

Cirrus Truck Camper Manual

2017 MODEL 820





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Cirrus Owner's Manual 2017

nüCamp RV

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NOTES

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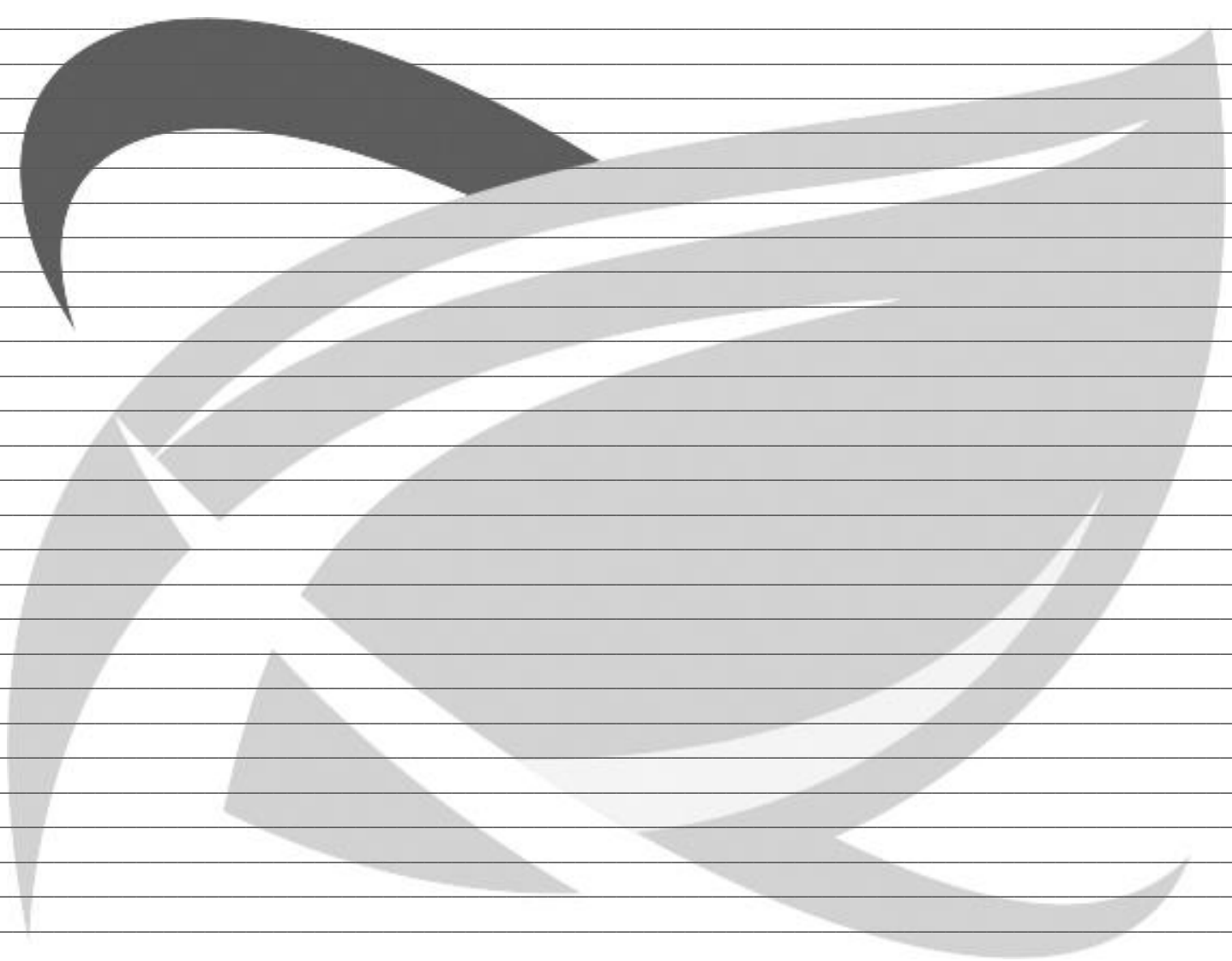


TABLE OF CONTENTS

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. 1

Coverage Provided 1

Owner's Obligation 1

Limited Warranty 1

Warranty Exclusions 1

Customer Information 2

Taking Delivery 2

Making a Service Appointment 2

Organize 2

Waiting at the Repair Facility 2

Dealers Responsibilities 2

Owners Responsibilities 3

Customer Relations Information Safety and Identification 3

LP Gas 3

Fire Safety 4

Recreational Vehicle Serial Number, Decals, and Data Plates 5

Information about This Manual 5

Product Changes 5

Owner's Info Package 5

Identifying Your Camper and Its Components 6

Camper and Truck, Weighing, Loading 7

Matching Camper and Truck 7

Federal Certification Label 7

Truck Payload 7

Optional Weights 7

Tires 7

Axle Weight 7

Weighing Your Truck & Camper 7

Weight Certification Label 8

Find Center of Gravity for Loading 8

Attaching Camper to/Removing from Truck 9

Loading/Removing Camper 9

Removing Camper from Truck 10

Electric Jacks 10

Jack Remote Control 10

Jack Fuse Panel Location 11

Support Equipment 12

Air Bags 12

Heavy Duty Shocks 12

Tie downs and Turnbuckles 12

Hitching and Towing Systems 12

Effects of Prolonged Occupancy 13

Condensation & Humidity 13

Ventilation & Moisture Control 13

Fire and Safety 14

Fire Extinguishers 14

Smoke Detector 14

Carbon Monoxide Gas Safety Precautions 15

Carbon Monoxide & Propane Detectors 15

Backup Camera 16

Electrical System 16

Interior Lighting 17

120-volt AC System 17

12-volt DC system 17

Battery and Compartment 17

Battery Information 17

Battery Storage Precautions 18

Battery Charging 18

Battery Disconnect Switch 18

System Monitor Panel 18

Water Pump Control Switch 19

Camper Fuse Panel (12-volt Interior Circuits) 19

Solar Panel 19

120-volt Power Cord 19

Power Distribution Center 20

Ground Fault Circuit Interrupter 20

<i>Power Generator</i>	20	<i>Appliances</i>	28
<i>Generator Operating Safety Precautions and Warnings</i>	20	<i>Lighting Propane Appliances</i>	29
<i>Loading the Generator</i>	21	<i>Refrigerator</i>	29
<i>Propane Gas Safety</i>	21	<i>Range</i>	29
<i>Propane Tank</i>	22	<i>Microwave Oven</i>	30
<i>Filling Propane Tanks</i>	22	<i>Alde Heating System</i>	30
<i>Using Propane System</i>	22	<i>Roof Mounted Air Conditioner</i>	31
<i>Single Propane Tanks</i>	22	<i>Camp Site Cable Inlets</i>	32
<i>Propane Gas Fuel System</i>	22	<i>Roof Mounted Antenna</i>	32
<i>Propane Gas System Troubleshooting</i>	23	<i>LCD TV</i>	32
<i>On the Road</i>	23	<i>Fresh Water System</i>	32
<i>Loading</i>	23	<i>Water Pump</i>	32
<i>Storage</i>	23	<i>Water Tank Fill</i>	33
<i>Preparing for Travel</i>	23	<i>Filling the Fresh Water Tank</i>	33
<i>Pre-Trip Checks</i>	24	<i>City Water Connection</i>	33
<i>Post-Trip Clean-Up</i>	24	<i>Water System Drain</i>	33
<i>Safe Driving Rules</i>	24	<i>To Drain your Camper:</i>	33
<i>Riding in Camper While Traveling</i>	24	<i>Sanitizing Fresh Water System</i>	33
<i>Campground Regulations</i>	24	<i>Water Filter</i>	34
<i>Equipment</i>	24	<i>Shower</i>	34
<i>Roof</i>	25	<i>Exterior Wash Station (Shower)</i>	34
<i>Compartment Doors</i>	25	<i>Waste System</i>	34
<i>Vents</i>	25	<i>Fresh Water Flush Toilet</i>	34
<i>Roof Vent</i>	25	<i>Black Water Holding Tank</i>	34
<i>Skylight</i>	25	<i>Sewer Hose Storage</i>	34
<i>Emergency Exit Window</i>	26	<i>Bathroom</i>	34
<i>Windows and Skylight venting</i>	26	<i>Toilet</i>	34
<i>Shades</i>	26	<i>Holding Tanks</i>	35
<i>Exterior Lighting</i>	26	<i>Holding Tank Care/Maintenance</i>	35
<i>Ladder</i>	26	<i>Winterization</i>	36
<i>Entry Door Locks</i>	26	<i>Operating in Freezing Conditions</i>	36
<i>Awning</i>	28	<i>Storage</i>	36
<i>Rear Awning</i>	28	<i>Short-Term Storage</i>	36
<i>Camper Bumper/Step</i>	28	<i>Long-Term Storage</i>	36
<i>Dinette Conversion</i>	28	<i>Storage below Freezing</i>	36
<i>Fold Down Top Cabinet</i>	28	<i>Winterizing with RV Antifreeze</i>	37

<i>Water Heater Bypass 2017 Models</i>	37	<i>Refrigerator</i>	42
<i>To De-Winterize:</i>	37	<i>Drains</i>	42
<i>Reactivating Camper after Storage</i>	37	<i>Shower Care</i>	42
<i>Outside Area</i>	37	<i>Sink Care</i>	42
<i>12-Volt System</i>	38	<i>Maintenance Chart 1</i>	43
<i>120-Volt System</i>	38	<i>Maintenance / Repair Schedule</i>	44
<i>Fresh Water System</i>	38	<i>Camper Loading & Checking</i>	44
<i>Propane System</i>	38	<i>Component Manufacturers Contact Information</i>	45
<i>General</i>	38		
<i>Maintenance</i>	38		
<i>General Maintenance</i>	38		
<i>Exterior Maintenance</i>	38		
<i>Exterior Graphics</i>	39		
<i>Damage Checks</i>	39		
<i>Sealant Renewal</i>	39		
<i>Doors and Windows</i>	39		
<i>Acrylic Windows/Skylight</i>	40		
<i>Roof</i>	40		
<i>Jack Brackets</i>	40		
<i>Camper Jacks</i>	40		
<i>Turnbuckles</i>	40		
<i>Air Conditioner</i>	40		
<i>Overhead Vents</i>	40		
<i>Skylight</i>	41		
<i>Exterior Lights</i>	41		
<i>Wiring</i>	41		
<i>Battery(s)</i>	41		
<i>Awning</i>	41		
<i>Interior Maintenance</i>	41		
<i>Interior Odor</i>	41		
<i>Upholstery & Drapes</i>	41		
<i>Wall & Ceiling Panels</i>	41		
<i>Floors & Carpeting</i>	41		
<i>Wood Product Care</i>	41		
<i>Fiberglass Care</i>	41		
<i>Laminate Counter Top Care</i>	42		

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 the front of 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

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.

Warranty Exclusions

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

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.

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.

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.

This warranty does not cover damage caused by or related to (1) normal wear and tear, (2) accidents, abuse, misuse, or negligence, (3) failure to comply with instructions contained in the Owner's Manual, (4) any alteration or modification of the Camper, or (5) environmental conditions, including, but not limited to, road salt, hail, or windstorm. Nor does this warranty apply to parts made from cloth, leather, wood, paint, or chrome, which have been affected by airborne fallout, including, but not limited to, chemicals and tree sap.

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.

As the manufacturer of the Camper that you purchased, **Nücamp RV** does not know the purpose you have in mind for your truck and camper, nor does **Nücamp RV** know the Gross Vehicle Weight Rating ("GVWR") of your truck. Therefore, **Nücamp RV** makes no warranties or representations, express or implied, as to the performance of your truck with the Camper or whether the match up of your truck and Camper exceeds the GVWR as specified by your truck's manufacturer. Specifically, there is no express or implied warranty of merchantability or of fitness for the match of your truck to any camper.

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.

Customer Information

Taking Delivery

The dealer will complete the Pre-Delivery Inspection / Warranty Registration form when you take delivery for your new camper. If you do not have a copy of this form in your Owners Packet, request a copy for your records. It is an important part of the history of your Camper.

A qualified dealer representative will perform a 'walk-through' demonstration which will provide you with important information regarding the operation of your unit. Be sure you fully understand the information given, and the proper functioning of your camper, to ensure you have the best camping experience possible. Your dealer will fully explain all the system functions and will supply the component information for products used in the manufacture of your camper.

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. Number or Serial Number containing 17 letters and digits.
- 2) Type of Unit (example; Cirrus 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.

Organize

Planning and being prompt when having service is beneficial for all. When someone misses their appointment, or arrives late, it disrupts the service schedule for the entire day so drop your unit off at the scheduled time and on the scheduled date. Have a list ready, be specific and reasonable with your expectations. Some repairs may require special order parts.

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.

Dealers Responsibilities

- 1) The dealership is responsible for inspecting both factory and dealer installed components for proper operation. This is known as the Pre-Delivery Inspection and Systems Check. This will assure you that all components are in proper working order and free of defects prior to you taking delivery.
- 2) Your dealer is required to provide a thorough and complete walk-through demonstration. This demonstration should provide a good understanding of how your new camper operates.
- 3) The owner's information packet should be presented at this point. This information should include all warranty cards, component information, operation and maintenance instructions relating to your new Camper.
- 4) All component warranty registration forms should be discussed and/or completed now. Your selling dealer should explain and you should fully understand, the warranty provided on your camper.

- 5) Your dealer should provide you with information concerning any need for service for your unit, whether in or out of their area. They should also provide you with the contact numbers for the dealership, along with contact information for **Nücamp RV**.

Owners Responsibilities

- 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.

The following are suggestions to assist you in avoiding most warranty issues:

- 1) Read your warranties and review them with your selling dealer. The dealer's obligation is to educate you regarding the proper and safe operation of your camper and all its' components.
- 2) Be sure to inspect the entire camper and note any service issues.
- 3) Locate all paperwork and ask any questions you may have before leaving the dealership.


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.

Customer Relations Information Safety and Identification

Your safety, and the safety of others, is very important. Operating your truck and camper is an important responsibility.

As you read this manual, statements preceded by the following words are of special significance:

 **WARNING** Indicates a potentially hazardous situation which, if not avoided, may result in death or serious injury.

 **CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in damage to the component, camper, or your truck.

This information is intended to help you reduce the risk of personal injury and prevent possible damage to others, your truck, camper and its equipment, or the environment.


To help you make informed decisions about safety, we have provided operating procedures and other information on labels in your camper and in this manual. There are also warnings in the appliance manuals in the Owner's Information Package. This information alerts you to potential hazards that could hurt you or others.

Of course, it is not practical or possible to warn you about all the hazards associated with operating or maintaining your camper. You must use your own good judgement.

This manual is filled with important safety information please read it carefully. If you have any questions regarding operation, maintenance, or service, please contact your dealer immediately so he can assist you.

Nücamp RV is required to furnish the following consumer information as provided by the National Fire Protection Association and the American National Standards Institute. The information and warnings found here might also be found in other chapters of this Owner's Manual. Please see chapters titled "Propane System" and "Appliances" for other safety and operating information.

LP Gas

 **WARNING** Propane containers must not be placed or stored inside the tow vehicle. Propane containers are equipped with safety devices, which relieve excessive pressure by discharging it to the atmosphere.

There is a label located in the cooking area to remind you to provide an adequate supply of fresh air for combustion.

⚠ WARNING

It is not safe to use cooking appliances for comfort heating. Cooking appliances need fresh air for safe operation. Before Operation:

- Open overhead vent or turn on the exhaust fan.
- Open window.
- Failure to comply could result in death or serious injury.

Unlike homes, the amount of oxygen supply is limited due to the size of the recreational vehicle, and proper ventilation when using cooking appliances will avoid 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

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 propane containers (except in the approved space designed for it), gasoline or other flammable liquids inside the camper. Fire or explosion may be the result.

⚠ DANGER

All pilot lights, appliances, and their ignitors (see operating instructions) shall be turned off before refueling of motor fuel. Tanks and/or propane containers. Failure to comply could result in death or serious injury.

