



MISSION

OVERLAND

OWNERS MANUAL

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THANK YOU!

Thank you and congratulations on the purchase of your new Mission Overland Trailers Summit! We have put years of research and testing into this trailer and we are confident it will take you anywhere you want to go – just make sure to tell us about it!

The Summit was designed for everyone and can handle a wide array of adventures, whether you are a family of three looking to scope out some National Parks, or a devoted ‘overlander’ looking for some remote solo adventures. At Mission Overland we operate on the principle that bigger isn’t better – we focus on smart design and create products with only the features we believe will enhance your camping experience and allow you to further connect with nature.

It is important to review this Owner’s manually thoroughly before your first use. While the Summit model is compact, there are many features, components, and electronic you should become familiar with before you begin your adventure – this will ensure a safe and enjoyable for you and those around you.

Mission Overland prides itself on its relationship with its customers and the community of adventure seekers that surrounds them, which is why we always want to be there for you when you need us. If you have any questions surrounding your Summit trailer, please feel free to contact us at customerservice@missionoverland.ca. Most questions can we answered quickly and easily, so don’t be shy!

Happy Travels!

Mark Badgerow
Mission Overland Founder

WARRANTY

Subject to the terms and conditions set forth herein, **MISSION OVERLAND TRAILERS LLC** (hereinafter referred to as the “**Manufacturer**”, “**MISSION OVERLAND**” or “**MISSION**”), warrants as follows with respect to the recreational trailer to which this Owner’s Manual has been provided with (the “**Trailer**”):

1. the Trailer Components will, for a period of twelve (12) months following the Owner’s purchase of the Trailer from either (a) the Manufacturer or (b) a Dealer (the “**Component Warranty Period**”), be free from defects in material or workmanship and will conform to all written specifications provided by the Manufacturer; and
2. the Tubular Trailer Frame Chassis only will, for a period of twenty four (24) months following the Owner’s purchase of the Trailer from either (a) the Manufacturer or (b) a Dealer (the “**Frame Warranty Period**”), be free from defects in material or workmanship and will conform to all written specifications provided by the Manufacturer.

(the above warranty referred to herein as the “**Warranty**”).

Terms and Conditions of Warranty

1. The Warranty becomes effective only if the online warranty card is fully completed and mailed/mailed to the manufacturer within (30) days of the date of purchase by the Owner. The Manufacturer will confirm Warranty registration.
2. The Warranty is the only warranty on the part of the Manufacturer and there is no other representations or warranties, express or implied, other than as expressly set forth or referred to herein and, without limiting the generality of the foregoing, the Manufacturer does not make any warranties to the owner or to any other person or entity, whether express, implied or statutory, as to the description, quality, merchantability, completeness or fitness for any purpose of the Trailer or information provided hereunder or described herein, or as to any other matter all of which warranties are hereby excluded and specifically disclaimed.
3. The Warranty does not apply to any Non-Warranty Components. The Manufacturer is not the manufacturer of the following products: ranges, ovens, range hoods, refrigerator, furnace, air conditioner, water heater, windows, jacks, electrical components, and LPG (liquid propane gas) accessories. The Manufacturer has not conducted any independent tests for Non-Warranty Component’s quality and fitness and makes no expressed or implied representation or warranty regarding their freedom from defects.
4. If any defects in material or workmanship are discovered during the applicable Warranty Period, the Manufacturer will, at its sole discretion, repair or replace the defective component.
5. Any defects must be brought to the authorized selling dealer from whom the Trailer was purchased, or to the Manufacturer no later than ten (10) days after the discovery of such

defects and must contain a written description of the defect and the Vehicle Identification Number of the Trailer.

6. The Warranty is effective only for the applicable Warranty Period and only in respect of any defects reported to the manufacturer discovered during the applicable Warranty Period. The Warranty does not apply to the cost of transporting materials or units to or from the repair site.
7. The Warranty applies only to new Trailers operated in the ordinary course and in accordance with the Manufacturer's specifications and guidelines (as may be modified or amended from time to time). The Warranty will be void and of no effect if (a) any after-market modifications are made to the Trailer, (b) any repairs are made to the Trailer using non-authorized parts, (c) the Owner fails to maintain the Trailer in a reasonable manner; or (d) in the opinion of the manufacturer, damage has occurred because of misuse, acts of God, negligence, or other causes beyond control of the Manufacturer.
8. As used herein, the following terms have the meanings given thereto:
 - a. **"Dealer"** means an authorized dealer of the Manufacturer's trailers or products.
 - b. **"Non-Warranty Components"** means any part, product or component included with or affixed to the Trailer which are (i) consumables, (ii) are not manufactured by the Manufacturer, or (iii) are covered by separate warranties of the individual manufacturer of such component (including but not limited to windows, tires, batteries, ranges, ovens, range hoods, refrigerator, furnace, water heater, jacks, electrical components, and LPG (liquid propane gas) accessories.
 - c. **"Owner"** means the original purchaser of the Trailer from the Manufacturer or a Dealer and excludes any person which has purchased the Trailer from a person other than the Manufacturer or a Dealer.
 - d. **"Trailer Components"** means any part, product or component of the Trailer excluding the Trailer Frame and the Non-Warranty Components.
 - e. **"Tubular Trailer Frame Chassis"** means the lower chassis frame of the Trailer, excluding any Non-Warranty Components.
 - f. **"Warranty Period"** means either the Component Warranty Period or the Frame Warranty Period, as applicable.

The Warranty is in substitution for and eliminates all other liabilities of any kind whether arising under statute, in tort, by implication of law or otherwise, including, to the full extent as may be allowed by law, liability for any other representations respecting the Trailer, statutory warranties or implied warranties or conditions as to the Trailer's merchantability or fitness. The Manufacturer's sole liability for a breach of the Warranty, and the Owner's sole remedy, shall be the repair or replacement of the defective component, as applicable. Under no circumstances shall the Manufacturer be accountable to any person for loss or damage to the Trailer or its parts, loss of time, inconvenience, business loss, consequential or other damages or any other claims associated to or amounting from any defect in factory materials or workmanship whenever found except as provided for herein.

Mission Overland Trailers LLC. reserves the right to change any components used in production at their discretion.

Ensure this Owner's Manual remains in your trailer at all times, and ensure to keep the manuals, stickers and tags associated with your trailer's items, add-ons, appliances and equipment in the trailer as well.

This manual is not intended to be inclusive of every operational aspect of your unit. It should be utilized and referenced by you in conjunction with separate, additional manuals provided by the manufacturers of the different components, component parts, appliances, add-ons, systems, and accessories in your unit. Your unit will contain any such manuals provided to Mission overland, by the specific component part, appliance, add-on, system and accessory manufacturer. You can also find the latest updates and compiles online at our website. Please read them to gain a better understanding of the operation and maintenance of the products and appliances installed on your trailer.

READ THE ENTIRE MANUAL AND OBEY ALL CAUTION, WARNING, DANGER AND OTHER SAFETY-RELATED STATEMENTS PRIOR TO OPERATING YOUR TRAILER.

This Owner's Manual contains the most up-to-date product information available at the time of publication. However, due to continuous product development, innovation and improvements, Mission Overland Trailers Corp. reserves the right to make changes in production techniques/processes, product materials, product specifications and components. Such changes may be made without prior notice or any obligation upon Mission Overland Trailers Corp. to make corresponding changes or improvements in or upon its already manufactured, installed and/or sold trailers and/or products. Please visit our website at <http://www.missionoverland.ca> to check for manual updates and our current manual.

SAFETY TERMS

We have included various safety messages in this manual, all of which are important. Please read and obey them. The following are safety-related terms and symbols referred to in this manual and their corresponding meanings/definitions:

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

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

CAUTION indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

NOTICE is used to address practices not related to personal injury. This applies to hazardous situations involving property damage or important information regarding the maintenance of your vehicle.

OVERVIEW AND SAFETY PRECAUTIONS

You'll find various safety-related references, discussions and instructions throughout this Owner's Manual; all of which are important. Please carefully read and follow all safety issues discussed in this manual. If you have any questions regarding trailer safety issues, please contact your dealer and/or Mission Overland. (customerservice@missionoverland.ca).

The following is a broad snapshot of a few of the more common safety instructions in the use and operation of your new trailer:

1. Be sure load/cargo weight does not exceed your GVWR and that weight is distributed properly before travel. Please refer to the "Loading" section.
2. Fully close-up and lock your trailer before towing.
3. Be sure safety chains and breakaway switch have been properly attached and secured as part of your hitching up process.
4. Be sure to have a qualified technician conduct the maintenance, service and adjustments on your brakes periodically and as needed. Do NOT travel until all brake problems, if any, are fixed. Please refer to the 'Brakes' section for more details.
5. Test your brakes and lights before towing on a public road, confirming that they are working properly and in synchronization.
6. Do not allow passengers to ride in the trailer during travel. Transport of people in your trailer puts their lives at risk and is illegal. Your trailer does not have seat belts and is not designed to carry passengers.
7. Be vigilant in your tire inspection and maintenance. Properly maintained tires improve the steering, stopping, traction, and load-carrying capability of your trailer and tow vehicle. Under-inflated tires and over-loaded vehicles are major causes of tire failure. Please refer to "Tires" section for a more detailed discussion on your tires and tire safety.
8. Keep your trailer well-ventilated. Please refer to the "Ventilation" section for details.
9. Clean your potable water hose, and drain and clean holding tanks periodically or as needed.
10. Be sure all electrical uses and activities involve proper grounding.
11. Reduce fishtailing & sway. Excessive sway of your travel trailer can lead to the rollover of the trailer and tow vehicle resulting in serious injury or death. This usually due to incorrectly loading the trailer but can also indicate road conditions or trailer damage. You may choose to install a separately purchased sway control device to help reduce sway. Be sure to contact your dealer or Mission Overland if you have any questions regarding sway control device alternatives. Please also refer to the sway and fishtailing discussion in the "Towing" section.
12. Generator Safety. If you decide to use a generator, do not operate it inside the trailer or in any other enclosed space. Be sure to follow all instructions and warnings in the manual provided with the generator, if any.

13. Lug nut torque. Be sure wheel mounting nuts (lug nuts) on trailer wheels are tight and properly torqued. Inadequate and/or improper wheel nut torque (tightness) is a major reason that lug nuts loosen. Loose lug nuts can rapidly lead to a wheel separation with potentially serious safety consequences. Refer to a qualified technician before travel if you have any questions regarding your wheel nut torque. See also “Tires” section.
14. Appliances and equipment. Some Summit equipment (cooktop, furnace, etc.) operate on propane. Propane is highly flammable and contained under high pressure. Improper use may result in a fire and/or explosion. Be sure to follow the instructions and warnings provided by the manufacturer of such appliances, if any.

HITCHING

Our trailers require a 2” diameter hitch ball. Use of any other hitch ball diameter size will create an extremely dangerous condition that can result in separation of the coupler and ball, and/or hitch ball failure. Other than this crucial 2” diameter requirement, there are numerous trailer hitches and hitching components available to you for your trailer. Be sure to consult your tow vehicle manufacturer for hitch and/or hitch assembly alternatives.

Be sure your hitch and tow vehicle are rated for the Gross Vehicle Weight Rating (GVWR) of your trailer. Remember that the hitch load rating must be equal to or greater than the coupler load (the hitch is attached to the vehicle, the coupler to the trailer). Be sure the hitch size matches the coupler size.

