

**ESCAPE CIVILIZATION.
WAKE UP IN THE WILD.**



**OFF GRID
TRAILERS**

TRAILER OWNERS MANUAL



CONTENTS

4	QUICK SET-UP GUIDE
6	HOOKING UP THE TRAILER
8	TRAILER CONNECTIONS
9	DOOR OPERATION MAINTENANCE
10	TOWING YOUR TRAILER
12	PLUMBING
17	ELECTRICAL SYSTEM
23	7-PIN LIGHTING & BRAKING SYSTEM
26	APPLIANCE & EQUIPMENT OPERATION
30	OPTIONAL EQUIPMENT
34	PROPANE SYSTEM AND PROPANE GAS DETECTOR
37	FRAME, SUSPENSION, BRAKES, BEARINGS, WHEELS & TIRES
44	WINTERIZING
46	MAINTENANCE & WARRANTY
57	TRAILER IMAGE APPENDIX

WELCOME

We would like to thank you for purchasing an Off Grid Trailer! Whether a new OGT customer or a returning enthusiast, the entire team at OGT is pleased to welcome you to the family. Adventurous and creative, ambitious and curious, the entire OGT team's passion for design, quality, authenticity, and craftsmanship are only matched by their love of the outdoors - a love that guides everything we do at Off Grid Trailers. Our off-road teardrop trailers are inspired by overlanding and off grid camping—they're designed for engaging with nature, for camping off the grid. We welcome you to visit support.offgridtrailers.com for information on new owner orientation, common questions, and customer maintenance.

We trust you will enjoy your new Off Grid Trailers adventure! Much thought has gone into the design of our units to bring us all closer to nature! Any of our company's success depends on our commitment to bringing joy and the adventurous spirit to our valued customers.

Thank you for choosing an Off Grid Trailer, and welcome to the OGT family!

A handwritten signature in black ink, appearing to read 'DL', is positioned above the name Duane Leedell.

Duane Leedell President, OGT

INTRODUCTION

This manual has been written to aid you in the proper and safe operation of your Off Grid Trailers product. Please read this manual before using your Off Grid Trailer. If you have any additions or suggestions and would like to see them added to this manual, please don't hesitate to email and let us know. Our contact information is on the back of this booklet.

QUICK SET-UP GUIDE

ITEMS REQUIRED (not supplied)

- For Standard coupler: 2" hitch ball and ball mount to suit vehicle
- For Max Coupler: ball mount to suit vehicle with 1" hole
- Tow vehicle 7 pin wiring & brake controller
- Trailer license plate & registration (or trailer transport permit)
- Some vehicles may require a 7-Pin extension
- 1 7/16" combination wrench, (or a crescent style wrench with jaws that can open to 1 1/2" - this is to hold the nut on the bottom of the ball or CU Offroad coupler.)
- 1/2" drive ratchet handle or breaker bar
- 3/4" 6 point hex socket, 1/2" drive OR 1 1/2" Socket, 1/2" drive (for mounting CU Offroad Coupler to ball mount.)

TRAILER SET-UP FOR TOWING

- Install License plate
- Prepare tow vehicle hitch (hitch height = 21" or 25" when equipped with OGT Evolution Series Suspension)
- Regular coupler: install 2" hitch ball
- Max Coupler: install supplied yoke on tow vehicle ball mount
- Attach safety chains
- Secure break away cable
- Plug in 7 pin trailer cable to tow vehicle
- Check trailer lights and brakes for proper operation
- Check brake controller/trailer brakes and break away system

NEW TRAILER CHECK LIST

- De-winterize and sanitize potable water system
- Charge batteries using Xantrex Freedom XC 1000/2000 or Noco Genius
- Turn on main circuit breakers (if equipped)
- Check tire pressure (35 PSI Nominal)
- Fill propane bottle
- Retorque wheel lug nuts

Refer to the applicable section in this manual or the OGT knowledge base for extra instructions on how to carry out the items in the checklists above.

MAINTENANCE

CRITICAL : Prior to trailer use, review, understand, and make a plan to follow the guidance given in the maintenance schedule located at the end of this manual. If you have any questions, email warranty@offgridtrailers.com



HOOKING UP THE TRAILER

When loading your trailer, store heavy gear first, keeping it on or close to the camper floor. Distribute items to keep the loaded trailer's tongue weight within 12–15% of the loaded trailer weight. Only store light items on high shelves. The trailer's top rack is capable of supporting a distributed load of 1,000lb, this including any supplied options such as a roof top tent. Loading heavier items over or behind the axle will help maintain proper tongue loading. Note that heavy items on the rack will raise the center of gravity of the trailer, affecting its stability. Ensure all items are sufficiently and safely fastened to the rack. Distribute weight to obtain even side-to-side balance of the loaded vehicle. Secure loose items to prevent weight shifts that could affect the balance of your vehicle. When the trailer is loaded, drive to a scale and weigh each vehicle and trailer axle separately to determine axle loads.

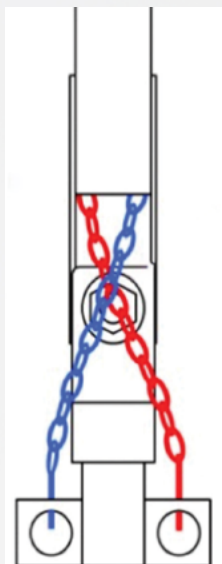
The trailer axle load should not exceed its gross axle weight rating (GAWR). The total tow vehicle and trailer load should not exceed the gross combined weight rating (GCWR) of the tow vehicle and/or not exceed the tongue weight rating of the tow vehicle. These weight ratings are given on the trailer certification label that is located on the left side of the trailer on the A-frame/tongue.

Ensure your vehicle has hitch and receiver capacities that meet or exceed the trailer weight; only use a hitch ball that matches the coupler provided with your trailer. For trailers equipped with the optional Max Coupler, refer to the manufacturer's manual for proper hook up and use. Ensure the coupler is properly seated with the locking latch fully closed and locking pin inserted to the latch prior to towing your trailer. Always use safety chains when towing your trailer, and cross over the chains as illustrated in Fig 1.1. Do not twist the chains to shorten them. If required, the chains can be shortened via removing the vehicle side hooks, cutting off the unneeded links, and reinstalling the hooks. For temporarily shortening the chains, zip ties work best to group several links together.

Your trailer is equipped with a manual trailer jack; Remove jack locking pin to rotate the jack as illustrated in Fig 1.2. The wheeled jacks are not intended to be used for moving the trailer long distances and have height limitations when facilitating movement. Consult the product manual for your jack. Jack options are subject to change.



Fig 1.1



**BOTTOM VIEW
VEHICLE SIDE**



Fig 1.2

TRAILER CONNECTIONS

The 7-pin trailer harness provides a connection to your vehicle's turn signals, brake lights, running lights, and brake control as well as provides power to your trailer. Plug and connections are industry standard.

NOTE: The trailer high mount taillight is not wired as a brake light, only as a running light – as per Transport Canada requirements.

Your trailer is equipped with electric brakes. Ensure you have a compatible brake controller and sufficient gauge wiring in your tow vehicle for a single axle two brake system (refer to your vehicle and/or brake controller's owner's manual).

Attach the emergency break away switch cable to the tow vehicle as illustrated in Fig 1.3.