If you smell gas:

- Extinguish any open flames, pilot lights and all smoking materials.
- DO NOT touch electrical switches.
- Shut off the gas supply at the tank valve(s) or gas supply connection.
- Open doors and other ventilating openings.
- DO NOT use the range hood.
- Leave the area until the odor clears.
- Have the LP system checked and leakage source corrected before using again.
- Overfilling the propane container can result in uncontrolled gas flow, which can cause fire or explosion.
- A properly filled container will contain approximately 80% of its volume as liquid propane.

Overfilled Propane tanks must be bled. This is different than purging the tanks. When the tanks are new, they must be purged of the oxygen in the tanks used during the tank manufacturer's testing procedure prior to being filled with propane. Overfilled tanks will emit liquid into the propane system, which can cause problems/plugging with the regulator used on the tanks, range, and generator. A bathroom scale can be used to weigh the tanks prior to reinstalling them in the camper. A 5-gallon tank should not weigh more than 35lbs. when filled. A 7-gallon tank should not weigh more than 50lbs. when filled. Instructions for bleeding the tanks are located on a label on the tank.

The following label has been placed in the vehicle near the range area.



Carbon Monoxide Hazard
Your truck and your camper's generator exhaust contain carbon monoxide gas. You should have no problem with carbon monoxide entering the camper if you maintain your truck and generator properly. Have the exhaust system inspected for leaks. Whenever

- The truck and camper is serviced.
- The truck or camper was in an accident that may have damaged the underside.

⚠ WARNING

Carbon monoxide is toxic.

Breathing it in can cause unconsciousness and Death.

Avoid any enclosed areas or activities that expose you to carbon monoxide.

High levels of carbon monoxide can collect rapidly in enclosed areas, such as a Truck Camper.

Fire Safety

Fire safety is an important part of owning a Camper. The following basic rules of fire prevention can help eliminate the possibility of a fire.

- 1) Never store flammable liquids inside the Camper.
- 2) Never leave cooking food unattended.
- 3) Never smoke in bed and always use an ashtray.
- 4) Never allow children to play with LP gas or electrical equipment.
- 5) Never use an open flame as a flashlight.
- 6) Immediately repair or replace damaged wiring and electrical components.
- 7) Never overload electrical circuits.
- 8) Locate any LP leaks and have them repaired immediately.
- 9) Keep cooking surfaces clean and free from debris.

- 10) Don't allow rubbish to accumulate.
- 11) Never clean with a flammable substance.
- 12) Spray fabrics annually with a flame retardant.

⚠ WARNING

Be sure that everyone in your camper is familiar with the location of all exits, including exit windows.

EXIT

If you have a fire evacuate everyone from the camper immediately.

Do not attempt to use water to put out a fire.

Water can spread some types of fire and electrocution is possible. Get everyone outside, then decide if you should attempt to extinguish the fire. If it is a large fire or a chemical fire, **DO NOT HESITATE!** Leave the vehicle immediately and call the fire department.

If you decide it is safe to fight a fire with an extinguisher:

TIP: Use the 'PASS' method. Familiarize yourself and all occupants with this procedure;

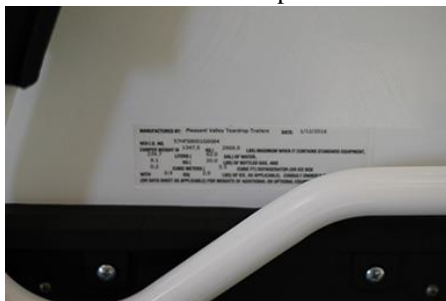
- Pull the pin (some extinguishers may have a cartridge you need to push).
- Aim the nozzle at the base of the fire.
- Squeeze the handle to release the extinguishing agent.
- Spray the base of the fire. (If you aim at the flames, you won't extinguish the fire.)

⚠ WARNING

Extinguishers are designed to put out a fire when in its' initial stage, not when it's blazing out of control. If a fire cannot be approached within 10 feet without risk of causing personal harm, immediately evacuate the camper, and call 911.

Recreational Vehicle Serial Number, Decals, and Data Plates

The recreational VIN, (vehicle identification number), label is located above the license plate holder.



Important: Always give model, year and the V.I.N. (vehicle identification number) information when ordering parts. Also, we

recommend that you keep a copy of that information separate from the Camper in the event of theft or vandalism. You may

be required to supply a copy of this information to the authorities.

Information about This Manual

This Owner's Manual is of a general nature only and does not cover every aspect of all models manufactured by **Nücamp RV**. Each owner should read this manual thoroughly and heed the warnings given herein, as well as those warnings given in the component instruction manuals contained in the Owner's Information Package.

Product Changes

The information contained within this manual is as accurate as possible at time of printing and generally reflects features, designs, specifications, and components available at that time. **Nücamp RV** reserves the right to make changes to specifications, features, designs, and components at any time without any notification. All information printed within this manual is subject to change after date of printing. Because of continual product changes throughout the production year and model year, and inadvertent transcription errors, this information may not be the most current information available at time of purchase. Information contained within this manual may reflect both standard and optional features which may not be included in your camper.

In the event, you are not the first owner of the vehicle, this manual may not reflect alterations and options added by previous owners.

Owner's Info Package

The owner information package contains valuable documents explaining details of operation for major appliances, systems and equipment built into your camper. Included in this package is warranty information on various appliances and components in your camper. Warranty registration cards for these items should be filled out and mailed as soon as possible after you take delivery of your camper. Since this Owner's Manual does not cover every possible detail of equipment and options installed on or in your camper, these booklets and instructional material in the package will help you operate, maintain, and trouble-shoot those items. If you are missing any of the component material, contact your **Nücamp RV** Dealer and request the desired or missing information.

This information should be considered a permanent part of the camper, and should remain with the camper when it is sold.

Identifying Your Camper and Its Components

For identification purposes, it is recommended that you write the camper serial number inside your camper. Pick a spot behind a drawer or inside a cabinet. Protect yourself from possible theft and can identify your property. **You should keep a copy of this information at home.** If the unit is ever stolen, the police can use the appliance serial number to identify the unit. It is also handy to have when service is needed.

Please take a few minutes to complete the information. It will be a handy reference for you.

Your Name _____ Camper Model _____

Serial Name _____ Purchase Date _____

Dealer Name _____ Entry Door Key Number _____

Address _____

Insurance Policy Number _____ Agent's Name _____

Agent's Phone Number _____

Air Conditioner

Manufacturer _____

Model _____

Serial Number _____

Range/Oven

Manufacturer _____

Model _____

Serial Number _____

Furnace/Water Heater

Manufacturer – Alde

Model _____

Serial Number _____

Refrigerator

Manufacturer – Norcold

Model _____

Serial Number _____

Stereo/DVD

Manufacturer _____

Model _____

Serial Number _____

Convection or Microwave Oven

Manufacturer _____

Model _____

Serial Number _____

Camper and Truck, Weighing, Loading

Matching Camper and Truck

Selecting the right combination requires understanding a few guidelines. Your **Nücamp RV** dealer can be a valuable source of information when matching a camper to your truck.

The truck bed is mounted to the frame of the truck with mounts that allow for some movement. It is important to allow enough clearance between your truck and camper to prevent damage due to normal racking, twisting and bouncing during driving conditions. The cab-over of the camper should never be closer than 1-1/2" to the tallest point of the cab of the truck. This could be cab marker lights or tracking system antennas, if installed. Also, ensure that there is a minimum of 1/4" clearance between the truck bed side rails and the camper wing. Some truck models have a tapered bed, meaning the bed depth is different between the front and rear. This can make the camper look tilted (front higher than the rear) along the bed of the truck.

It may be necessary to place a bed mat in the truck bed to raise the camper to the minimum clearance requirements. There must also be a minimum of 1/2" between where the truck and camper meet at the back of the truck taillight. Adding a spacer at the front of the camper or in the front of the truck bed can help ensure proper clearance. Refer to your **Nücamp RV** dealer for proper installation.

Federal Certification Label



Located inside the wardrobe door. A Federal Certification Label is required by law on all Campers. It lists the Gross Vehicle Weight Rating (GVWR), the maximum

weight at which the vehicle may be operated. It also provides a Gross Axle Weight Rating (GAWR), the maximum weight allowed for each axle. The GAWR, divided by two, is the maximum axle rating for each end of an axle.

Truck Payload

Truck 'payload' is the amount of weight a truck is designed to carry. Campers are considered "truck payload". New trucks have their payload capacity posted in the glove box or on a specification sheet supplied with the truck owner's manual. Trucks that have many options and/or a 4-wheel drive option have less payload. To calculate payload, the truck manufacturers assume all seat positions are filled with persons weighing 150 pounds each.

Optional Weights

In addition to occupant weight, optional equipment and dealer installed accessories will change the weight load. As well as items, you purchased on your trip.

One way to determine the actual payload available is to weigh the truck full of fuel and with the number of passengers you will normally be carrying and subtract that weight from the GVWR.

Tires

Tires are available in a variety of load ratings and sizes, and if the tires you currently have cannot handle the load, it may be possible to replace your tires with tires of higher pound capacity. Bear in mind, that the ultimate capacity of the truck is determined by the weakest link in the system. This could be the tires, wheels, suspension, or brakes.

Be sure you also know the load and inflation pressure ratings for your wheels as well. Often, these are stamped on the inside of the wheels, but if not, your dealer can help you find out what they are. Never exceed the maximum load or inflation pressure of your wheels. The maximum ratings are molded into the side of the tire. The sidewall of the tire shows maximum and minimum inflation pressure for that load.

Driving on under-inflated tires can cause the tires to overheat, which leads to the breakdown of the tire's internal structure. Improper inflation also can reduce your ability to control your vehicle. Tire blowouts occur more during summer months than any other time of the year. Properly inflated tires last longer, run quieter, grip better, increase fuel mileage and safely support and control your vehicle.

Check your tire pressure once a month and each time before you take a trip with your truck and camper. Use a quality air pressure gauge to check the pressure. Do not under-inflate or over-inflate your tires. Inspect your tires for uneven or excessive wear. Look for bulges, cuts, blisters on the sidewalls.

When you're traveling, do as professional commercial drivers do: inspect your tires regularly and check and adjust cold inflation pressure every day that you travel.

CAUTION

Individual wheel position weights must not exceed the maximum tire load capacity. Maximum tire load capacity can only be achieved utilizing the maximum allowable psi as listed on the sidewall of the tire.

Axle Weight

The correct way to be sure the camper weight is properly distributed is to determine the weight on each end of each axle.

WARNING

Failure to properly match the camper and truck can result in undesirable handling characteristics and create a safety hazard. **DO NOT** load your vehicle beyond its gross vehicle weight rating (GVWR) and/or gross axle weight ratings (GAWR).

Weighing Your Truck & Camper

Weighing Your Truck

- The truck must be weighed with all anticipated occupants and full of fuel.
- Drive onto the scales and note the weight of the total truck.
- Pull forward until the front axle is off the scale and get the weight on the rear axle.
- Subtract the weight on the rear axle from the total truck weight to get the weight on the front axle.

Weighing Your Camper (Fully Loaded)

- With the camper fully loaded with LP and water, (if you intend to travel with water), pull onto the scales as before and note the combined weight of the truck and camper.
- Pull forward until the front axle is off the scale and get the weight on the rear axle.
- Subtract the weight on the rear axle from the total truck and camper weight to arrive at the weight on the front axle.
- Subtract the truck weight from the combined truck and camper weight for each axle. This amount should be less than the truck manufacturer's GAWR, (Gross Axle Weight Rating). If you are over the GAWR, you will need to remove or shift weight accordingly.
- Once the weight is less than the GAWR, you need to weigh each individual wheel to ensure your camper is evenly loaded on each side.
- Again, pull on to the scales, but with only the right front tire on the scales. Pull forward and note the weight of the right rear tire. Do the same for the left rear tire. Follow the same procedure for the front tire. Take the GAWR of the rear axle and divide do the same for the front. This is the GAWR for each axle end.
- Now subtract the individual wheel weights from the individual GAWR for each wheel. If the amount is less, you are within the GAWR for that axle end. If the amount is more, you are over the GAWR for that axle end and you will need to adjust how your camper is loaded to bring the weight down within the GAWR.

Look in your Yellow Pages under gravel pits, storage companies or recycling facilities to find certified scales. Call in advance to determine if they offer public weighing service, their fees if any, and hours of operation.

NOTE: Cargo can be added to the vehicle up to the maximum weight specified on the weight label. The combined weight of the camper and its cargo cannot exceed the stated GVWR.

GVWR (Gross Vehicle Weight Rating) – the maximum permissible weight of the fully loaded camper.

GAWR (Gross Axle Weight Rating) – the allowable weight, including cargo that can be safely supported by each axle.

UVW (Unloaded Vehicle Weight) – the weight of the camper as manufactured. If applicable, it also includes full generator fluids including fuel, engine oil and coolants.

CCC (Cargo Carrying Capacity) – equal to GVWR minus each of the following:

- UVW
- Full fresh water (potable water-used for drinking and cooking) weight, full water heater and full LP gas weight.

Weight Certification Label

The weight certification label indicates the gross axle weight (GAWR). This is the most weight the fully loaded camper can weigh.

Find Center of Gravity for Loading



Truck

manufacturers are also required to provide a 'center of gravity zone' for camper loading. To determine if your truck/camper combination is within the proper center of gravity limits, allow these three steps:

- Find the center of gravity for your type model.
- Determine the recommended center of gravity zone for your truck, as listed in your truck owner's manual. If you cannot find this information, contact the nearest manufacturer's representative for your truck. The zone is normally measured from the rear or back of the cargo area.
- In a properly matched combination of truck and camper, point 'B' (camper center of gravity) will fall within points 'C' and 'D', (truck's center of gravity zone).

NOTE: Remember that installed options and the storage of personal items will affect the listed center of gravity. Care must be taken to properly balance the camper when loading your personal items.

Camper's become overloaded when people put too many things into them. There is no easy way to determine the weight you've loaded, so there's a temptation to keep loading until every available space is filled. People are loading by volume, but weight is far more important. Unfortunately, you may have exceeded to load-carrying capacity of the tires before everything is on board. The only way to tell if your truck/camper is overloaded is to weigh it fully loaded. The most critical point about weighing a vehicle is that it must be weighed with everything on board that will be there while you're traveling. That means you must weigh the truck/camper with passengers, supplies, food, water, propane, and the truck full of fuel. Bear in mind that water weighs 8.3 lbs. per gallon

and propane weighs 4.2 lbs. per gallon. Limiting your on-board water until you arrive at your destination will lower your total weight. You must know the actual load on the axles and wheels, and there's no other way to do it other than on a commercial scale.

In addition to knowing the total weight, it is crucial to know the weight on each end of each axle. That's the only way you can find out if the load is both within the tire capacity, as well as whether the load is properly distributed.

You should be able to find certified scales by looking in your Yellow Pages for moving and storage companies, farm suppliers, gravel pits, recycling companies or commercial truck stops. Be sure to call in advance to determine whether the facility offers public weighing services, their hours of operation and any fees that might be involved.

⚠ WARNING

Failure to properly match camper and truck can result in undesirable handling characteristics and create a safety hazard. In addition to knowing the overall weight that can be safely loaded in or attached to the truck, you should know how to distribute the weight in the camper so that correct amounts of weight are placed on each truck axle. Proper weight distribution is required for driving stability and will assure that the truck/camper is not rear, front or side heavy. Heavy weights placed at the rear end of the truck/camper may cause undesirable handling characteristics.

When loading the camper, store heavy gear first, keeping it on or close to the camper floor. Place heavy things far enough forward to keep the loaded camper's center of gravity within the zone recommended by the truck manufacturer. Store only light objects on high shelves. Distribute weight to obtain even side-to-side balance of the loaded vehicle. Secure loose items to prevent weight shifts that could affect the balance of your vehicle.

Attaching Camper to/Removing from Truck

Swing-Out Brackets: (If equipped)

To load or unload campers on dual rear wheel trucks, special brackets are installed on the front jacks to clear the fender. To operate, follow the steps below:

- 1) Lift jack from the travel notch locked position and swing outward from the camper body.
- 2) Position jack so when camper jack is lowered, the notch and raised tab engage to prevent rotation.
- 3) Repeat the process for the other front mounted jack.
- 4) Follow the standard camper loading and removal procedures below.