Examine all hitch components before hitching, looking for wear, corrosion, deformations, stripping and cracks. Replace worn, corroded or cracked hitch components before coupling the trailer to the tow vehicle. Be sure the hitch components are tight and that the ball-locking device works freely before coupling the trailer to the tow vehicle. Remember to also inspect the safety chains. Be sure to correct any noted problems or defects before towing the trailer.

Important Note: Be sure to raise all trailer jacks and close the trailer fully before hitching (i.e. close all doors and windows and raise the steps). Your trailer is equipped with a 7-pin connector, which synchronizes the lights of your tow vehicle and trailer. It can also connect their respective braking systems. Your trailer is equipped with electric brakes.

Electric brakes are not required in every State/Province; however, we recommend that you use them.

WARNING: THE PROPER SELECTION AND CONDITION OF THE COUPLER AND HITCH IS ESSENTIAL TO THE SAFE TOWING OF YOUR TRAILER. A LOSS OF COUPLING MAY RESULT IN DEATH OR SERIOUS INJURY.

WARNING: AN IMPROPERLY COUPLED TRAILER CAN RESULT IN DEATH OR SERIOUS INJURY.

WARNING: USE OF A TOW VEHICLE WITH A TOWING CAPACITY LESS THAN THE LOAD RATING OF THE TRAILER CAN RESULT IN LOSS OF CONTROL, AND MAY LEAD TO DEATH OR SERIOUS INJURY.

Hitching up your trailer will get easier with practice. The hitching steps described below are typical. However, we highly recommend that you also consult the hitching and unhitching instructions associated with your tow vehicle and hitching configuration.

Hitching Steps and Instructions:

1. Crank the tongue of the trailer jack until the hitch coupler is raised enough to clear the tow vehicle.
2. Back the tow vehicle to the trailer until the hitch ball is directly under the trailer coupler. The use of a backing aid mirror may be helpful, especially if you are hitching alone.
3. Set the parking brake in the tow vehicle.
4. Be sure the coupler latch-locking lever is fully open, and then lower the tongue jack until the ball is firmly seated in the socket.
5. Close the coupler latch and secure it with a locking pin or bolt. If you cannot get the latch to go down try pulling the tow vehicle forward a few inches.
6. Securely attach the safety chains in a crossing pattern to the tow vehicle and confirm that they are properly connected to the trailer. Do not fasten chains to any part of the hitch unless the hitch has holes or loops designed specifically for that purpose, be sure the chains do not drag during towing.
7. Connect the breakaway switch. Attach and secure the breakaway switch cable to the tow vehicle bumper or frame independently of the safety chains. The following are guidelines for attaching the cable:
 - a. The cable should come straight out from the switch to attach to the tow vehicle.
 - b. The switch and cable should be located and secured on the same side of the trailer and tow vehicle.
 - c. Do not loop the cable over the hitch ball; the cable may bounce off while the vehicle is moving.
 - d. Before towing you may test the breakaway assembly by pulling the pin out of the switch to confirm activation of the trailer electric brakes.

WARNING: DO NOT CONNECT THE BREAKAWAY SWITCH LANYARD TO THE HITCH BALL OR ANY PART OF THE HITCH ASSEMBLY.

Note: Your breakaway switch will automatically engage the electric trailer brakes if the safety chains fall during uncoupling.

8. Adjust side mirrors.

9. Check all lights on trailer and tow vehicle, ensuring that they are communicating properly.
10. Confirm the brakes are working properly prior to towing the trailer on a public road. You can, for example, check the operation of the trailer brakes by pulling forward and using the hand control, if any.
11. You may, depending on your tow vehicle or intended usage of the trailer, want to consider the use of a weight distributing hitch and or sway bars. These distribute the tongue weight of the trailer further away from the rear and can help in vehicle handling.

FOLLOW ALL INSTRUCTIONS PROVIDED BY YOUR VEHICLE'S TOW PACKAGE MANUFACTURER AND/OR INSTALLER.

LOADING

The process of safely and properly loading your trailer should become easier with practice and experience. Please first get familiar with and understand the following terms related to your trailer's weight, carrying capacity, and rating:

- **Gross vehicle weight rating (GVWR)** is the maximum permissible weight of the trailer when fully loaded and equipped/outfitted. It includes but is not limited to all weight at the trailer axle(s) and tongue or pin as well as all add-ons, appliances, accessories, potable water, etc. Your trailer's GVWR is 3500 lbs. This number is recorded on the permanent label on the tongue your trailer.
- **Unloaded vehicle weight (UVW)** is the weight of the trailer as manufactured at the factory (standard weight). It includes all weight at the trailer axle(s) and tongue or pin. Your trailer's standard UVW is approximately 2200 lbs. However, you will need to account for the weight of dealer or third-party installed add-ons, options and accessories, if any, in determining your actual UVW. In sum, your actual UVW will vary (and increase) to the extent you have outfitted your trailer with additional items. Note: Your cargo carrying capacity (discussed below) will vary (and decrease) to the extent of the weight of dealer or third-party installed add-ons, options and accessories, if any.
- **Cargo carrying capacity (CCC)** is equal to GVWR minus UVW and potable water weight. Your trailer's CCC is approximately 1300 lbs. However, remember that your actual CCC will vary (and decrease) to the extent you have outfitted your trailer with additional items. Please refer to the stickers located at the front exterior of your trailer for CCC.
- **Gross axle weight rating (GAWR)** is the value specified as the load carrying capacity of a single axle system, as measured at the tire-ground interfaces. Your trailer's GAWR is 3500 lbs. Please refer to the sticker located at the front exterior of your trailer for GAWR.

- **Gross trailer weight (GTW)** is the weight of the trailer with all the items and supplies that are loaded into the unit at any point in time.

Before towing, you must choose the items you will load onto your trailer and then determine whether the loaded weight is safe and proper. The best way (highly recommended) to calculate the loaded weight of your trailer is to have it weighed while loaded, and then compare it with the GVWR (3500 lbs.). Otherwise, you will need to do some calculations on your own to make an appropriate determination. If the loaded weight of your trailer exceeds the GVWR, your trailer is overloaded and should not be towed. You will need to remove items from, and reduce the loaded weight of, the trailer until it's at or below the GVWR before towing.

Note: remember to include in your calculations the weight of dealer or third-party installed equipment, options, add-ons, accessories and any other non-standard items. As an additional safety precaution, we recommend that you take a conservative approach when doing your own weight calculations.

WEIGHT/LOAD DISTRIBUTION

Proper weight and load distribution is essential to safe towing. Load the trailer evenly (front to back and side to side) and securely, keeping heavier items as low as possible. Be sure to secure the load. A firmly secured load will be less prone to shifting and should help maintain load balance during travel.

TONGUE WEIGHT

Tongue weight is the amount of weight borne by the trailer hitch and another important consideration when loading your trailer. Generally, the actual tongue weight should equal approximately 10-15% of the gross trailer weight. Excessive tongue weight will make your tow vehicle's steering and braking less responsive. Insufficient tongue weight may cause your trailer to sway. You could weigh your loaded trailer's tongue to determine the actual tongue weight. However, you may also observe the actual tongue weight and determine if it is too light or too heavy. For example, a trailer with a proper tongue weight will form a straight line from front to back between the tow vehicle and the trailer. A trailer with the weight improperly distributed (i.e. a light tongue weight) will cause the coupling between the tow vehicle and trailer to rise, with the weight pressing down at the rear of the trailer and the front of the tow vehicle. Excessive tongue weight will do just the opposite. If you notice a rise or fall in your tow coupling, you will need to redistribute the weight of the load before getting on the road. If you have trouble estimating the combined weight of your trailer plus cargo, take your loaded trailer to a vehicle scale at a nearby weigh station or truck stop.

Important Note: you need to also refer to your tow vehicle's towing capacity and other towing and load capacity-related definitions and instructions before getting on the road. Please also consult your supplying dealer or Mission Overland if you have any questions regarding these terms and/or loading your trailer.

TOWING

We want your towing experiences and practices to be safe and enjoyable. Please take your time, avoid being in a rush and give special attention to all safety matters prior to and during the towing of your trailer. As previously indicated, we recommend that you practice towing your Summit in, for example, an empty parking lot before going on your first camping trip. This initial trial and practice is fun and will help you get accustomed to and familiar with Summit's systems and operation.

Please also make note of any questions, issues or problems that arise during your pre-travel towing practice, and then inquire with your dealer or email us customerservice@missionoverland.ca.

Please also refer to the "Overview of Safety Precautions" and "PreTravel Checklist" sections before towing your trailer.

SAFETY CHAINS

We have equipped your trailer with safety chains. Make use of them. Safety chains serve to maintain the connection between your trailer and the tow vehicle in the event of separation of the ball and trailer coupling. Be sure to hook the safety chains to the frame of the tow vehicle (not the hitch), crossing them under the trailer's tongue. Also, remember to inspect the length of the chains once they are attached to the tow vehicle frame. A proper chain length will allow turns and prevent the chains from dragging on the road.

BREAKAWAY SWITCH

Your trailer is equipped with a breakaway switch. Your Summits breakaway switch has its own internal battery. Breakaway switches are designed to activate the electric brakes in the event your trailer disconnects/uncouples from the tow vehicle. Your trailer battery powers this braking. Ideally, the safety chains will prevent your trailer from disconnecting if the coupler comes off the hitch ball. However, if the safety chains fail, the breakaway pulls the pin out of the switch which fires the brakes and serves as a last line of defense against a runaway trailer. The breakaway switch cable needs to be secured to the tow vehicle bumper or frame independently of the trailer safety chains. The following are guidelines for attaching the cable:

- I. The cable should come straight out from the switch to attach to the tow vehicle.
- II. The switch and cable should be located and secured on the same side of the trailer and tow vehicle.
- III. Do not loop the cable over the hitch ball; the cable may bounce off while the vehicle is moving.
- IV. Before towing you may test the breakaway by pulling the pin out of the switch to confirm activation of the trailer electric brakes.

TIRE PRESSURE

You are responsible for maintaining proper tire pressure in the tires of your trailer and tow vehicle. Thus, always check your tire pressure and refer to the “Tires” discussion herein before traveling.

BRAKES

You are responsible for inspecting and maintaining both your trailer and tow vehicle brakes before towing. Do not tow your trailer unless you have confirmed your brakes are in good condition and operating properly. Be sure to have a qualified technician perform all brake adjustments, service and maintenance. Please also refer to the “Brakes” discussion herein before traveling.

LIGHTS

Be sure to check all electrical connections to ensure all lights on the tow vehicle and trailer are functioning properly before traveling. The brake lights, and hazard and turn signals should be in synchronization with the tow vehicle.

LEVELING

The trailer and tow vehicle must be level when hitched. Dragging may occur if the hitch is too low. Conversely, if the hitch is too high, the rear of the trailer is exposed to striking higher points in the road.

GENERAL TOWING / DRIVING

Drive defensively, anticipating stops, braking early, and never following closely. We recommend maintaining a length of at least three cars and a trailer (approximately 65 ft.) between you and the car in front of you for every 10 mph of speed you are traveling (for example, at 60mph, you should maintain approximately 390 ft. of distance between your vehicle and the vehicle in front of you). This should give you adequate time to safely complete a proper avoidance maneuver (i.e. come to a safe stop, change lanes, etc.) in the event of an abrupt stop or emergency.