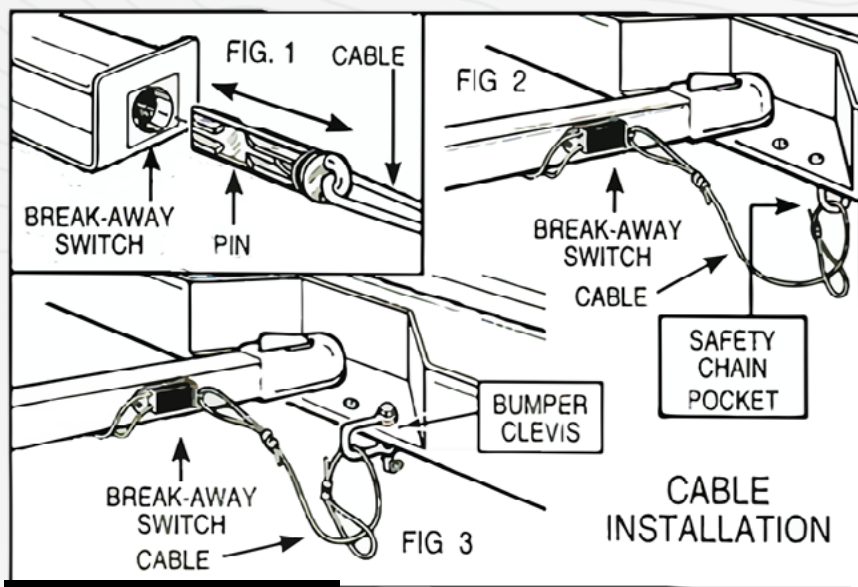


Fig 1.3

DOOR OPERATION & MAINTENANCE

Expedition, Pando, and Sprocket Models: Your Off Grid Trailer is equipped with RV grade side entry doors. Depending on model purchased you may have either of the following versions below.

Ref. Fig 2.1, Fig 2.2, Fig 2.3, Fig 2.4



Fig 2.2 Door Exterior v2



Fig 2.3 Door Interior v2

VERSION 2:

The doors require a firm closure to engage the dual stage latch. Ensure the doors are flush with the exterior wall when closed to prevent dust or water intrusion. It is recommended that the doors be locked during travel.

Emergency Release: In the process of familiarizing yourself with the trailer, you should remove the small cover pictured and test the emergency release.



Fig 2.4 Emergency Release

TOWING YOUR TRAILER

Towing a trailer requires an adjustment for the extra weight and size of the combined tow vehicle and trailer unit, both on and off road. Ensure your trailer load is distributed evenly tongue loading within the limits of your tow vehicle, this will help ensure safe travel as well as help prevent trailer sway.

As there are added challenges in towing a trailer over just driving a vehicle on its own, it is recommended additional resources and/or instructions are used to ensure safe towing.





PLUMBING

PLUMBING

FRESH WATER SYSTEM SANITIZATION

The water system needs to be sanitized prior to **FIRST** use as well as after winterizing, **(all new trailers are shipped fully winterized)** if the system has not been used for extended periods of time or if the system is contaminated. Failure to do so may result in sickness, injury or death. Follow the procedure bellow or have a qualified RV technician perform the sanitization for you.

NOTE: THE WATER SYSTEM IS NOT SANITIZED AT THE FACTORY AND MUST BE SANITIZED PRIOR TO USE.

TO SANITIZE FRESH WATER SYSTEM:

1. Drain fresh water tank as described in the fresh water tank draining procedure.
2. Adjust the recipe of 0.5 cup of chlorine bleach and 2 gallons of water for every 30 gallons of fresh water tank capacity to make a chlorine bleach solution to suit your trailers fresh water tank capacity.
3. Add chlorine bleach solution to fresh water tank and fill to capacity with water, shake the trailer to mix the tank contents.

For example: For a 30 gallon fresh water tank, add 0.5 cup of chlorine bleach to 2 gallons of water and mix, add this solution to the fresh water tank, than fill the fresh water tank with water (~28 gallons).

4. Turn on fresh water pump, open each faucet (hot & cold) and shower until chlorine bleach smell is evident.
NOTE: Set the water heater for full water flow, but do not turn water heater on.
5. Close faucets and shower and allow system to sanitize in the chlorine bleach solution for a minimum of 4 hours.
6. Drain fresh water system, re-fill with fresh water and flush all faucets (hot & cold) and shower to remove chlorine bleach solution. Repeat this step until chlorine bleach smell is gone.

TANK SIZE PER MODEL	
EXPEDITION 3.0	31 GAL
SWITCHBACK	31 GAL (OPTIONAL)
PANDO 3.0	14 & 19 GAL (OPTIONAL)
SPROCKET/ SPROCKET_x	ROTOPAX 2 GAL PORTABLE CONTAINERS X 2 (OPTIONAL) YAKIMA 7 GAL ROAD SHOWER (OPTIONAL)

NOTE:

Location of equipment described in this section varies between trailer models, refer to model specific trailer diagram at the end of this manual for location of equipment if not indicated.

DEMAND PUMP

When switched on, the demand pump automatically maintains pressure by pumping water from the fresh water storage tank to the required water outlet as it's required (controlled by a discharge check valve). The demand pump switch is located on the front of the hot water on demand unit. For normal operation, open all faucets (hot and cold and check to see that the bypass system on the hot water heater is in the normal position) and run water until air bubbles no longer affect water flow. Shutting off all faucets will automatically shut the pump off. Remember to shut the pump off when the tank is empty or when traveling.

WASTE DRAINAGE

The trailer is not equipped with a gray water system, collect and dispose of gray water according to the local guidelines & regulations.

FRESHWATER FILL LOCATION

Fresh water fill locations vary by model, refer to the model specific trailer diagram at the end of this manual.

FRESH WATER DRAINING PROCEDURES

To drain the fresh water tank, freshwater drains vary by model, refer to the model specific trailer diagram at the end of this manual.

PLUMBING APPENDIX

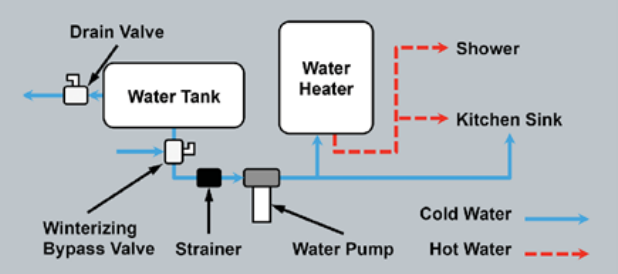


Fig 3.1
Expedition & Pando

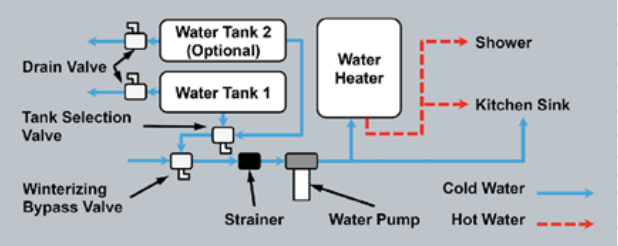


Fig 3.2
Expedition & Pando

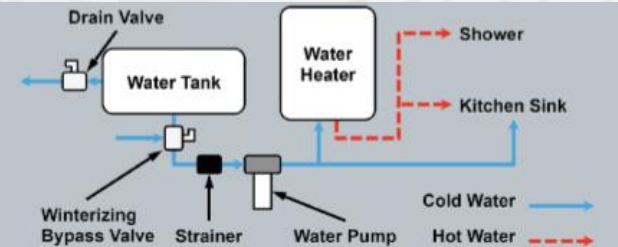


Fig 3.3
Switchback

NOTES ON SPROCKET WATER SYSTEM:
The sprocket is not equipped with an on-board powered water pump and plumbing system. There is an option to store Rotopax water containers in the rear compartment.
If you have the optional Yakima Road Shower, see the owner's manual included in your gear bag for more information.

