

HERO CAMPER RANGER MANUAL



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All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication approval.

When new materials and production techniques are developed that can improve the quality of its product, or material substitutions are necessary due to availability, **HeroCamper** reserves the right to make such changes.

HeroCamper



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INTRODUCTION

Welcome to the **HeroCamper** family and thank you for selecting our Ranger. Congratulations on 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 Ranger, 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. Please carefully read the Limited Warranty in this manual. **HeroCamper** 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.

The Owner's Manual for your new Ranger is designed to respond to the most frequent inquiries regarding the operation, function, and care of the many systems that make modern trailering a joy.

Any modification done by the end user, will mean that the manufacturer can no longer guarantee the safety, nor is the warranty no longer applicable for those areas and the once the modification is related to. We have provided many important safety messages in this manual. Always read and obey all safety messages.



DANGER: indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING: indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION: indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



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

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

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



Safety

Safety precautions

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

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

Mold

Mold and mold spores exist throughout indoor and outdoor environments. There is no practical way to eliminate all mold and mold spores in the outdoor environment, however, the way to control indoor mold growth is to control moisture, by ventilating the units as much as possible.

Diesel heat

When using diesel heat system, do not stay inside kitchen tent. Always ensure to turn off diesel heat when staying inside the kitchen tent.

Tire safety

Properly maintained tires improve stopping, traction, and load-carrying capability of your vehicle. Please see page 20 (Maintenance for tire, care, and safety information). Also, be sure to read the Tire Safety Manual Addendum included with your owner's packet.

Lug nuts torquing

Making sure lug nuts on trailer wheels are tight and properly torqued is an important responsibility that trailer owners and users need to understand and practice. Inadequate and/or inappropriate wheel nut torque (tightness) is a major cause of lug nuts loosening in service. Loose lug nuts can rapidly lead to a wheel separation resulting in potentially serious safety consequences. See torque pattern on page 21.

Towing and weight distribution

Weight distribution is an important factor when loading your travel trailer. A camper with the cargo distributed properly will result in efficient, trouble-free towing. Please see page 14 (Towing) for more information.

Control sway

Sway or fishtailing is the sideways action of a trailer caused by external forces. Excessive sway of your trailer can lead to the rollover of the trailer and tow vehicle, resulting in serious injury or death. Please see page 14 (Towing) for more information.

GENERAL INFORMATION

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 Ranger and file appropriate individual warranty cards as required. You have joined the **#Hero** family, and as you begin making great memories using your new Ranger, we wish you a lot of exciting and adventurous days of camping.



NOTICE: Failure to properly maintain your trailer could result in loss of warranty coverage

Coverage provided

Within the warranty period, **HeroCamper** 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 dealership for a service appointment. If it is not possible to return to the selling dealership, contact the **HeroCamper** head office in Denmark, and they will provide you with the location of the nearest authorized dealer or repair facility.

The cost of transporting the Ranger to the dealer or service center shall be incurred and paid for by the Owner.

Owner's obligation

The purchaser must notify **HeroCamper** or a **HeroCamper** authorized dealer of any defect promptly upon discovery. Warranty repairs by a non- **HeroCamper** dealer or service center must be approved by **HeroCamper** customer service prior to any work being started. This is the only warranty given with the purchase of the Ranger 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, expressed or implied, not provided for in this limited warranty is waived by the owner, to the extent allowed by law.



Warranty

Limited warranty

HeroCamper warrants to the original end user purchaser (“Owner”) of this Ranger, to be free of defects in materials and workmanship and for structural integrity, under normal use, with care and maintenance, according to page 17-22, for 12 months 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 **HeroCamper** therefore makes no warranty with respect to component parts constructed or assembled by other manufacturers, including electrical appliances, 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 Ranger.