Longer stopping distances are required when towing a trailer so remember to start braking sooner than you would if driving without your trailer. Begin slowing down well in advance of anticipated street/road dips and depressions. It also takes longer to accelerate when towing a trailer. Thus, remember to account for both the slower acceleration rate and the combined length of your tow vehicle and trailer when passing another vehicle and then safely returning to your lane. In sum, always pass, allow others to pass, and change lanes with care. We also do not recommend using cruise control or overdrive when towing/travelling.

SWAY AND FISHTAILING

Excessive sway or fishtailing of your trailer can lead to the rollover of the trailer and tow vehicle, and thus, serious injury or death. The tendency for the vehicle to sway increases with speed. Thus, reduce speed as needed and in inclement or harsh weather conditions (i.e. high winds, rainstorms, slippery roads, etc.). The following are a few tips for reducing sway or fishtailing when they occur and are not exhaustive:

- I. Slow down gradually: do not jam/slam on the brakes or press on the accelerator, both of which may make the situation worse and result in severe injury or death. Instead, remove your foot from the accelerator and reduce your speed gradually whenever possible.
- II. Minimize and avoid quick steering movements. Quick steering movements will cause increased sway and loss of control. Keep both hands on the wheel, and hold the wheel as straight as possible until stability is regained.
- III. As soon as practicable after regaining control: pull over and check tire pressures, cargo weight distribution, and inspect the trailer and tow vehicle for any signs of failure or defect. If you suspect a mechanical failure, we recommend that you not tow until the problem is identified and remedied. If you choose to travel, do so at reduced speeds and with heightened caution until the problem can be identified and remedied.

WARNING: Side to side motion (sway) that begins as you reach a certain speed will likely become whipping at higher speeds. As soon as you notice sway, slow your vehicle by letting off the gas pedal. Then stop to check the trailer and tow vehicle as soon as it is safe to do so. Often sway can be temporarily controlled by pressing the brake controller's brake button independent of touching the tow vehicle's brake. This tends to pull the trailer back in line and gives greater control as one determines the issue at hand.

OTHER IMPORTANT TOWING SCENARIOS:

Winding, narrow roads: stay in the center of the lane. This reduces the likelihood of the tires/wheels dropping onto the shoulder, another potential cause of hazardous sway. Do not cross the center-line unless safely changing lanes. **WARNING: If a wheel goes off the paved roadway, do not steer sharply and do not brake. Let off the gas pedal, slow down below 25 mph and then steer gradually back onto the roadway. Proceed with caution entering traffic.**

Sharp turns: Minimize the suddenness of sharp turns by anticipating them, slowing down well in advance of them, and taking them at low, substantially reduced speeds.

Steep, long grades: Like sharp turns, be sure to anticipate steep grades. Down-shift into a lower gear or range in advance to assist your braking on a descent and to add power on a climb. Note: avoid situations that require excessive and prolonged use of the brakes. If unavoidable, apply and

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release brakes at short intervals to give them a chance to cool. Downshift your tow vehicle to reduce breaking needs on long downgrades of highway.

Slippery, icy pavement: Reduce speed and drive slowly. Remember that skidding/hydroplaning can occur with minimal moisture on the road. If skidding occurs, remove your foot from the accelerator and then gently apply the trailer brakes only.

Freeways and highways: Try to pick and stay in the far right-hand slow(er) lane.

Corner turns: Trailer wheels do not follow the path of your tow vehicle's wheels during corner turns. The trailer will make a closer, tighter turn than the tow vehicle. Compensate by moving further into the intersection before turning so that the trailer clears any objects in or near the road such as but not limited to the curb and parked vehicles. Left turns require a wider than normal turn to help prevent the trailer from edging into an opposing lane. Use turn signals early for the traffic behind you and begin slowing down well in advance of your turn.

Mud and sand: When going through mud or sand, accelerate gently, if at all, and try to remain in the path of the previous vehicles. Let the momentum of the tow vehicle and trailer carry you through the problem area. If stuck, the trailer and tow vehicle should be towed out while hitched.

Dirt, gravel, washboard roads: Go slow, use caution, your trailer will move and vibrate more than the tow vehicle, a good rule of thumb is 25 mph or less and much less on severely rutted roads.

Parking: Whenever possible, avoid parking on a grade. If unavoidable, turn the front wheels of your tow vehicle into the curb and set the parking brake. For added safety, place wheel chocks under the trailer wheels.

Additional towing safety information can be found on the National Highway Traffic Safety Administration's website:

<http://www.nhtsa.dot.gov/Cars/problems/Equipment/towing/Towing.pdf>

BRAKES

Your Summit is equipped with electric brakes. Under normal driving/towing conditions, the trailer brakes will operate only in conjunction with a properly installed brake controller. Please also obtain and read your brake controller manufacturer's manual.

Important Note: in an emergency uncoupling of your tow vehicle and trailer, your trailer electric brakes will automatically engage even without a brake controller. This assumes, of course, that you have properly attached and secured the provided breakaway switch.

See also "Hitching" and "Towing" sections herein.
brake controller, breaking-in your brakes and synchronization

BREAKING-IN YOUR BRAKES

We recommend that you break-in your trailer brakes in, for example, an empty, paved parking lot, not on a public road, when practicable. To break-in your brakes, apply the brakes at least twenty (20) times, decreasing your speed approximately 20 mph in each application. Allow a few minutes for the brakes to cool between each application so that the brake shoes and magnets "wear-in" to the drum surfaces.

BRAKE CONTROLLER

When a brake control or controller is properly installed, your trailer electric brakes will work in synchronization with your tow vehicle brakes. If you sense lock-up, "grabiness," or your trailer "jerking" or "pushing" the tow vehicle when braking, your braking systems are not properly synchronized. You may need to have small adjustments made periodically because of, for example, changing loads and driving conditions. Brake controllers are proportionally adjustable and small adjustments are easily made.

Important Note: be sure to refer to and follow your brake controller manual for instructions on synchronization, use, maintenance and adjustments.

CAUTION: Minimum vehicle stopping distances are achieved when wheels approach lock up. Brake lock up should be avoided as it results in poor vehicle stability and control.

CONNECTOR

Your provided 7-pin cord connector located at the front of the trailer transfers electrical power from the tow vehicle battery to the trailer brakes, lighting system, and battery.

BRAKING TIP

Do not use the trailer brakes only . They were designed to provide braking for your trailer, not the tow vehicle. Remember that the added weight of both the trailer itself and the cargo you are carrying can put additional load pressures on your tow vehicle brakes. It also may, under some conditions (i.e. slippery pavement, loose gravel, etc.), impact overall stability and control of your tow vehicle and trailer. Thus, be sure that you have all the information you need to make an informed decision regarding your brakes before getting on the road.

BRAKE ADJUSTMENTS

Generally, brakes should be adjusted after the first 200 miles, every 3,000 miles thereafter, and/or as use and performance requires. We recommend that you have a qualified technician perform all brake adjustments, service and maintenance.

TIRES

Size: LT 265/70R17 MAX PSI 80

OVERVIEW

Properly maintained tires improve the steering, stopping, traction, and load-carrying capability of your vehicle. Under-inflated tires and overloaded vehicles are a major cause of tire failure. Maintaining proper tire pressure, tire and vehicle load limits, avoiding road hazards, and regularly inspecting tires for cuts, slashes, and other irregularities are important steps in avoiding tire failure, such as tread separation or blowout and flat tires. These steps, along with other care and maintenance activities, may improve vehicle handling, help protect you and others from avoidable breakdowns and accidents, improve fuel economy and increase the life of your tires. In sum, you are responsible for making tire safety a regular part of your tow vehicle and trailer maintenance routine. Remember that the time you spend is minimal compared with the inconvenience and safety consequences of tire failure.

WHEEL NUT TORQUE

Proper wheel nut torque is essential to safe towing. The wheel and axle systems used in trailers are similar in many ways to those found in motor vehicles. However, they differ in several important ways. First, trailer wheels do not steer, and are subjected to high side load stress when making tight turns around corners. This tends to flex the wheel and loosen the wheel nuts. Wheel nut torque requirements vary depending on the size and manufacturer of the wheel.

TIRE FUNDAMENTALS

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

SIDEWALL MARKINGS AND IMPORTANT TERMS

Your trailer tires should be marked with either a designation of “LT” (i.e. LT265/70R17). The “LT” indicates Light Truck Service and designed to be used on vehicles that are capable of carrying heavy cargo.

MAXIMUM LOAD RATING

Is the maximum load in kilograms and pounds that the tire can carry.

MAXIMUM PERMISSIBLE INFLATION PRESSURE

Is the greatest amount of air pressure that should be put in the tire under normal driving conditions.

MAX LOAD SINGLE kg (lbs) at kPa (psi) COLD

This information indicates the maximum load and tire pressure when the tire is used as a single.

LOAD RANGE

Identifies the tire's load-carrying capabilities and its inflation limits.

TIRE TREAD

The tire tread provides the gripping action and traction that helps prevent your vehicle from slipping or sliding, especially when the road is wet or icy. Generally, tires are not safe and should be replaced when the tread is worn down to 1/16 of an inch.

REPLACEMENT

Please refer to the tire sidewall on your trailer's standard tires for information regarding proper tire replacement. Be sure to replace your standard trailer tires with "ST" designated tires. Note: replacing your trailer tires with non-ST designated tires will void the Limited Warranty. See Limited Warranty section herein. If you have any doubt about the correct size/type to choose, consult with a tire dealer. Please also refer to the manual provided by your specific tire manufacturer for care and use instructions. R

REPAIR

The proper repair of a punctured tire requires a plug for the hole and a patch for the area inside the tire that surrounds the puncture hole. Punctures through the tread may be repaired if they are not too large, but punctures to the sidewall should NOT be repaired. Tires must be removed from the rim to be properly inspected before being plugged and patched. **ALL TIRE REPAIRS SHOULD BE PERFORMED BY A QUALIFIED TECHNICIAN.**

TIRE PRESSURE AND LOAD LIMITS

Tire inflation pressure is the level of air in the tire that provides it with load-carrying capacity and affects the overall performance of the vehicle. Because tires may naturally lose air over time, or when driven over objects such as potholes or curbs, it is important to check tire pressure monthly and before every trip. The tire inflation pressure number indicates the amount of air pressure—measured in pounds per square inch (psi)—a tire requires to be properly inflated. Vehicle manufacturers determine this number based on the vehicle's design load limit, that is, the greatest amount of weight a vehicle can safely carry and the vehicle's tire size. Excessive loads may lead to abnormal tire flex, tire overheating, and ultimately, tire failure. As travel trailers may be set up and loaded in varying ways, proper air pressure should be determined by referencing the information on your tire.

MISSION

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Please also refer to the Tire and Loading Information sticker located at the front exterior of your trailer. The proper tire pressure for your vehicle is referred to as the “recommended cold inflation pressure.” Proper pressure depends on many conditions – terrain, temperatures, altitude, etc. A “cold” tire in this sense is one that has not been driven on for at least three hours. When you drive, your tires get warmer, causing the air pressure within them to increase. Therefore, to get an accurate tire pressure reading, you must measure tire pressure when the tires are cold or account for the extra pressure in warm tires.