YAKIMA ROAD SHOWER 7 GAL



Fig 3.4 Expedition Gravity Water Fill

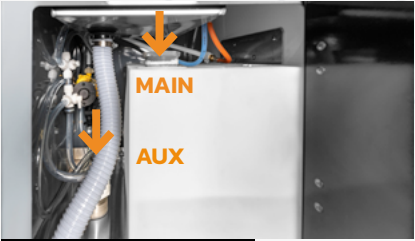


Fig 3.5 Water Fill Pando

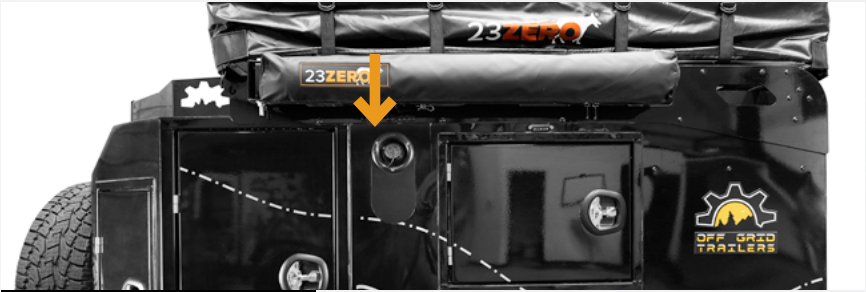


Fig 3.6 Switchback Water Fill

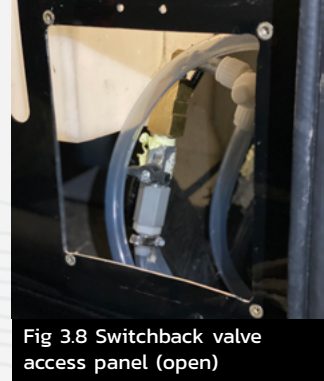
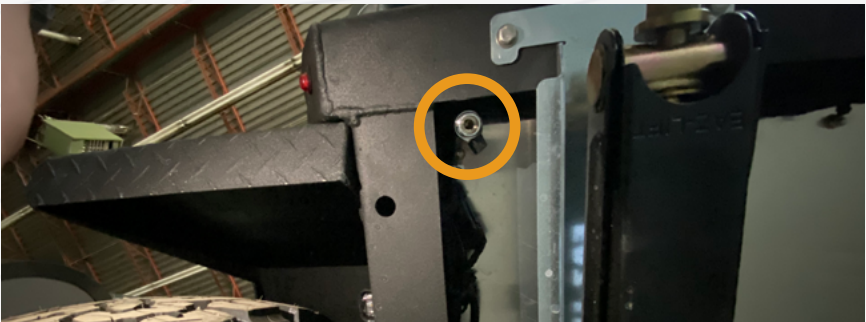


Fig 3.9 Pando Water Tank Drains



3.10 Expedition water tank drain

A large, stylized, light orange graphic in the background depicts a hand holding a plug. The hand is formed by several thick, curved strokes, and the plug is represented by a circular shape with a central point. The entire graphic is set against a solid orange background.

ELECTRICAL

SHORE POWER

To charge via shore power, plug the included 15-amp power cord into the exterior mounted shore power port and connect to a electrical power source.

NOTE: The base unit is NOT equipped with an on board solar charge controller.

XANTREX FREEDOM XC 1000/2000

The base inverter/charger on Expedition, Pando, and Sprocket trailers is the Xantrex Freedom XC 1000. This unit has a maximum DC charge rate of 50 amps, and a continuous AC output of 1000 Watts.

The optional inverter/charger on Expedition, Pando, and Sprocket trailers is the Xantrex Freedom XC 2000, with a maximum DC charge rate of 80 amps, and a continuous AC output of 2000 Watts.

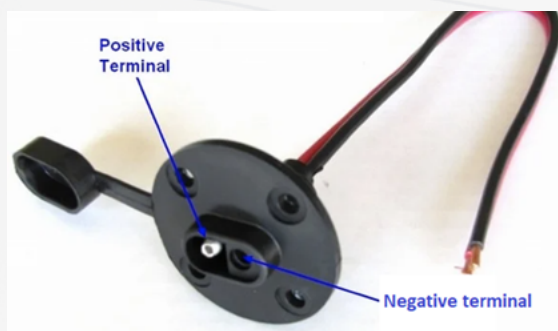
Both of these inverter systems can be controlled either from the control panel on their face, or from the interior control panel. **For the interior control panel to manage these Xantrex inverters, the power button on the inverter itself must be in the standby (UP) position.**

For more information on the Xantrex inverter systems, consult the OGT Knowledge Base and the Xantrex manual included in your gear bag.

NOCO GENIUS

The standard charger ONLY on Switchback models is the Noco Genius 10x1. This charger has a maximum DC charge rate of 10 amps. Refer to the Noco manual for more information.

CHARGING WITH SOLAR PANELS

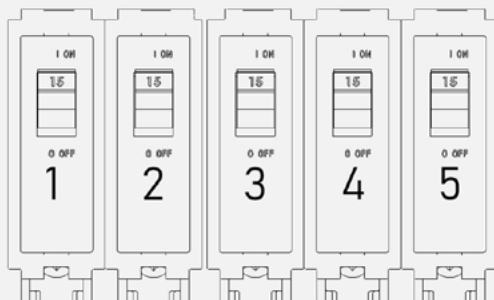


NOTE: This port is designed to accept up to 20 amps of current from any combination of solar panels connected via a charge controller. No charge controller is provided with the trailer units.

Fig 4.1

The solar port on the front of the front storage box is wired as shown above. The circuit is protected by a 20-amp inline fuse on the positive lead.

CIRCUIT BREAKER PANEL - 110V SYSTEM



The panel mounted breakers protect the following circuits:

- 1) From panel to inverter/charger
- 2) From shore power to panel
- 3) From inverter/charger to panel
- 4) From panel to outlets
- 5) From panel to AC rough in - home run

All breakers can be left on at all times. These breakers are not meant to be used as switches.

Fig 4.2

A circuit breaker's job is to protect an electrical circuit (the wiring,) from damage due to excess current. Excess current flow can occur because of excessive load (too many appliances, or appliances that draw too much power,) from defective appliances, or from short circuits. If a breaker has tripped, determine what the fault is before resetting. Ensure that you are using the shore power cord provided with your unit; alternate cords may have too high a resistance or may not have a proper ground lead.

GFCI Outlets

These outlets monitor the current imbalance between the hot and neutral lines – there should be little to none. If there is a difference here, it means that current is escaping through a fault rather than traveling normally through wiring and appliances. The outlet immediately trips, and power is no longer supplied.

12V FUSE BLOCK AND POWER SUPPLY

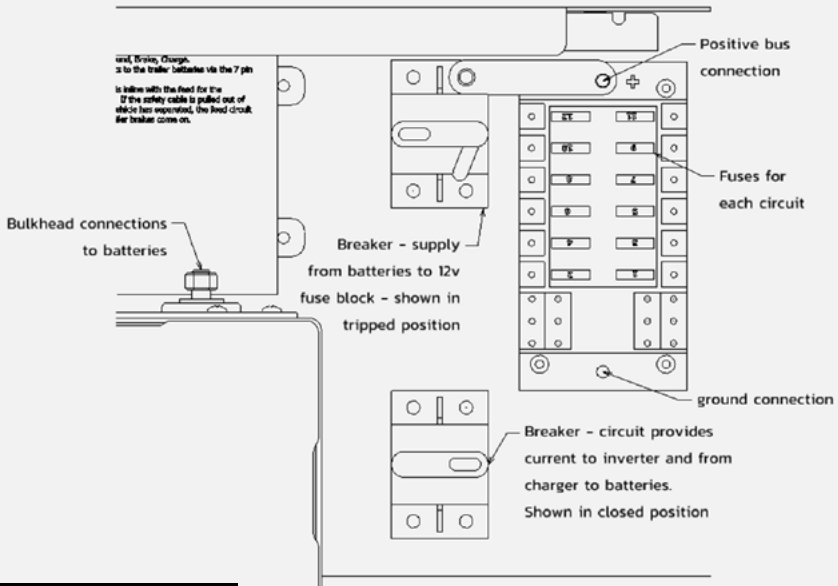


Fig 4.3

Fig 4.3 shows the fuse block and breakers that supply the fuse block and the inverter/charger. **The inverter cannot operate nor charge the batteries if the lower breaker is in the tripped position.**

Fuse functions for all trailers are indicated on the cover provided with the fuse block.

BATTERIES

For the Expedition, Pando, and Sprocket the base option batteries are provided by Canadian Energy, model G31 DC. They have a power capacity of 105 Ah each, giving the system a capacity of 105Ah given lead acid batteries should only be discharged to 50%.