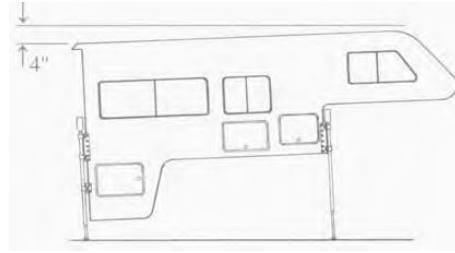
Loading/Removing Camper

Keep children and animals away from the area when raising or lowering the camper. Avoid putting any part of your body under the camper during the procedure.

Do not tilt the camper sideways while raising it on the jacks. The jacks could buckle.

Always raise or lower the camper with the front either level or higher than the back to avoid weight transfer and damage to jacks or cargo.

Always load and unload camper on firm level ground. Use caution when loading and unloading the camper on a windy day. The amount of wind that is dangerous depends on your exposure and the weight of the camper, etc.



Always keep front higher than rear. Before loading the camper onto the truck, be sure to attach the tie-downs to the

truck.

- 1) Extend each jack no more than 4" at once. Starting with the front jacks, keeping the camper level always. Repeat this process until the camper clears the truck body bed by approximately 4".
- 2) Slowly back under camper making sure to clear wheel wells and any structure or plumbing located below the living area. This may take more than one try.
- 3) Continue backing until the truck is within a foot of loaded position. Stop and connect the 7-way power cord to the 7-way receptacle in the truck bed.
- 4) Continue backing under the camper until the bumpers mounted on the crossbar in the truck bed lightly touch the front of the camper.
- 5) Slowly lower both rear jacks, then front jacks until the camper is resting fully on the truck bed.
- 6) Raise the jacks and secure in place per the manufacturer's instructions.
- 7) Lift and swing front jacks inward (if equipped with swing-out brackets).
- 8) Secure the camper to the truck with turnbuckles. The front turnbuckles must be spring or shock loaded, while the rear should use solid turnbuckles. Install both the front and rear turnbuckles per manufacturer's instructions.

Safety Tips:

- 1) Never allow the camper to be occupied while it is being loaded or unloaded.
- 2) Never raise the rear of the camper higher than the front of the camper.
- 3) Be sure all tie-down devices and electrical devices are disconnected from the vehicle.
- 4) Do not load the camper on a windy day. The amount of wind that is dangerous depends upon your exposure and the weight of the camper.
- 5) Only store your camper on level ground.

To Lower Camper:

- Retract the rear jacks first so the camper is 4" lower in the rear than in the front.
- When the rear of the camper is lower than the front, press and hold the 'ALL JACKS' button to retract the jacks. Release the button when the camper is at the desired height.

- If the jacks continue to operate push the control switch and the light will go out. The jacks should disengage. If they continue to operate, unplug the jack(s) from their exterior plug and contact your **Nücamp RV** service center.

NOTE: When operating the jacks with a low 12V battery, the 'all jacks' extend and retract feature may not work. In that case, use the individual jack buttons to operate the jack.

When operating the jacks by remote control, visually inspect all four jacks to ensure that they are responding properly and that you are following proper lifting or lowering camper procedures.

DO NOT over-extend or over-retract the jacks. The electric jack has an internal slip clutch to help prevent damage. If a clicking sound is heard, release switch. Continuing to hold the switch will cause undue wear on the slip clutch and/or cause damage to the motor.

Removing Camper from Truck

- 1) Position the truck/camper combination on firm level ground. If needed use 12" sq., 3/4" plywood support pads under each jack to prevent sinking into the ground or asphalt.
- 2) Disconnect and/or remove the following items;
 - a) Front and rear turnbuckles
 - b) 7-way camper power cord
- 3) Using your remote control, operate all jacks together until the camper clears the truck bed by 4". If it is necessary to operate the jacks individually starting with the front jacks, extend the jacks no more than 4" at a time. Keep the camper as level as possible. Repeat the process until the camper has cleared the truck bed by approximately 4".
- 4) Slowly drive the truck from under the camper until it clears the camper and the front overhang.
- 5) Lower the camper with the rear jacks first, the lower the front jacks no more than 4" at a time.

Always lower camper back down close to ground level. Do not use Homemade sawhorses, cinderblocks etc. to support the camper in the raised position. Do not enter or occupy the camper in a raised position.

Please see link below for recommended support systems. (For long term storage)

<http://www.torklift.com/index.php/products/truck-camper-storage-stability/camper-packer>

Your camper is designed to be used while standing on the jacks in a lowered position without damage to the camper. When lowering camper, do not allow camper bumper to touch the ground. Damage may occur. Allow two inches of clearance to the ground.

Electric Jacks

Electric jacks need 12-volt automotive battery power to operate. The camper battery must be charged and in good condition. If the battery is too low to operate the jacks, charge

the battery before using jacks. If the camper is on the truck, starting the truck's engine will supply power to the jacks if the 7-way electrical power cord is connected. If no power is available or battery power is too low switch the power "OFF" to the receiver. This will eliminate the dynamic braking effect of the motor. Remove the access cap on the top of the powerhead. The crank shaft of the gearbox will be accessible to turn with a 3/8" ratchet wrench. Rotate the wrench counter-clockwise to raise the jack and clockwise to lower the jack. Do not activate the motor with the wrench still on the crank shaft.



Do not use the electric jacks to raise or lower the camper using only 120-volt power. The converter's charger will be damaged if the jacks are operated with 120-volt power through the 12-volt converter without a 12-volt battery installed in the camper.

Before operating the remote control electric camper jacks, be sure to read and understand the operating instructions that were provided with your camper pertaining to their safe operation.

Jack Remote Control



There are two remotes for the jacks, if the remote battery dies simply plug it into the remote cable port on the activation switch panel with provided cable, if the black remote doesn't there is a backup remote on the jack fuse panel. The hand held remote control operates on radio frequency, which is like remote units for garage door openers. The remote is powered by a battery located under the removable cover on the back of the remote unit. The remote has a range of up to 20 feet from the camper. Occasional frequency interference from other nearby remote control devices may occur. This will only result in momentary pauses during the extend or retract operation.

NOTE: Keep a spare battery available for your remote control for best wireless performance, it is recommended that you install a new battery in the remote at the beginning of each season (1 per year) the battery is # A-23 12 volt Alkaline. The frequency of your remote-control unit has been pre-set by the manufacturer. If interference problems routinely occur, refer to the manufacturer's instructions in your owner's packet to change the frequency.

When controlling the jacks, the following operations are possible.

- Extension or retraction of an individual jack.
- Extension or retraction of all 4 jacks.
- Paired operation – adjacent jacks can be operated simultaneously by holding down two jack buttons.

The base receiver for your remote jacks is in door #2 in photo below.



The receiver uses 12-30 amp fuses that protect each of the jack circuits. If any of the jacks do not operate while depressing the "All Jacks" button on the remote, check the fuses.

Jack Fuse Panel Location

This panel is located inside storage door #2



To Lift

Camper: (Extend jacks to ground)

- 1) First you must turn on the activation switch located on the cabinet inside the entry door.
- 2) Press and hold the 'All Jacks' extend button. All four jacks will simultaneously extend until they touch the ground. Release the button. **NOTE:** If the jacks do not extend equally, (jacks can extend unevenly due to the distance each jack is located from the 12-volt source), the front jacks lift the heaviest load, and consequently will raise slower than the rear jacks conversely, the front jacks will lower faster than the rear jacks. Extend the front jacks so the camper front is higher than the rear, press and hold the 'All Jacks' button. Release the button when the camper is

at the desired height. Make sure the front of the camper stays higher than the rear and is level (side to side).

- 3) Use the individual jack buttons to adjust an individual jack. Press and hold the Extend or Retract buttons for the individual jacks as needed to keep the front of the camper 4" higher than the rear, and to prevent overloading the front jacks. Keep all corners within 4" of level with each other.

DO NOT use homemade sawhorses, cinder blocks, etc. to support the camper in the raised position.

DO NOT enter or occupy the camper in a raised position.

To Lower Camper:

- 1) Retract rear jacks first so the camper is 4" lower in the rear than in the front. Once the camper rear is lower than the front, press and hold the 'All Jacks' button and retract. Release the button when the camper is at the desired height.
- 2) Use the individual jack buttons to adjust an individual jack. Keep all corners within 4" of level with each other. If the jacks keep running, push the control switch and the light will go out. This should shut off the jacks. If they continue to run, unplug the jack(s) from their exterior plug and contact your **Nücamp RV** service center.

NOTE: When operating the jacks with a low 12-volt battery, the 'All Jacks' extend and retract feature may not work. In that case, use the individual jack buttons to operate the jacks.

When operating the jacks by remote control, visually inspect all four jacks to ensure that they are responding properly and that you are following proper lifting or lowering camper procedures.

Do not over-extend or over-retract jacks. The electric jack has an internal slip clutch to help prevent damage; when clicking, sound is heard, release switch. Continuing to hold the switch will wear out the slip clutch or cause damage to the motor.

If the jack fails to operate, check these items:

- Be certain that the battery in the remote-control unit is fresh. Keep spare batteries available.
- The control switch light located next to the entry must be on.
- You are within range for the remote to operate.
- Adequate 12-volt battery power is still available.
- The jack electrical cord is securely plugged into the exterior socket.
- Hold the remote vertically (keypad facing you) and have it between the camper and you.
- If other radio frequencies devices are making the jack pause, lift your finger from the button and press the button again.

If the jacks still fail to operate, consult your **Nücamp RV** service center for more information and help.

Swing-Out Brackets: (If equipped)

To load or unload campers on dual rear wheel trucks, swing-out brackets are installed on the front jacks to clear the fender. To operate, follow the steps below:

- 1) Lift jack from the travel notch locked position and swing outward from the camper body.

- 2) Position jack so when camper jack is lowered, the notch and raised tab engage to prevent rotation.
- 3) Repeat the process for the other front mounted jack.
- 4) Follow the standard camper loading and removal procedures below.

Leveling/Stabilizing Jacks

Prior to lowering the jacks, try and park on a flat level spot whenever possible; certainly, never on a steep slope. If it is not possible to move to a more level location, use wood blocks under the truck tires to assist in leveling. Be sure that the block is larger than the “footprint” of the tire.

No part of the tire should ever “hang over” the edge of the block. This includes trucks with dual rear tires. This can cause internal damage to the tire. Being level is necessary for comfort, but it is also required for correct operation of your refrigerator. The jacks should only be used to stabilize the camper when attached to the truck.

NOTE: Attempting to level your camper and truck using the jacks can overload your jacks and cause damage to the jacks, your camper, and tie-down system.

NOTE: If you are unsure of the process, please consult your **Nücamp RV** dealer.

Support Equipment

Air Bags

Adding air bags can improve vehicle ride, safety, in handling, and load hauling. Air bags are used to maintain proper weight distribution to all the tires to improve steering, braking and tire wear. Air bags increase spring rate and improve your truck and camper stability. Air bags are used to raise your loaded truck back to the normal ride height. A level, balanced vehicle handles better and provides a safer, more comfortable ride.

Heavy Duty Shocks

An adjustable shock absorber can significantly increase ride performance in all types of driving conditions, on and off-road.

Tie downs and Turnbuckles



This photo shows the tie down anchor point there are two on each side of the camper
Check Tie down anchor bolts for tightness before each trip and tighten as needed.

The camper must be secured to the truck with high quality tied downs and turnbuckles. The turnbuckles must be spring or shock loaded.

Turnbuckle Installation

Torklift Fast Gun turn buckle installation video link below.
<https://www.youtube.com/watch?v=Ps1AF1LlTrk>

Hitching and Towing Systems

A Torklift hitch system is recommended for use when towing with your truck and **Nücamp RV** camper. The Super Hitch Receiver, along with a custom designed bar extension for campers over 8’ are available from authorized Torklift Dealers. It can be used with a standard weight carrying ball mount, or for added capacity, a weight distributing hitch bar and ball mount.

Qualified personnel should install hitch systems only. Towing will change the handling and braking characteristics of your truck/camper package. Do not tow from or attach a hitch bar or ball to the camper bumper.

Below are two links with the recommended hitch systems if you desire to use it to tow a trailer.

<http://www.torklift.com/index.php/products/towing/superhitch-receiver-hitches>

<http://www.torklift.com/index.php/products/towing/superhitch-supertruss>

The Super Hitch



The Super Truss



Effects of Prolonged Occupancy

Condensation & Humidity

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

The relatively small volume of space and air tight construction of a modern recreational vehicle means that the normal living activities of even a few occupants will lead to rapid moisture saturation of the air contained in the camper and the appearance of visible moisture, especially in cold weather.

Just as moisture collects on the outside of a glass of cold water during humid weather, moisture can condense on the inside surfaces of your camper during use in cold weather when the relative humidity of interior air is high. This condition is increased because the insulated walls of the camper are much thinner than house walls.

Studies indicate that a family of four can vaporize up to three gallons of water daily, through breathing, cooking, bathing, and washing. Unless this 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. The moisture 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 condensation problem. When you recognize the signs of excessive moisture and condensation in your camper, you should act to minimize their effects. DO NOT ignore this issue. Doing so could result in damage to your camper due to neglect, and could void or decrease your warranty.

NOTE: Your camper is not designed to be used as permanent housing. Use of this product for long term or permanent occupancy may lead to premature deterioration of the 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 your warranty protection.

Tips to Help Control Humidity in Your Camper:

- 1) Keep indoor humidity low, if possible below 60%. (Ideally between 30 and 50%) relative humidity. Relative humidity can be measured with a moisture or humidity meter. The meter is inexpensive (\$10-\$50) instrument available at most hardware stores. Some larger campground stores may also have the meters.
- 2) Consider using a small dehumidifier to help rid the unit of moisture.
- 3) Avoid hanging wet clothing to dry inside your camper.
- 4) When showering or bathing, open the roof vents or turn on a fan to allow steam and moisture to escape. Dry the shower walls to prevent water evaporation into the camper.
- 5) Be sure no vents are obstructed and that all vents are properly sealed. Pay attention to appliances that

produce moisture, such as air conditioners, showers, oven.

- 6) Consider using the microwave oven instead of the stovetop to boil water or soups for long periods. If you choose to use the stove to boil water or soup, open a window or a vent slightly, (even in cold weather), to provide a passage for airflow. This will help restrict the humidity inside your camper.
- 7) Recirculate the air by using vent fans or small oscillating fans. If condensation occurs, keep the windows clean to prevent growth of mold and mildew.

NOTE: If you have water and/or mold damage caused by sewage or other contaminated water, it is best to call in a professional who has experience cleaning living spaces damaged by contaminated water.

CAUTION

If you have health concerns, consider consulting a health professional before beginning mold clean up.

Ventilation & Moisture Control

You can reduce interior moisture condensation by taking the following steps:

Ventilate with outside air. Partially open one or more roof vents and one or more windows to provide circulation of outside air into the interior. While this ventilation may increase furnace-heating load during cold weather, it will greatly reduce water condensation. Even when it is raining or snowing, ventilation air from outside will be far drier than interior air and will effectively reduce condensation inside the camper.

Minimize moisture release inside the camper. Run the bath vent fan (or open the bath vent) when bathing to carry water vapor out of the camper. Avoid making steam from excessive boiling or use of hot water. Remove water or snow from shoes before entering to avoid soaking the floor. Avoid drying overcoats or other clothes inside the camper.

WARNING

DO NOT HEAT THE CAMPER INTERIOR WITH THE RANGE OR OVEN!!

In addition to the hazards of toxic fumes and oxygen depletion, open flames add moisture to the interior air, increasing condensation. Do not use an air humidifier inside the camper. Water put into the air by the humidifier will greatly increase condensation.

Ventilate closets and cabinets. During prolonged use in very cold weather, leave cabinets and closet doors partially open to warm and ventilate the interior of storage compartments built against exterior walls. The airflow will warm the exterior wall surface, reducing, or eliminating condensation and minimizing possible ice formation.

Install a dehumidifier. During prolonged, continuous use, a dehumidifying appliance may be more comfortable and effective in removing excess moisture from the interior air.

While use of a dehumidifier is not a “cure-all”, ventilation, and moisture reduction continue to be important, operation of the dehumidifier will reduce the amount of outside air needed for ventilation. Heating load on the furnace will be reduced, and the interior will be less drafty.