WARNING: Improper tire pressure can quickly lead to excessive wear and dangerous situations.

Tire Pressure Steps:

1. Locate the recommended tire pressure on the vehicle’s tire.
2. Record the tire pressure of all tires.
3. If the tire pressure is too high in any of the tires, slowly release air by gently pressing on the tire valve stem with the edge of your tire gauge until you get to the correct pressure.
4. If the tire pressure is too low, note the difference between the measured tire pressure and the correct tire pressure. These “missing” pounds of pressure are what you will need to add. At a service station, add the missing pounds of air pressure to each tire that is under-inflated.
5. Check all the tires to make sure they have the same air pressure (except in cases in which the front and rear tires are supposed to have different amounts of pressure).

Remember: Do not exceed the maximum recommended pressure. The air pressure recommended on the tire information placard is for the original standard equipment tires only. Your trailer may be equipped with optional-sized tires. Always follow the pressure recommendations stamped in the tire sidewall for any replacement tire. Rotate tires every 5,000 miles or as recommended by the tire manufacturer.

WHEEL NUT TORQUE ADJUSTMENTS

Setting torque value on a dial indicator wrench:

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

Setting torque value of adjustable dial wrench:

1. Unlock the handle and set the dial to your desired torque value.
2. Lock the handle back in place.
3. As you apply clockwise pressure to the lug nut, you will hear and audible “click” when the desired torque wrench value is reached.

4. Do not apply further pressure once you hear the “click”.

PRE-TRIP TORQUEING PROCEDURE

Be sure to tighten the wheel nuts and torque to 90 lbs. Follow the torque sequence and torque table provided next:

First Stage:	20-25 ft./lb
Second Stage:	55-60 ft./lb
Third Stage:	85-90 ft./lb

FIRST STAGE

Set your torque wrench to the 1st stage value on the Wheel Nut Torque Table. Begin with the appropriate bolt for your wheel (12 o'clock position for 8 and 6 hole wheels and 2 o'clock position for 5 hole wheels) and apply torque to all wheel nuts following the star pattern.

SECOND STAGE

Set your torque wrench value on the to 55-60 ft./lb. Begin with the appropriate bolt for your wheel and apply torque to all wheel nuts following the star pattern. Following stage 2, the wheel can support the weight of the trailer and may be lowered off the jack stands.

STAGE THREE

Increase your torque wrench setting to 85-90 ft./lb. Begin with the appropriate bolt for your wheel and apply torque to all wheel nuts following the star pattern.

FOLLOW UP

If the wheel was replaced, check the torque again at every 50 miles for the first 500 miles and prior to each trip thereafter.

If you notice wheel wobbling or hear a rattling sound coming from a wheel, especially at low speeds, a wheel lug may have come loose. This problem is usually caused by improper tightening or by faulty or damaged lug bolt threads. If you have reason to believe a lug nut has come loose, safely stop the vehicle at the side of the road as soon as possible. Put up warning devices. Remove the lug caps and check the tightness of all the lug nuts. If lug bolt threads are damaged or faulty, get professional services help. Do NOT tow the trailer with missing lug nuts or faulty lug bolts.

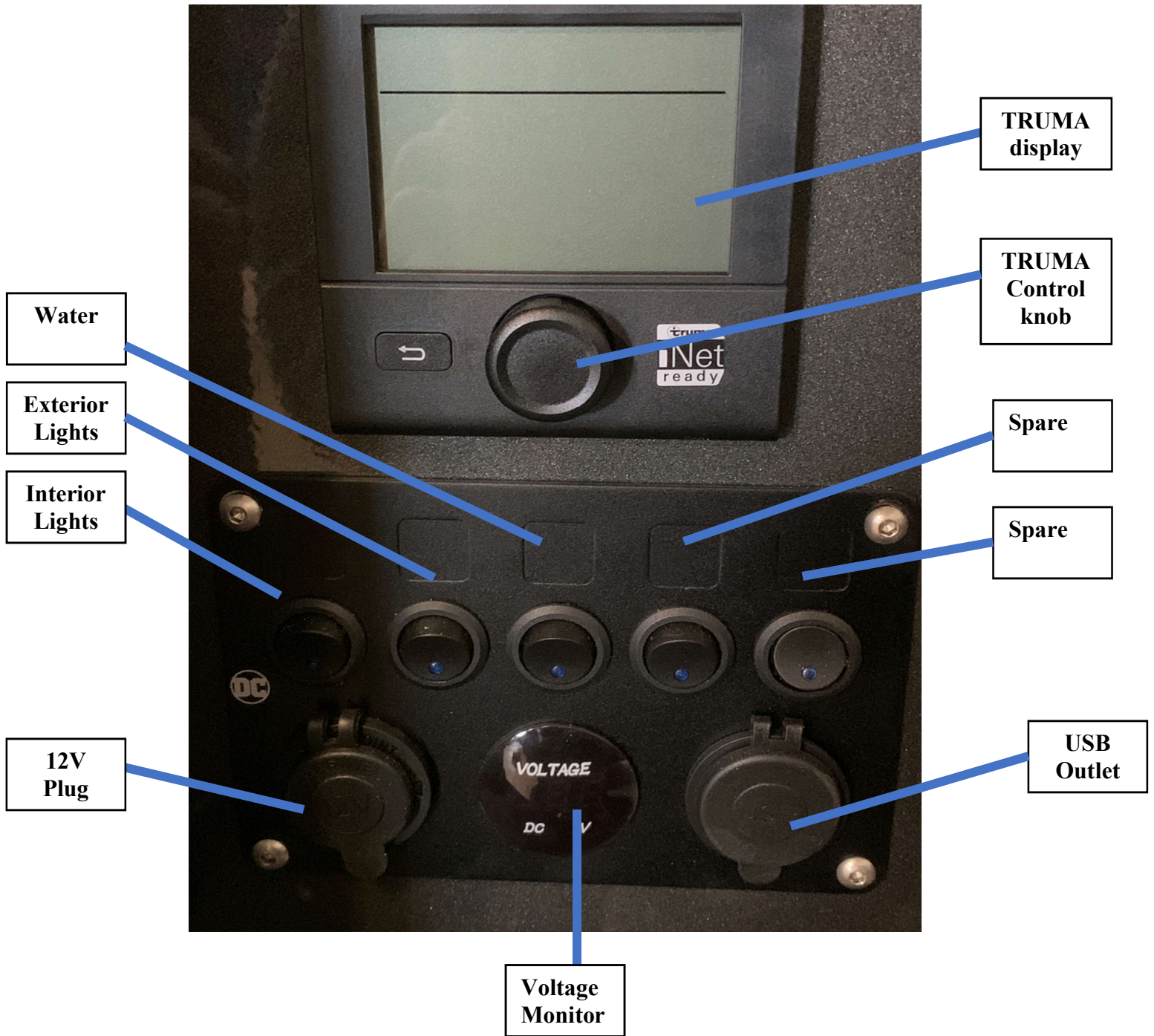
BALANCING, ALIGNMENT AND LUBRICATION

To avoid vibration or shaking of the vehicle when a tire rotates, the tire must be properly balanced. This balance is achieved by positioning weights on the wheel to counterbalance heavy spots on the wheel-and-tire assembly. A wheel alignment adjusts the angles of the wheels so that they are positioned correctly relative to the vehicle's frame. This adjustment maximizes the life of your tires. These adjustments require special equipment and should be performed by a qualified technician. Wheel bearings should be repacked every 6000 miles or every 6 months. Every time the wheel hub is removed, the wheel bearings must be adjusted. Please refer to manufacturer instructions or schedule maintenance with a qualified technician to repack wheel bearings.

TIRE SAFETY CHECKLIST

- Check tire pressure regularly (at least once a month and before any extended trip/travelling), including the spare tires, if any. Note: When checking air pressure, be sure that all tires have both the correct and identical pressure before getting on the road.
- Check and torque wheel lug nuts regularly.
 - Inspect tires for cuts, slashes, punctures and other irregularities at least monthly and before every extended trip/travelling.
- Remove any foreign objects (i.e. pieces of glass or metal, etc.) wedged in the tread.
- Confirm all tire valves have valve caps.
- Do not overload your tow vehicle or trailer.
- Slow down when having to go over a pothole or other object in the road, and avoid running over curbs and other foreign objects in the road and when parking if you can safely do so.
- Replace tires when tread depth approaches and/or reaches 1/16 of an inch.
- Have a qualified technician perform tire service, maintenance and adjustments as needed.

CONTROL PANEL



PLUMBING OVERVIEW

Your trailer's fresh water system is a vital part of your traveling life while on the road. Your SUMMIT is equipped with an on-demand fresh water system which operates from the trailer's supply tank and water pump.

Fresh water is stored in a 30-gallon plastic tank located below the floor of the trailer. The tank is vented to allow proper and complete filling. The drain valve allows you to drain the tank. Always drain the tank before storing the trailer for long periods. When the trailer is in continuous use for an extended period (generally over a month). Drain and clean the tank monthly. The entire fresh water system should be sanitized before the first use, after a reasonable period of nonuse, and when the system is contaminated. Please also see below for more information on sanitation and routine tank maintenance. The easiest way to keep the tank full of clean water is to use (1) a dedicated clean water hose and (2) a filter system in line with your hose. You will need to purchase these two (2) items separately.



Note regarding your fresh water hose: Never use the hose for anything except filling the freshwater tank or connecting to city water, and always store it independently of other hoses and plumbing supplies. Remember that nothing should pass through the fresh water hose unless it first passes through a filter in-line with the hose.

Non-toxic, FDA-approved drinking water hoses are inexpensive and work well. They are typically white in color with a light blue stripe, which helps to identify the hose and serves as a reminder to keep it separate from other hoses or hardware, especially those used for waste drainage. You may consider using a special FDA-approved hose as many common garden hoses are made of reground rubber. As clean water hoses age and compounds break down, you may notice taste and odor-related impurities in your fresh water supply. To help counteract this

process, be sure to screw the two (2) ends of the fresh water hose together following each use. This also prevents dirt or other matter from entering the hose.

Do NOT fill the potable water tank too quickly as air can be trapped in the tank if you do. Fill the tank slowly, allowing the air inside to escape through the inlet vent and reducing the possibility of water gushes and/or spray back.

The recommended pressure for your plumbing system is <45 psi. Water pressure varies depending upon the location and water pressure exceeding 45 psi can damage your plumbing system.


Your water pump is generally referring to as a “demand” pump, operating when it detects a pressure drop in the water lined. This is similar to the pressure being restored after a sink facet is turned off. If the indicator light is ON at the switch panel, the water pump is operational. Many campers only turn the pump on when using the plumbing – turning it off after usage. The pump vibrates and makes a humming noise when in operation

PREPPRING FRESH WATER TANK FOR USAGE:


1. Fill the fresh water tank as instructed;
2. Turn on the water pump switch;
3. Turn on the sink faucets both hot and cold, allowing time for the water heater to fill.
Note: be sure that your faucet is set to engage hot water flow.
4. Turn off each sink faucet as the water flow becomes steady and free of air (stops sputtering, and a solid stream of water flows from the faucet.
5. Allow the water pump time to stop running. The water pump should stop running approximately 5 minutes after the sink faucets are turned off.
6. The system is now ready for use. water heater. Your Summit is equipped with the TRUMA system – combined propane furnace and HW heater please refer to the TRUMA manual for complete instructions and maintenance procedures:
(<https://www.truma.com/web/downloadcenter/files/truma-heating-combi-operating-us-en.pdf>)


The controls for the TRUMA are electric and are in the main switch panel.