What is not covered

1. Tires, batteries, refrigerator, air conditioner, tents/visor, as well as other materials, parts, and components warranted by persons or entities other than **HeroCamper**. Please refer to the warranties of component manufacturers for terms and conditions of coverage
2. Accessories and equipment that are working as designed, but you are unhappy with due to the design
3. Any part of component of the Ranger that has not been manufactured or installed by **HeroCamper**
4. Normal deterioration due to wear or exposure, including but not limited to upholstery, flooring rust, corrosion, oxidation, and cosmetic blemishes
5. Normal maintenance and service items, including but not limited to light bulbs, fuses, lubricants, sealants, and seals, as well as door adjustments
6. After-market equipment or accessories installed on the Ranger after completion of manufacture by **#HeroCamper™**, or any defects or damage caused by such items
7. Rangers not purchased through authorized dealer of **HeroCamper** and Rangers purchased directly or indirectly through auction, salvage, repossession, or other non-customary sale means
8. Defects or damage caused by, in whole or in part, or in any way related to: Accidents, misuse (including off-road use. I.e. use in terrain that requires 4 wheel drive and individual suspension), or negligence; Failure to comply with the instructions set forth in any owner’s manual provided with the Ranger; Alteration or modification of the Ranger except such alterations or modifications approved in writing by **HeroCamper**; Acts of God or other environmental conditions, such as lightning, hail, salt causing rust, or other chemicals in the atmosphere; De-icing agents or other



chemicals applied to the Ranger; Failure to properly maintain or service the Ranger, including but not limited to the maintenance of lubricants, sealants, and seals; Condensation and the result of condensation including water damage and the growth of mold or mildew. Mold and mildew are natural growths given certain environmental conditions recreation purposes, including but not limited to use of the trailer for residential, commercial, disaster relief, or rental purposes; The addition of weight to the Ranger that causes the total weight to exceed applicable weight ratings, or addition of weight causing improper distribution of the weight of the Ranger; Failure to seek and obtain repairs in a timely manner; Failure to use reasonable efforts to mitigate damage caused by defects; Failure to properly ventilate the trailer; Improper electric power supply or improper trailer hookup to other facilities; Acts or omissions of any person or entity other than **HeroCamper**

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 Ranger, 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. **HeroCamper** does not provide warranty on equipment or accessories installed at any dealership or other place of business, or by any other party.

This Limited Warranty is intended to comply with the requirements of EU legislation. 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 country to country.

Reporting safety defects

For detailed information about your Ranger, please go to www.herocamper.com. If you have any questions or concerns, please contact your authorized **HeroCamper** Dealer.

CAMPING

Suggested Pre-Travel Check list

Interior

1. Turn off water tap switch
2. Check battery
3. Close windows and vents
4. Shut all interior cabinet doors
5. Hold down or stack securely all loose, hard, and sharp objects
6. Turn off interior lights
7. Zip up shades
8. Secure and lock all doors



Exterior

1. Disconnect and stow the electrical hookup cord
2. Retract support legs
3. Check hitch for proper attachment
4. Check safety chains and breakaway switch cable
5. Fully retract hitch jack wheel. Remove wood block
6. Check clearance and stoplights
7. Check lug nuts
8. Check tires for correct pressure
9. Adjust tow vehicle mirrors
10. Pull forward about 25 meters, test brakes, and check site for forgotten objects and cleanliness

Trailer Equipment and Accessories

1. Power cord adaptor, 30 Amp capacity
2. 10 meters electric cord, 30 Amp capacity
3. Blocks for leveling
4. Cross-type lug wrench and a torque wrench
5. Quality tire gauge
6. Emergency road warning triangle
7. First aid kit

Overnight stop

Hero Camper Ranger owners have parked virtually in every place imaginable, from filling stations to farmlands.

In time, you will develop a knack for scouting wonderful little roadside locations by turning off the main highway and exploring.

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

When stopping for the night, your camper is built to be safely parked in any spot that is relatively level and where the ground is firm. Your facilities are with you. You are self-contained. Unless the tow vehicle is needed for transportation, it is not necessary to unhitch. Choose the most level parking spot possible. Support legs or blocks may not be required for an overnight stay.

Before moving on, check your campsite, both for cleanliness and, to be sure you have not left anything behind. Make sure everything is properly stowed. Use your pre-travel check list, and you are ready for more travel adventure.



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

Extended stay

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

Leveling

Level from front to rear by disconnecting the hitch from the tow vehicle and adjusting the jack up or down until you are level. Block or chock the wheels to keep your Ranger from rolling. Use the support legs at the two rear corners, to eliminate the natural spring action of the axles.

Support legs

The support legs are located at the rear corners of the Ranger. Use the manual handle to lock the legs into position. Support legs should only be lowered enough to contact the ground.



WARNING: Support legs are designed to stabilize the Ranger only. Misuse of the support legs to level or lift the Ranger may result in damage to the legs and potentially the Ranger



WARNING: Whenever the Ranger must be lifted, as when changing a tire or leveling on very rough terrain, always place the lifting jack under the main frame rail. Never use support legs to lift the Ranger

Effects of prolonged occupancy

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

Moisture can condense on the inside surfaces of the Ranger during cold weather, when relative humidity of the interior air is high. This condition is increased because the insulated walls of the Ranger are much thinner than house walls. Also, the relatively small volume and tight compact construction of the modern Ranger means that the normal living activities of even a few occupants will lead to rapid moisture saturation.