Our optional batteries are provided by GoPower. They are LiFePO₄, 100Ah each, model GP-ADV-LIFEPO4-100. The lithium system capacity is then roughly 200Ah as these cells can be fully utilized.

The Switchback is available with a single Canadian Energy G31 DC, and with a single GoPower GP-ADV-LIFEPO4-100.

NOTE: The optional GoPower batteries must be set up using a Bluetooth enabled phone or tablet and the GoPower app. One battery must be set as the master. The batteries when installed are linked together and are seen by the app as a single 200Ah capacity cell. Consult the OGT knowledge base for more information.

INTERIOR & EXTERIOR LIGHTING

The trailer exterior and interior lighting units are LED, meant to last the life of the trailer. If you require replacement lights or if there is a defect with a light, please consult the OGT Knowledge Base for part numbers and suppliers, or contact warranty@offgridtrailers.com

GROUNDING

On the Expedition, Pando, and Sprocket, the grounds for the 110v, 12v and 7 pin lighting and braking systems on the trailer are common to a connection point on the trailer frame located in the front storage box between the battery compartment and the inverter. This ensures that all metal parts of the trailer are grounded, that the charger/inverter is grounded, and that the tow vehicle and the trailer share the same ground plane. If electrical accessories such as DC/DC chargers or solar charge controllers are added, they can be grounded at this point.

ELECTRICAL APPENDIX



Fig 4.4 Interior - Expedition and Pando main elec panel



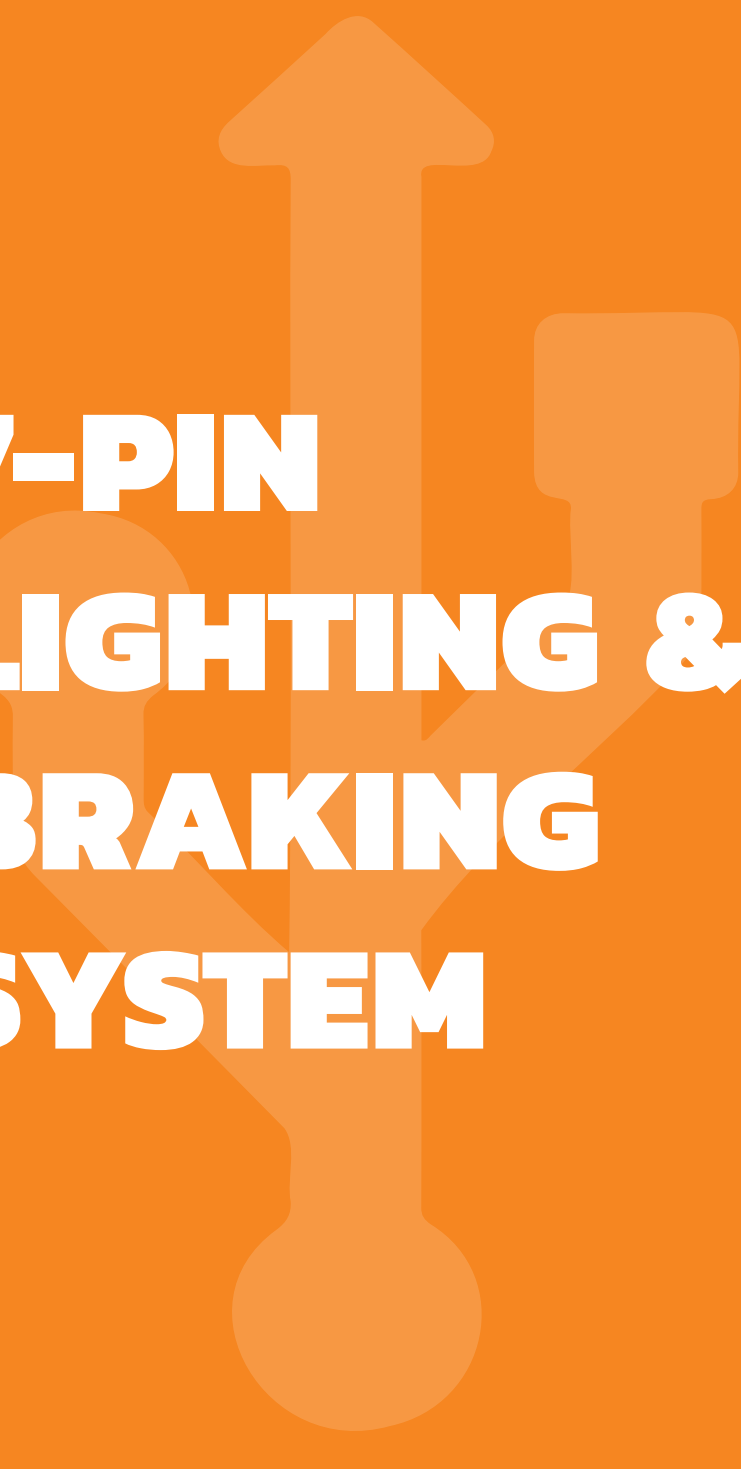
Fig 4.5 Interior - Sprocket main elec panel



Fig 4.6 Switchback Front switches



Fig 4.6 Switchback Front switches



7-PIN LIGHTING & BRAKING SYSTEM

7 PIN PLUG AND JUNCTION BOX

OGT units are equipped with a standard 7 pin trailer light and brake wiring system.



Fig 5.2 7 Pin Plug & Junction Box

The junction box is fastened to the floor in front storage, between the battery box and the fridge (if equipped.) Pin 7, for reverse lights, is not used.

CHARGING VIA THE 7 PIN AUXILLIARY CIRCUIT

The black 10AWG lead is connected, with a 30 amp fuse inline, to the trailer batteries. The ground circuit for the 7 pin system is also common to the trailer batteries. This means that the trailer batteries will charge via the vehicle's 7 pin system.

IT IS IMPORTANT TO DETERMINE:

- That the tow vehicle side wiring is capable of providing at least 30 amps of current
- Under what conditions the auxiliary circuit on the vehicle is live (Key on engine off, Key off, Key on engine running, etc.)

This connection is not meant to charge batteries up from a discharged state. It is meant to keep a charged system full during trailer transport when shore power cannot be used.

LIGHTING

The lights connected to the 7 pin system: marker, stop/turn, and clearance lights, are LED units and are meant to last the life of the trailer. If you require replacement lights or if there is a defect with a light, please consult the OGT Knowledge Base for part numbers and suppliers, or contact **warranty@offgridtrailers.com**

BREAKAWAY SYSTEM

The breakaway braking system backup battery is wired to charge from the auxiliary pin in the 7 pin junction box. See figure 5.3. This pin is connected to both the tow vehicle's auxiliary power lead and to the trailer batteries. The light circled in green is illuminated amber when the break away box is charging; this is normal. To check the state of charge of the break away battery, push the button on the face of the box as shown (circled in red,) and the "full" or "low" indicator light above will glow. If this system doesn't seem to be working correctly, email **warranty@offgridtrailers.com** for assistance.

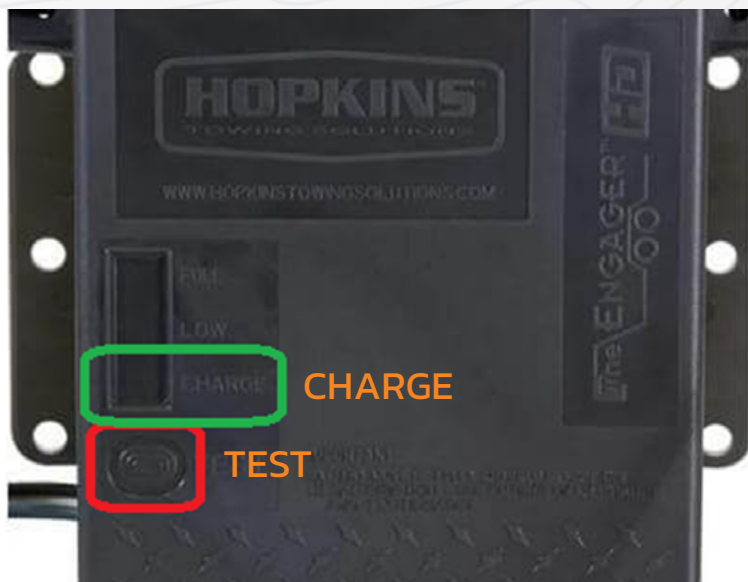


Fig 5.3 Breakaway battery



APPLIANCE & EQUIPMENT OPERATION

TRUMA AQUA GO COMFORT PLUS & TRUMA VARIO HEAT FURNACE

Congratulations! Your OGT unit is equipped with state of the art, industry leading water and optional cabin heating systems from Truma. **Please review fully the owner's manual for each of these products as they are feature rich, technically complex, and require proper procedures for maintenance and operation.** If you have questions about operating these systems, consult the OGT Knowledge base or contact **warranty@offgridtrailers.com**.