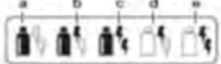
Here are the “quick start instructions for using your TRUMA:



CP Plus Functions


 Adjust room temperature - Range: 40-86°F (5-30°C)


 Select energy mode




- a) LP gas
- b) MIX 1* - Electricity 850W + Gas
- c) MIX 2* - Electricity 1700W + Gas
- d) EL* - Electricity 850W
- e) EL* - Electricity 1700W

*Truma Combi eco plus and comfort plus


 Adjust water temperature





- a) **boiler** – Hot water generator is on. Icon flashes until desired temperature is reached.
- b) **eco** – Water temperature is 104°F (40° C)
- c) **hot** – Water temperature is 140°F (60° C)
- d) **boost** – Boiler content is heated quickly (boiler priority) for up to 40 minutes. The water temperature is then kept at the higher level (about 144° F (62° C) for two subsequent heating cycles. When the water temperature is reached, the room is heated again.




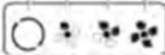
CP Plus Functions – Cont.

 Set clock to current time

 Set time switch
Set a start time and end time for room temperature, water temperature, energy mode and fan speed set points.

 Settings
Index - Show version number of connected device
Bright - Adjust backlighting
Lang - Adjust language
12-24h - 12/24 hour mode
Temp – °F or °C
Offset – Calibrate temp offset
Pr set – Factory reset

 Select fan speed



OFF – Fan is switched off (if furnace mode OFF)

- a) **VENT** - Circulating air (if furnace mode OFF)
- b) **ECO** - Low fan speed
- c) **HIGH** – High fan speed
- d) **BOOST** – Fast room heating. Available if the difference between the selected and current room temperature is >18° F (10° C)

NOTE: The Summit’s TRUMA is in the driver side passenger storage compartment.

MAINTENANCE AND SANITATION

Potable water (suitable for consumption) does NOT stay potable for a long period. Thus, be sure to exercise caution when deciding whether to use your stored water for drinking. We recommend that you be conservative in making this determination, and make every reasonable effort to use your stored water for washing, rinsing, and cleaning only. Regardless, you must diligently maintain your water system, emptying and replacing your fresh water periodically. We also recommend that you separately purchase and install a water purification system to attach to the sink faucet or at the water inlet hose, especially if you plan on consuming your stored water.

INSTRUCTIONS ON FILLING THE FRESH WATER TANK

- Prepare the inlet on the rear driver’s side panel of the Summit.
- Connect one end of a potable water transfer hose to a water supply, turn on the water supply and let the water run until it is clean and clear.

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- Turn off the water supply, and place the other end of the transfer hose into the fresh water inlet located on the side of the trailer.
- Turn on the water supply and fill the tank until tank is full. Avoid overflowing tank as this can fill the vent tube with water. If the vent tube gets full of water the tank can become difficult to fill.
- Remove and store the hose.
- Slide cap back into the fresh water tank inlet.

IMPORTANT PRECAUTIONS

Whenever you leave the trailer for more than 10-15 minutes, be sure to turn off the water pump (see kitchen switch panel and accompanying indicator light). A sudden, unexpected leak in the water system will allow the water system to run freely and flood the trailer. Be sure to turn off the water pump while travelling/towing. If not, a faucet may open while travelling, causing fresh water to escape. If you leave the sink drain plugged, the sink will overflow causing the interior of the trailer to be flooded. Always set the water pump to OFF with an empty fresh water tank. Otherwise, it may destroy the pump and cause a blown circuit.

TO EMPTY THE FRESH WATER TANK

The valve for the fresh water tank is located beneath the trailer directly connected to the bottom of the white tank on the passenger side. Remove the drain plug to open and replace when it has finished draining. Note, there is NO gray water tank in the Summit model; please see below for recommendation on waste water disposal for sink.

WATER DISPOSAL FROM SINK

As there is no gray water disposal tank in the Summit model, we highly recommend collecting your gray water from your sink using a collapsible water collection bucket and disposing it in a designated disposal area. We like to use a six (6) gallon collapsible bucket, which generally stores the amount of waste water from meal prep and dishes. Before disposing of waste water please familiarize yourself with the rules surrounding gray water disposal where you are camping. When setting up camp please ensure to connect the gray water hose to your Dometic sink and run it to your gray water bucket.



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NOTE: Rules regarding proper waste disposal vary, sometimes greatly, from site to site. Please be sure to educate yourself on the waste disposal rules of your particular site/location and follow them.

SHOWER

Your Summit is equipped with an outdoor shower with option privacy curtain. The exterior shower is located on the driver's side about midway behind a small gray door. Behind this is a single water valve and a Quick Disconnect (QD) valve to insert the white hose of the shower wand. The dark gray end of the hose (non-wand end) simply pushes into the QD receptacle – a click will indicate it is secure. Turn the dark gray dial left for hot water and left for cold water.





To remove the hose after use, push the dark gray dial in (towards trailer) and the brass end should pop out. Hose off your head, your feet, your dog, etc. Use an exterior privacy enclosure for a full on shower if you like.

Ensure to drain the shower when winterizing the trailer.

ROUTINE SANITATION PROCESS

Be sure to periodically (between trips and/or every few months) conduct routine maintenance on your water system to keep it in good working order. There are many ways to do this and many supporting products from the RV industry.

Empty the water heater between uses by:

1. Draining the fresh water tank.
2. Turning on the water pump and running the sink faucet on HOT until there is sputtering.

Empty the water heater for storage or for freezing temperatures by:

1. Draining the fresh water tank.
2. Turning on the water pump and running the sink faucet on HOT until there is sputtering.

3. Opening drain valve on TRUMA for more details refer to the TRUMA manual. As an extra precaution and to avoid damage to your system we reprint the winterizing page from the manual here:

Draining the water container

NOTICE Damage to the Truma Combi furnace caused by freezing!

- The Truma Combi furnace does not feature a frost-protection function. The water container must be drained if the recreational vehicle (RV) will not be used whenever there is a risk of frost.

No warranty claims for frost damage.

i To make sure that all water drains properly from the water container, place a big enough vessel underneath the drainage socket of the drain valve (> 2.64 gallons (10 liters)).

1. Use the main switch or pump switch to switch off the power to the water-pump assembly.
2. Turn off or disconnect the city water connection, if present.
3. Open all water release points, e.g. cold and hot water faucets, showers, toilets.
4. Open the drain valve (refer to "Opening the drain valve" on page 10).

The water container will drain via the drainage socket of the drain valve.

Winterizing

NOTICE Severe damage to the plumbing components and the Truma Combi furnace! Damage due to freezing or an unsuitable winterizing fluid is not covered by warranty.

- Follow the recommendations below if the Truma Combi furnace will be stored under freezing conditions or for an extended period of time.
- Winterize the Truma Combi furnace at the start of the winter season or before traveling to a location where freezing conditions are likely.

For winterizing, drain the Truma Combi furnace, refer to "Draining the water container" on page 13.

After draining the water, the Truma Combi furnace is protected against freezing conditions.

Optional: Winterizing the RV with a winterizing fluid

i Winterizing the RV with a winterizing fluid is only possible with an installed bypass kit (not in scope of supply), refer to the RV manual.

1. Drain the water container (refer to "Draining the water container" on page 13).
2. Turn the valves of the bypass kit according to the supplier's or RV manufacturer's guidelines.
3. Flush the water system with a suitable winterizing fluid according to the supplier's or RV manufacturer's guidelines.

i Before using the Truma Combi furnace again in hot water mode, remove the winterizing fluid and flush the water system with potable water.

Winter operation

To operate the Truma Combi furnace in potentially freezing conditions, the following requirements must be ensured:

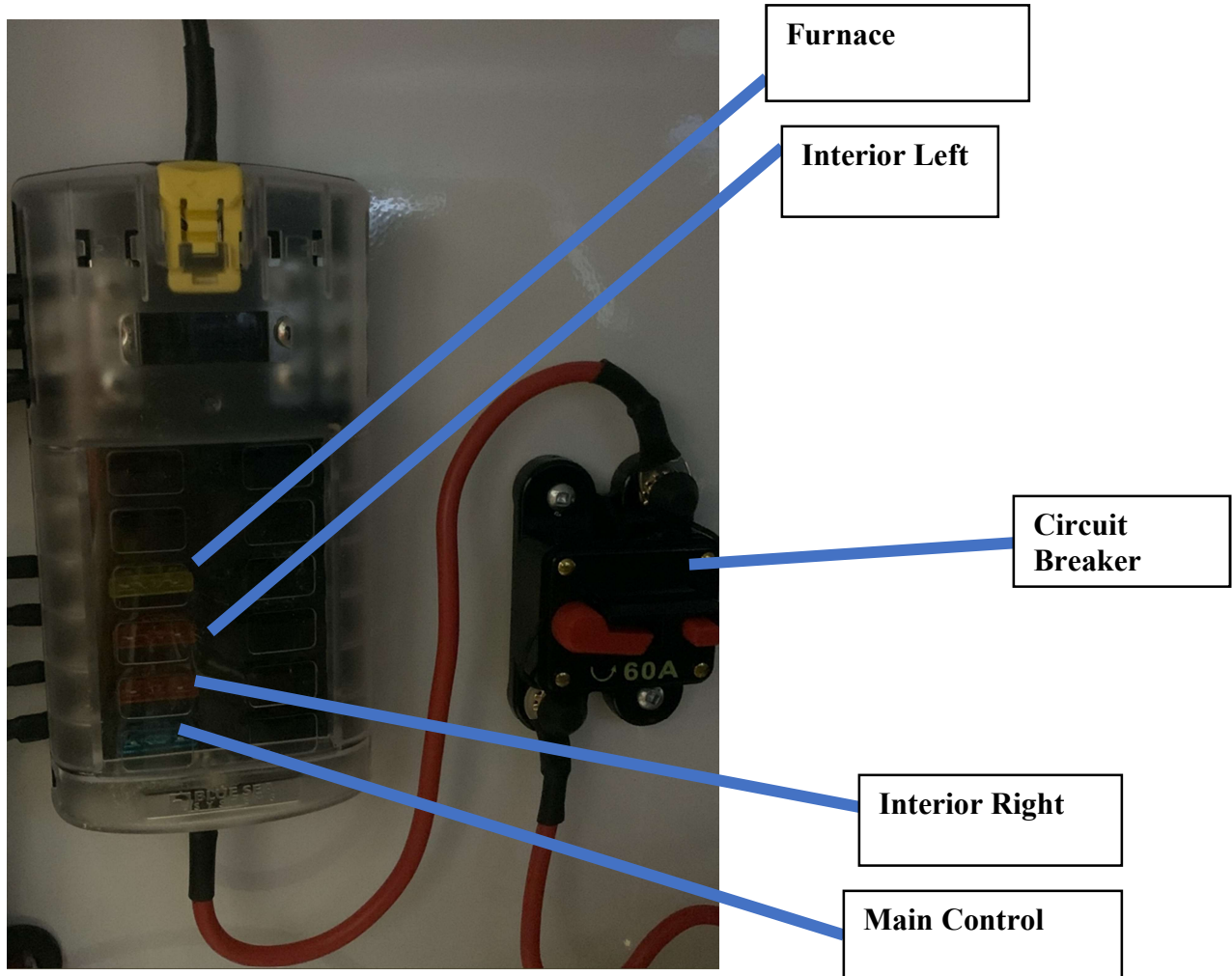
- There must be sufficient LP gas (propane; fuel inlet pressure 11 - 13 in. wc (27.4 - 32.4 mbar)) in the tank.
- In addition, the Truma Combi eco plus and the Truma Combi comfort plus models require a supply voltage of 120 V if they are to be operated in electric or mixed mode.
- For hot water operation, the water container must be filled (refer to "Filling the water container" on page 11). You must leave the furnace powered ON whenever freezing might occur.

