

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




**OFF GRID
TRAILERS**

TRAILER OWNERS MANUAL



CONTENTS

4	QUICK SET-UP GUIDE
6	HOOING UP THE TRAILER
9	DOOR OPERATION MAINTENANCE
9	TOWING YOUR TRAILER
12	PLUMBING SYSTEM
17	ELECTRICAL SYSTEM
19	PROPANE SYSTEM
23	APPLIANCE OPERATING INSTRUCTIONS
26	SAFETY TIPS
28	OPTIONAL EQUIPMENT INFORMATION
32	FRAME, SUSPENSION, BRAKE, BEARINGS, WHEELS & TIRES
37	WINTERIZING
39	GENERAL MAINTENANCE
40	MAINTENANCE SCHEDULE
43	WARRANTY
47	TRAILER IMAGE APPENDIX

A large, stylized gear graphic is positioned in the bottom right corner of the page. It is rendered in a dark gray color, matching the background, and has a thick, outlined appearance. The gear is partially cut off by the right edge of the page.

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 'Duane Leedell', written in a cursive style.

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
- For Max Coupler: 2" receiver with ball mount 1" shank hole
- Tow vehicle 7 pin wiring & brake controller
- Trailer license plate & registration (or trailer transport permit)
- Some vehicles may require a 7-Pin extension

TRAILER SET-UP

- Install License plate
- Prepare tow vehicle hitch (hitch height = 21")
- 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

NEW TRAILER CHECK LIST

- De-winterize &/or sanitize potable water system
- Charge batteries
- Turn on main circuit breaker
- Check tire pressure
- Fill propane bottle
- Re-torque wheels refer to the maint schedule
- Review maintenance schedule and ensure specific internals are followed (i.e. re-torque suspension bolts after 1st week of use)

Note: Hitch ball and/or ball mount not supplied with trailer.

Refer to the applicable section of this manual for specific instructions to carry out items in the Quick Setup and New Trailer Check Lists.



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. 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 tow 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.

Your trailer is equipped with a manual trailer jack; turn the handle clockwise to raise the trailer, and counter clockwise to lower the trailer. Remove jack locking pin to rotate the jack as illustrated in Fig 1.2. If a wheel(s) is supplied with your trailer jack it is only intended for delivery assistance. Jack options are subject to change.

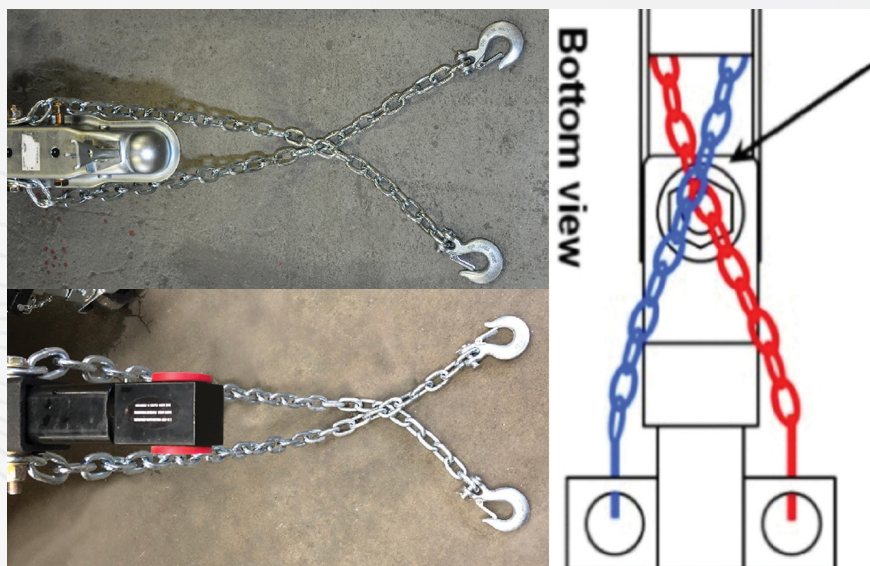


Fig 1.1



Fig 1.2

HOOKING UP THE TRAILER

The 7-pin trailer harness provides connection to your vehicles turn signals, brake lights, running lights, brake control as well as provides power to your trailer. The connections in the trailer plug are according to industry standard, refer to wiring details section C of this manual to confirm this matches your vehicle connections and for additional information on optional charging wiring/configuration. Note that the trailer high mount tail light is NOT wired as a brake 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 owner's manual).