Estimates indicate that a family of four can vaporize up to 11 liters/3 gallons of water daily through breathing, cooking, bathing, and washing. Unless the water vapor is carried outside by ventilation, or condensed by a dehumidifier, it will condense on the inside of the windows and walls as moisture, or in cold weather, as frost or ice. It may also condense out of sight, within the walls or the ceiling, where it will manifest itself as warped or stained panels.

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

Tips to controlling condensation

Avoid dead air spaces by:

1. Opening windows to keep air circulating
2. Keeping the temperature as reasonably cool as possible during cold weather
3. Allowing your Ranger to breathe; do not make it airtight
4. Allowing some warm air to be removed and some cool outside air in
5. In hot weather, starting the air conditioner early will help remove excess humidity from the air while lowering temperatures



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

Molds

Molds are microscopic organisms that naturally occur in virtually every environment, indoors and out. Outdoors, mold growth is important in the decomposition of plants. Indoors, mold growth is unfavorable. Left unchecked, molds break down natural materials, such as wood products and fabrics. Protect your investment by understanding the potential risks that mold imposes.

Contributing factors to mold growth

For mold growth to occur, temperatures, indoors or outdoors, must be between 4°C/40°F and 38°C/100°F, and must also have a source of moisture, such as humidity, standing water, damp materials, etc. Indoors, the most rapid growth occurs with warm and humid conditions.

Inhibiting mold growth

By controlling relative humidity, the growth of mold and mildew can be inhibited. In warm climates, use of the air conditioner will reduce the relative humidity even during colder weather. Opening a window during

these activities will assist in ventilation. In extremely humid conditions, the use of a dehumidifier can be helpful.

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

For more information concerning controlling moisture in the Ranger, read **Tips to controlling condensation** on page 11.

Safety

As always, safety should be a top priority. Ensure that you, and everyone travelling with you, can operate the main and rear door rapidly, without lights. Contemplate other means of escape in case the designated exit is blocked. The side windows can be vented to allow fresh air and stale air to escape. However, the windows were not designed as escape windows. Be sure to keep both doors unblocked for means of escape, if necessary.



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



WARNING: Do not smoke inside the Ranger. Keep matches out of reach of small children. Do not clean with flammable material. Keep flammable material away from open flame



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



WARNING: The window operation should be checked before each trip

INTERIOR

General information and cleaning

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

Interior skin

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

Water tank

Notice that the water sitting in the tank under the sink is non-potable. Non-potable water has a wide range of uses, however drinking water is not one of them. Water that has not been examined or properly treated as an approved water source, should not be consumed.

Even though you fill in potable water in the tank, the quality of the water in a water tank rapidly deteriorates. Especially high temperature in the summer encourages the growth of harmful bacteria. Bacteria are free to multiply rapidly, as the water is not moving and stays in an enclosed space. Bacteria and/or mold will particularly gather along the walls and in the tubes of the tank.

For your safety, you should sanitize your water system when your Ranger is new or when it has been sitting unused for a period and it may have become contaminated.



WARNING: The water in the water tank is non-potable. Sanitize, flush, and drain before using. See the maintenance and winterization guide on page 17 & 22 for instructions. Failure to comply could result in illness, death, or serious injury

EXTERIOR

General information and operation

Doors

The doors of the Ranger are manufactured with an integrated door lock, which is engaged from the outside by use of a key. The doors are fixed to the side walls by self-tapping screws and sealed by glue all around the gaps.

When the doors are open fully and fixed into locking system, please remove the key from the door lock beforehand.



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

Rear door

The rear door provides access to the rear kitchen area, the rear door lock is opened by the same key for side lock. Before driving, the rear door must be locked.



Towing

Tow vehicle

When buying a new vehicle to tow your Hero Camper Ranger, we suggest including towing options offered by most tow vehicle manufacturers. These include such things as heavy-duty alternator and radiator, heavy-duty springs and shock absorbers, transmission cooler, heavy-duty fan, and flasher unit, etc. for the make of the vehicle. Transmissions may be manual or automatic, but an automatic transmission may prolong your tow vehicle's life and generally does a better job of controlling engine loads than does the average driver using a manual shift.