Winter operation will not protect the RV's entire plumbing system. The RV must be designed for freezing conditions.

ELECTRIC SYSTEM

Your Summit trailer's electrical system is primarily a 12 Volt Direct Current (DC) system. If your unit is equipped with the optional inverter you will have access to 120V outlets.

FUSE BOX OVERVIEW:

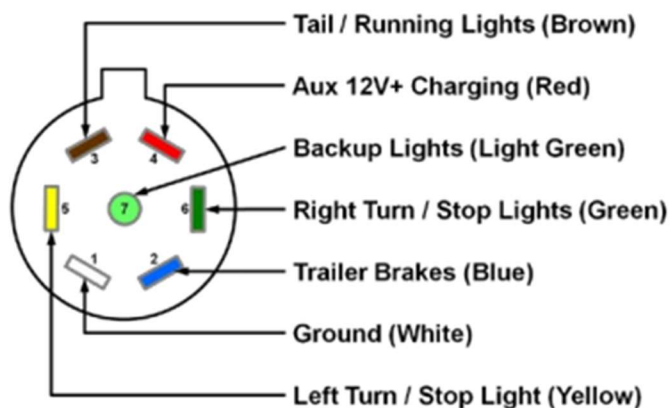


12V DC OVERVIEW

Your trailer 12 Volt system is powered by a 12V battery or batteries (see “Battery” section). All installed appliances operate fully with 12V power. Fuses for 12V circuits are located in the driver’s side luggage compartment.

Use your 7-pin connector plug to connect your tow vehicle and trailer electrical systems. This cord is located at the front of your trailer and plugs into a receptacle provided in your tow vehicle’s hitch package. In addition to charging your trailer battery while driving, this connection powers your trailer lights and electric brakes.

7-way Traditional Style Trailer Plug Wiring Tow Vehicle Plug (view looking into connector)



BE SURE TO PLUG THE 7 PIN CONNECTOR WITH THE PROPER HOLES AT TOP AND BOTTOM. FAILURE TO DO SO MAY DAMAGE YOUR TRAILER WIRING AND ELECTRIC BRAKE SYSTEM.

We recommend disconnecting the 7-pin connector from the tow vehicle when camping!

When hitching and unhitching, be sure to move the 7-pin connector cord so it does not get damaged by, for example, the hitch and/or pin box. Do not allow the cord to drag on the ground and cover with a rag or soft cloth when not in use. Keep the connector clean and dry, and follow manufacturer instructions for cleaning if necessary. See also “Hitching” section for further discussion regarding your 7-pin connector.

Important Note: you must refer to the manuals and other instructions of all appliances, additions and/or accessories regarding their respective electrical requirements.

A 12V circuit breaker is located beside your fuse box, which is in the driver's side storage compartment. It controls the circuit between the main batteries and the main fuse box in the trailer. If your circuit trips because of overload, reduce the load and reset the breaker.

BATTERY

A single Deep Cell 12-volt battery is supplied with your trailer. While one (1) battery is provided with all base model trailers, there is room for two (2) batteries. You may purchase a second battery separately. See below battery specifications and technical information as well as such information provided by the manufacturers of any additional and/or replacement batteries you purchase.

WARNING: BATTERIES CONTAIN SULFURIC ACID, WHICH IS HIGHLY CORROSIVE, FLAMMABLE AND EXTREMELY DANGEROUS. THUS, WE STRONGLY RECOMMEND THAT YOU HAVE ALL BATTERY MAINTENANCE, SERVICING AND INSTALLATION PERFORMED BY A QUALIFIED TECHNICIAN.

The battery and charging system are the heart of the 12-volt DC system. Thus, it is important that you keep the battery fully charged and monitor its charge state. Low battery charge and/or bad batteries are common causes of poor appliance and other component part performance. Fuses and circuit breakers can fail even without a short circuit under low voltage.

The converter/charger system in your Summit will help you manage your electrical requirements and charging needs. The converter/charger monitors and charges your batteries as needed when connected to a power supply. Please refer to the manufacturer's information regarding the converter/charger for more information. This is supplied with your trailer. Please also refer to the "Electrical System" chapter herein.

There is a 12v monitor on the control panel on the cabinet. This will let you monitor current or charging voltages.

Your trailer will generally be in one (1) of the following three (3) power states when in use:

1. **Dry camping** (not connected to shore power). You will be using battery power only to operate lights, fans and other DC components, and thus, discharging the batteries. Exercise constant vigilance in keeping your battery charged when dry camping. Make every reasonable effort to conserve your battery power (i.e. turn off lights and appliances when not being used). If you have a solar panel, please ensure to have it connected always in line with the directions in the associated user manual.
2. **Being towed**. If your tow vehicle has been wired properly, your trailer's battery will charge while being towed (the rate of charge varies depending on the tow vehicle).
3. **Connected to shore power**. When you are connected to shore power (an external 120V power source), all batteries will charge automatically and will be regulated by your

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converter/charger so they don't overcharge. This is the fastest method of recharging your trailer. Connect to shore power through the 13 amp electrical inlet located on front storage box (driver's side). Note: when parking the trailer for more than a few days, detach from tow vehicle, turn off appliances and lights, and plug in to shore power if available to ensure the battery is charged in advance of next use.

CONNECTED TO SOLAR PANELS WHEN OFFGRID

Summit models can accept specific solar panels (via the 7-pin connector). The rate of charge will vary based on the panels and solar exposure. PLEASE REFER TO SPECIFIC MAKES OF SOLAR PANELS ACCEPTED BY THIS SOLAR POWER INLET ON THE STICKER LOCATED NEAR THIS INLET.

BATTERY INSTALLATION

Proper battery installation is critical. Thus, please see a qualified technician for the installation and/or replacement of your trailer batteries.

BATTERY INSPECTION AND MONITORING

We recommend that you inspect and monitor the charge of the battery at least once a month and prior to any trip. During your inspection, look for cracks in the cover and case, and check vent plugs. Have a qualified technician replace any cracked or broken plugs or other such items, and confirm that the hold-down hardware is tightly secured, that the battery box, tray or compartment is clean and free of corrosion, and that the vent caps and terminals are secure and tight. Note: Do not store anything in the trailer battery compartment, box or tray other than the battery and its various components.

CHARGING AND STORING

Keep the batteries fully charged but be sure not to overcharge the battery. If the trailer is charging via a power cord, shore power, your power distribution center (Red Arc Manager 30) will prevent overcharging.

Here are three ways to charge your battery:

1. Plug into any 120V outlet via the inlet located on front box of your Summit.
2. Plug the trailer's 7-pin connector into an appropriately wired tow vehicle while the vehicle's engine is running.
3. Plug compatible solar panels into 7-pin connector of Summit.

WHEN CAMPING, DETACH 7-PIN CONNECTOR FROM TOW VEHICLE. OTHERWISE IT IS POSSIBLE THAT THE TRAILER MAY DRAIN THE TOW VEHICLE'S BATTERY.

WHEN TRAILER IS IN STORAGE, MAINTAIN THE BATTERY BY PLUGGING A 120V POWER SOURCE INTO THE SUMMIT'S ELECTRICAL INLET (LOCATED IN THE FRONT BOX).

THE CHARGE CONTROLLER WILL MAINTAIN A PROPER CHARGE WITHOUT OVERCHARGING. OR USE THE CIRCUIT BREAKER SWITCH LOCATED BESIDE THE FUSE BOX (When battery disconnect is in OFF position it is still possible to charge the battery from the tow vehicle or solar panel)

DEAD BATTERIES

If your battery is dead, plug into shore power if available. Reduce the loads on the battery by turning off any lights, 12-volt DC powered equipment and all non-essential items to allow rapid recharge. You may also connect the 7-way connector to your tow vehicle and run the engine at high idle to increase charging current and possibly reduce charging time. If your tow vehicle battery is dead or discharged, an external jumper battery or battery charger must be used to either start your tow vehicle engine, or generator, if any.

APPLIANCES AND FIRE EXTINGUISHER

The following appliances are optional. If you choose to equip your trailer with any options, please be sure to read and follow the separate manuals and instructions regarding safety, risks, use, maintenance, care and service associated with each option, add-on, appliance and/or equipment.

REFRIGERATOR

The refrigerator operates on the trailer's 12V battery system. Please refer to the applicable separate manufacturer instructions for care and operation.

FIRE EXTINGUISHER and SMOKE DETECTOR and CARBON MONOXIDE DETECTOR and PROPANE DETECTOR

Your trailer includes a fire extinguisher, which is mounted on the rear driver side cabinet. Test and operate per manufacturer instructions. Your trailer also includes a battery powered smoke detector and a separate carbon monoxide detector and propane detector, which should be tested prior to and during each camping trip.

PRE-TRAVEL CHECKLIST

INTERIOR

- Turn off all switches at main switch panel or on ceiling.
- Turn off and close all appliances, if not in use.
- You may keep the refrigerator on while driving.

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- Be sure your cargo berths are secured, and close and latch all windows
- Be sure roof top is closed and latched properly at all locations from inside and outside.
- Be sure tent fabric is secured but not pinched.
- Be sure shoreline power cord, 7-pin connector and hoses are secured (and properly attached, if applicable).
- Close and lock both doors.

EXTERIOR

- Be sure the stabilizer jacks and door step are fully raised and secured.
- Be sure wheel lug nuts are tight and secure.
- Check that all tow vehicle and trailer lights and brakes are working in synchronization.
- Check brakes with multiple applications in an empty parking lot.
- Confirm brake controller, if any, is operating properly.
- Be sure hitch assembly is secure, and that safety chains and breakaway switch have been properly attached.
- Check underneath trailer for any damage or displacement.
- Emptying water tanks prior to travel will decrease tow weight and improve fuel efficiency of your tow vehicle.

WARNING: DO NOT ALLOW ANYONE TO RIDE IN TRAILER WHILE IT IS BEING TOWED.

Important Note: This is not an exhaustive list nor is it intended to be. Use common sense when preparing for a trip and all other helpful resources available to you.

OTHER IMPORTANT PRE-TRAVEL CONSIDERATIONS –

- Be sure to pack wheel chocks and blocks.
- Be sure roof rack cargo, if any, is secure.
- Be sure to monitor your battery's charge before and during your trip. Charge battery before travelling, if necessary.
- Read and follow the manual and all pertinent instructions provided to you by your tow vehicle manufacturer.
- Be sure tow vehicle is operating fully before any trip, correcting any problems before travel.
- Bring flashlight and batteries.
- Make sure your cell phones are charged and that you have phone chargers.
- Bring extension cords, if necessary.
- Take spare tire.
- Check for any potential fire hazards, and eliminate them, if any.
- Weigh your load before trip, making sure it does not exceed your GVWR.
- Contact your dealer or Mission Overland Trailers Corporation if you have any questions before your trip.

