze to your fresh water tank and turn on your water pump.

4. Open your faucets one at a time until you see the color of the antifreeze then go to the next one, (don't forget to flush the toilet a few times to flush out the water) once you get to the last one leave it open until the pump is drawing air from the fresh water tank, then close it and turn off your pump.

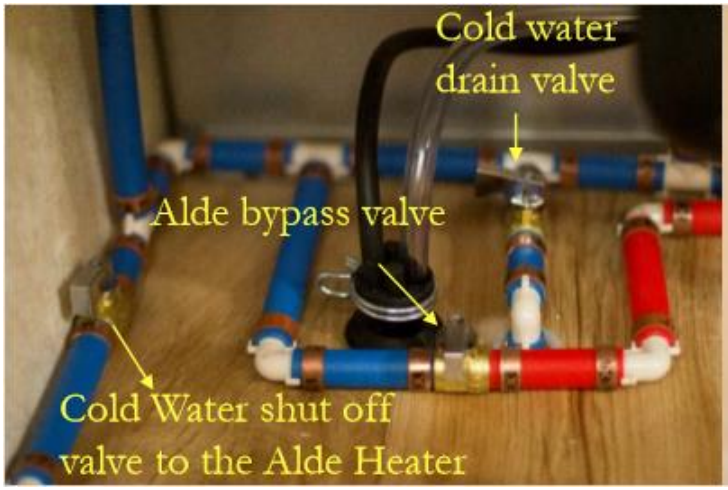
5. Now pour some Antifreeze down your drains and then drain your Black and Grey water tanks.