Dripping Ceilings Vents

During cold weather and even in short term occupancy, condensation frequently forms on ceiling vents and may even accumulate to the point of dripping onto the surfaces below. This is frequently misinterpreted as a “leaking” roof vent but is most often condensation drippage.

Interior Odor

New units may have a strong odor and even cause eye and lung irritation when closed in hot weather. This is due to glues used in production of forest products (plywood, paneling, etc.). This condition passes with time, but in an extreme condition, open the door, windows, and vents to allow the interior to “air out” for several hours.

Fire and Safety

The hazard and possibility of fire exists in all areas of life, and the recreational lifestyle is no exception. Your camper is a complex device made up of many materials – some of them flammable. But like most hazards, the possibility of fire can be virtually eliminated by recognizing the danger and practicing common sense safety and maintenance habits.

Recreational vehicle fires are generally caused by unattended food cooking on the stove or in the oven, faulty or damaged wiring and electrical devices, fuel leaks (both gasoline and propane), or carelessness. The most common careless acts include smoking in bed, leaving children unattended and cleaning with flammable liquids.

Consider These Fire Safety Suggestions:

Before refueling your truck or any fuel tank near your camper, be sure to turn off all pilots and appliances in your camper. Consider the cause and severity of the fire and the risk involved before trying to put it out. If the fire is major or is fed by gasoline, propane, or any type of oil product, stand clear of the vehicle, and wait for the fire department or other emergency assistance.

If fire damages your camper, do not use it until it has been thoroughly examined and the cause of the fire is found and fixed.

All occupants of the camper should become familiar with the audible sound of the smoke, propane leak and CO detectors. If an alarm sounds, investigate the cause. Do not remove the detector to silence the alarm.

Teach everyone in the camper how to use the entry door locking system and emergency exits. Occasionally open the emergency exit to prevent the seal from sticking. Always keep the dead bolt on the entry door in working condition.

Fire Extinguishers

The fire extinguisher in your camper is located near the main entry door. Your fire extinguisher should be replaced immediately after use or discharge.



The fire extinguisher furnished with your camper is rated for Class B (gasoline, grease, flammable liquids) and Class C (electrical) fires since these are the most common types of fires

in recreational vehicles. Read the instructions on the fire extinguisher. Know how and when to use it. You and your family should be familiar with its operation. If you find it necessary to use the fire extinguisher, stand 45 degrees from the flame and spray side to side, starting at the top of the flame. Use caution to avoid standing upwind or uphill. If flames are climbing, spray vertical and work the retardant downwards. Dry chemical flame retardant should be cleaned away as soon as possible.

If you decide it is safe to fight a fire with an extinguisher

TIP: Use the ‘PASS’ method. Familiarize yourself and all occupants with this procedure;

- Pull the pin (some extinguishers may have a cartridge you need to push).
- Aim the nozzle at the base of the fire.
- Squeeze the handle to release the extinguishing agent.
- Spray the base of the fire. (If you aim at the flames, you won’t extinguish the fire.)

CAUTION

Avoid inhaling the dry chemicals from the fire extinguisher. Although non-toxic, they could cause temporary irritation. When the fire is out, clean the area as soon as possible. The dry chemical may cause surface damage if left too long.

DO NOT use water to extinguish a fire.

Water can spread some types of fire and electrocution is possible.

Smoke Detector

Most fire casualties are caused by inhalation of toxic fumes (smoke) from a fire and not by flame. The smoke detector responds to smoke that enters the sensing chamber. It does not sense gas, heat, or flame. A ceiling mounted, battery powered smoke detector is in the living /cooking area of your camper. Please read the smoke detector Owner’s Manual for details on

testing and caring for this important safety device.

Smoke detectors may not have time to alarm before the fire causes damage, injury or even death.

A smoke detector works only for detecting smoke, not fire. The alarm will sound only if smoke reaches the sensor.



This unit will not alert hearing-impaired residents. (Special alarms with flashing strobe lights are needed for the hearing impaired.)

Smoke detectors have a limited life and are not foolproof. Never attempt to repair this unit. Replace the complete unit if faulty.

Test the smoke detector after the camper has been in storage, before each trip, and at least once a week during use.

The smoke detector should never be disabled due to nuisance or false alarm from cooking smoke, a dusty furnace, etc.

Ventilate your camper with fresh air and the alarm will turn off. Do not disconnect the battery.

Replace the battery once a year or immediately when the low battery “beep” signal sounds once a minute. The detector uses a standard 9-volt battery.

Test smoke detector operation after replacing the battery. If the smoke detector fails to operate with a new battery, replace the detector with a new unit.

Carbon Monoxide Gas Safety Precautions

Carbon monoxide gas is colorless, tasteless, and odorless. It is a combustion by-product of fuel burning engines. The engines in your truck and generator system (if installed) produce it constantly while they are operating.

⚠ DANGER

Carbon monoxide gas is deadly. Please read and understand the following warnings and precautions to protect yourself and others from the effect of carbon monoxide gas.

⚠ DANGER

Exhaust gases are deadly. **DO NOT** block the tailpipes or situate the vehicle in a place where the exhaust gases have any possibility of accumulating either outside, underneath, or inside your vehicle of any nearby vehicles.

⚠ WARNING

Outside air movement can carry exhaust gases inside the vehicle through windows or other openings remote from the exhaust outlets.

⚠ WARNING

Operate the engine(s) only when safe dispersion of exhaust gases can be assured, and monitor outside conditions to be sure that exhaust continues to be dispersed safely.

⚠ WARNING

DO NOT under any circumstances operate any engine/s while sleeping. Be aware of exhaust gas (carbon monoxide) poisoning symptoms:

- Dizziness
- Headache
- Weakness and Sleepiness
- Nausea
- Vomiting
- Muscular twitching

- Throbbing in temples
- Inability to think coherently

If symptoms indicate the possibility of monoxide gas poisoning:

- Turn off engine(s) immediately
- Get out into fresh air at once
- Summon medical assistance

⚠ WARNING

Check the exhaust systems during routine maintenance and repair leaks, damages, or obstruction before further operations. **DO NOT** modify any exhaust system in any way.

⚠ WARNING

Never disconnect the battery to silence the alarm.

Carbon Monoxide & Propane Detectors



A permanently installed detector is located near the floor in the forward portion of the main camper floor area. The unit contains an alarm that will sound, alerting you to

the presence of propane or carbon monoxide.

⚠ WARNING

To reduce the risk of carbon monoxide poisoning or propane gas explosion, test this alarm’s operation after the camper has been in storage, before each trip and at least once per week during use.

⚠ WARNING

Do not use a cigarette lighter to test the CO/Propane gas alarm. Butane gas may damage the sensors.

DO NOT attempt to test the alarm by any other means than by using the TEST/RESET button. **DO NOT** attempt to produce CO to the alarm. The TEST/ RESET button tests all functions of the alarm and is the **ONLY** safe way to be sure the alarm is working properly.

The alarm may be tested at any time. The TEST/Mute switch is located on the front of the alarm. Press and hold the test button for 1 second. The alarm is working properly if the GREEN indicator light changes color to RED and the alarm beeps 4 times. The Gas LED should also blink Red.

Operation

When the unit is first powered up, the CO sensor requires a ten (10) minute initial warm-up period to clean the sensor element and achieve stabilization. The GREEN LED indicator will flash on and off during the 10-minute warm-up period. This unit cannot go into a CO alarm during the warm-up period. After the warm-up period, the GREEN power ON indicator should glow continuously. If the ON indicator light does not

light see the section, “Trouble-Shooting Guide” in the User’s Manual for this alarm provided in the Owner’s Information Package.

This alarm will operate normally down to 7-volt DC. It will not work without power.

CO Alarm

The red CO LED will flash and the alarm will sound 4 “BEEPS” then silent for 5 seconds. These signals indicate that the CO level is over 70 ppm. IMMEDIATE ACTION IS REQUIRED. This cycle will continue until the TEST/Mute button on the front of the alarm is pressed. Ventilate the Camper. The red light will stay on until the CO has cleared, or the alarm will reactivate in approximately 6 minutes if the CO is still present. DO NOT RE-ENTER THE CAMPER. This alarm will return to normal operation after the Camper’s properly ventilated.

The CO (Carbon Monoxide) detector is designed to detect carbon monoxide from any source of combustion. It is **NOT** designed to detect smoke, fire, or any other gases.

Procedures to Take During a CO Alarm:

Actuation of this device indicates the presence of the carbon monoxide (CO) or propane gases, can cause death. If signal sounds (4 beeps and flashing or solid red light), immediately turn off all combustion sources and ventilate the premises. Evacuate the premises immediately. Check that all persons are accounted for. Do not re-enter the camper until it has been aired out and the problem corrected. Get the system checked before restarting appliances.

⚠ WARNING

Carbon monoxide cannot be seen or smelled and Breathing it in can cause unconsciousness or death.

Propane Gas Alarm

The Red LED will flash and the alarm will sound a steady tone whenever a dangerous level of propane or methane gas is detected. IMMEDIATE ACTION IS REQUIRED. The detector will continue to alarm until the Test/Mute switch on the front of the alarm is pressed. Ventilate the Camper. The RED Gas LED will continue to flash until the gas is cleared, or the gas alarm will reactivate in approximately 5 minutes if the gas is still present. DO NOT RE-ENTER THE CAMPER. This alarm will return to normal operation after the Camper is properly ventilated.

NOTE: This detector senses propane gas in the air, not smoke or fire or other gases. It detects the presence of propane gas at the sensor; explosive gas may be present in other areas.

DO NOT attempt to repair the detector. If it fails the test, check the battery voltage and if it still does not function properly, replace the entire unit.

Procedures to Take During a Gas Alarm

Turn the propane off at the tank(s), turn off all propane appliances, extinguish all flames and smoking material and open all doors and major windows to air out the camper. Do not re-enter the camper until the alarm stops sounding. If the alarm sounds a second time after the propane is turned back on, leave the propane off and have a **Nücamp RV Service Center** make the necessary repairs to the source of the propane leak.

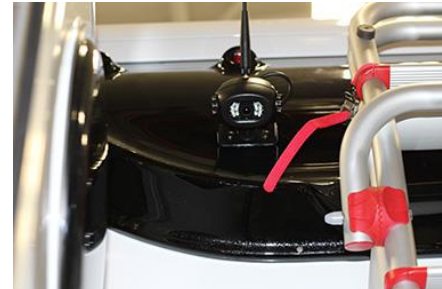
Be aware of the difference between a propane leak versus propane escaping from an unlit, open burner. Pure propane from a leaking pipe or fitting is heavier than air and will build up its heaviest concentration at the floor level first. Propane from open burners is intentionally mixed with air to induce burning and will dissipate into the air. The primary purpose of the detector is to detect propane leaks. The propane from open burners is mixed with air (oxygen) so that it will burn. When mixed with air, the propane becomes only marginally heavier than air and may not sink to the floor. If a burner is left on, the area around the burner, range and adjoining counter space will be combustible and will cause injury and damage if ignited. This condition may exist for an extended period before the propane can reach the detector’s location and be detected. The detector only indicates the presence of propane at the sensor. Propane may be present in other areas.

The detector is powered by the 12-volt DC system and is always powered if the camper is connected to the truck, a charged battery, or 120-volt AC power. The fuse for the detector is in the Power Distribution Center.

NOTE: The detector is continuously powered; disconnect the battery if you are not using your camper. The detector can eventually drain the camper battery.

Backup Camera

The backup camera (optional) is located beside roof ladder on the rear wall, it is a color camera with a built-in microphone.



Switch location is below the wardrobe door right inside the entry door, it’s a double toggle switch with the one on the right being the camera switch. The portable monitor that will be in the truck cab has a 12-volt power plug and a built-in receiver.

Electrical System

The electrical system consists of a primary 12-volt DC system and a 120-volt AC system. The 12-volt system uses battery power like that used in automobiles. The 120-volt system requires a source of 120-volt power provided through the power supply cord or optional generator. These systems are

connected through a power converter. When connected to 120-volt power, the converter transforms 120-volt AC input into 12-volt DC power output and charges the storage battery(s) when installed.

Interior Lighting

The interior lighting operates on 12-volt DC power only. When connected to a 120-volt source or using the generator, the power converter transforms 120-volts to 12-volts. However; when not connected to 120-volts, the entire load of lights, water pump, exhaust fans, etc., is on your 12-volt battery(s). Use conservatively to minimize battery discharging.

120-volt AC System

The 120-volt electrical system supplies power to the following components:

- AC to DC Power Converter
- 120-volt Outlets (interior and exterior)
- Refrigerator
- Roof Mounted Air Conditioner (optional)
- Microwave Oven
- Alde System
- Never operate the 120-volt electrical system without a proper ground.

12-volt DC system

The 12-volt system provides power for the following components:

- Electric Jacks
- Interior Lighting
- Exterior Lighting
- Water Pump
- Refrigerator
- Alde System
- Stereo/CD/DVD Player
- TV
- Systems Panel Monitor
- Fantastic Fan
- Accessories plugged into 12-volt outlet

Battery and Compartment



Maintenance of your 12-volt battery(s) is essential for carefree travel. Be sure to use a heavy-duty, minimum 75 amp/hr. RV/Marine deep cycle battery. Ensure that they are both the same size and type battery. Check the battery's frequently with the condition meter located on the monitor panel. Also, check the water level often. The use of a hydrometer is required to test for the specific gravity of the battery acid. Hydrometers are available through an auto parts store.

NOTE: The 12-volt battery(s) is not supplied with the camper by the manufacturer.

Battery Terminology

Deep Cycle Batteries

The term "deep cycle" refers to a battery that has the capability of deeply discharging hundreds of times. How it differs from an automotive starting battery is that the automotive battery is manufactured to specifically provide a quick burst of energy thousands of times while only being able to deeply discharge less than 50 cycles during its lifetime. A Cycle refers to one batter discharge and recharge.

Battery Ratings and Specifications

Marine/RV deep cycle batteries have rating specifications which include cold cranking amps (CCA), marine cranking amps (MCA), reserve capacity (RC), and ampere hours (Ah). RC and approximate Ah ratings may not be listed on the battery decal. However, they should be available through your local battery distributor.

Cold Cranking Amps (CCA)

The amount of current (amps) a battery at 0°F (-17.8°C) can deliver for 30 seconds and maintain at least 1.2 volts per cell (7.2 volts on a 12-volt battery).

Marine Cranking Amps (MCA)

The amount of discharge current a battery tested at 32°F (0°C) can deliver for 30 seconds and maintain at least 1.2 per cell (7.2 volts for a 12-volt battery).

Reserve Capacity (RC)

The amount of time a battery can deliver 25 amps at 80°F (26.7°C) without falling below 1.75 volts per cell (10.5 volts on a 12-volt battery). An approximate Ah rating can be attained by multiplying the battery's RC rating by 0.6. Example: 180 RC x 0.6 = 108 Ah.

Ampere hours (Ah)

Tested at 80°F (26.7°C). It is the amount of current (in amps) a battery can deliver, multiplied by the number of hours, without falling below 1.75 volts per cell (10.5 volts in a 12-volt battery). Most marine/RV deep cycle batteries are rated on a 20-hour discharging rate. Example: a 100 Ah battery can deliver 5 amps for 20 hours (amps x hours = Ah). The Ah rating is important when determining the type and amount of battery(s) required to meet your specific component needs.

Battery Information

The battery(s) must be securely strapped in the compartment always.

The battery(s) is charged by the truck's charging system while the truck is running or when connected to 120-volt power through the power converter. If equipped, the onboard

generator charges the battery while running through the power converter.

Check that the battery liquid level is correct (weekly in warm climate, monthly in cold climate). Using protective gloves, take the caps off the battery. Look for a 'fill line' inside the battery wall. If the fluid is below the line, add distilled water as required. Remember to also check the condition of your truck battery.

Clean battery terminals and cable periodically using a wire brush and baking soda. Be sure the caps are securely in place when cleaning. Be sure the wing nuts on top of the battery are tight. Loose wing nuts can cause arching and intermittent, or loss of, 12-volt power. Use caution not to touch battery terminals to metal door frame when removing or installing the battery. Always disconnect the negative (-) cable first and reconnect it last.