SITE SELECTION AND SET UP

With time and experience, you will get better at spotting and identifying good camping sites. Although they will vary to some degree, all good sites will (a) be level and (b) have a firm, not soft, ground that will support the weight of jacks and/or other support devices. There are also many public camping sites that provide electrical and other useful hook-ups or services. Once you have chosen your site, we suggest that you refer to the following important tips for your set-up:

LEVEL AND STABLE

1. Before uncoupling, level the unit from side to side if desired with wood or plastic leveling blocks. Place the blocks on the ground forward of the wheels and tow the unit onto the blocks.
2. Lower the jack onto blocks or pad, if necessary;
3. Use a trailer level to ensure trailer is level;
4. Once the unit is level, use wheel chocks or blocks to prevent the trailer from moving;
5. Uncouple the trailer from the tow vehicle, unplug 7 pin connector from vehicle;
6. Lower the stabilizing jacks until they firmly engage. Be sure all jacks have about the same pressure on them. Note: Before resuming travel, be sure that the stabilizer jacks are fully retracted/raised and that the trailer has been fully closed.

WARNING: DO NOT ATTEMPT TO USE JACKS STANDS OR STABILIZER JACKS TO JACK UP THE TRAILER OR SUPPORT THE FULL WEIGHT OF THE TRAILER. DO NOT ATTEMPT TO LEVEL, RAISE OR OTHERWISE PLACE ALL OF THE WEIGHT OF THE TRAILER ON THE STABILIZER JACKS. STABILIZER JACKS ARE NOT DESIGNED TO BEAR WEIGHT.

SET UP CONTINUED

Once the unit is safely leveled and stabilized, continue with set-up:

1. Open roof (see below listed steps);
2. Connect to shore power, if available;
3. Set up the remaining features and/or options as needed.

OPENING ROOF

Follow these simple steps:

1. Unlatch the two (2) rear stainless steel exterior hold-down latches (located above rear entry door).

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2. Using the handle provided, push roof up from center rear of roof interior. Place hands on either side of center spine and push upwards. Gas springs will assist the lift and prevent a sudden closing.

CLOSING ROOF

Follow these simple steps:

1. While inside the trailer, pull the handle attached at the highest point of the roof down;
2. The roof will close slowly as the force is dampened by two gas springs. Pull slowly and steadily.
3. Before the roof closes all the way pull in any tent side material that have billowed outwards.
4. Secure the two exterior latches. Make sure the catches are caught!
5. Walk around the exterior of the trailer to ensure that no tent fabric is caught in the roof; no jacks, cords, hoses, etc were left in place.

Be sure to carefully roll and tuck the fabric side walls into the unit when lowering the roof. Otherwise, the tented fabric is likely to bellow outside of the unit during travel, causing rips and tears. Rips and tears and other damage caused by improperly closing the roof are excluded under the Mission Overland Limited Warranty. See “Limited Warranty” section herein.

WARNING: BE SURE TO WATCH YOUR HANDS AND FINGERS WHEN SECURING LATCHES.

AWNING INSTRUCTIONS

An awning or shade structure can be a very useful addition to your Summit. Shelter from the sun, rain and bugs can be achieved with different styles. Mission Overland sells a 270 degree awning that covers the rear door, exterior kitchen, food service window and approximately 129 square feet to shelter you from the sun and rain. You can purchase wall kit enclosures that pair with this awning for added comfort and shelter. Please refer to the user manual provided with you Summit for further instructions and care.

VENTILATION

OVERVIEW

Good ventilation and indoor air quality is essential to long-term enjoyment of your trailer. Inadequate ventilation can increase indoor pollutant levels. To maintain good air quality, be attentive to proper ventilation of your trailer, keep it clean, and prevent and avoid unnecessary air pollutants. Common indoor air pollution sources include molds, pollen, pet fur dander, secondhand smoke, carbon monoxide from burning propane and other fuels, and household cleaners.

Travel trailers are much smaller than homes. Thus, the exchange of air inside a travel trailer is significantly less than a home. Proper ventilation is an ongoing process, occurring before, during and after use, and at times when the temperatures and humidity are elevated.

Decreasing the flow of air by sealing the travel trailer may increase the presence and/or concentration of indoor air pollutants, such as but not limited to, molds and household chemicals. Improve ventilation by opening windows, using fans and opening vents, running the air conditioner, or some combination thereof. We also recommend that you do not smoke or use any type of bug or other chemical spray inside your trailer.

WARNING: Your trailer was designed for recreational use and short-term occupancy only. Long-term occupancy can create conditions, which if not managed properly, can be hazardous to your health and cause significant damage to your trailer.

The following are three (3) basic strategies recommended by the Environmental Protection Agency (EPA) to improve indoor air quality:

1. Remove sources: eliminate sources of pollution and/or reduce their emissions. Pollutants that this strategy can have an impact upon are: (i) Biological Contaminants such as bacteria, molds, mildew, viruses, animal dander, and pollen, (ii) Household Products such as paints, varnishes, cleaning and disinfecting solutions, cosmetics and hobby products, and (iii) Pesticides.
2. Ventilation: increase the amount of outdoor air coming indoors. Typically, trailer air conditioners, for example, do not mechanically bring fresh air into the unit. Simultaneously opening doors and windows to allow fresh air in along with turning on fans to take inside air out is an effective way to improve ventilation. Remember, if there is insufficient outdoor air entering a trailer, pollutants may accumulate to higher levels.
3. Air cleaners: air cleaners are designed to remove particles from the air. There are many types and sizes of air cleaners available to you on the market. Note: Air cleaners are not generally designed to remove gaseous pollutants. The effectiveness of an air cleaner depends on how well it collects pollutants from indoor air and how much air it draws through the cleaning or filtering element. For more information about Ventilation, Indoor Air Quality and its effects, please refer to www.epa.gov/iaq.

MOISTURE/CONDENSATION

The relatively small volume and compact construction of travel trailers means that the normal activities of even a few persons can lead to rapid, visible moisture saturation in the trailer, especially in cold weather. Note: some estimates indicate that a family of four can vaporize up to three gallons of water through daily breathing, cooking, bathing and washing. Just as the moisture collects on the outside of a glass of cold water during humid weather, moisture will condense on the inside surfaces of the trailer during cold weather when the relative humidity of the inside air is high. Unless water vapor is carried outside, it will condense on the inside of the windows and walls. Thus, when you observe signs of excessive moisture and condensation

in the trailer, take action to minimize the effects. Such action steps in non-extreme hot or cold weather conditions may include but not be limited to the following: Allow excess moisture to escape by ventilating with outside air. Open windows to provide circulation of outside, dryer air to the inside. While this ventilation may increase the heating load during cold weather, it will greatly reduce water condensation.

Minimize moisture released inside the trailer such as steam from excessive boiling water or other use of hot water. Remove water or snow from shoes before entering the trailer. Avoid drying wet or damp clothing, towels, gear and other items inside the trailer. In hot, humid weather, start the air conditioner, if applicable, early in the day. Manage the inside temperature during cold weather. Remember that the higher the temperature inside (in cold weather) will cause condensation to form on areas that are not insulated as well as others (windows, vents, wall studs, etc.); try to avoid drastic, quick temperature reductions, which can increase moisture condensation inside.

Properly maintain and secure the exterior of the trailer. This will help keep a tight barrier against water intrusion. Note: using your trailer in severe climates or weather conditions (which is NOT recommended), such as extreme hot, humid or cold weather, will require extra care, attention and maintenance of moisture-related issues and relative humidity conditions inside the trailer.

Other tips to minimize condensation:

- When, for example, washing dishes, hair drying, laundering, and non-vented gas burners, keep a window partially or fully open turn on your fan.
- For further ventilation keep all doors and vents open when practicable, and allow air to circulate inside cabinets (leave doors partially open) so the temperature inside the cabinet is the same as in the rest of the unit.
- Clean any spills immediately.
- On laminated surfaces and the floor, use mold or mildew-killing cleaning products.
- Check sealants regularly and reseal when necessary to avoid water leaks.
- Use LED, or fluorescent lights and minimize prolonged use of incandescent lights, which produce heat and may contribute to condensation issues.

Your natural tendency may be to close the trailer tightly during cold weather. This will make any moisture/ condensation problems worse. You must ventilate the trailer, allowing inside air to travel outside.

Note: If the tips outlined here are not effective in controlling condensation, it may be necessary for you to invest in a dehumidifier to reduce the health risk to you or your family as well as prevent damage to your trailer.

MOLD

Molds are pollutants found in virtually every environment. Left unchecked, molds break down various materials such as wood products and fabrics. Mold can rapidly grow indoors if it is warm and humid. By controlling relative humidity (moisture) as outlined herein, the growth and potential for growth of mold and mildew can be greatly reduced.

WARNING: Mission Overland Trailers Corporation carefully chooses the production/manufacturing materials for its trailers. However, Mission Overland Trailers Corporation. does not warrant or otherwise represent that its production/manufacturing materials are formaldehyde free.

FOUR SEASON USE / EXTREME WEATHER

Your trailer was NOT designed for use in extreme climates or weather situations. It was designed to be used any season you wish. Some conditions require special consideration or preparations. If conditions are extreme due to weather or other natural or unnatural causes be safe and use extreme caution!

Your trailer was designed for short-term use in normal, moderate temperature and climate conditions. Normal, moderate temperatures are between 32 degrees F and 100 degrees F. Climates falling outside of this range are considered extreme for purposes of this manual and your trailer. Be advised that some of your trailer's systems and components are not appropriate for use in extreme climates (see further notes below). Please be advised that some damages, losses or injury arising out of use of your trailer in extreme climate conditions may not be covered under the Limited Warranty. See Limited Warranty section herein. Thus, before you consider using your trailer in extreme conditions, please read the following:

PLUMBING SYSTEM

Your trailer's fresh and waste water plumbing will require preparation and or attention during extreme cold weather use. The interior plumbing can be kept from freezing either by use of your furnace OR by draining all lines and traps. The fresh water tank is exterior and not insulated. Freezing temperatures can cause extensive damage to the plumbing system, resulting in costly repairs or replacement not covered under your Limited Warranty. Your plumbing system and components should not be used in below freezing conditions. Remember that no portion of the plumbing system is situated in a heated compartment, and much of it is directly exposed to the outdoor air and especially susceptible to freezing. Thus, be sure to take notice of where all plumbing is situated on your trailer. You can comfortably camp in winter; however, your drinking water should come from portable water containers that you can keep unfrozen or do not care if they freeze. Please also refer to the "Plumbing System" section.

INSULATION AND HEAT

Keep the inside of the trailer heated and insulated. Use your furnace that is integrated into the trailer to keep interior temperatures modulated. Follow all manufacturer's instructions for safety. The panels of your trailer are insulated.

ADDITIONAL TIPS

Thoroughly dry, thaw out and drain water from hoses before storing, and drain holding tanks if possible. This should reduce the likelihood of damage to your tanks from a freeze. Supply your trailer with bottled water for drinking, cooking, washing and brushing your teeth.