Attach the emergency brake away switch cable to the tow vehicle as illustrated in Fig 1.3. Note your breakaway backup battery requires shore power to charge/recharge.

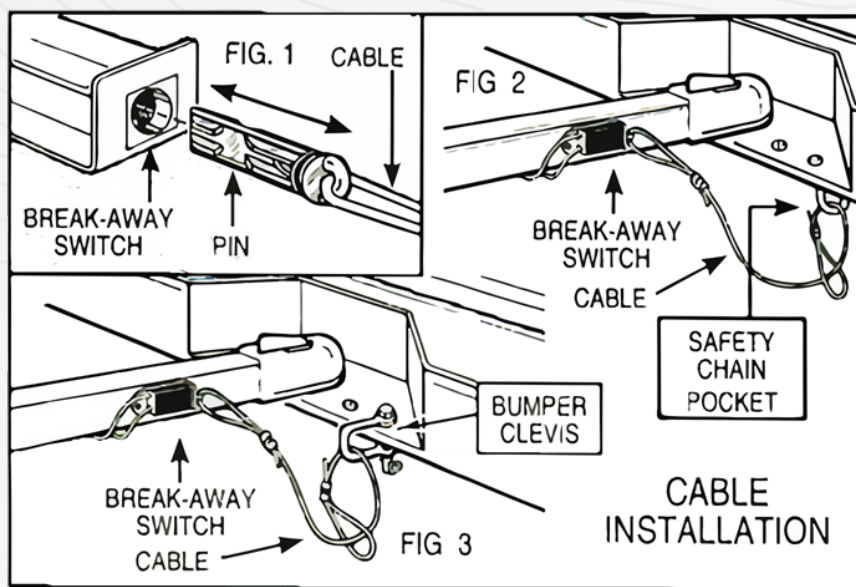


Fig 1.3

DOOR OPERATION & MAINTENANCE APPENDIX

DOOR OPERATION & MAINTENANCE

Expedition and Pando 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 2.1 Pando Door



Fig 2.2 Pando Door

VERSION 1:

Single stage primary latch system - ensure Deadbolts are engaged while travelling.

VERSION 2:

Dual stage primary and secondary latch system - ensure primary door latch is engaged to ensure full seal. The latch is equipped with a secondary safety mechanism. Door must be fully closed on both latch mechanisms. This door is also equipped with a safety system to allow emergency latch cable access for exit in the event the latch cable / mechanism fails (see below).

Maintenance: Trailer inspection is key to ownership of an off road trailer. Door maintenance including window, seal, latch, hinges, and overall assembly inspection is crucial.

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 with sufficient tongue loading with the limits of both your trailer and 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, 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 below or have a qualified RV technician perform the sanitization for you.

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 SIZES PER MODEL

EXPEDITION 2.0

31 GAL

SWITCHBACK

31 GAL (OPTIONAL)

PANDO 2.0

14 & 19 GAL (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.

PLUMBING (where equipped)

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 LOCATION & FILLING

Fresh water fill locations vary by model, refer to the model specific trailer diagram at the end of this manual. To fill the fresh water storage tank, remove fill cap and fill with hose.

PLUMBING

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. The drain cock is located near the freshwater tank.

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. The drain cock is located near the freshwater tank.

NOTE: The water system is not sanitized at the factory and must be sanitized prior to use.