To use either system; they first must be turned on via their power switches. The switches are located on each unit.

The switch for the VarioHeat is located as shown below.

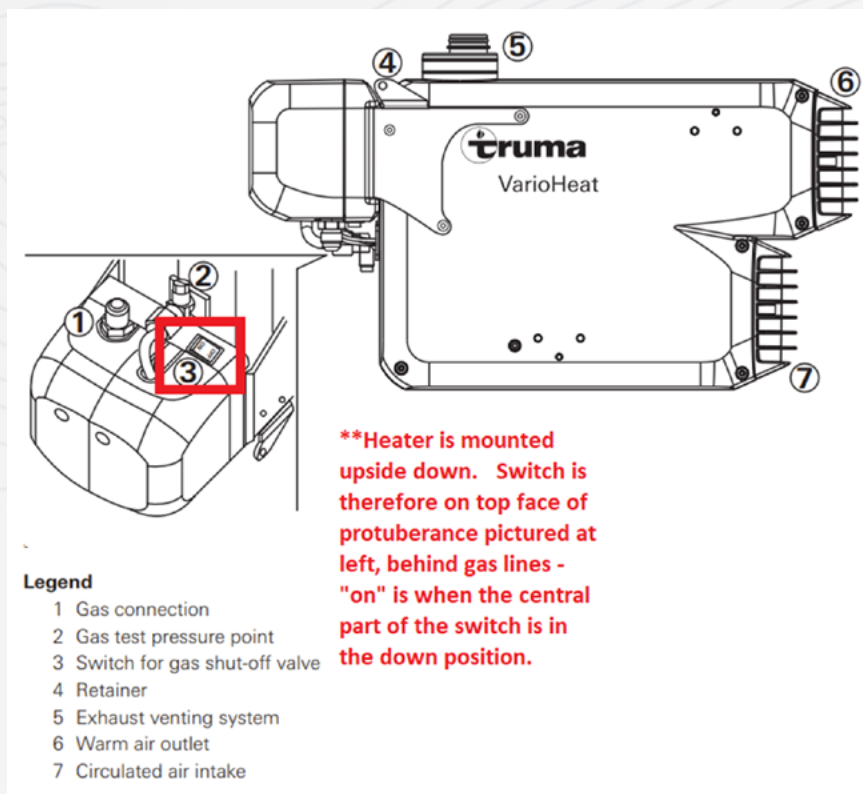


Fig 6.1 Truma VarioHeat

The VarioHeat cabin heating unit is controlled by the Truma CP Plus control panel as shown below.



Fig 6.2 Truma Cp Plus Control Panel

Push the rotary knob to get started; this allows you to cycle through the icons on the main screen, pressing to get into the features in each. The back button to the left exits each menu.

THE TRUMA AQUAGO SWITCH

The switch is located as shown in figure 5.3 below

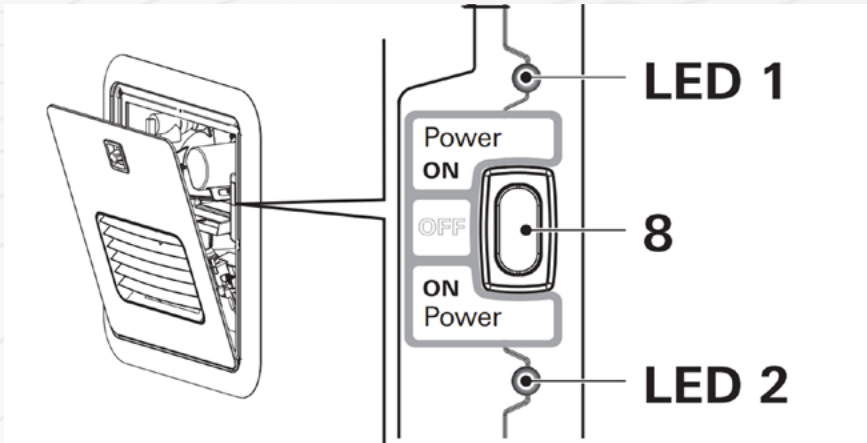


Fig 6.3 Power Switch

To open the compartment to access the switch, use the closure at the top, and do not excessively tip the compartment door outwards; rather pull it straight up and it will hang from integral vinyl straps. Replacement is the reverse of removal. The power switch can be switched on in either direction. LED 1 is lit green during operation. LED 2 is the fault indicator; it will flash error codes listed in the heater owner's manual.

IMPORTANT: Review the heater's manual for information on filter removal and replacement, decalcification, and system winterization.

IMPORTANT: The water heater is shipped with the filter removed. It is located inside of the Truma Aquago compartment. Install the filter as described in the Aquago manual prior to operation, be sure to review the sections on decalcification and system winterization, and also consult the winterization section of this manual.

NOTE: In frost conditions, ambient temperatures below 39 °F (4 °C), there is a risk that water in pipes, faucets and appliances could freeze. This can cause considerable damage. If you are going to be operating the trailer in these conditions, winterize the water system as described in the WINTERIZING section of this owner's manual.

DOMETIC D21 SEC STOVE

The Dometic stove provided with your trailer is set up ideally and rated for outdoor use.

Burner 1 (LHS,) is rated at 7200 BTU/h or 2 kW.
Burner 2 is rated at 5200 BTU/h or 1.5 kW.

The stove features piezoelectric ignition. If you are having any issues with stove lighting or operation, particularly at higher altitudes, please contact us at warranty@offgridtrailers.com

WARNING

- When using your stove ensure that combustibles are kept away from the stove. Maintain at least 30 inches of clearance from combustibles above the stove.
- Always ensure there is proper ventilation to provide the stove air for combustion and dissipation of fumes. Carbon monoxide poisoning can occur if there is insufficient ventilation.
- Never leave oven pilot or range burners on while unattended or while sleeping. Never use stove top to heat trailer.

REFRIGERATOR

Refrigerator models vary depending on which trailer you own. Refer to the fridge manual included in your gear bag for operating instructions.

FIRE EXTINGUISHER

Each unit is equipped with a centrally located fire extinguisher. For further information please refer to the individual component manufacturer's warranty/manual for specific operating instructions (included in your Off Grid Trailers Warranty Pouch).

CARBON MONOXIDE & SMOKE DETECTOR

Expedition, Pando, and Sprocket trailers are equipped with a combination Smoke and CO2 detector on the roof of the main cabin.

If the alarm sounds, exit the unit and leave the entry doors open. Before re-entering, be sure to determine and eliminate the cause of the smoke and/or CO2. Be sure to read the detector's manual for maintenance and test procedures. Test the unit before each trip and change the batteries at least annually.

ZEROBREEZE AC ROUGH IN (PANDO AND EXPEDITION)

The optional Zerobreeze rough in includes a manifold, 4" exterior ports c/w removeable caps, a 110v outlet and a condensate drain. For more information on installing the Zerobreeze unit, consult the OGT Knowledge base.

ZEROBREEZE AC PORT/PLANAR HEATER PORT (SPROCKET MODELS)

The optional Zerobreeze AC and Planar Heater port is located on the driver's side of the Sprocket trailer. The port has a screw on cap for weather tightness; remove this cap and inside are configurable inserts to allow for ducting for either AC or heat to be installed. There's also a wire pass through for the thermostat wiring provided with the Planar heater. For more information on how to use this system, consult the OGT Knowledge base.