Having adequate power is very important when considering the purchase of a new vehicle or the trailer-towing capability of your present one. Auto dealers are provided with guidelines to use when helping a customer decide on a tow vehicle. Guidelines are not determined solely by the power output of the engine. The gear ratio of the differential is also a very important part of the guideline.

Inspect the tow vehicle's hitch regularly for loose bolts or nuts, cracked welds, loose ball mounts, worn parts etc.

Remember that every item you take along is one more thing to tow and adds weight to the total load you must pull. Consolidate items in shelves, lockers, and in the refrigerator. It is better to have one full and one empty locker, than two half empty ones. Special care must be taken not to overload the front and rear ends of the trailer.

Loading

When towing a trailer such as your Hero Camper Ranger, you are subject to new and different challenges on the highway than you may have previously encountered. Towing a trailer is no small responsibility and should be undertaken with great care and safety first in mind. An accident with a tow vehicle and trailer can have much greater consequences than carelessness with a small car. Like an airline pilot who is responsible for expensive equipment and many lives, you should take your responsibilities as a tow vehicle driver very seriously and learn all you can about doing this job safely and well. Balancing the load and preparing the trailer and tow vehicle are critical to safe handling.

One of the most critical aspects of safely towing a trailer is knowing the weight involved and where they are placed. The first thing to determine is how much is being towed and confirming that it is within the capacities of the equipment being used. Determining where the load is placed is critical to the way your rig will handle on the road. Know what your Hero Camper Ranger weighs loaded. Load your Ranger including water, propane etc. and take it to public scale. Weigh each axle of your vehicle.

Refer to your axle weight and tire limits to see if you are within a safe range. Total all axle weights, ensuring you are below the Gross Vehicle Weight Rating (GVWR). Make sure your load is balanced. Do not load too much on one side. A balanced load is much easier to tow or drive. Front to back balance is also important. Step back and look at your Ranger, making sure there is not too much weight on the hitch, or on the rear of the Ranger. Secure all items, as loose items can cause damage and become a safety issue.



As cargo is added, removed, or shifts in location, the weight on the axle and hitch will change. Also, the transfer of weight because of water in the freshwater tank being used, the reduction in hitch weight may be significant. When loading the Ranger, keep the following in mind:

- GVWR
- Gross Axle Weight Rating (GAWR)
- Tire Weight Rating
- Cargo should never exceed these rating. Your safety depends on not overloading the trailer, trailer axles, and tires

While driving

IMPORTANT!!

Danger of injuries and damage to the vehicle

- Pay attention to the dimension of the vehicle during shunting maneuvers, through passages, bridges, tunnels and by overhanging branches
- Vehicle dimensions, see registration documents
- Additions and extensions change the weight and dimension. From a technical point of view, the Hero Camper Ranger is designed for a maximum permitted speed of 100 km/h. This maximum speed must not be exceeded, even if higher speeds are allowed in the country of travel. Always observe speed limits that independently differs in individual countries

REFERENCE!

- It is forbidden for people and travelling pets to stay in the camper while driving

Observe the following while driving:

- Check the function of the braking system and the braking characteristics (direction of travel, the function of the inertia brake, etc.) by applying the brake at low speed before running
- Adapt the driving styling to the size of the vehicle, drive considerately and with foresight
- Drive slowly on bad roads
- Drive as fast down mountain as up mountain
- Shift to the next gear in time
- Avoid hard braking
- Avoid steering in jerks, as the trailer train may start to sway
- When driving over bridges, crosswinds must be expected. Due to the vehicle's size and height, a trailer is more sensitive to crosswinds than a passenger car
- When a truck train is overtaken, the trailer train can enter an air suction. An easy counter-control cancels this effect
- Do not underestimate the length of your trailer train
- Consider the large radius of curvature of the trailer when turning onto a road, and when driving in curves
- The braking distance of a trailer train is considerably longer than that of a passenger car. Increase the safety distance accordingly

Equipment

When hitched together, the trailer and the tow vehicle must be leveled. The tires of both the trailer and the tow vehicle should be in good condition and properly inflated to their recommended pressures.