PLUMBING APPENDIX

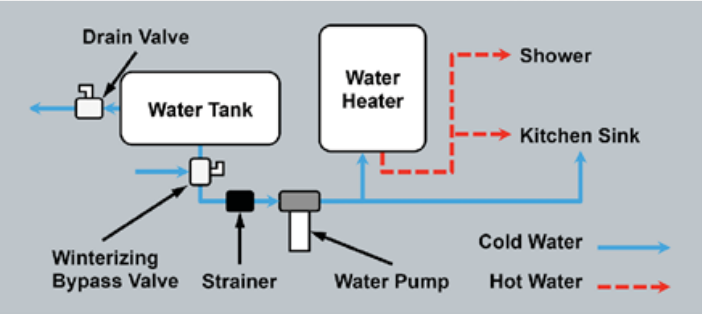


Fig 3.1
Expedition & Pando

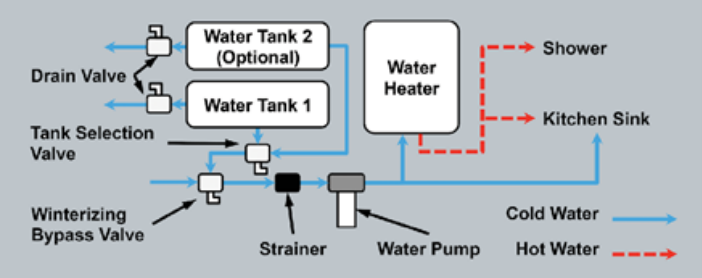


Fig 3.2
Expedition & Pando

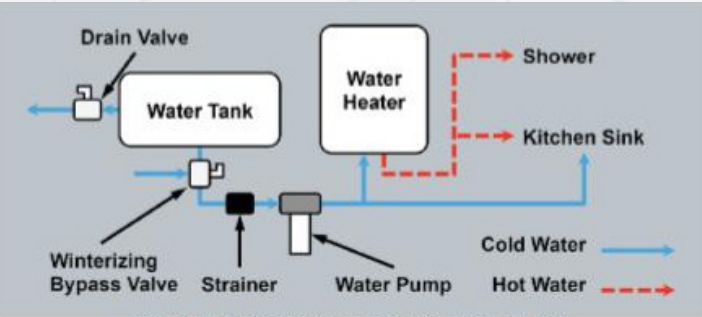


Fig 3.3
Switchback



Fig 3.4 Expedition Gravity Water Fill

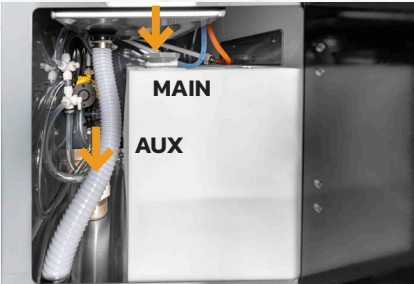


Fig 3.5 Water Fill Pando



Fig 3.6 Switchback Water Fill



Fig 3.7 switchback water tank drain valve access panel



Fig 3.8 Switchback valve access panel (open)

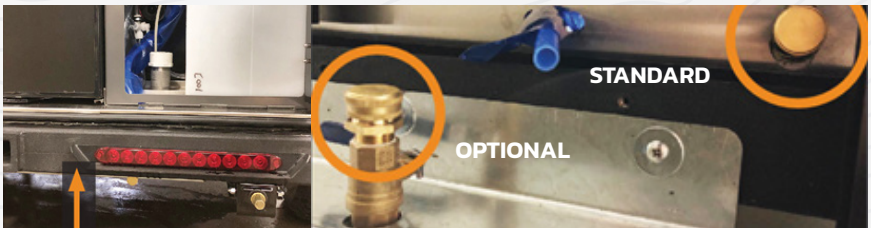


Fig 3.9 Pando water tank drains

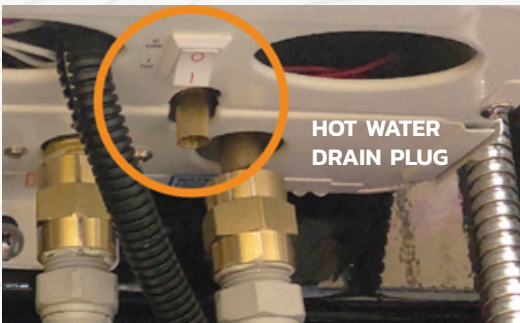


Fig 3.10 Drain to Winterize WH



3.11 Expedition water tank drain

A stylized, light orange graphic on a darker orange background. It depicts a hand with fingers spread, holding a two-prong electrical plug. The entire graphic is composed of thick, rounded lines.