OPTIONAL EQUIPMENT

AWNING and ROOF TOP TENT

Since models vary depending on the type of OGT unit you own, please refer to the individual component manufacturer's manual for specific operating instructions.

Use guide ropes to stakes and secure your awnings to the ground at all times. Never use awnings in high winds as it can damage the camper and awnings.

TV

If your unit has a TV installed, please ensure the bracket arms are tight and strapped with the TV stored flat to wall when traveling.

LEVELING/STABILIZING JACKS

The rear stabilizing jacks are meant only to level and stabilize the trailer; they are not to be used to raise the trailer for removing or replacing tires or for any other purpose. See the "Frame and Suspension" section for information on jacking points.

LIGHTING SYSTEM

The optional lighting system upgrade includes:

- A switched LED light in the front and rear storage, in the drop down kitchen box (Expedition models,) in the side shower box.
- Rock lights, LED, activated by the switch for the light in the front storage box.
- A dimmer switch inside the sleeping quarters in place of the standard switch.

OPTIONAL EQUIPMENT APPENDIX



Fig 6.4 Pando Tent Up



Fig 6.5 Pando Shower



Fig 6.6 Awning Switchback



Fig 6.7 Awning Switchback



Fig 6.8 Expedition Tent Up Awning Up



Fig 6.9 Expedition Tent Up



Fig 6.10 Top Plug Shore Power
Lower Plug Solar Ready



Fig 6.11 TV



Fig 6.12 Pando Shower & Tent



Fig 6.13 Expedition Rear Angle Tent Up Shower Down



PROPANE SYSTEM AND PROPANE GAS DETECTOR

PROPANE SYSTEM

SAFETY TIPS

- DO NOT disconnect or remove any tank while valve is open.
- DO NOT store gasoline or any other flammable liquid near any propane appliance.
- Propane tanks should not be left open while traveling.
- Never fill with natural gas.
- Remove tanks from camper before filling.
- Never fill to more than 80% capacity.
- DO NOT tow the trailer with wall mounted tanks in position.
- Always perform a trailer walk-around inspecting for propane leaks and ventilate accordingly

IF YOU SMELL GAS / PROPANE DETECTOR GOES OFF

- DO NOT touch electrical switches.
- Extinguish any open flame.
- Open windows.
- Shut off propane at tank(s).
- Have your system checked by a qualified LP gas technician. if your trailer and mattress are new, leave the side doors/ windows open and ventilate the unit.



Fig 7.1 Propane gas detector

NOTE: The propane detector (fig 7.1) is powered by the trailer's 12v batteries and therefore will only function if the trailer batteries are charged. The detector can exhibit false alarm behavior due to off gassing of the supplied mattress/couch, from soiled clothing, or from other hydrocarbon containing items. Do NOT disable this alarm! Instead, if your trailer and mattress are new, leave the side doors/ windows open and ventilate the unit.



Fig 7.2 Expedition & Pando Tank Location



Fig 7.3 Switchback Tank Location



Fig 7.4 Sprocket Tank Location



Fig 7.5 Furnace & Water Heater Location



FRAME, SUSPENSION, BRAKES, BEARINGS, WHEELS & TIRES

FRAME, SUSPENSION, BRAKE, BEARINGS, WHEELS & TIRES

The rigors of off-road operation dictate that critical fasteners, parts, and assemblies be checked regularly. Refer to the maintenance schedule in the appendix for required service intervals.

The OGT knowledge base at **support.offgridtrailers.com** has detailed information for carrying out wheel alignments.

FRAME

Although the frame has been designed for the abuse of off-road travel, regular inspection is required to ensure there has been no damage and no cracks have formed.

TIMBREN SUSPENSION

If a Timbren Axle-less independent suspension is installed in your trailer, refer to the manufacturer's manual (included in your Off Grid Trailers warranty pouch) for helpful operating and maintenance instructions.

TORQUE SPECIFICATIONS:

Main suspension bracket bolts: (12, 9/16") 170 ft/lbs

Spindle mount bolts: (8, 5/8") 160 ft/lbs

OGT EVOLUTION SERIES SUSPENSION BY FABTECH MOTORSPORTS

Torque specifications:

Control arm pivot bolts (4, M16): 183 ft/lbs

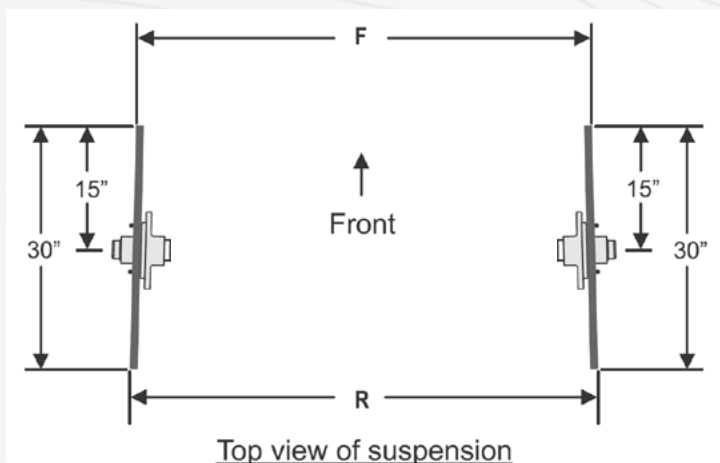
Shock mount bolts (4, 1/2"): 106 ft/lbs

ALIGNMENT SPECIFICATIONS:

Camber: 0°, plus or minus 0.5°

Toe: 0" plus 1/16" minus 0" – difference between R and F below

Positive toe is shown on this diagram: "F" < "R"



WHEEL BEARING ADJUSTMENT & SERVICE

To ensure proper and safe function, regular inspection, lubrication, maintenance, and adjustments of the wheel bearings are required, refer to the maintenance schedule in the appendix for required service intervals..

A wheel bearing adjustment should only be performed by certified mechanical personnel. See below for general service recommendations.

Raise and safely support the trailer, remove the wheel. Remove the grease cap, cotter pin, and castle nut retainer.



Loosen the castle nut slightly and then while rotating the hub, tighten to 200 ft-lb. Loosen one turn and **tighten to 50 ft-lb** while rotating the hub. Back off 1/8th of a turn to facilitate the castle nut retainer going over the castle nut and to allow for re-installation of the cotter pin. Check hub assembly for excessive bearing play, none should be felt with an in-out movement. Replace the grease cap.

DUST CAPS

In case you need to replace a cap ...

FabTech: TruRyde part DC-250 -2 1/2" dust cap

Timbren: TruRyde part DC-250 -L - 2 1/2" dust cap
(w/lube plug)

LUG NUTS

Torque specification: 110 lb-ft

Wrench size: 19mm, optionally a splined adapter (supplied in gear bag.)

Ensure threads of studs and inside of lug nut are clean and dry. Do not lubricate threads or seats.

BRAKES

Your trailer is equipped with electric brakes which includes an emergency brake away system. Due to the low weight of your trailer, brakes may not be required by your local regulations, but lack of use may cause corrosion of the brake system parts which will not be covered by warranty. Always check the regulations of where you will be traveling with your trailer for brake and other trailer towing requirements.

The emergency break away system will activate the brakes on the trailer if the trailer becomes unhitched from the tow vehicle. For proper function, the break away switch lanyard must be attached directly to the tow vehicle and the emergency brake system battery must be fully charged. Refer to the maintenance schedule in the appendix for required service intervals and refer to the break away system manual for specific operating and maintenance instructions.

The brake system on your trailer must be controlled by a break controller in your tow vehicle. Refer to the manual supplied with your brake controller for the specific instructions on how to operate and set up the trailer and tow vehicle brake system. Consult with a qualified RV or trailer technician if you require assistance.

To ensure proper and safe function, regular inspection, maintenance and adjustment of the brake system are required. Refer to the maintenance schedule in the appendix for required service intervals and refer to the individual component manufacturer's manuals for specific operating and maintenance instructions.