MAINTENANCE

Maintenance schedule



WARNING: Failure to maintain your Ranger can cause premature and unexpected parts breakage and/or erratic operation that may be hazardous



NOTICE: See appliance manufacturer’s literature for further information

Service to be performed	Each trip	Before use at set-up & weekly	Monthly
Inspect wiring, connector plug and receptacles	X		
Check exterior lighting	X		
Test smoke detector for proper operation	X		
Check fire extinguisher		X	
Inspect/clean battery cables and terminals			X
Tighten wing nuts			X
Check battery charge (in storage)			X
Check battery electrolyte (in use)			X
Wash exterior			X

Service to be performed	Every six months	Yearly & after prolonged storage
Inspect nosewheel & lubricate according to manufacturer’s instructions	X	
Inspect roof sealants (required)	X	
Inspect compartment & access doors (required)	X	
Inspect moldings & window seals (required)	X	
Inspect all cold & drain plumbing		X
Sanitize freshwater tank		X
Lubricate locks, hinges & hardware		X
Wax exterior		X



WARNING: The maximum speed rating on the tires installed on your Ranger is 120 km/h. Do not exceed this rating. Failure to heed this warning could cause catastrophic tire failure resulting in property damage, personal injury, and/or death



WARNING: When removing aluminum-forged wheels from the spindle, it is very important to mark them to ensure the wheel is placed in the same position of the drum when reinstalling. If the aluminum-forged wheel is to be mounted on a different drum, it is important to sand all loose corrosion from the mating surfaces



WARNING: Wheel separation can occur

1. On first trip, tighten wheel nuts at beginning of trip
2. Thereafter, check wheel nuts before each trip
3. Following winter storage, check wheel nuts before beginning a trip
4. Following excessive braking, import wheel nuts. Do not over torque

The load and inflation information

Maintaining proper tire inflation pressure is essential for both tire safety and performance.

Proper tire inflation

The level of air in your tires affects your vehicle's overall performance. A maximum inflation pressure specification is found on your Ranger's exterior on a sticker on the front left corner of the Ranger, as well as on the original equipment of the tires.

Air pressure should be checked based on the load on each individual tire. Cold Inflation Pressure should be adjusted to handle the maximum tires load, and all tires on the axle should carry the same inflation pressure. Cold tire inflation pressure is the tire pressure checked in the morning before you drive more than a few miles or before rising ambient temperatures of the sun's radiant heat affects it.

Underinflated tires

Underinflation brings a higher risk of damage due to road hazards, reduce casing durability, cause a loss in fuel economy, and will result in uneven or irregular tire wear. Severe underinflation brings about an increased risk of tread separation, handling difficulties, and possible tire failure, caused by overheating.

When minimum inflation pressure requirements are not met, tire durability and optimum operating conditions are compromised. Tire inflation pressure should always meet the guidelines for vehicle weight.



Observe the following:

- It may be necessary to inflate your tires at a truck stop or truck service center to achieve adequate air pressure for your Ranger's needs
- Only permanent air seal metal valve caps should be used
- Be safe – if a tire has been run in a 20% underinflated condition, it must be dismantled and inspected by a trained professional. It should not be aired up without a full inspection or without using a safety cage. Use a calibrated gauge
- If your tire is rated for higher inflation pressures, a special gauge will be required designed for larger tires
- Do not bleed air from warm tires to reduce pressure buildup
- Do not inflate tires to cold PSI rating beyond rim specifications

How overloading affects your tires

Tire pressure is what enables your Ranger tire to support loads, thus, overloading can have serious consequences. Too much weight can cause stress on the suspension system components, brake failure, handling and steering problems, irregular tire wear, and possible tire failure. If you discover that your tires cannot handle the load, lighten the weight of the load on your tires.

Tire care

The most important function of tires is to provide traction while moving, and grip when steering or stopping. The tires on your Ranger are designed for highway use and must be properly maintained to maximize tire life, as well to provide a safe mode of transportation.

Tire care tips

To reduce the risk of tire failure, we strongly recommend the following:

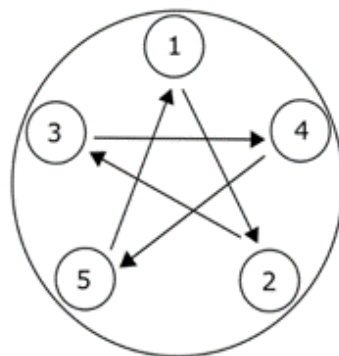
1. Check the pressure in your tires, including your spare, at least monthly when the tires are cool
2. Never overload your tires. Heed the maximum load-carrying capability of your tires
3. Check your tires frequently for scrapes, bulges, separations, cuts, or snags resulting from use. See your tire dealer immediately, if any such condition is discovered
4. Never operate your vehicle more than lawful speeds or the maximum speeds justified by driving conditions, or more than speeds recommended for the tires you are using
5. Make every effort to avoid running over objects that may damage the tire through impact or cutting, such as chuck holes, glass, metal, etc.