ELECTRICAL

ELECTRICAL SYSTEM (where equipped)

Ref. Fig 5.1, 5.2, 5.3, 5.4, 5.5, 5.6

SHORE POWER CHARGING

To charge via shore power, simply plug a standard 15-amp power cord into the exterior mounted shore power port and plug in electrical power source.

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

REPLACEMENT & MAINTENANCE OF LIGHTS

All interior and exterior lights are LED fixtures rated to provide issue free service for the life of the trailer. The LEDs in these fixtures are not serviceable, and the fixture must be replaced if malfunctioning by a qualified RV technician.

NOTE: External light fixtures may require seasonal maintenance to prevent corrosion.

ELECTRICAL SYSTEM - ALL MODELS

WIRING DETAILS

The following details of each unit's color coded wiring layout is intended to aid only authorized RV technicians to troubleshoot and repair any wiring problems that could potentially arise and is not intended to aid the owner in doing any electrical repairs.

WIRED (not connected at factory)

Tow vehicle to trailer battery connection requires electrical installation and modification of the 12V trailer pin by an authorized RV technician or Automotive Technician. The manufacturer is not responsible for any damage caused to the tow vehicle through electrical modification.

POWER INVERTER & FUSE PANEL

1. All 12 volt circuits are protected from overload by automotive type fuses indicated on the fuse panel.
2. 110 volt circuits are operated by the power inverter remote installed in the inside cabinet on the operator panel.
3. The main BUS master power off is in the unit front box with the main system 12 or 6V batteries. Depress to turn off all unit power.

FUSES

The fuses used in every Off Grid Trailer unit are an automotive fuse. Fuse boxes are mounted with positive up, negative down.

EXPEDITION 2.0		
FUSE	AMP	DESCRIPTION
1	15	Stereo
2	5	Exterior Lights
3	15	Fridge
4	5	Interior Lights
6	5	USB Plug
8	10	Water Pump
10	5	Fan
12	5	Furnace

PANDO 2.0		
FUSE	AMP	DESCRIPTION
1	15	Stereo
2	5	Exterior Lights
3	15	Fridge
4	5	Interior/Galley Lights
5	15	Optional Fridge
6	5	USB Plug
8	10	Water Pump
10	5	Fan
12	5	Furnace

SWITCHBACK		
FUSE	AMP	DESCRIPTION
1	15	Stereo
2	5	Exterior Lights
3	15	Fridge
4	5	Interior/Galley Lights
5	15	Rear Fridge
6	5	USB Plug
8	10	Water Pump

PROPANE SYSTEM

IMPORTANT NOTE: Heater cabinet doors must be fully open to operate the hot water system. The propane water heater requires combustion air and exhaust.

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 walkaround 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.



Fig 4.1 Expedition & Pando Tank Location



Fig 4.2 Switchback Tank Location

ELECTRICAL APPENDIX



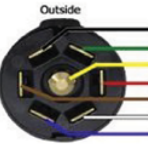













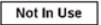
Fig 5.1 Interior - Expedition and Pando main elec panel



Fig 5.2 Switchback Front switches



Fig 5.3 Switchback Rear Switch Panel

Trailer 7 Pin Plug (View looking into connector)	Pin	Function	Wire Color Code	
			Tow Vehicle	Trailer
 <p>Outside</p> <ul style="list-style-type: none"> 12V Power Tail & Running Lights Reverse Lights Left Turn & Stop Right Turn & Stop Ground Brake Controller Output 	1	Ground		
	2	Trailer Brakes		
	3	Tail/Running Lights		
	4	Aux 12V+ Charging		
	5	Left Turn/Stop Light		
	6	Right Turn/Stop Light		
	7	Center Aux (Backup lights)		

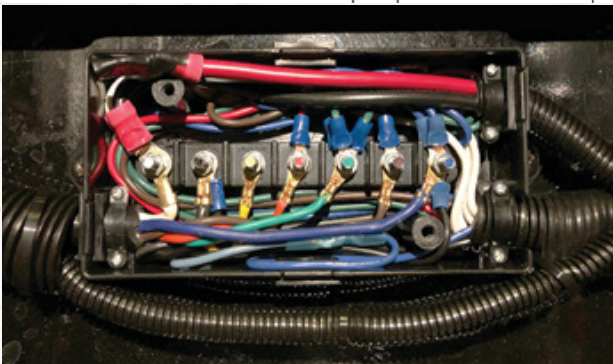


Fig 5.4 Electrical

NOCO CHARGING SYSTEM

Information on the design and performance of the Noco charging systems and how to maintain performance while at home and off grid.