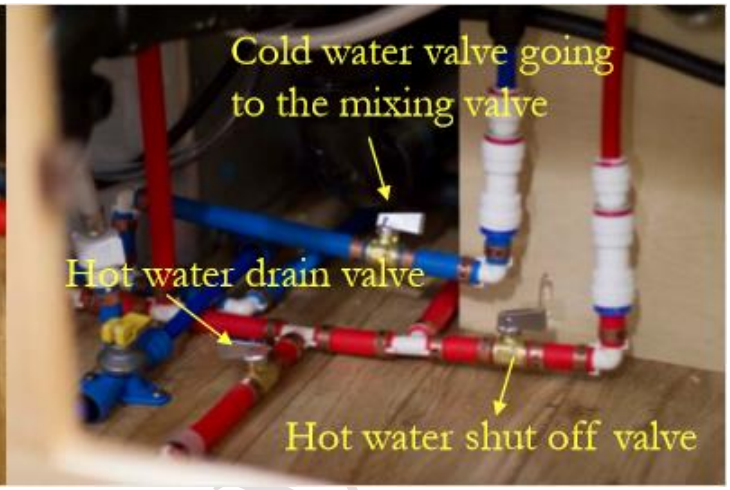
Steps to Dewinterize Your T@B

1. Mix a bleach solution, "½ cup per gallon of water" Flush the system with this solution to sanitize it.

2. Then flush the system with 2 full tanks of water to ensure the system is clear of the sanitizing solution.

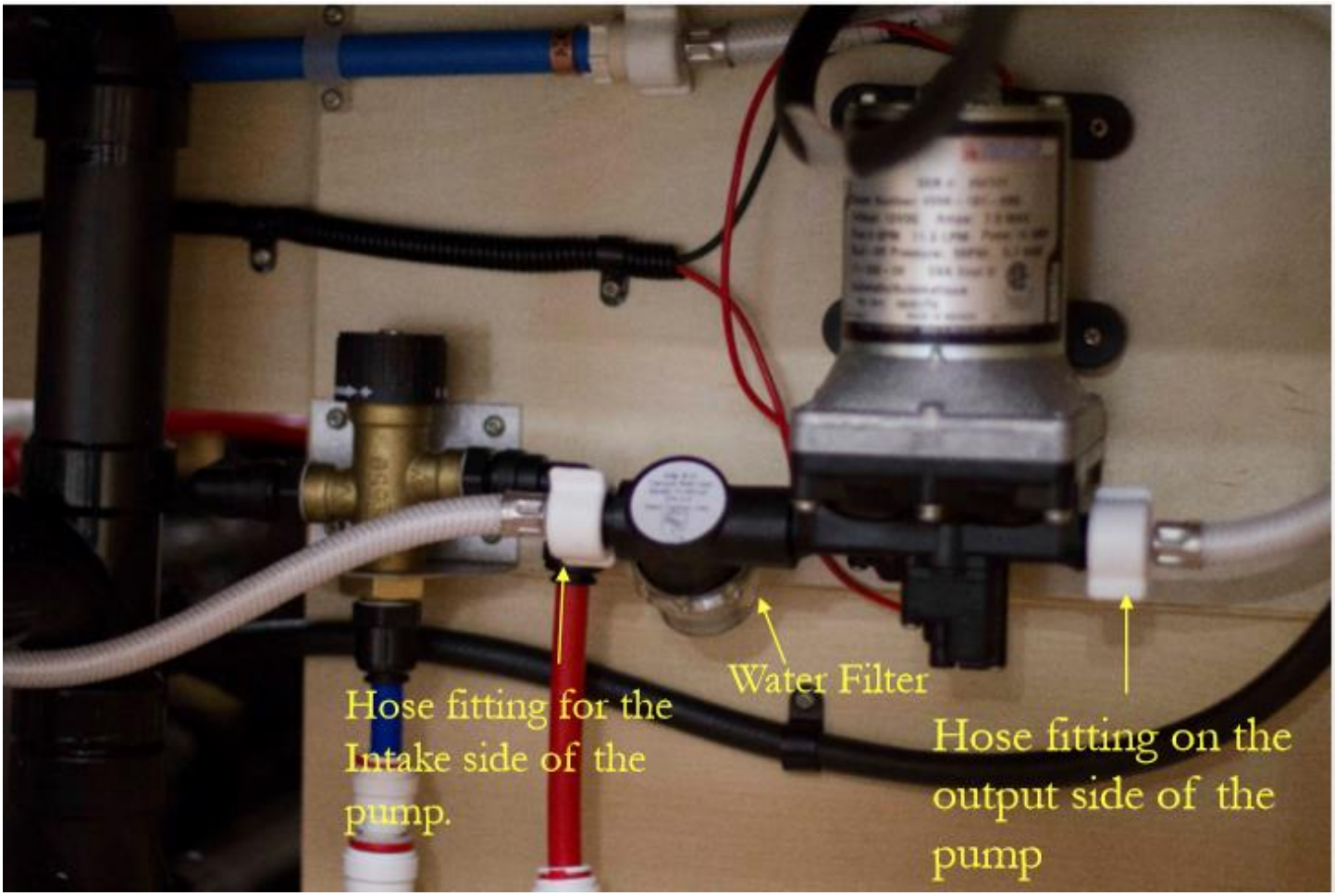
Valves are in camping season mode





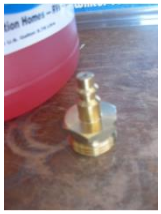
Valves are in winterizing mode after water was drained from the lines

(only needed if you're using RV antifreeze to winterize)



This is a "blow out" plug that fits into your city water connection, then connects to a standard air compressor hose… KEEP THE PRESSURE WELL BELOW 50psi!

To find this part search "Blow out plug" on Amazon.



Here is what you can use to put antifreeze into the city water line; it has a hose connection on the tubing. Camco; costs around $25