Lug nut torquing

Trailer wheels must carry much higher loads per wheel than passenger car or truck wheels. Each wheel may carry 450 kg/1,000 lb and higher. Furthermore, wheels on tandem axle trailers do not steer, and are subjected to very high side load stress whenever the trailer makes a tight turn. When going around corners, especially

on slow, tight turns, the wheels are subject to every strong side loads. This tends to flex the wheel and gradually loosen the wheel nuts. Although the materials and manufacturing methods are maximized for this kind of service, these extra loads can cause stress, which can result in flexing and loosening of wheel nuts.

Before each trip and anytime a wheel is replaced, be sure to tighten the wheel nuts, following the lug-pattern sequence shown below. If the wheel was replaced, check the torque every 15, 40, and 80 km/10, 25 and 50 miles.



Five-Bolt

If you notice wheel wobbling, or hear a rattling sound coming from a wheel, especially at low speeds, a wheel lug nut may have come loose. This problem is usually caused by improper tightening, or by faulty or damaged lug bolt threads.

If suspicious of a loose lug nut, safely stop the vehicle as soon as possible. Put up warning devices. Remove the lug caps and check the tightness of the lug nuts. Tighten all lug nuts to the specified torque, using a torque wrench. If stud threads are damaged or faulty, get professional help.



NOTICE: Use a torque wrench to tighten lug nuts. Tightening by hand or with an impact wrench is not recommended. See the Specification Chart in this manual for wheel torque ratings

Spare tire carrier

The Hero Camper Ranger's spare tire is held on a frame fixture on the trailer side. Use a regular hex wrench to loosen the bolts for spare tire and take it down by hand. To secure the spare tire onto the frame fixture, please see above Five-Bolt drawing.



CAUTION: The frame is designed to carry a tire and wheel combination of max. 28 kg/61 lb

Brakes

Due to normal brake lining wear, the brakes should be checked every six months or 15,000 km/10,000 miles, whichever comes first. Brakes and wheel bearing are considered wear parts and are not included in warranty.

Battery storage

During the winter, the batteries should be removed from the trailer and stored in a dry place, where there is no danger of freezing – optimal temperature around 15°C/60°F. They should be kept away from water, cleaned, and charged from 30 to 80% of capacity. A battery that can completely lose its charge will never regain its original power or a full charge.

The following recommendations may be helpful if the battery is to be stored:

- When storing the battery in a vehicle or vessel, it is not necessary to leave it on charge. Disconnect the negative battery cable. This will prevent inadvertent discharging of the battery which may lead to a complete discharge
- Fully charge the battery before putting it in storage and store in a cool place
- Charge the battery every 30 to 60 days to ensure maximum battery life



NOTICE: A battery will self-discharge 1 to 3% per month at 26°C/80°F

WINTERIZING AND STORAGE

When storing your Hero Camper Ranger for short or long periods, use the same precautions as you would in your own home regarding perishables, ventilation, and rain protection. In addition, for prolonged storage periods, flush out all the drain lines, also drain the entire water system including the water storage tank. Instructions for draining the water system are explained in the following paragraphs on winterizing.

The main consideration in winterizing your Ranger is to prevent the following items from freezing; water pipes, tank, pump, the waste drain system including the traps and tanks, and the batteries.

To completely winterize your Ranger, follow this procedure:

1. Level the Ranger from side to side and front to rear. Open all faucets
2. Turn the water tap switch to the ON-position to expel water from the storage tank
3. Turn the pump switch OFF after all water has been removed from the storage tank
4. Remove the water pump inlet connection from the portable tank and turn the pump on until all the water is expelled from the system
5. Ensure that the batteries are stored in a dry place where there is no danger of freezing – optimal temperature around 15°C/60°F. It is very important for optimum life of a battery to check it periodically and to keep it charged from 30 to 80% of capacity. Please be aware that Lithium batteries should never be charged below 5°C/41°F



For additional winterizing protection, add a non-toxic antifreeze (approved for drinking water systems) to the water lines using the following procedure:

1. For antifreeze usages follow manufacturer's instructions found on label of container
2. Insert hose length into the antifreeze container, turn the pump switch on, and run the water pump until the antifreeze solution fills all water lines

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