⚠ CAUTION

Remove rings, metal watchbands, and other metal jewelry before working around a battery. Use caution when using metal tools. If the tool contacts the battery terminals or metal connected to them, a short circuit could occur which could cause personal injury or fire.

DO NOT allow battery electrolyte to contact skin, eyes, fabrics, or painted surfaces. The electrolyte is a sulfuric acid solution that could cause serious personal injury or property damage. Wear eye protection when working with batteries.

Battery Storage Precautions

When you store your camper for a week or more be sure to disconnect the battery(s). Electronic tuning radios, the propane detector, and the CO detector all draw a small amount of current when the battery is connected. Even disconnected batteries will naturally "self-discharge" about 1 % of capacity per day. If you intend to store your camper for any length of time, remove the battery(s). Store it in a cool, dry place and recharge every month. Batteries will discharge on their own. Recharging will also help prevent problems with battery sulfating which leads to premature battery failure.

Battery Charging

Normally the battery(s) will be kept charged by either the truck charging system while on the road, solar panel, or by the AC/DC power converter when plugged into AC service. On those occasions when the battery needs to be charged from a different charging source, please follow these safety guidelines:

- Disconnect both cables to prevent damage to the camper's electrical system
- **DO NOT** smoke near batteries that are being charged or which have recently been charged. Please note that batteries are being charged while you drive, and while you are connected to 120-volt AC power through the power converter/charging circuit.
- Use care when connecting or disconnecting booster leads or cables while charging. Poor connections are a common cause of electrical arcs that can cause explosions.

- Check and adjust the electrolyte level before charging. Fill each cell to the indicator level with distilled water. Always remove the vent caps (if equipped) before charging the battery.
- Never expose the battery to open flame or electric spark. Chemical action in the battery generates hydrogen gas that is flammable and explosive.
- To avoid sparks, turn off all electrical components before connecting the battery cables. Connect the **black** or **red** to the **positive (+)** post on the battery. Connect the **white** cable to the **negative (-)** post.

NOTE: This is different than the automotive industry which uses red and black. There are fuses on the front of the power converter that will protect the camper's electrical system if you accidentally connect the battery in reverse.

The 40-amp main circuit fuse will not allow power into the camper or the battery(s) to be charged when an overload or short circuit occurs. To reset replace the 40-amp fuse, if the fuse continues to burn out, a short circuit or overload condition is indicated. Have the system checked by qualified personnel.

Battery Disconnect Switch



While in storage use, the battery disconnect switch to help with slowing down the discharging of the battery.

System Monitor Panel



The systems monitor panel may incorporate controls and instrumentation for the water and holding tank levels, battery voltage level, water pump switch.

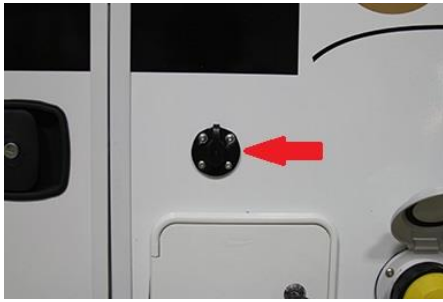
Monitor Panel –

Level Indicator Switch

When depressing the monitor switch, indicator lights for the black (waste), grey (sink and shower), and fresh water, (for drinking and cooking) tank will illuminate, indicating the existing condition of each component. The battery level is a digital display that reflects the battery voltage when the switch is depressed.

Water Pump Control Switch

This rocker switch controls the demand water pump. The water pump is pressure sensitive and starts (with the switch ON) when a faucet is open, causing pressure in the line to drop. When the faucet is closed, pressure builds in the line and the pump

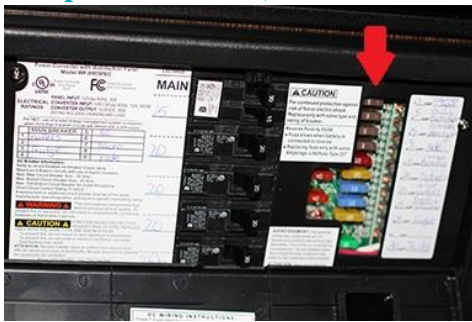


stops.

Erroneous indications when checking water levels can be caused by:

Water with low mineral content. Level is measured by a very low electrical signal traveling through the liquid. Some water that is low in mineral content may not conduct the signal properly. This condition may be infrequent, but can exist. Check the panel reading when the fresh water tank is filled. Material trapped on the sides of the holding tanks may give a full reading when the tank is empty. Use of a cleaner to wash out the tank following dumping should help prevent this condition.

Camper Fuse Panel (12-volt Interior Circuits)



A 12-volt interior fuse panel is installed below the fridge in the Power Distribution Center to protect the interior circuits.

Circuit titles and fuse sizes are all marked inside the removable access door. If a fuse blows, locate, and correct the cause. Turn off all lights and motors, and then install a fuse with the same rating. If fuses continue to blow, a short circuit is indicated. Have the system checked by your **Nücamp RV Dealer**.

Fuses

All the electrical circuits in your camper have fuses to protect them from short or overload. If something electrical in your camper stops working, the first thing you should check is for a blown fuse. Determine from the diagram on the fuse panel, which fuse or fuses control that component. Check those fuses first, but check all fuses before deciding that a blown fuse is not the cause. Replace any fuses and check the component's operation.

Do not install fuses with amperage ratings greater than that specified on the label. (Unless you Notify **Nücamp RV** and they indicate it's safe to do so) Replacing a fuse with one that

has a higher rating greatly increases the chances of damaging the electrical system. If you do not have a replacement fuse with the proper rating for the circuit, install one with a lower rating until you can replace it with the proper rated fuse.

If the replacement fuse of the same rating blows in a short time. Leave the blown fuse in that circuit and have your camper checked by your **Nücamp RV Dealer**.

Solar Panel

The solar panel plugs into the solar ready connector. The solar panel is designed to “trickle charge” your battery system. It is not intended to be a fast charger. It also cannot supply large amounts of current to operate 12-volt DC electrical equipment. **NOTE:** Weather conditions will affect the charging rate of the solar panel. Refer to the solar panel manual supplied in your Solar Information Package.

120-volt Power Cord

Your camper is equipped with a heavy-duty power cord for connection to an external 120-volt, 30 amps rated service. The cord is commonly called the “shore cord”. The cord and plug are molded together to form a weatherproof assembly. **DO NOT** cut or alter the cord in any way. **DO NOT** remove the ground pin from the attachment plug. If you must use an adapter to plug into an electrical service, make sure the ground is maintained.

Never use a two-conductor extension cord, or any cord that does not assure appropriate and adequate ground continuity. Use a 30-amp RV extension cord with a maximum length of 25'.

Never plug the 120-volt cord into an ungrounded receptacle.

⚠ WARNING

- Shore power poses a risk of death due to electrocution.
- Always use a grounded connection.
- Never connect to an ungrounded source of shore power.
- Never remove the “third prong” from the shore power plug.

⚠ WARNING

- Risk of fire.
- Connect only to source of correct voltage.
- Do not overload electrical circuits.
- Do not use an extension cord to connect to shower power.
- Replace fuses with like rating.

Power Distribution Center



The power distribution center consists of 120-volt AC, 12-volt DC and the power converter. The 120-volt AC panel board

containing a 30-amp main breaker and 15 and/or 20-amp branch circuit breakers. These breakers interrupt the power if the rated current is exceeded. If a breaker trips repeatedly, reduce the load on that circuit and have the system checked by your Nücamp RV Dealer.

Switching from 120-volt AC power to 12-volt DC power is automatic when the power cord is plugged in or the generator is on. This powers the 12-volt panel board and the connected circuits are protected by the installed fuses. Battery charging is automatic when plugged into 120-volt AC power. The converter has reverse battery circuitry to prevent damage if the battery is accidentally connected in reverse. These fuses protect the power converter from accidental shorting of the power cables at the battery or reverse polarity caused by accidental cross connecting the battery. **Remember red is positive (+), white is negative (-).** The power converter has a cooling fan that will run at appropriate times to cool the converter.

NOTE: Should the converter shutdown during normal operation, heat may be the cause. The converter has a built-in automatic-reset thermal breaker that will reset after a cooling off period. If this occurs frequently, your dealer or qualified personnel should correct the problem. Be sure not to store items in front of the vent openings.

Ground Fault Circuit Interrupter



A Ground Fault Circuit Interrupter (GFCI) This device is intended to protect you against the hazards of line to ground

electrical faults and electrical leakage shocks possible when using appliances in damp areas.

NOTE: The GFCI device does not prevent electrical shock. It does not protect a person who comes in contact with both the “hot” and “neutral” sides of the circuit. It does not protect you against electrical overload.

TEST the GFCI at least once a month while operating on 120-volt AC power. To test the GFCI:

- Push the TEST button. The RESET button should pop out, indicating that the protected circuit has been disconnected.
- If the reset button does not pop out when the test button is pushed, a loss of ground fault protection is indicated. Do not use the outlet or other outlets on the same circuit. Have the camper electrical system checked out at an authorized **nüCamp RV Dealer Service Center**. Do not use the system until the problem has been corrected.
- To restore power, push the RESET button.

NOTE: If galley or patio receptacles don't work, check the GFCI. Reset the button if necessary. If the GFCI continues to trip, have the camper electrical system checked at an authorized **nüCamp RV Dealer Service Center** or by a qualified electrician.

Power Generator

Before operating any generator, read, and understand this section of the manual and the manufacturer's operating instructions for your generator. The generator circuit breaker provides circuit protection while in the “ON” operating mode. See the Generator Manual for location.

NOTE: Refer to your Generator Owner's Manual provided in your Owner's Information Package for starting, operating, service and troubleshooting instructions. Always wait at least three minutes after starting generator before turning on or plugging in heavy electrical loads, such as the roof air conditioner and the convection microwave oven.

⚠ CAUTION

To stop the generator:

- 1) Turn off all electrical loads.
- 2) Let the generator run at no-load for a few minutes, to stabilize internal engine generator temperatures.
- 3) Place Start/Stop switch in the Stop position.

Generator Operating Safety Precautions and Warnings

Do not block the generator ventilating air inlets or outlets. The engine requires a constant supply of cooling air. Restricted ventilating air inlets or outlets can cause engine failure or fire from engine overheating.

Do not use generator-ventilating air for heating any interior living space. Ventilating air can contain high concentrations of lethal gases.

Exhaust Gas Is Deadly!

Exhaust gases contain carbon monoxide, an odorless and colorless gas. Carbon monoxide is poisonous and can cause unconsciousness and death. See the “Carbon Monoxide Safety Precautions” section in the “Fire and Safety” chapter.

⚠ WARNING

Do not block the tailpipe or situate the camper in a place where the exhaust gases have any possibility of accumulating

either outside, underneath, or inside your vehicle or nearby vehicles.

Outside air movement can carry exhaust gases inside the vehicle through windows or other openings remote from the exhaust opening. Operate the engine (s) only when safe dispersion of exhaust gases can be assured, and monitor outside conditions to be sure that exhaust continues to be dispersed safely.

⚠ WARNING

Do not operate the generator when parked in or near high grass or brush areas. Exhaust heat may cause a fire.

Loading the Generator

The generator can power (depending on size) AC motors, air conditioners, AC/DC converters and other appliances. How much load can be serviced depends upon the generator power rating, temperature, and altitude. The generator will shut down or its circuit breakers will trip if the sum of the loads exceeds the generator’s power. Allow the air conditioner to operate on the thermostat setting. If manually operated, it may cause an overload condition. Applying excessively high electrical loads may damage the generator and may shorten its life.

To avoid overloading the generator, add up the rated watts of all electrical lighting, appliance, tool, and motor loads the generator will power at one time. This total should not be greater than the wattage capacity of the generator. If an electrical device nameplate gives only volts and amps, multiply volts’ time’s amps to obtain watts (volts x amps = watts). Some electric motors require more watts of power (or amps of current) for starting than for continuous operation.

Typical Appliance Loads

Appliance	Load (Watts)	Load (Amps)
Coming soon		

Power VS. Altitude

Note also that air density decreases as altitude and ambient air temperature increase, causing the generator power to decrease. Power decreases approximately 3.5 percent of rated power for each 1000 feet of increase in elevation and 1 percent each 10°F (5.6°C) rise in temperature above 85°F (29°C).

Elevation above Sea Level	Maximum Power
Up to 500 feet	2500 watts (rated)
2500 feet	2325 watts
5500 feet	2063 watts
Above 5500 feet	2063 watts minus 87 watts each 1000 feet

Propane Gas Safety

Please observe the warnings and cautions contained in this section as well as the manufacturers supplied information with each gas appliance.

Propane is stored in a high-pressure tank in liquid form and is delivered to the appliances in a gaseous form. The propane canister(s) must not be placed or stored inside a vehicle. The

container(s) are equipped with safety devices that relieve excess pressure by discharging propane to the atmosphere.

Safety Precautions

⚠ DANGER

Propane is highly flammable and heavier than air. It’s treated to have a garlic like odor to aid in detecting a leak. If a leak should occur, the propane can collect in pockets along the floor and thereby dissipate in the air. If left unnoticed, it could result in suffocation or an explosion.

⚠ DANGER

If you smell propane

- 1) Extinguish any open flames, pilot lights and all smoking materials.
 - Do not touch electrical switches.
 - Shut off the propane supply connection.
 - Open door and other ventilating openings.
 - Leave the area until odor clears.
 - Have the propane system checked and leakage source corrected before using again.
- 2) Inspect the entire propane system for leaks or damaged parts before each trip.
- 3) Never check for leaks with an open flame. Use an approved leak detection solution or a non-ammoniate, non-chlorinated soap solution only. If the leak cannot be located, have the system checked by qualified personnel.
- 4) Always be careful when drilling holes or fastening objects to the camper. A nail or screw could puncture the propane supply lines.
- 5) Do not restrict access to propane tanks. In an emergency, the tank service valve must be easily accessible. Do not store items or block ventilation openings in the propane compartment.
- 6) Do not use any propane tanks other than those furnished with your camper.
 - Turn off main propane valve and individually turn off all propane appliances or electrically disconnect automatic ignition appliances before entering propane bulk plant or motor fuel service station. When not individually turned off, automatic ignition appliances may continue to spark.
 - Do not fill propane containers to more than 80% capacity. Overfilling can result in uncontrolled propane flow that causes fire and explosion. A properly filled container holds about 80% of its volume as liquid.
- 7) Do not use a wrench or pliers to close the service valve. This valve is designed to be closed leak-tight by hand. If a tool is required to stop a leak, the valve probably needs repair or replacement.
- 8) When attaching the hose connector to the valve, don’t force, jam or cross-thread the fitting. Always check fitting for leaks after tightening.
- 9) Be sure the tanks are securely fastened when mounted on the camper.

- 10) Consult a **Nücamp RV Dealer** for any propane system repair.
- 11) Always think safety, never guess. If you are not sure, please seek a qualified service technician or a certified LP service center.

WARNING

Turn off main propane valve and individually turn off all propane appliances or electrically disconnect automatic ignition appliances before entering propane bulk plant or motor fuel service station. When not individually turned off, automatic ignition appliances may continue to spark.

WARNING

Do not fill propane containers to more than 80% capacity. Over filling can result in uncontrolled propane flow that can cause fire and explosion. A properly filled container holds about 80% of its volume as liquid.

Propane Tank

All new propane tanks must be purged of air and moisture before filling for the first time. The propane tanks should be filled per the instructions on the tank safety labels. Filling should be done only at authorized propane fueling stations. Please observe the following instructions when filling the storage tanks.
D.O.T. regulation # 173-34 prohibits propane tanks from being refilled inside the RV. The tank(s) must be removed from the compartment to be properly inspected before refilling. Use propane tanks in their proper position.