To find this part search this "Camco Mfg36003 RV Hand Pump Kit" on Amazon

Valves are in camping season mode

Valves are in winterizing mode after water was drained from the lines
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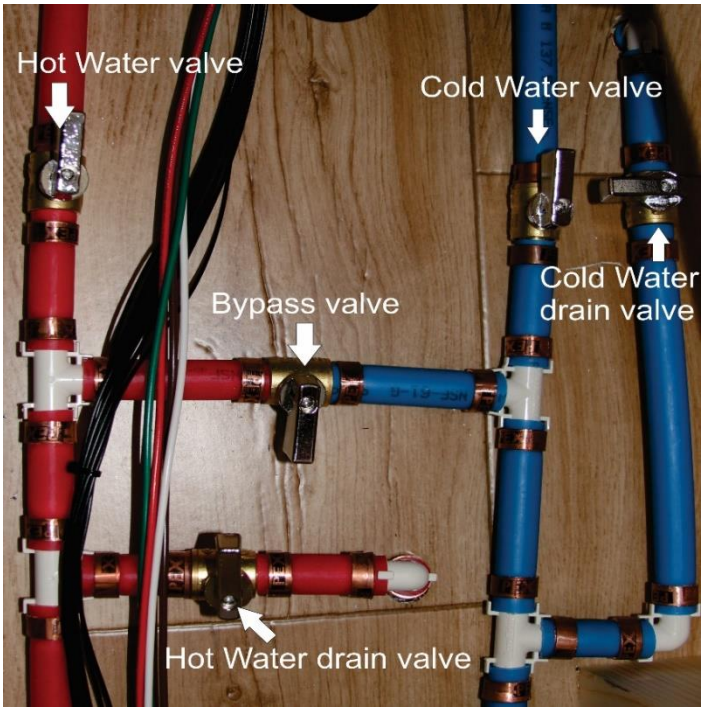