BATTERY AND ELECTRICAL SYSTEMS

If you are connected to shore power or have a generator, you should have all the power you need to operate appliances. You can easily run your furnace or, if with shore power, can plug in a portable electric heater. However, if you are dry camping (i.e. no shore power or generator), your battery or batteries will be your only source of power, and thus, your primary electrical system concern in extreme cold. Be sure to keep the battery charged and conserve available energy when possible. Remember that there is no substitute for common sense when camping in extreme weather conditions. Please also refer to the "Battery" and "Electrical System" sections herein.

EXTREME HEAT AND COLD

Please use common sense when camping. Extreme heat and extreme cold can cause injury and or death, especially to the elderly and young. Take all necessary precautions when camping.

Here are some notes for camping Winter:

- Bring bottled water for drinking, washing, brushing teeth etc. Keep those plumbing lines and tanks free from water in prolonged freezing conditions.
- Your furnace will keep you warm and toasty even with the roof up. We have been to well below freezing in our experiences.
- Have a good sleeping bag, zip two together.
- Some people close the roof at night for extra insulation.

Here are some notes for camping Spring:

- No special considerations unless you are up high or far north where temps may drop below zero at night.

Here are some notes for camping Summer:

- your trailers roof is insulated! on the hottest of days being inside is like being on a porch – shady and with great cross ventilation. Have a siesta in the middle of the afternoon and stay up late!

- some climates support swamp cooler use.

Here are some notes for camping Fall:

- no special considerations unless you are up high or far north where temps may drop below zero at night.

WINDS ABOVE 20KM/HR

If your trailer is equipped with an awning please ensure to use anchor lines at all times, and ensure to stow away awning when winds are 20km/hr (12.5 mph) or greater. Even if winds are forecasted to be low throughout the night, please ensure to stow away the awning before retiring for the night.

GENERAL CARE AND MAINTENANCE

Regular care & maintenance of your trailer is important in furthering safety and dependability. Keep good records of all service and maintenance performed on your Summit. These records may be necessary for limited warranty purposes or may assist in future repairs. Always refer to the manufacturers' care and maintenance recommendations for installed appliances.

EXTERIOR FINISH

Your trailer's exterior is made of vinyl wrapped aluminum composite panels, which are durable and easy to maintain. Aluminum is lightweight and relatively soft, naturally showing wear over time. Cosmetic marks are intrinsic to aluminum and do not constitute a fault in material or defect in workmanship. Routine maintenance is the best way to minimize and guard against cosmetic changes due to weathering. Wash the trailer exterior with a soft cloth, warm water and soap thoroughly, paying special attention to the graphics. Never use strong solvents or abrasives when cleaning. Also, be aware that power buffers and high pressure washers may damage or totally remove the graphics and damage the vinyl wrap. See also the following summary of do's and don'ts:

- Do use soft cloths to clean
- Do be careful around graphics, washing with the graphics, not against them.
- Do not use products containing ammonia or caustic, harsh cleaning agents.
- Do not use high-pressure washers, rotating brushes (i.e. in-car wash facilities), or power buffers.
- Do not dry wipe surfaces
- Do not use rubbing compounds

FRAME AND CHASSIS

Over time, various weather and climate conditions may lead to corrosion your trailer frame and chassis. Be sure to rinse the trailer undercarriage, wheel wells, hitch and bumper of all dirt, oil, tar, salt and other debris periodically and as needed. Remember to routinely inspect for evidence of rust. Do so frequently when camping in or near coastal regions.

HITCH COUPLERS

Inspect hitch couplers before each trip. Clean and lubricate the ball socket and clamp monthly using wheel bearing grease. If hitch assembly and coupler appears damaged in any way, contact your dealer and resolve the problem before travel.

SAFETY CHAINS

Inspect safety chains before each trip. Replace them before travelling if they are damaged or compromised in any way.

JACK

Inspect and test the jack before each trip. Clean and lightly apply oil periodically and as needed. If your jack needs repair or other service, see a qualified technician.

TIRES AND WHEELS

Inspect your trailer tires, checking air pressure regularly and before each trip. Keep them inflated to recommended pressure, which is located on the tire sidewall. Keep a tire gauge in your tow vehicle or trailer. Have the tires rotated by a qualified technician at least every 5,000 miles.

BRAKE ADJUSTMENT

Have your trailer's electric brakes adjusted after the first 200 miles. Have them tested for brake drag every 3 months or 3000 miles, whichever is earlier. When adjusting brakes on any vehicle, either replace or adjust all brakes at the same time, or at least both brakes on the same axle. Qualified service personnel should perform all required work on brakes.

SEALANTS

Inspect all sealants/seals (i.e. doors, windows, plumbing components, undercarriage) every ninety (90) days, when the seasons change, and before each trip. During your inspection, look for cracks, voids, shrinkage, and any other sign of deterioration. Replace sealant where necessary, using the same type of sealant. Contact your dealer or Mission Overland Trailers Inc. for suggestions concerning replacement sealants.

TENT SIDES

You may clean your trailer tent sides periodically with warm soap and water and then dry. The tent sides are made from waterproof, flame retardant, breathable, Ultra-violet treated, high-performance material. While very durable, no fabric lasts forever. The best storage procedure, if the trailer is stored out of doors, is to park it under the cover of a roof, trailer, cover or tarp. Keep your tent sides dry when possible to avoid prolonged exposure to mildew, which may damage them. If you have mildew, use the following recipe: Mix 1 cup of salt, 1 cup of lemon juice, and 1 gallon of hot water, wash moldy/mildew areas of the tent with a sponge, let dry. Be aware that wind, water, sun, pollution, debris and neglect may all degrade your tent side fabric over time. Have the tent side repaired at the first sign of fraying or tearing. Take care to protect the fabric from metal parts.

CEILING, INTERIOR WALLS, COUNTERTOP AND TABLE

Clean with soap or other mild, non-abrasive cleaner, warm water, and a damp cloth. Do NOT use strong, harsh chemicals, and limit water/moisture exposure to ceiling and walls when cleaning. Excessive moisture may damage ceiling and walls. Be sure thoroughly dry ceiling and walls after cleaning. Avoid using abrasive pads and scouring powders, which may dull surfaces and increase exposure to future staining. Remember to use a chopping block or cutting board when using knives on the countertop. Pots and pans straight from the burner or oven should be placed on lined hot pads and not directly on the counter surface.

FAUCETS AND FIXTURES

Use only a damp soft cloth or sponge to clean. Do not use abrasive cleaners or materials as they may damage the finish.

FABRIC AND UPHOLSTERY

Berth cushions are made of a fixed marine-grade vinyl. Clean them with a damp cloth and mild soap or other cleaning product. Be sure to dry thoroughly after cleaning. Folding couch cushions are made of nylon which may be machine washed cold and air dried.

STORAGE, WINTERIZATION & BRINGING OUT OF STORAGE

If storing your trailer in persistently cold weather (less than 20 degrees F), you must prepare your trailer appropriately. We recommend that you store your trailer in a dry, level, well-ventilated area protected from the elements. Use blocks, chocks or ramps for the wheels, if necessary. A garage is ideal. Refer to and follow the following storage preparation guidelines:

Interior:

- Open your refrigerator, if any, and remove all food items, block lid open to provide air movement
- Spread out your upholstery so that air can reach all sides
- Open all cabinet doors and drawers, including interior storage area
- Place containers of moisture-gathering beads in the trailer
- Clean the floor, walls and all surfaces

Chassis:

- Lubricate all grease fittings on the axle hubs
- Check all tires for damage and set tire pressure to the maximum as indicated on the tire sidewall.
- Clean the tires and wheels with your regular soap/car wash solution
- Clean the tires and wheels as well as the underside of the trailer. Wash off mud and/or other road accumulations on frame, axles, and other components. Inspect and make note of damage to or in any areas or components.

Exterior:

- Close all vents and windows and thoroughly wash the exterior, including roof, sidewalls and front and rear.
- Note any maintenance issues that arise that may be needed. Inspect the sealants around roof accessories (vents, racks, etc.), windows and doors, resealing as necessary before winter rains or snows accumulate (to prevent leaks when snow melts in spring)
- Cover all exterior appliance vents.
- Extend the awning (if equipped). Vacuum or sweep away branches, leaves, and any other debris. Wash with a mild, natural soap to reduce mildew. Allow to dry completely before retracting the awning.
- Be sure all exterior components, attachments, etc. (breakaway switch, cords, safety chains) are secured

Prevent trailer from rolling unexpectedly during storage - chock wheels, raise levelling jacks and retract step assembly.

PLUMBING SYSTEM

Proper preparation and winterization of your trailer fresh water and waste water systems are vital. Freezing water expands, leading to possible rupture of tubing, fittings, tanks, and fixtures. Thus, be sure to empty the holding tanks before storing and winterizing. Drain hot water or fill traps and lines of system with non-toxic anti-freeze if you are unable to blow out any pockets of water with pressurized air. Turn off the water heater, if any, and let it cool. Remove access panel and remove HW distribution line per instructions in 'plumbing system' section. Siphon water from tank per same instructions. Reinstall HW line by firmly pushing it back into place. Open your sink and shower faucets, both hot and cold, Open the drain valves of potable water tanks and fully drain. Close the valves when tank is completely drained /empty disconnect the

shower hose and drain the hose. Drain your TRUMA furnace and hot water heater per manufacturer's instructions.

IMPORTANT NOTE: ALL FRESH WATER LINES MUST BE FLUSHED WITH FRESH WATER TO CLEAR THE FRESH WATER SYSTEM OF ANY ANTIFREEZE PRIOR TO USING FRESH WATER SYSTEM AFTER STORAGE

ELECTRICAL SYSTEM

Preparation and winterization of the electrical system primarily revolves around your battery. Proper battery storage helps ensure both the powering up of your trailer systems on your next trip, and maximizing the life of your battery. Refer to the "Battery" section of this manual for proper storage information. Important Note: remember to turn off all electric loads in your trailer prior to storage.

BRINGING OUT OF STORAGE

If your trailer was properly and carefully stored and winterized, taking it out of storage and prepping it for another travel season should be relatively simple. Note: if your trailer sustained damage while being stored, please consult with your dealer or Mission Overland Trailers Corporation for information regarding repair or service options. The following checklist assumes that you stored your trailer with care:

- Thoroughly inspect the trailer exterior, looking for animal nests in, for example, wheel wells, compartments or openings.
- Open all doors and compartments, checking for animal or insect intrusion, water damage, or other deterioration
- Check charge level in all batteries and recharge as needed.
- Check tire pressures and re-inflate to specified cold pressure
- Lube chassis
- Check all exterior lights, and replace as needed
- Drain, flush and sanitize the fresh water system as outlined in the General Care and Maintenance chapter.
- Inspect the drain hose for leaks and replace it if necessary
- Turn on sink faucets and all plumbing fixtures (faucets, water pump, Hot Water Heater), checking all joints and fittings and repairing leaks, if any.
- Check all 12-volt DC circuit fuses - Operate all 12-volt DC lights and equipment
- Test the carbon monoxide detector as manufacturer's instructions (if equipped).
- Check your shore-line power cord, 7-pin connector, converter, all outlets, breakaway switch, and any exposed wiring. If defects are found, refer service to your dealer
- Inspect and clean the interior
- Check sealants on and around the roof, body seams and windows, resealing as needed.
- Wash the exterior, thoroughly flushing the trailer underside.

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