The Noco system is not designed to charge batteries and service 12v loads at the same time, but it can work well. The charger can only provide at most 20 amps of charging. The fridge can use 10 amps, the fan 5 amps - you quickly run out of power.

The older Noco Genius GEN2 chargers are appropriately wired in parallel to the batteries - one Noco bank to each battery. The batteries are of course 12v each, and wired in parallel to supply 12v nominal.

HOW DO YOU KEEP THE SYSTEM CHARGED?

You need to always understand where you are. These are "at rest" (neither charging nor discharging,) voltage levels for 12v deep cycle batteries:

12.6 volts = 100%

12.5 volts = 70%

12.3 volts = 50%

11.4 volts = 20%

The batteries should never be allowed to get below 50% charge state. They are 80 amp hours each. This means that there is 80 amp hours of capacity available. The only way to determine how fast your batteries are discharging is to do an experiment with your loads. One may suppose that the fridge uses 6 amps, since it is a constant draw - but this is dependent on temperature and the items inside the fridge.

If you do an exercise and assume that 6 amps is the load on the electrical system, you could infer that the fridge would run for about 13 hours before the batteries were completely discharged. $80 \text{ amp hours} / 6 \text{ amps} = \sim 13$.

How do you use this system while camping? First, you start with fully topped off batteries, so if the fridge is on or the system is loaded while at home, the Noco system should be on.

ONCE ON THE ROAD

- 1) You can have the tow vehicle attached via:
 - The aux. pin in the 7 pin box (ensuring this connection is fused with a 30 amp fuse inline, proper sized wire is used – 10ga or larger, and that the vehicle/7 pin ground is properly attached between the tow vehicle and the trailer batteries.)
 - More suitably, a proper DC/DC charger for RV battery systems.
- 2) Solar panels can be attached via a suitable charge management system.

When shore power is again available, the Noco charger can be used to replenish the batteries. Using the Noco charger in conjunction with the aux pin in the 7 pin box, or in conjunction with a solar panel is not a scenario that has been tested but may work well.



Fig 5.5 Noco Genius GEN2



Fig 5.6 Noco Genius GENPRO

The background is a solid orange color. A large, rounded orange rectangle is centered on the page. Inside this rectangle, there is a circular graphic that resembles a dial or a control knob, also in orange. The text "APPLIANCE OPERATION" is written in white, bold, uppercase letters across the center of the circular graphic.

APPLIANCE OPERATION

APPLIANCE OPERATING INSTRUCTIONS

FURNACE OPERATING INSTRUCTIONS (where equipped)

Since models may vary depending on the type of Off Grid Trailers unit you own, please refer to the individual component manufacturer's warranty/manual for specific operating instructions (included in your Off Grid Trailers warranty pouch).

For the Propex HS2211 unit, access to the heater reset switch is located on the interior of the side mounted aluminum box. The removable panel is sealed with reusable butyl tape. The reset switch is below the wiring harness (protected by rubber boot-marked in yellow as in Fig 6.1). Depress the yellow/red boot to reset the heater unit.

FURNACE TROUBLESHOOTING (where equipped)

The heater is equipped with an electronic diagnostic system which will detect fault conditions ranging from poor gas or d.c. supply to internal heater malfunctions. In the unlikely event of a failure, the red light on the control panel will flash a number of times, pause, and repeat until switched off. Count the number of flashes to find the remedy below:

1 FLASH: OVERHEAT

Check gas supply making sure there is gas in the bottle and no blockage in the gas line. Ensure propane is used at temperatures below +5°C. Clear lockout as described below.

2 FLASHES: NO FLAME DETECTED

Check the air ducts and vents are not blocked or restricted. We recommend that you wait at least 5 to 10 minutes to allow the heater to cool before clearing lockout as described below.

3 FLASHES: LOW/HIGH SUPPLY VOLTAGE

Minimum operating voltage is 10V, maximum is 15V, when measured at the heater. Check battery voltage. If between 10V & 15V, check connections between heater and battery. Check alternator or external battery charging. Clear lockout as described below.