Filling Propane Tanks

- 1) A small amount of anhydrous methanol (3/4 oz. per 5 gal) can be added before filling an empty tank to prevent freeze ups. Check with your propane.
- 2) The law requires least a 20% vapor space for safety. A special liquid level valve is installed in the tank when the tank has reached 80% of its volume as liquid propane. Stop filling when liquid appears at this valve.
- 3) Use vapor only. All propane appliances for cooking, heating, lighting, water heating, and refrigeration are designed to operate on propane vapor only. Therefore, all propane tanks designed for vapor service must be transported, installed, and used in the proper position. Propane containers are permanently marked with "TOP" stamped on tank, welded to the tank or "ARROWS must point up" stamped in the guard or bracket to identify the proper position.
- 4) Do not transport, install, or use a vertical cylinder in a horizontal or upside down position. Liquid propane could enter systems designed for vapor only, creating a hazardous condition.
- 5) Do not carry or store filled or empty propane containers inside your camper. Propane containers are equipped with a safety device that relieves excessive pressure by discharging gas to the

- atmosphere. Leaks can occur at valves and fittings. Always store propane tanks with the valves closed.
- 6) Always use the dust cap when transporting or storing disconnected tanks (full or empty).
 - 7) All propane tanks must be securely attached in the proper position for intended use. Use all brackets provided to ensure proper support and positioning.
 - 8) Route all propane lines carefully and avoid kinking the lines. A kinked hose can limit or cutoff the flow of propane through the system.

Using Propane System

It is normal to have a slight gas odor when initially opening the outlet valve. Fully open and seat valve by hand only to prevent leakage past the valve stem. If an odor seems to linger perform a leak test.
Keep outlet valves closed when not using the propane system. Do not attempt to adjust the regulator. The manufacturer has preset it. If any adjustment is required, a qualified propane service technician using special equipment must make it.

Single Propane Tanks

Single propane tanks are equipped with a two-stage regulator. Be sure the regulator is securely fastened to the tank with the diaphragm vent facing downward. When using the tank, simply open the valve.

Propane Gas Fuel System

Propane gas systems are installed to operate a variety of appliances, such as stoves, refrigerators, heating units and water heaters. The exhaust fumes from burning propane gas are odorless and can cause death or serious brain injury if inhaled. The exhaust from propane appliances must be directed to the outdoors. You must have an operating carbon monoxide detector in the accommodation space of your camper.

DANGER

- Carbon Monoxide can cause brain damage or even death.
- Make certain the exhaust from Propane appliances is directed to the outdoors.
- Have a working carbon monoxide detector in the accommodation spaces of your trailer before operating Propane gas appliance.
- Do not operate portable grills, portable stoves, portable lanterns, or portable heaters inside the trailer.

When used for the first time, or after a period of storage, the Propane gas lines will be full of air and must be purged of air, before the appliance will stay lit. Have the Propane gas lines purged by your **Nücamp RV Dealer**, or a Propane gas dealer. A Propane gas system is designed to operate with a supply of Propane gas only, NOT natural gas. A natural gas supply is unsafe for the system's pressure regulation devices.

WARNING

- Risk of death due to fire or explosion.
- Do not connect a Propane gas system to a supply of natural gas.
- Extinguish all pilot lights and turn off all appliances before refilling fuel or Propane gas tanks.
- Do not fill the tank with any gas other than Propane.
- Do not store Propane gas tanks inside the camper.

Keep the shutoff valve on your Propane gas tank closed always, except when you are operating a Propane gas appliance. Before opening the Propane shutoff valve, turn off all Propane gas appliances. If an appliance is on when you open the shutoff valve, Propane gas can accumulate in the camper, which can result in an explosion. Propane gas leaks can result in fire or explosion. If your camper is equipped with a Propane gas system, it must also be equipped with a Propane gas detector. The Propane gas detector will be located near the floor to detect the heavier-than-air Propane gas. If a leak is suspected, use a soapy water solution to search for the leak. Do not use a solution that contains ammonia or chlorine (common in window and other household cleaning compounds), because those chemicals will cause Propane piping corrosion.

WARNING

- Risk of fire or explosion
- If Propane gas is detected (by smell or by the Propane gas detector):
 - Do not touch electrical switches
 - Extinguish flames and pilot lights
 - Open door for ventilation
 - Shut off Propane gas supply at the Propane tank
 - Leave the area until odor clears
- Correct the source of Propane gas leakage before using Propane appliances.
- Do not use a flame to locate the source of a propane gas leak.

Propane gas is compressed into liquid form. Propane gas must be completely vaporized before being burned.

NOTE: Propane gas will operate at temperatures as low as minus 44° Fahrenheit (-44° F).

Propane gas is prohibited on some roadways, bridges, and tunnels. Check a map and with Department of Transportation (or with the AAA) for travel routes that do not have such restrictions.

Propane Gas System Troubleshooting

- Having liquid “gas” at your appliances is an indication that the Propane gas tank is overfilled, or that the temperature is too cold.
- If your Propane gas appliances do not stay lit, it might be because your Propane gas system is contaminated with air or moisture. Many Propane gas vendors have facilities to purge the air from a Propane gas system.

- If your Propane gas system is not providing gas, even when the shutoff valve is open, it might be because the Propane gas regulator has frozen water in it.

WARNING

- Risk of fire or explosion.
- Never use a flame, heat lamp or hair dryer to thaw a Propane gas regulator.
- Use an incandescent light bulb to warm the regulator.
- Do not remove the regulator cover or attempt to service the Propane gas regulator.

On the Road

Loading

When loading camper gear, store heavy items first and place down low. Distribute weight as evenly as possible from side to side. **Remember:** overloading or uneven loading can create a serious safety hazard or may even shorten the service life of chassis components. Do not load upper cabinets with heavy items. Secure and brace stored items so they don't move during travel, thereby shifting the load in the camper. Do not load heavy items near the end of the camper or on the rear bumper. Carry only as much water as needed for travel use or to balance the load. Whenever possible, empty the waste water holding tanks before traveling.

Storage

All cabinets and storage areas should have the heaviest items on the bottom and lighter items overhead. After loading you should have the skillet and can goods on the floor or bottom shelf, and the cereals and crackers in the overheads. Use the unbreakable type plates and saucers, and consider storing your dishtowels around them.

Clothing hung in wardrobes should be kept on hangers that snap over the clothes rods to keep them from “jumping” off on rough roads.

Preparing for Travel

Properly preparing for a trip before you leave can make things more enjoyable. Make a list of items you will need or wish to take. Keep in mind the following categories:

- Bathroom supplies
- Bedding
- Cleaning items
- Clothing
- Fire Extinguisher
- First aid items
- Food
- Holding tank chemical
- Kitchenware
- Personal items
- Road flares
- Tools

Pre-Trip Checks

(Exterior)

- 1) Connect battery(s) and check condition.
- 2) Check for fluid leaks.
- 3) Check that access doors are securely closed.
- 4) Check all running lights, taillights, and electrical system.
- 5) Be sure tie downs and stabilizers are securely tightened.
- 6) If equipped check back up camera function

(Interior)

- 1) Secure all loose items.
- 2) Close all drawers and cabinets.
- 3) Secure microwave and refrigerator doors.
- 4) Check that entry door is locked.
- 5) Latch all windows and skylights in the second latching position.

(Systems)

- 1) Fill fresh water tank.
- 2) Drain holding tanks and secure drain cap.
- 3) Check operation of interior lights and appliances.
- 4) Check propane gas level. Check for kinked propane lines and possible leaks.

Post-Trip Clean-Up

- 1) Clean unit and check for damage.
- 2) Drain waste-holding tanks.
- 3) Clean waste drain hose and secure drain cap.
- 4) Drain fresh water tank.
- 5) Close outlet valve on propane tank.
- 6) Disconnect the battery cables or turn off battery disconnect switch if equipped.

Safe Driving Rules

Your truck will have different handling and stopping characteristics when it is carrying the camper. The following rules will help you develop needed skills for safe Camper driving.

Travel slowly with your new truck/camper combination, until you have learned the handling and stopping characteristics of the combination. Practice turning, stopping, and backing in a secluded place away from traffic.

Do not permit a driver who is inexperienced to operate your truck/camper combination without your direct supervision. Remember its slow speed for beginners.

Drive at moderate speeds allowing for adverse highway and wind conditions. Even under the best of conditions, do not exceed 55 miles per hour. As speed increases, driving stability, stopping ability, and ability to make emergency maneuvers are greatly reduced.

Reduce speed before starting down hills – even short ones – and avoid heavy braking on downgrades. Truck stability is reduced when traveling downhill.

Slow down before entering turns and avoid heavy braking in turns. Truck stability is reduced in turns, and the weight of the camper on the truck will affect the way the truck handles. Avoid quick steering movements that can reduce truck stability.

Maintain at least twice the normal stopping distance while carrying your camper. The increased weight of the camper on the truck requires greater stopping distance.

Use lower gears on long grades. Downshift on upgrades to avoid overheating or undue engine loads. Downshift on downgrades to allow engine braking to assist in controlling vehicle speed. Avoid continuous or frequent brake application. The added weight of the camper can cause brakes to overheat and fade.

Allow ample time for passing. Your acceleration will be much slower when you are carrying the camper.

Become familiar with the position of the truck in traffic, and be cautious when maneuvering to allow for its length and width. Always allow extra room to corner and to change lanes. Learn to use the side mirrors to view the road behind and to the sides. Check them often.

Allow for extra height of your camper. Check for low hanging tree branches or other obstructions whenever you drive, park, or when pulling in for fuel or service. Always check overhead clearance of overpasses and bridges, especially if you drive with the roof vents slightly open or if the camper is equipped with a roof air conditioner, roof rack, TV/radio antenna, or a satellite dish.

Measure your height from the ground to the highest point on the roof. Write it down on a piece of tape and put it in a visible place in your truck. This will help you when you get to that “low overpass”.

Riding in Camper While Traveling

For the safety of passengers, it is not advisable to ride in the camper while traveling. In some states, it may be illegal. If it is necessary, care must be taken to remain seated while moving.

Campground Regulations

You should always check the campground regulation on arrival. This will avoid any unnecessary conflict with the campground management and/or other campground users. **NOTE:** Some campgrounds do not allow the camper to be removed from the truck.

Equipment

Some features described here do not appear on all Nücamp RV models Nücamp RV is continuously changing and

upgrading appliances for better usage and for your convenience. For that reason, the style you have may not be exactly what is described in this manual. In this manual, you will find general information for the operation of the appliances for more detailed information, please refer to the appliance manuals provided to you in your **Nücamp RV** Owner's packet.

After taking delivery of your **Nücamp RV** camper, spend some time familiarizing yourself with the exterior and interior features. Your interior has been designed with utility and comfort in mind to provide spaciousness and versatility. Familiarize yourself with the bedding and dining arrangements as well as the various storage areas inside and out.

Each appliance in your camper is warranted by its' manufacturer. It is very important that you review all the literature provided in the Owner's packet that came with your camper. Fill out and return all warranty registration cards as required by the appliance manufacturers. If you have any questions regarding the operation of the appliances in your unit, contact your selling dealer. Also, please notify your dealer of any shortage of literature you may have.

It is important that you read all the manufacturer's information provided, regarding both operation and maintenance of the appliance. Pay close attention to all safety precautions given and follow them closely. Keep all literature, including this manual with the camper for easy reference. If service on any appliance is required, contact your dealer or an authorized service representative of the appliance manufacturer. Most appliance manufacturers have toll free service telephone numbers for your convenience. You will find some listed under the Component Manufacturers.

Roof

All **Nücamp RV** models have a fully decked and laminated roof that may be walked on from front to rear. When walking on the roof use deck shoes as leather shoes become slippery and can also leave marks on the decking. When on the roof, use caution to avoid slips and falls. Use caution when loading sharp articles on the roof as you can gouge or puncture the roof. If you add accessories or new equipment on the roof, use a qualified installer, or consult your dealer. Care must be taken when working on the roof to avoid disrupting the seals which could void your warranty.

Compartment Doors

Various exterior compartment doors provide access to certain appliances, controls, and general storage.

Outside storage compartments are not air sealed or vented enclosures Do not store hazardous chemicals/materials or flammable, volatile liquids in these areas.

The Propane Tank Compartment Door provides access to the storage propane tank(s) and regulator valve(s). This compartment door must remain unlocked as required by National Fire Protection Association (NFPA) to allow immediate access in case of a propane leak or fire.



The Refrigerator Vent/Door provides access to the rear of the refrigerator for service and supplies inlet ventilation for proper operation.

The exterior Service Center Door #2 provides access to the jack control center.

The Exterior Service Center Door #3 provides access to waste tank dump valves, fresh water tank drain valve.

Vents

All exterior vents and louvers provided need air circulation. Be sure not to block these vents because damage to equipment, as well as hazards to individuals could result.

Roof Vent

The roof vents are operated from inside and have built-in screens. To operate, turn the crank on the vent clockwise to open and adjust. The bath vent may be equipped with a 12-volt exhaust fan. The switch to control the fan is located on the vent.

Skylight



This skylight is dual pane and opens. It has a sliding screen.

To open;
Depress the button on the latches and turn to open. And tighten knobs on the

window stays.

To close;

Loosen the window stay knob, close and latch.

The shade and screen operate independently of each other and are engaged by connecting to each other and sliding.

Close the skylight completely when traveling and leave shade partially open. The shade could pull up into the vent due to

negative pressure in the camper. If camper is parked in extremely bright sunlight, leave shade partially open. If completely closed heat buildup can cause damage to the dome.

- Do not stand on the acrylic glass Skylight.
- Close the Skylight completely before driving off. Damage can occur to the shade if the shade is not closed and the Skylight is open while driving.
- Do not open Skylight when it rains or when there is a strong wind.

Emergency Exit Window



The emergency exit window is in the cab over or dinette area of the camper and is identified by the red handle(s) and EXIT label.

Read and understand these instructions before you need to use them. The emergency exit window provides an escape route in case the camper must be evacuated under emergency conditions and the path to the main entry door is blocked.

To operate the emergency exit window, push in the latch button and turn to open the red handle(s) and swing the window outward. The window is hinged at the bottom.

When parked, be sure trees or other obstacles do not block the exit window.

Windows and Skylight venting

The latches on windows and skylights allow you 2 position latching.



The first position is used when you want a water and airtight seal while traveling.

The second position allows you to vent the camper and still have the windows and skylight locked.

Shades

Screen/Night Shades

The screen/night shades are dual-purpose window covering that provides privacy at night and bug control during the day.

Exterior Lighting

Your camper is equipped with exterior lights and normally found on autos to comply with state and federal regulations. It's important not to alter the lights or the reflecting markers. Check the exterior lighting frequently and replace any inoperative or damaged lighting fixtures as soon as possible.

Ladder



It is critical that all racks and accessories be properly and securely attached to your camper. Improper attachment could result in an accident or damage to your camper's roof. Check the attachments prior to use and periodically inspect for adjustments, wear, and damage.

Large, long, or oversize items will require additional strapping/tie downs. Do not underestimate the power of the wind.

Entry Door Locks



RV Lock Keypad/Remote Programming and Syncing

Instructions Version 4.0

(Additional Remote(s) can be purchased at www.rvlock.com)

New Code: _____

Programming a new code into your RV Lock Keypad

1. Write your desired “new” code below then read all instructions before you start the programming process as this will make the programming much easier.
2. While holding down the “8” button, press the “lock” button and release both. (You will hear a long confirming beep – this signifies that you have entered the programming mode.)
3. Type in the keypad existing code, for example 1234, then press lock. (1234 is the default code from the factory and after the “code reset” button is held down.)
4. Now type in the new code written below (up to 8 digits), the press lock.
5. Again, type in the same new code as written below and press lock. (A long confirmation beep from the keypad confirms and completes programming).
6. Test to ensure your new code works by typing in your new code and press the lock/unlock button. The Keypad should confirm the accepted code by a long beep and then actuate the handles deadbolt.
- 7.

NOTE:

- If programming of Keypad is unsuccessful or you forget your code, simply press, and hold down the “Code Reset” button for 5-10 seconds on the back handle and start again at step #1. (A long tone will confirm the reset to the default “1234” code.)
- Programming mode is only 12 seconds long, so keypad will reset to former code/operation after 10 seconds of being idle during programming mode. (If you take too long or make a mistake, simply wait 10 seconds, and start over at step 1.)
- Always keep your keys **OUTSIDE** of your coach in case of electronics/battery failure.
- Changing the batteries on your RV Lock products will not cause your handle to forget the current code or remote programming.