NOTE: The brakes on trailers equipped with the Timbren suspension have a self adjusting feature, but will still need inspection and service as per the Timbren manual and our maintenance schedule. The brakes on trailers equipped with the FabTech evolution suspension are NOT self adjusting; careful observation of their operation and regular inspections, testing, and service are required.

WHEELS & TIRES

Off-road travel increases the chance of wheel and tire damage. Frequently check your trailer tires and wheels. Note that wheels/tires over 33 inches may cause interference with the fenders in an overloaded trailer - optional Timbren jounce springs may be required (Consult with OGT). Your trailer is not equipped with a lifting jack, ensure that the jack used is adequate for the trailer weight. If needed, jack the trailer by the frame just behind the suspension mount as illustrated in Fig. 7. Always ensure the trailer is parked on a level surface and use wheel chocks. When replacing the wheel, tighten the wheel lug nuts in the pattern illustrated in Fig. 7.2 to a final torque of 110ft/lbs. Check wheel torque after 50 and 100 kms (30 and 60 miles.) Keep tires inflated to the pressures on your trailer vehicle information plate. When replacing tires, ensure replacements meet or exceed the OEM tire weight rating.

JACKING POINTS

When lifting the trailer with a suitable jack of sufficient capacity, be very careful so that no part of the track interferes with the fenders or suspension during its travel. You can lift the trailer by any part of the longitudinal frame. The best points are where a 3/16" (the thicker of the two,) lateral member intersects, staying away from the wheels/tires and fenders. See the image below. You'll usually be raising the trailer to remove a tire, so you'll want to position the jack at the rear. It is safest to lift the trailer when it is attached to a vehicle.

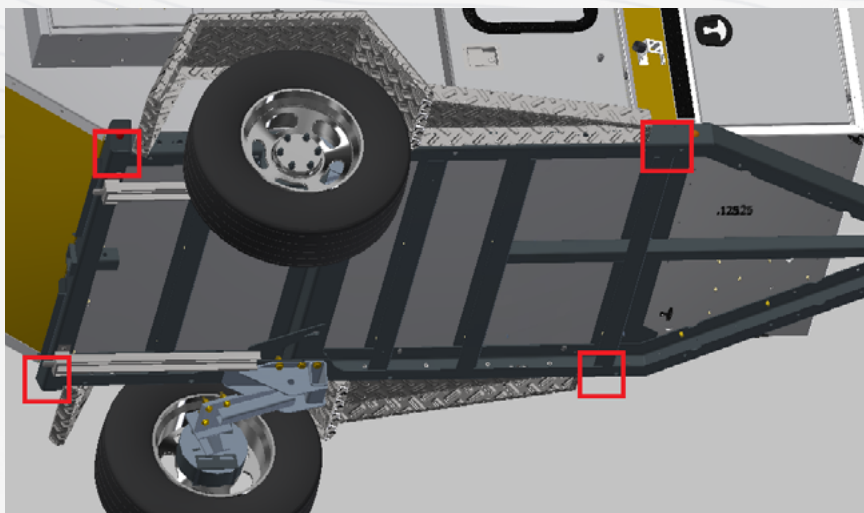


Fig 7.1 Jacking Points

FRAME, SUSPENSION, BRAKE, BEARINGS, WHEELS & TIRES APPENDIX

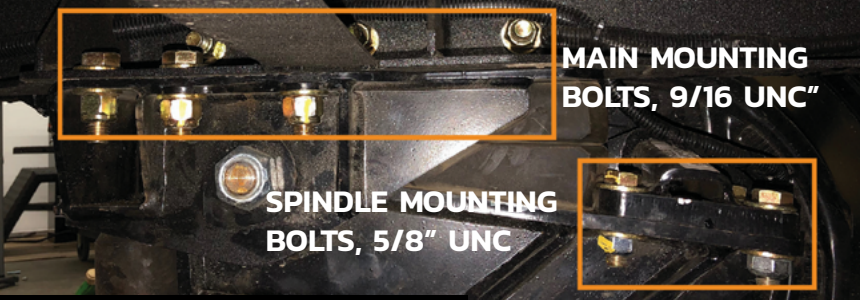


Fig 7.2 Timbren Suspension Mounting Bolts

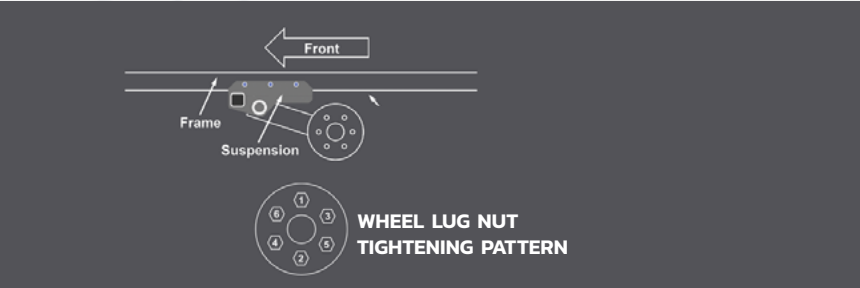


Fig 7.3 Suspension



Fig 7.4 Timbren



Fig 7.4 Fabtech

A large, stylized orange snowflake graphic serves as the background for the page. It has a central vertical stem with six horizontal branches, each ending in a rounded tip. The branches are slightly offset from the center, giving it a three-dimensional appearance.

WINTERIZING

WINTERIZING - ALL MODELS

By ensuring that your Off Grid Trailer unit is properly serviced and protected, you can prevent any damage caused by cold weather. In this way your Off Grid Trailer unit will be ready for next year's enjoyment with a minimum of preparation. The Hot water heater heat exchanger is the most prone to freezing. De-winterizing procedure follows Trailer Winterizing in reverse.

TRAILER WINTERIZING:

1. Drain all holding tanks & fresh water tank, turn the water heater power off.
2. Flush the entire water system with NON-TOXIC RV anti-freeze;
 - a. Insert the end of line into a container of RV anti-freeze. Turn pump on to pressurize system with RV anti-freeze.
 - b. Open each faucet, one at a time, both hot and cold and run slowly until anti-freeze begins.
 - c. To flow out of the faucet. Ensure RV anti-freeze is run through the shower head;
 - d. Turn pump off and open all taps to relieve pressure; leave all taps open.
 - e. With the access panel for the Truma Aquago removed, open the easy drain lever as shown in the Aquago manual. Remove the filter and allow the AquaGo to drain of any RV antifreeze. Replace the filter and close the lever valve system.
 - f. Switch anti-freeze bypass valve to operating position.
4. Lift cushions and mattress slightly to allow circulation of air beneath them.
5. Ensure that all windows and vents are closed.
6. Cover with a trailer cover is recommended to protect unit from ice formation; do not use tarp or materials that do not allow moisture to escape as moisture may build up under the cover.
7. Periodically check unit for snow load and remove excessive amounts.

For additional information reference support.offgridtrailers.com



MAINTENANCE & WARRANTY

GENERAL MAINTENANCE

INTERIOR MAINTENANCE TIPS

- All Off Grid Trailers have been designed to be compatible with mild cleaning agents, so each unit's appearance and quality can be maintained.
- All the cushions used in the manufacturing process are foam backed and therefore can be professionally cleaned.
- These tips will prolong the life and add to a better re-sale value of your Off Grid Trailer.

EXTERIOR MAINTENANCE TIPS

- Wash the unit regularly with mild soap and water, the trailer wraps although durable, may overtime weather and may scratch, this will not affect the performance of the trailer walls.
- Check roof sealant and silicone annually and re-apply if cracked or peeling.
- Rinse windows well to remove dirt before cleaning with clean soapy brush. Always ensure window latches are locked before traveling.

Note: Pressure Washing The 3M Wrapped Surfaces

Although hand washing is the preferred cleaning method, pressure washing may be used under these conditions: Ensure the water pressure is kept below 2000 psi (14 MPa). Keep water temperature below 180 °F (80 °C). Use a spray nozzle with a 40-degree wide angle spray pattern. Keep the nozzle at least 1 foot (300 mm) away from and perpendicular (at 90 degrees) to the graphic.