4 FLASHES: COMBUSTION AIR FAULT

Check combustion air inlet flue and exhaust flue for blockages.

5 FLASHES: OTHER/INTERNAL FAULT

Attempt to clear lockout as shown below. If this fails, contact a Propex Approved Service Centre / Technician.

GAS LOCKOUTS

Gas lockouts must be cleared by turning the selector knob from gas on (flame) position to off position then back to the on position. The complete sequence of switch movements must be completed within 2.5 seconds for a lockout to be successfully cleared. If there is air in the gas line, e.g. after a gas bottle change, the space heater may require several attempts before it lights. Lockouts can also be cleared by switching to the 'fan only' position and then back to 'on' within this 2.5 second period.

OTHER LOCKOUTS

Note: A cycling of the power supply to the unit will not clear a lockout. Some gas lockouts, e.g. ignition lockout and combustion air faults will still permit use of the appliance in electric only operation.

If the problem persists please contact warranty@offgridtrailers.com



APPLIANCE OPERATING INSTRUCTIONS

REFRIGERATOR

Since models may vary depending on the type of Off Grid Trailers unit you own, please refer to the individual component manufacturer's warranty/manual for specific operating instructions and winterizing (included in your Off Grid Trailers warranty/manual pouch).

HOT WATER HEATER

Since models may vary depending on the type of Off Grid Trailers unit you own, please refer to the individual component manufacturer's warranty/manual for specific operating instructions and winterizing (included in your Off Grid Trailers warranty/manual pouch).

IMPORTANT NOTE: On demand water heater is only to be operated with heater compartment door fully open.

FIRE EXTINGUISHER (where equipped)

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 (where equipped)

Your trailer may be equipped with a CO detector designed to warn you of dangerous CO levels. If alarm sounds immediately open all windows, vents and doors and air unit out. Be sure to read manufacturer's manual for correct maintenance and testing procedures. Your camper may be equipped with a smoke detector. Test before each trip and change batteries at least annually.

PROPANE/LP GAS ALARM (where equipped)

Your trailer may be equipped with a Propane/LP Gas Alarm designed to warn you of hazardous propane vapors. Be sure to read manufacturer's manual for correct maintenance and testing procedures. Test before each trip.

APPLIANCE OPERATING INSTRUCTIONS - ALL MODELS

STOVE

Since models may vary depending on the type of Off Grid Trailers unit you own, please refer to the individual component manufacturer's warranty/manual for specific operating instructions (included in your Off Grid Trailers warranty pouch).

SAFETY TIPS

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



APPLIANCE OPERATION APPENDIX



Fig 6.1 Furnace

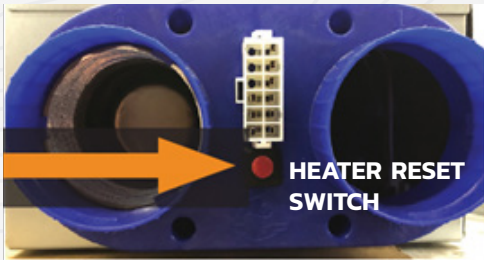
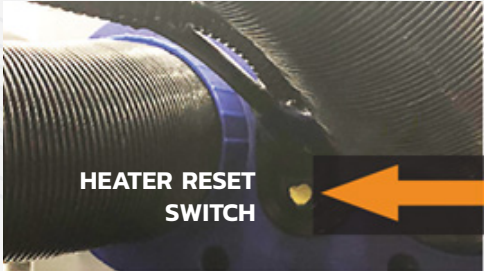


Fig 6.2 Water Heater

OPTIONAL EQUIPMENT

XANTREX SHORE POWER/BUILT-IN BATTERY CHARGER/INVERTER

The Xantrex Freedom XC Pure Sine Wave Inverter/built-in battery charger will automatically charge the recreational vehicle's battery system (if the units are plugged into a 110-volt power source). The battery system will not charge if separated by an isolator- ensure the units main power BUS is in the "Closed" or "ON" position. Refer to the "Xantrex Freedom XC Series Inverter Charger" Owners Guide for more usage details on the included GFCI plug and remote display head unit.