TONE CHART:

- Long beep – Confirmation/Correct code
- 5 shore beeps – Error/Wrong code
- Short set of tones after your input your code and before the dead bolt extends signifies that the batteries are getting low and will need to be changed soon.

- Code can be between 0 and 8 digits long, we recommend at least 4 digits for security.

Synchronizing the RV Lock handle with your optional RV Lock Remote(s)

1. Turn the FOB switch to “on” and lightly press the “FOB LEARN” button located above the ON/OFF switch on the back of the handle. A short quick bee will confirm that you have entered the programming mode.
2. Now press the LOCK button on your remote until the handle confirms with a long beep. (Usually takes one or two times). Additional pressing of the LOCK/UNLOCK button will actuate the deadbolt on your RV Lock handle.
 - If remote programming did not work or if you have additional remotes to program, repeat steps 1 and 2.
 - Holding down the LEARN button for 10 seconds will remove all previously synced remotes from the handles memory.
 - You can have up to 10 remotes operating the same RV Lock handle. Remote FOB’s can control multiple RV Lock handles.
 - You must hold the remote buttons down for a couple of seconds to actuate the handle, this is a safety feature against accidental pushes in pockets.

Changing the Batteries on your RV Lock Handle

Remove the two (2) screws holding the battery cover on the back handle next to the “on/off” switch. Install four (4) AA alkaline batteries. **NOTE: Install high quality, fully charged alkaline batteries. Batteries should last at least 12 months in between changes depending on usage. (Remove batteries at the end of the season and/or during large gaps between trips to avoid drainage and/or leaking batteries and possible damage.) After new batteries are in, a beep will confirm that the handle has power. Replace the battery cover and screws. (DO NOT OVERTIGHTEN) Changing the batteries on your RV Lock handle will not change the current code or remote programming. If you choose not to use the remote FOB’s, you can turn the wireless switch to “off” to save power and simply use the keypad.

Be sure all occupants in the camper know how to operate the entry door lock and deadbolt as well as the emergency exits in case of emergency.

When traveling, lock the deadbolt. This will reduce the possibility of the door opening while on the road.

Awning



To operate awning press the select button on the jack remote and hold it for 5 seconds, an LED will indicate bright red for the four-jack mode

and green for the two-auxiliary device mode, the top four buttons on the remote will operate the two auxiliary devices. The bottom four buttons and the “All” buttons will be inoperative during Auxiliary mode.

An operating and maintenance guide for your awning(s) is included in your Owner’s Information Package. It contains instructions for opening and closing the awning, as well as maintenance and care instructions.

You should make sure your traveling companion is also familiar with the operation of the awning. If a sudden wind should come up, or if high winds are in forecast, the awning should be retracted, stowed and the travel locks engaged. Awning damage such as a bent tube, torn canvas, or broken arms due to high winds or water are not covered by warranty.

Rear Awning

If your camper is equipped with a rear awning you will find the crank to extend it in the wardrobe right inside of entry door.

Camper Bumper/Step

The aluminum bumper has sealed taillights and backup lights. Use the fold down step when entering or exiting the camper.

Dinette Conversion



To convert table into a bed push down both buttons where table top connects with the rail on the wall, then press the button on the leg to fold it and move the table to the bottom rail.



Reverse procedure to return the dinette to the seating position.

Fold Down Top Cabinet



The fold-down top cabinet is located over the dinette. To lower, open the latches located inside the cabinet at each end and lower the cabinet front. To store the cabinet, reverse the procedure.

Appliances

Follow the operating and maintenance instructions supplied by the appliance manufacturer for safe and dependable use. The following information is supplied as only a supplement to that provided with each appliance. If you have a problem, see your local **nüCamp RV service center** <http://cirrus-truckcamper.com/dealer-locator/> or call the appliance

manufacturer listed under the Component Manufacturers contact list.

Each appliance in your camper is warranted by its manufacturer. It is very important that you review all the literature provided in the Owner's packet that came with your camper. Fill out and return all warranty registration cards as required by the appliance manufacturers. If you have any questions regarding the operation of the appliances in your unit, contact your selling dealer. Also, please notify your dealer of any shortage of literature you may have. After taking delivery of your **Nücamp RV** camper, spend some time familiarizing yourself with the exterior and interior features. Your interior has been designed with utility and comfort in mind to provide spaciousness and versatility. Familiarize yourself with the bedding and dining arrangements as well as the various storage areas inside and out.

Lighting Propane Appliances

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.**

Refrigerator

The refrigerator operates on 120-volt AC power, propane and/or 12-volt DC. The operating instructions supplied in the Owner's Information Package will help you with detailed information from the manufacturer.

The recreational vehicle propane type refrigerator operates on the "absorption" principle and therefore must be reasonably level. When your camper is stationary, it should be leveled for comfortable living. If you can occupy the camper comfortably, the refrigerator unit should perform well. If the refrigerator unit is not "close to level", it may not function properly and your food will not be adequately cooled. When the RV is in motion, the continuous movement will not affect operation. The operating instructions are printed inside near the controls and may be found in the manufacturer's instructions manual.

Operating Tips

Operate the refrigerator on 120-volts for 8 hours (overnight) before you leave on a trip. This will allow the refrigerator to get cold.

Pre-cool food and drinks before putting them into the camper refrigerator. For off-truck use, some refrigerator models must have 12-volt battery hookup to power the electronic controls. Refer to the supplied appliance manuals for proper operating instructions.

Gas Mode

This mode provides LP gas 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. If unsuccessful, the indicator lamp will not illuminate. Check Fridge Owner's manual to trouble shoot.

DC Mode

When DC mode is chosen, the refrigerator will operate by pulling power from the battery/s. In most cases, the refrigerator controls will work down to 10.6v DC, causing a drain on the battery/s.

Please Note: a 3-way fridge in 12-volt mode isn't designed to cool your fridge only to help maintain fridge's current temperature. **Please See Fridge owner's manual.**

Purging Air from the Lines

If the refrigerator has not been used for a long period or if the LP tanks have just been refilled, air may be trapped in the supply lines. Purge the air from the lines by pressing ON/OFF button to OFF and then back to ON, 3-4 times. If repeated attempts fail to start the LP gas operation, check to make sure the LP tanks are not empty and that all manual shutoff valves in the lines are open.

Range

The gas burners and oven use propane gas for fuel. Operation is similar to the range in your home. However, cook temperatures will vary from home ranges depending on the altitude.

Before turning on the main propane supply, be sure all burner and control knobs are in the "OFF" position.

Cooking appliances need fresh air for safe operation.

Before operation:

- 1) Open window.

The 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.

Lighting Surface Burners

The surface burners will feature match lit ignition. Be sure all control knobs are in the OFF position before supplying gas to the appliance. Be sure the main LP gas supply is on before lighting the burner.



If the burner does not light within 4 seconds, or if the flame should go out during cooking, turn the burner OFF. If gas has accumulated and a strong gas odor is detected, open a

window, and wait 5 minutes for the gas odor to dissipate before relighting the burner.

NOTE: If the appliance has not been operated for a period, the surface burners may be difficult to light, as air may have accumulated in the gas line.

⚠ WARNING

Do not turn the burner control knobs ON, allowing gas to escape before lighting a match or using an electronic igniting device.

To Bleed Air from Line

- Hold a lighted match next to the burner.
- Turn the surface burner control knob to the LITE position.
- When the burner lights, turn the knob back to the on position.
- Depending upon your model, follow procedure for either 'Match lit' ignition or 'Piezo' ignition.

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 LITE position.
- 3) When the burner lights, adjust the knob between HI and LOW to select the desired flame size.
- 4) After cooking, turn the surface burner knob to the OFF position.

⚠ WARNING

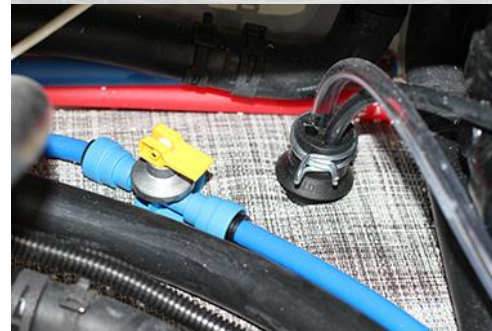
It is not safe to use cooking appliances for comfort heating.

Microwave Oven

Please read all instructions that come with the microwave oven before use. The microwave should never be operated empty.

When operating on your generator power is limited. If the roof air conditioner is operating there may not be enough power to operate the microwave. Turn the air conditioner control to "fan only" setting to use microwave.

Alde Heating System



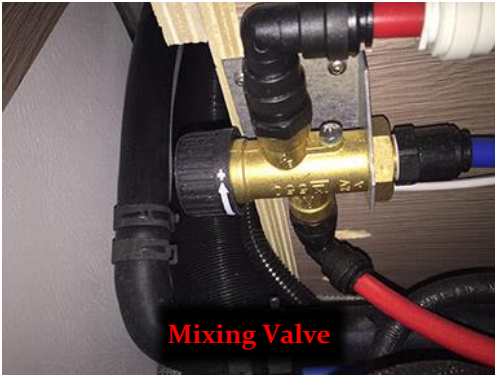
Operating the Alde Heater

Alde heater comes with its own manual please read its instruction on how to operate the heater.

Turn on the water pump and open hot water at the kitchen sink, and at the shower and when water flows continuously the heater is full. More details in the water pump section of this manual.

The quickest way to do this is attaching a hose to the city water fill.

Please note: For winter camping you may use the ALDE system for your heat source while the water system has been winterized, you will not damage the heater or any of its components as long as you have properly drained the heater tank from any RV winterizing fluids (if you didn't use RV anti-freeze to winterize the camper but instead used air to blow out the system there is a nothing you need to do to use the heater for heat) if you did use Anti-freeze to winterize you only need to open the Alde relieve valve to drain the Anti-freeze from the tank.



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.

CAUTION

Please use caution water can be extremely hot coming out of the heater.

Turning the mixing valve knob to the positive side will increase the water temperature, if you have adjusted the knob to its standard max setting please follow the instructions below on how to increase the max temperature setting on the mixing valve.

Increasing the Maximum Temperature:

Turn the knob counterclockwise 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

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.

Water Odor

Odor from the water is not a service issue. Many water supplies contain enough Sulphur to produce a 'rotten egg' odor. It is not harmful, only unpleasant. The solution is to

chlorinate the water. You may add about 6 oz. of common household liquid bleach per 10 gal. Of water in the tank. Run the chlorinated water throughout the system by opening each faucet one at a time until you smell the chlorine. Let the camper sit for a few -*days and the chlorine should take care of the problem. However, you must then remove the chlorine by flushing the system with fresh water. You may need to do this more than once, if this is a frequent occurrence, consider adding a filtering system as a prevention.

Roof Mounted Air Conditioner

The roof-mounted 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 either an air conditioner or microwave oven installed or both.

- 1) Be sure air conditioner is OFF before connecting electricity.
- 2) When the air conditioner has been shut down, wait at least five minutes before restarting.
- 3) Do not operate without a filter installed.

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 roof.

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".

Cooling

- 1) Park the camper in a shaded area.
- 2) Use window shades, blinds, or curtains.
- 3) Keep windows and doors shut or minimize usage.
- 4) Avoid the use of heat producing appliances.
- 5) Installing window awnings will reduce heat gain by removing direct exposure to the sun.

Starting the air conditioner in the morning and giving it a head start on the expected high outdoor ambient temperature, will greatly improve its ability to maintain the desired indoor temperature.

Whether using the HEATING or the COOLING function of your thermostat, condensation can always be an issue. Keeping you Camper at a constant temperature helps keep condensation at a minimum.

Camp Site Cable Inlets



The park cable inlet is located on the driver's side of the camper. The park cable inlet allows for the connection from the campground cable service to the camper.

Roof Mounted Antenna

The roof mounted TV antenna is designed for reception of local television signals. Consult the manufacturer's operation instructions for proper use.

To Play TV or Cable Audio on Camper speakers' press source button on DVD player and select Rear Aux. speakers for your audio input.

LCD TV



If equipped, your camper may have a LCD TV. The unit runs on 12-volt. Instructional material can be found in the Owner's Information Package.

Exterior Speakers

Your camper is equipped with exterior mounted speakers. The speakers are located on the curbside of the camper. The wiring for these speakers terminates at the stereo location. If a CD/DVD player is installed, the exterior speakers are connected to the speaker control zones on the stereo.

Fresh Water System

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.

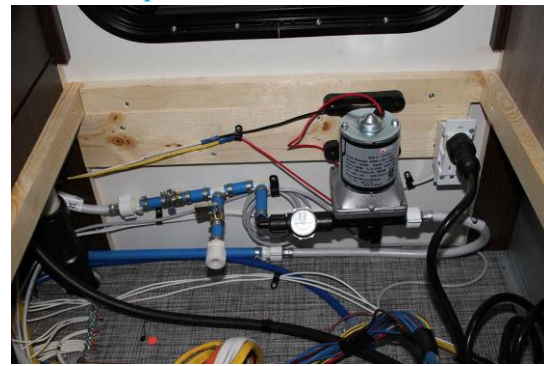
When connecting to the city water hookup, use only a non-toxic water hose, available at most RV supply stores. Since water pressures at campgrounds and household hookups vary, you should install an inline pressure regulator at the water supply faucet. This will protect both the camper water system and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



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

Water Pump



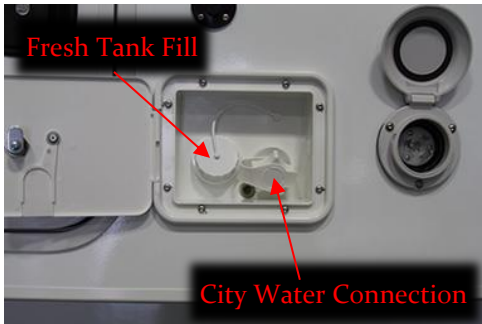
The pump is not equipped with a dry tank shut-off switch. Turn the pump switch OFF if water in tank becomes depleted or when system is not in use. The pump operates when water pressure drops below a predetermined pressure. A drop-in pressure occurs when a faucet or a toilet valve is opened. When the 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 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 partly 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.

Water Tank Fill



3/8 hose adapter link: http://www.amazon.com/Anderson-Metals-Garden-Fitting-Connector/dp/B006PKMU7U/ref=pd_sim_86_11?ie=UTF8&dpID=51uF4RcaeaL&dpSrc=sims&preST=_AC_UL160_SRI60%2C160_&refRID=10EHMTB3KCACCK7J85FN

The fresh water system should be sanitized at the initial filling, after a period of storage or if contaminated. See “Sanitize Fresh Water System” in this section.

Please fill tank slowly.

Filling the Fresh Water Tank:

- 1) Make sure fresh water tank drain valve is closed, located in the compartment door #3
- 2) Remove 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 or check tank monitor and fill until it reads 100%.
- 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) Replace cap and lock the access door.

City Water Connection

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 tub to clear air from the lines.
- 5) Close the faucets when the water is flowing freely.

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 Alde relief valve. (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. (See Drain Water System).
- 2) Prepare a chlorine solution with one gallon of water and ¼ cup household bleach.
- 3) Pour one gallon of solution for each 15 gallons of tank capacity into fill spout.
- 4) Fill tank with fresh water.
- 5) Open each faucet and water heater relief valve until water flows evenly.
- 6) Set pump switch to OFF.
- 7) Allow solution to stand for 3 hours.
- 8) Drain and flush with fresh water.
- 9) To remove any chlorine taste or odor, fill tank with one-quart vinegar to 5 gallons of water. Allow solution to remain in tank several days if possible.
- 10) Drain and flush with fresh water.

⚠ WARNING

Potable water only. Sanitize, flush and drain before using. See instruction manual. 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. Loosen the clear filter cap at the inlet end of the filter.

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.

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 Wash Station (Shower)



The exterior wash station is in the service center on the roadside compartment for exterior use. It uses water from the fresh water tank or when connected to the city water hookup. The shower-head is equipped with a flow control to allow you to conserve water. This flow control is not a permanent shut off.

After use of the shower, the water must be shut off at control valves or possible damage could occur to the shower-head and/or hose.