Search the Off Grid Trailers knowledge base for 3M wraps for more information!



MAINTENANCE SCHEDULE

Item (if equipped)	Interval	Maintenance
Coupler	Each use	Inspect, clean and grease
Safety chains	Each use	Inspect
Wheels and tires	Weekly	Check tire pressure
	3 Months or 5000 kms/3000 miles	Inspect for wear, damage
	50 and 100 kms (30 and 60 miles)	Check lug nut torque. If/when reinstalling wheel reinspect torque at 50 and 100km
	3 Months or 5000 kms/3000 miles	Check lug nut torque
Brakes	Each use	Test trailer brakes for proper operation
	Each use	Test breakaway system switch and check battery charge
	3 Months or 5000 kms/3000 miles	Brake adjustment (manually adjusted brakes)
	6 Months or 10000 kms/6000 miles	Inspect brake magnets and check current draw
	12 Months or 20000 kms/12000 miles	Inspect brake drum, brake linings and brake wiring
Wheel bearings	Once at 4 months then every 12 Months	Inspect for bearing play/flash, check seals for leaks, repack/replace as required.
Suspension	Within first week of use	Check torque of all suspension nuts and bolts
	Once at 4 months then every 12 Months	Inspect all suspension components for damage and cracks
	Once at 4 months then every 12 Months	Check wheel alignment
	Once at 4 months then every 12 Months	Check torque of all suspension nuts and bolts
Frame	12 Months or 20000 kms/12000 miles	Grease suspension bushings
	Each use	Check for damage and cracks, check fasteners for tightness
	6 months	Wax tongue jack, grease as required
Locks and hinges	12 months	Lubricate / Adjust
Window and door seals	12 months	Inspect, repair/replace as required
Sealant	12 months	Inspect, repair/replace as required
Water heater	6 months	Descale
	Monthly	Clean inlet air and water filter
	12 months	Inspect burner, top exhaust, water system and gas system
Trailer heater/AC	12 months	Gas system & combustion system inspection
Stove	12 months	Inspect hoses and connections, check for leaks
Gas system	Each use	Inspect gas bottle connection for leaks
	12 months	Inspect hoses and connections, check for leaks
Fire extinguisher	Each use	Inspect, replace or service if expired
Smoke detector	12 months	Test for proper function, replace if expired
CO detector	12 months	Test for proper function, replace if expired
Gas detector	12 months	Test for proper function, replace if expired
Leak check	12 months	All wiring, liquid propane, plumbing fittings for leaks, wear and tear.

NOTE: Not all items listed in the maintenance schedule may be installed on your trailer as they may be optional. Accessories should be maintained in accordance with the manufacturers specifications included in the respective owner's manual. Maintenance listed is recommended by Off Grid Trailers, individual manufacture maintenance requirement may change and supersede this schedule. All maintenance is to be carried out by an individual familiar the R.V. repair, some of the maintenance items listed must be carried out by a qualified R.V. technician, refer to the individual component manufacturer's manual for maintenance instructions.

During the warranty period, any repairs or maintenance not on this list is to be carried out by the trailers owner or other non licensed personnel, please contact the OGT Warranty department at warranty@offgridtrailers.com. In order to be safe and to maintain your factory warranty

MAINTENANCE NOTES

[illegible]

MAINTENANCE NOTES

[illegible]

MAINTENANCE NOTES

[illegible]

MAINTENANCE NOTES

[illegible]



LIFETIME ROOF WARRANTY

OGT guarantee: Our roof will not leak or become compromised.

Off Grid Trailers LP offers a limited lifetime warranty, following the Owner's purchase of the Trailer from either (a) the Manufacturer or (b) a Dealer (the "Roof Warranty Period"), against leaks and manufacturing defects in the roof and will conform to all written specifications provided by the Manufacturer. For clarity, the "roof" begins above any rear hatches/doors/or other ingress areas and continues fore and on both overlapping sides to the interface of the front wall to the frame. This warranty is provided to the original owner and is not transferable.



MANUFACTURER'S 5-YEAR STRUCTURAL INTEGRITY WARRANTY

The Trailer Frame Chassis only will, for a period of sixty (60) 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.



MANUFACTURER'S 1-YEAR COMPREHENSIVE WARRANTY

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.



LIFETIME CUSTOMER SERVICE

Our dedicated customer service team will always be there to support you and your Off Grid Trailer. Whether you are looking for replacement parts or advice, we are only a phone call or email away.

WARRANTY

OFF GRID TRAILERS LP. WARRANTY

Subject to the terms and conditions set forth herein, OFF GRID TRAILERS LIMITED PARTNERSHIP (hereinafter referred to as the "Manufacturer", "Off Grid Trailers" or "OGT"), 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 Trailer Frame Chassis only will, for a period of sixty (60) 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.
3. Off Grid Trailers LP offers a limited lifetime warranty, following the Owner's purchase of the Trailer from either (a) the Manufacturer or (b) a Dealer (the "Roof Warranty Period"), against leaks and manufacturing defects in the roof and will conform to all written specifications provided by the Manufacturer. For clarity, the "roof" begins above any rear hatches/doors/or other ingress areas and continues fore and on both overlapping sides to the interface of the front wall to the frame. This warranty is provided to the original owner and is not transferable.

(The above warranty referred to herein as the "Warranty")

TERMS AND CONDITIONS OF WARRANTY

The Warranty becomes effective only if the enclosed or online warranty card is fully completed and mailed/emailed to the manufacturer within (30) days of the date of purchase by the Owner.

The Manufacturer will confirm Warranty registration.

1. The Warranty is the only warranty on the part of the Manufacturer and there are 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.
2. The Warranty does not apply to any Non-Warranty Components. The Manufacturer is not the manufacturer of the following products (but not limited to): axles, 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.
3. 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.
4. 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.
- 5.

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 axles, 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. "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.

Off Grid Trailers LP. reserves the right to change any components used in production at their discretion.



WARRANTY SERVICE

If you require warranty work to your unit (this warranty is effective for twelve months after date of purchase by the original owner) it should be taken to your nearest Authorized Off Grid Trailer Dealership or Ambassador. To locate the Authorized Off Grid Trailer Dealership nearest you, please call Off Grid Trailers LP.

If you are in the area, warranty and special repairs can also be done at Off Grid Trailers LP facility but remember to call ahead for an appointment so as not to inconvenience you or our production staff.

We offer this service to ensure you are professionally serviced and fully satisfied so you may again enjoy a trouble free Off Grid Trailers product regardless of whether you travel in Canada or the United States.

OUR ADDRESS: **Off Grid Trailers LP**
6322 Roper Rd
Edmonton, AB T6B3P9 Canada

TELEPHONE: 1-800-786-3221
EMAIL: warranty@offgridtrailers.com
WEB SITE: support.offgridtrailers.com
www.offgridtrailers.com

TRAILER IMAGE APPENDIX



EXPEDITION 3.0



BATTERIES CHARGER / CHARGER PORT



PANDO 3.0

MAIN FUSE/ POWER SHUT OFF

WATER HEATER / OPTIONAL FURNACE

FUSE BOX
INVERTER



BATTERIES CHARGER / CHARGER PORT



FRIDGE

WATER DRAIN

KITCHEN



SWITCHBACK R



MAIN FUSE/ POWER SHUT OFF

FUSE BOX
INVERTER

HOT WATER
DEMAND
SYSTEM



20lb
PROPANE TANK

SIDE GALLEY
KITCHEN



OPTIONAL
BBQ



SLIDE OUT FRIDGE

SPROCKET



MAIN FUSE/ POWER SHUT OFF

FUSE BOX
INVERTER

HOT WATER
DEMAND
SYSTEM



20lb
PROPANE TANK

SIDE GALLEY
KITCHEN



OPTIONAL
BBQ



SLIDE OUT FRIDGE



**OFF GRID
TRAILERS™**



KNOWLEDGE BASE