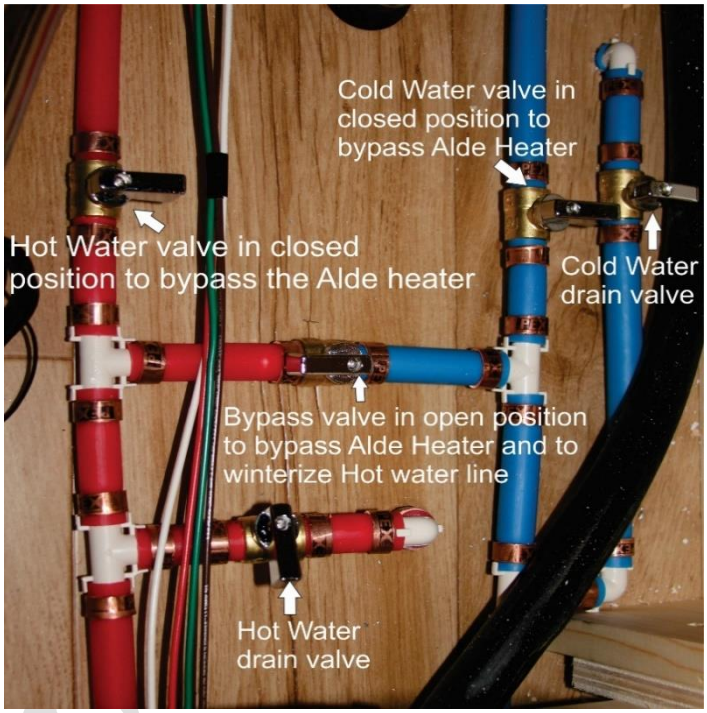

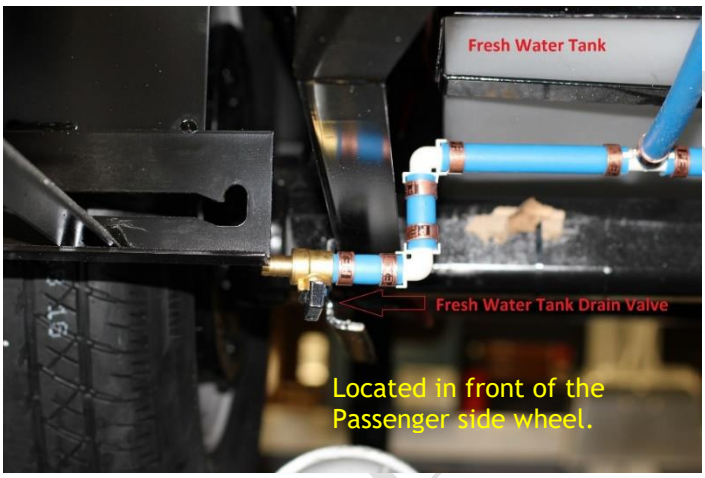

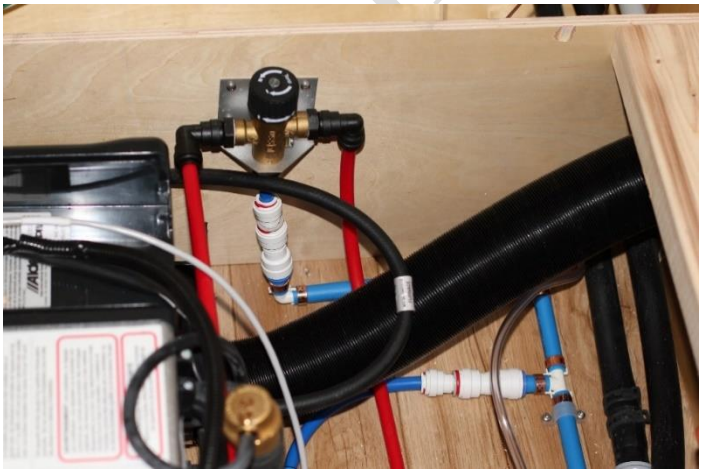

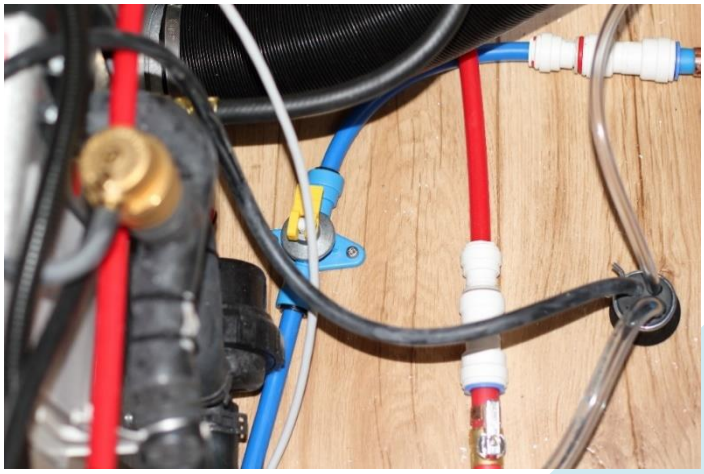

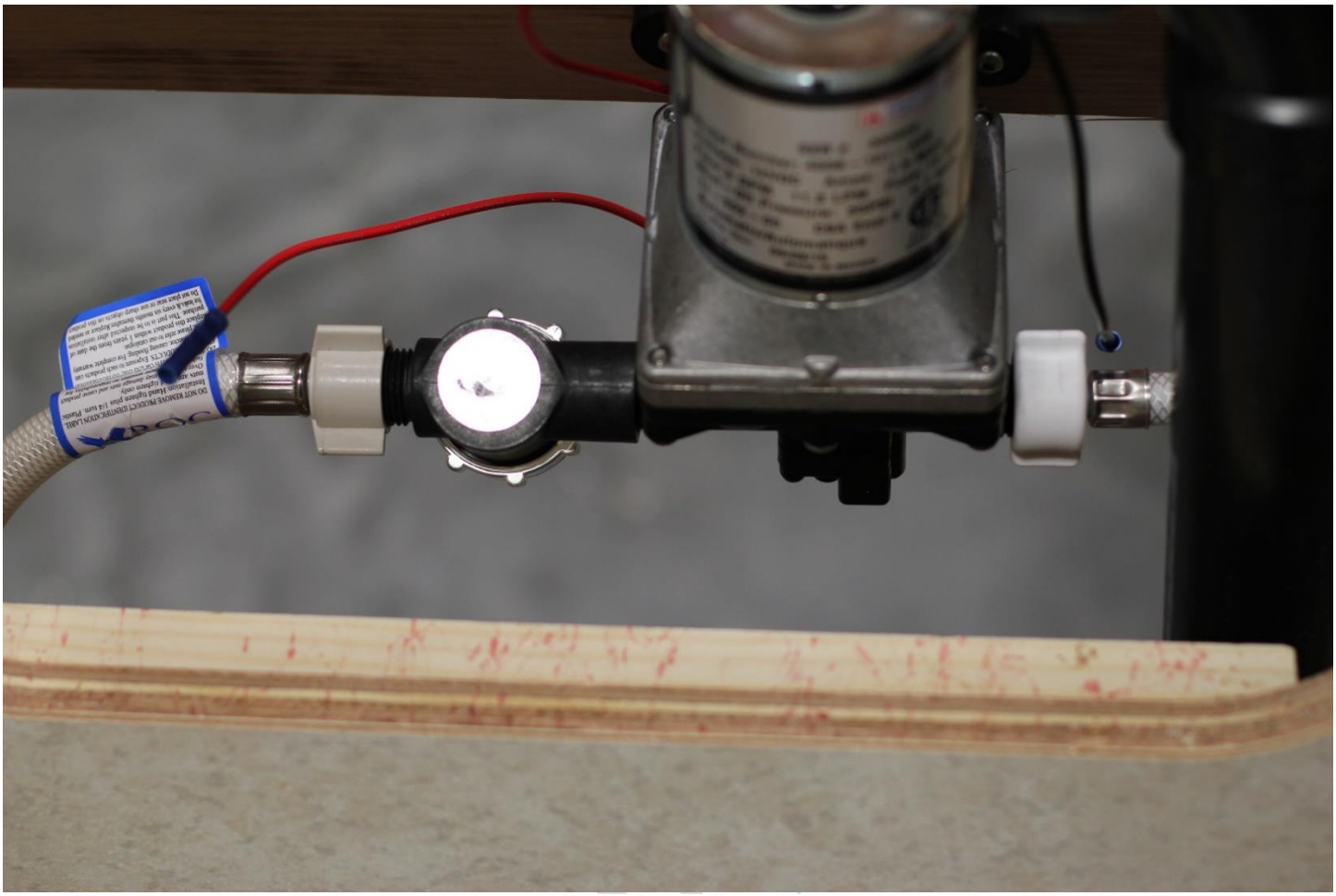

Helpful Gadgets

This is a "blow out" plug that fits into your city water connection, then connects to a standard air compressor hose... **KEEP THE PRESSURE WELL BELOW 50psi!**

To find this part search "Blow out plug" on Amazon.

Here is what you can use to put antifreeze into the city water line; it has a hose connection on the tubing. Camco; costs around $25

To find this part search this "Camco Mfg 36003 RV Hand Pump Kit" on Amazon.

Exterior Sealant Chart

Coming soon

Schematics

Coming soon

Component Manufacturers Contact Information

These items have Standalone warranty coverage from the Component manufacturer.

1. Axles (Dexter Axle) phone 574-295-7888 (http://www.dexteraxle.com/contact_us)
2. Tires (Lionshead) Brenda Speicher Email: bspeicher@lionsheadtireandwheel.com Phone: 574-533-6169
3. Radio/DVD Player/Monitor/Speakers (ASA Electronics) phone 877-305-0445 call for immediate Customer Service Support and 877-845-8750 for Technical Assistance. (http://www.asaelectronics.com//customerservice)
4. Hot Water/Heat (Alde) phone 360-608-4803 (http://www.alde.se/us/support/alde-service-locations/) or info@alde.us
5. Batteries (Dealer Provided) contact your dealer.
6. Power Converter (WFCO Distribution) phone 1-877-294-8997 (http://wfcoelectronics.com/contact/)
7. Power Roof Vent (Atwood Mobile Fan-Tastic Vent) phone 800-521-0298 (ftvservice@atwoodmobile.com)
8. Air Conditioners (contact the factory at 330-852-4811)
9. Microwaves (Call the factory for contact information phone 330-852-4811)
10. Stoves (Call the factory for contact information phone 330-852-4811)
11. Refrigerator phone 1-800-543-1219 (http://www.thetford.com/customer-support/dealer-and-service-center-locator/) info@thetford.com