For severe weather camping, by-pass valves are provided to shut off the water to the exterior wash station to prevent the system from freezing.

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.

Fresh Water Flush Toilet

Your camper is equipped with a marine-type recreational vehicle toilet. This toilet is especially designed to operate with a minimum of water usage. The flushing mechanism, a hand-operated lever, allows a valve in the bottom of the bowl to open, permitting the contents to be flushed into the holding tank below. A stream of water under pressure from the camper’s water system swirls around the bowl, cleaning and flushing the contents. Most models have two levers, each working independently of the other so the bowl can be filled with water prior to use. For additional information, please refer to the operating manual supplied with the toilet.

NOTE: If the toilet requires a water supply for proper use. This can be from either a city water hookup, if available, or from the on board fresh water tank supply. The 12-volt water pump switch must be in the “ON” position when using water from the tank.

Black Water Holding Tank

This holding tank must be primed with 2 gallons of water and one odor control chemical package at each initial use. Add more odor control chemical if needed until dumping is required. Refer to the chemical package available at most RV outlets for specific instructions.

Sewer Hose Storage



Located in the bumper

Bathroom

The bathroom walls are sealed and waterproof; so, do not worry if water splashes on it. Some models are equipped with a power roof vent in the bathroom.

Toilet

The toilet is designed to flush with a minimal amount of water and still provide for proper disposal and odor control. Toilet chemicals are available at most RV retail outlets. Review the

manufacturer's owner's manual supplied with the toilet for proper use, maintenance, and chemical usage. The toilet paper dispenser is mounted inside the lavvy door under the sink. Information on the toilet plumbing can be found in the "Waste System" section.

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.

When you want to drain 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 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: To facilitate draining, the camper should be slightly higher in the front. Also, raise the passenger side of the camper to allow drainage toward drains located on the driver's side.

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 tank valve may be left open.

Holding Tank Care/Maintenance

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 drain valve closed. Be sure to cover the tank bottom with water after dumping.
- Movement while driving will help to liquefy the solids.
- Use only toilet tissue formulated for use in septic tank or RV sanitation systems.
- Keep both drain 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 RV 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.



Do not use the same hose you use for filling the potable water tank or for the connection to the city water inlet. Use a

different hose to ensure that you will not contaminate your fresh water supply.

Winterization

Operating in Freezing Conditions

If water freezes inside the system, it can damage piping and equipment.

Keeping the interior warm will aid in preventing water in the storage tank, pump, and piping from freezing.

Add non-toxic anti-freeze to the holding tank(s). Refer to the instructions that came with the anti-freeze.

Propane for the appliances will work down to 44 degrees below zero (-44°).

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 “OFF” 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) Close and lock all windows. Be sure the vent fan and range hood fan switches are off.
- 9) Cap and close the holding tank drain, city water inlet and fresh water fill spout.
- 10) Turn off all radios, TV’s, interior and exterior lights.
- 11) Close the mini blinds and day/night shades.
- 12) Disconnect the 120-volt power cord and store in compartment.
- 13) If removing the camper from the truck, see procedure and warning in the “Loading and Unloading Camper” section.
- 14) 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.
- 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.

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 or be drained and blown out with air. 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.

These are instructions on how to winterize the Campers with VIN# that have letters FS in the VIN and numbers 01 thru 96 at the end of the VIN. You must use air to blow out the water lines, please follow the instructions below.

- 1) Perform all steps in the short and long term storage procedures.
- 2) Turn the water pump ON and open all hot and cold water faucets. When the flow of the water stops, turn the pump OFF.
- 3) Drain the fresh water tank by opening the fresh water tank drain and leaving open, the drain is in door number 3.
- 4) While having the Alde relieve valve and fresh water tank drain valve open disconnect the hoses on each side of the water pump until all the water is drain out. After the water is drained out reattach the hoses.
- 5) Drain the water heater by opening the Alde relief valve.
- 6) Attach the air blow out plug to the city water connection, leaving all the valves and faucets open connect the air hose and blow out all the leftover water that couldn’t be drained out. Depress the toilet flush pedal or hand-operated lever. Below is a link for the blow out plug needed.
<http://www.walmart.com/ip/29764314?wmlspartner=wlp&adid=22222222227021475530&wl0=&wl1=g&wl2=c&wl3=40838463032&wl4=&wl5=pla&wl6=78651722432&veh=sem>



- 7) After all the water is blown out, disconnect the air hose, and Shut OFF all faucets, fresh water tank drain valve, water heater pressure relief valve.
- 8) Drain the showerhead and hose by disconnecting the hose at the faucet from the inside and outside shower.
- 9) Drain the waste water system by following the normal procedure for draining the holding tanks.

- 10) Pour 2 to 3 cups of RV Antifreeze down each drain to fill the drain traps with antifreeze.



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.

Winterizing with RV Antifreeze

- 1) Make sure the water pump switch is off.
- 2) Insert the hose from the winterizing valve into a container of RV approved non-toxic antifreeze.
- 3) Turn the water heater bypass valve to Bypass position and drain the water heater by opening the safety relief valve.
- 4) Open faucets to relieve pressure. (Hot and Cold) Open the hot and cold low point drains.
- 5) Drain the water tank by opening the tank drain and leave open to drain completely.
- 6) After the system is completely drained, close all faucets and turn off the low point drain valves.
- 7) Turn the winterize valve to "Winterize" position.
- 8) Turn ON the water pump switch.
- 9) Open the hot water faucet farthest from the water tank. When antifreeze appears, let at least one cup run down the drain to winterize the P-trap. Do the same to all other water outlets, hot and cold, including shower, toilet, and outside shower.
- 10) Turn OFF the pump switch.
- 11) Open a water faucet to relieve pressure, and then close.
- 12) The procedure is complete.

Water Heater Bypass 2017 Models

The water heater bypass valve is located behind the water heater and is used when winterizing the water system for storage. By rotating the lever to the bypass position, antifreeze will not enter the water heater requiring less antifreeze to protect the water system plumbing. Follow the instructions shown on the valve.

NOTE: Be sure to drain the water heater by opening the drain plug at the bottom of the heater and open the pressure relief valve.

To De-Winterize:

- 1) First, fill the water tank.
- 2) Turn the winterizing valve to normal flow position.
- 3) Turn the water heater bypass valve to "bypass"; this will keep antifreeze from entering the water heater.
- 4) Turn ON the water pump switch.
- 5) Open the water faucet farthest from water tank, catching antifreeze in a container for future use, until clear water appears. Shut off the faucet. Do this to all other faucets and the showerhead, including outside shower.
- 6) Turn the water heater bypass valve to normal flow position.
- 7) Open a hot water faucet until water appears.
- 8) Your system is now ready for use.

Reactivating Camper after Storage

The following procedure checklist assumes that you stored the camper with care. If you didn't and extensive freeze damage or other serious deterioration may have occurred, please consult your Nücamp RV Dealer Service Center for advice.

Outside Area

- 1) Thoroughly inspect the outside of the camper and open all doors and compartments. Check for animals or insect intrusion, water damage or other deterioration.
- 2) Remove all appliance vent, ceiling vent and air conditioner coverings. Be sure all furnace, water heater, and refrigerator openings are clear and free of debris or insect nests, webs, etc.

NOTE: Spiders and other small insects climb into burner tube(s). The spiders create webs, build nests and lay eggs. These webs and nests can be very small, but they are very strong and can block the flow of gas.

Mud Daubers are another insect to watch out for. It is not uncommon for Mud Daubers to build their mud

huts in places like the furnace exhaust ports. This can be dangerous in two ways. First by causing a restriction that could cause carbon monoxide to build up on the inside of the camper, second, the same restriction can also cause heat and flame problems which could cause a fire. Both scenarios are dangerous and can cause death.

- 3) Open vents and windows.

12-Volt System

- 1) Prior to the battery installation, check charge level. Refill and recharge as necessary. Inspect cable ends and ensure that terminals are clean and free of corrosion. Place the battery into the compartment, install tie downs, and connect cables. Turn battery switch to “USE” position. Check battery condition on monitor panel.
- 2) Be sure all 12-volt DC and 120-volt AC circuit breakers are ON.
- 3) Inspect and operate all 12-volt lights and accessories.



120-Volt System

- 1) Inspect the 120-volt electrical system: Power cord, converter, and outlets. If defects are found, refer service to a **Nücamp RV Dealer Service Center**.
- 2) Prepare the AC generator (if equipped) for operation following instructions in the generator operating manual in your Owner’s Information Package.
- 3) Operate 120-volt AC appliances and air conditioner.

Fresh Water System

- 1) If the fresh water system has been winterized, drain the antifreeze from fresh water system.
- 2) Turn the water pump on and open all faucets until flow of antifreeze stops.
- 3) Do not let antifreeze stand on plastic sinks or outside shower components or stains may occur.
- 4) Open the water heater bypass valves.
- 5) Flush and sanitize the fresh water system as outlined in the “Fresh Water System” section.
- 6) Operate all faucets and fixtures in the fresh water system. Check for leaks at all joints and fittings. Repair if necessary.

Propane System

- 1) Turn on propane valve and inspect all pipes and fittings in the propane system. Check for leaks as outlined in the “Propane System” section.
- 2) Operate each propane appliance. Observe all burners and pilot flames for proper color and size. If there are any problems, refer to an authorized **Nücamp RV Dealer Service Center**.

General

- 1) Install new 9-volt battery in smoke detector.
- 2) Check the monitor panel operation.
- 3) Open and operate vents and vent fans.

Maintenance

- 1) Check the sealant around all roof, body seams, and windows. Reseal if necessary. See “Sealant renewal” subsection of the “MAINTENANCE” section.
- 2) Lubricate all exterior locks, hinges, and latches.
- 3) Wash and wax the exterior. Inspect the body for scratches or other damage. Touch-up or repair as necessary.

General Maintenance

This section explains why it is important to keep your camper well maintained, how to preserve the appearance of the exterior and interior and to follow basic maintenance safety precautions. Also included are several things you can do to help prevent corrosion. This section also includes Maintenance Schedules for when service should be performed on your camper and instructions for simple maintenance tasks you may want to take care of yourself. Regularly maintaining your camper is the best way to protect your investment. Proper maintenance is essential to your safety and will also reward you with many years of trouble-free use of your camper. The Maintenance Schedules specifies how often you should have your camper serviced and what things need attention. It is essential that you have your camper serviced as scheduled to retain its high level of safety and dependability. Keep accurate records of maintenance, service performed and follow all owner obligations, as required, to keep warranty in force.

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 RV 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.

You should clean your roof at least four (4) times a year. For normal cleaning use a mild liquid detergent and water mixture, or Murphy's Oil Soap with a soft nylon brush or sponge. Do not use solid or granulated cleaners, as they will mar the finish. For more difficult stains, use a cloth dampened with mineral spirits. DO NOT use mineral spirits in a large area or allow it to soak into the roof membrane.

CAUTION

Roof is slippery when wet.

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 with powdered graphite. 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 **Niucamp 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.

Roof

Twice a year inspection of roof components is necessary to ensure 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.

CAUTION

Use extreme caution when storing items on the roof. The roof can be very slippery when wet.

Jack Brackets

The corner jack brackets need to be inspected each time the camper is to be loaded or removed from the truck. These brackets can loosen and the seals separate during regular use due to rocking, while loading or unloading or while the camper is being stored. Retighten the bolts until they are snug and reseal the brackets as needed. Do not over-tighten as this can cause the fasteners to strip-out, creating the possibility of losing the jacks during travel.

Camper Jacks

The internal parts of the jacks are permanently lubricated at the factory and do not require any further lubrication. At least once each camping season fully extend the jacks and clean dirt and grime from outside of the inner tube. Coat the entire outside of the tube with silicone spray lubricant. This will protect the finish of the inner tube and provide lubrication between the jack's tubes. Clean dirt and automotive polish or wax to the outer tube of the jacks to maintain the appearance.

Turnbuckles

Each time the turnbuckles are installed, and any time they begin to squeak, place a few drops of oil into the turnbuckle barrel at the captive hook end. This will reduce squeaking caused when the turnbuckles dry out.

It is important that the turnbuckles be kept clean and protected from corrosive agents, such as salt spray, acid, rain, etc. This is best done by cleaning and waxing turnbuckles with a good automotive wax or chrome polish.

Air Conditioner

The air conditioner mounting bolts should be checked for tightness after the first 500 miles. Removing the interior shroud and inspecting the four (4) bolts located in the corners of the roof opening accomplishes this. Aside from securing the air conditioner to the roof, these fasteners apply pressure to the sealing gasket between the air conditioner and the top of the roof. Loose fasteners could cause water intrusion around the roof opening.

Overhead Vents

The vents can be cleaned from the top of the camper. Use soapy water on the vent cover. The screens may be vacuumed

or lightly brushed to remove accumulation of leaves or other debris. Lubricate the gears and mechanism yearly with a light, water resistant grease.

Skylight

The skylight/s should be cleaned at least once a year. Rinse the skylight/s with lukewarm water. Wash with mild soap and lukewarm water using a soft cloth or sponge and gently wash to loosen dirt and grime. **DO NOT SCRUB** or use brushes or squeegees. Repeat rinse and dry with a soft cloth to prevent water spotting.

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.

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, jacks, slide-outs, 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.

Awning

An operating and maintenance guide for your awning/s included in your Owner's Information Package. It contains instructions for opening and closing the awning, as well as maintenance and care instructions.

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 & 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 & Carpeting

Vinyl flooring requires only washing and periodic waxing. Vacuum the carpeting frequently to remove dirt. Ground-in dirt will make the carpet wear out faster. Periodically shampoo the carpet to keep it looking new. Use one of the foam-type carpet cleaners on the market. Follow the instructions that come with the cleaner, applying it with a sponge or soft brush. Keep the carpeting as dry as possible by not adding water to the foam.

Wood Product Care

Remove dust with a clean slightly damp cloth. Buff with a soft, dry cloth. Never use harsh detergents and solvents.

Fiberglass 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.

Laminate Counter 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.

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 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 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

Maintenance Chart 1

Service to Be Performed	Each Trip	Before Use At Set-Up & Weekly	Monthly
Inspect wiring, connector plug and receptacles	X		
Check exterior lighting	X		
Inspect & tighten mounting bolts on each jack corner	X		
Inspect & secure camper anchors	X		
Test propane leak detector for proper operation		X	
Test carbon monoxide detector for proper operation		X	
Test smoke detector for proper operation		X	
Inspect generator exhaust muffler & tailpipe clamps		X	
Check fire extinguisher			X
Inspect/clean battery cables, terminals, tighten wing nuts			X
Check battery charge (in storage)			X
Check battery electrolyte (in use)			X
Test GFCI (ground fault circuit interrupter)			X
Wash exterior			X
Inspect water pump filter	X		
Bleed propane tanks after filling per instruction label on tank/s	X		
Inspect TV strap for secure fit and that TV tray latch is engaged	X		

Maintenance Chart 2

Service to Be Performed	Every Six Month	Yearly & After Prolonged Storage
Inspect camper jacks & lubricate per manufacturer's instructions	X	
Inspect roof sealants (required)	X	
Inspect compartment & access doors, moldings & window seals (required)	X	
Inspect all hot, cold, & drain plumbing		X
Sanitize fresh water tank		X
Complete propane pressure check & system check *		X
Clean & lubricate overhead vents		X
Lubricate locks, hinges & hardware		X
Replace smoke detector battery		X
Inspect & tighten air conditioner mounting bolts		X
Lubricate TV antenna per manufacturers recommendations		X
Lubricate slide mechanism along each side of the slide arms		X
Wax Exterior		X

*Item marked with asterisk requires special equipment and/or qualified LP technician

Maintenance / Repair Schedule

Date	Maintenance/Service Procedure	Service Center Name/Address/Phone

Camper Loading & Checking

- 1) Load the camper onto the truck following the procedure in the “Loading and Unloading” section.
- 2) Check the operation of taillights, turn signals, backup lights, clearance lights, license plate lights, and emergency flashers.

Your camper should now be ready for a new traveling season. If you choose, your **nüCampRV** Dealer can double check your preparation and correct any defects or make any necessary adjustments.

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 (Tredit Tire) phone 855-8-TREDIT (855-887-3348) (warranty@tredittire.com)
- (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