AWNING and ROOF TOP TENT (where equipped)

Since models may vary depending on the type of Off Grid Trailers unit you own, please refer to the individual component manufacturer's warranty/manual for specific operating instructions (included in your Off Grid Trailers warranty pouch).

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

TV (where equipped)

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

LEVELING/STABILIZING JACKS (where equipped)

Use jacks with supplied handle to operate and stabilize the trailer. Do not support the full trailer weight on jacks.

SOLAR

The unit is not equipped standard with a solar charge controller. The solar port is configured to connect portable panels with integrated charge controllers only.

OPTIONAL EQUIPMENT APPENDIX



Fig 8.1 Awning Switchback



Fig 8.2 Awning Switchback



Fig 8.3 Expedition Tent Up Awning Up



Fig 8.4 Expedition Tent Up



Fig 8.5 Expedition Rear Angle Tent Up Shower Down



Fig 8.8 Pando Tent Up



Fig 8.9 Pando Shower



Fig 8.10 Pando Shower & Tent



Fig 8.6 Top plug shore power
Lower plug solar ready



Fig 8.7 TV



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

FRAME, SUSPENSION, BRAKE, BEARINGS, WHEELS & TIRES

Your trailer has been designed for off road use with an independent Timbren suspension and all terrain tires. Due to increased vibration caused by off road use, fasteners including wheel lug-nuts are more prone to loosening and need to be inspected for tightness to specified torque on a frequent basis. Refer to the maintenance schedule in the appendix for required service intervals.

FRAME

Although the frame has been designed for the abuse of off road travel, regular inspection of the frame is required to ensure no damage or cracks have formed, particularly with off road travel. If damage or cracks are found or suspected have the trailer inspected and repaired by a qualified RV technician.

SUSPENSION

A Timbren Axle-less independent suspension is installed in your trailer, refer to the maintenance schedule in the appendix for required service intervals and refer to the individual component manufacturer's warranty/manual for specific operating and maintenance instructions (included in your Off Grid Trailers warranty pouch).

Factory set suspension torque:

Main suspension bracket bolts: 170 ft/lbs

Spindle mount bolts: 160 ft/lbs

Factory set camber and toe-in measurements:

Camber: 0° +/-1°

Toe-In: 0 - 1/16 inch toe in

(Toe-In measured at 30 inch hub centric span)

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 brake away system will activate the brakes on the trailer if the trailer becomes unhitched from the tow vehicle. For proper function, the brake 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 individual component manufacturer's warranty/manual for specific operating and maintenance instructions (included in your Off Grid Trailers warranty pouch).

The brake system on your trailer is controlled by a brake controller in your tow vehicle, you may need to have a brake controller installed in your tow vehicle if you do not have one. Refer to the manual supplied with your brake controller for the specific instructions on how to operate and setup the trailer and tow vehicle brake system (and/or consult with a qualified RV technician).

To ensure proper and safe function, regular inspection, maintenance (including break away battery backup charging) and adjustments 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 warranty/manual for specific operating and maintenance instructions.

WHEEL BEARINGS

To ensure proper and safe function, regular inspection, maintenance and adjustments of the wheel bearings are required, refer to the maintenance schedule in the appendix for required service intervals and refer to the individual component manufacturer's warranty/manual for specific operating and maintenance instructions.

WHEELS & TIRES

Off road travel increases the chance of wheel and tire damage; frequently check you trailer tires and wheels for damage, especially if traveling off road. Note that wheel/tires over 33 inches may cause interference in an overloaded trailer. Optional Timbren jounce springs may be required (Consult with OGT). Your trailer is not equipped with a jack or lug nut wrench, ensure jack and wrench used is adequate for the trailer weight and jack points. If needed, jack the trailer by the frame just behind the suspension mount (as illustrated in Fig. 18, always ensure the trailer is parked on level surface and use wheel chock. Progressively re-tighten the wheel lug nuts in the pattern illustrated in Fig. 19 to a final torque of 100ft/lbs., re-check wheel torque after 50 and 100 kms (30 and 60 miles), Check and inflate tires to corresponding tire pressures on your trailer Vehicle Information Plate. When replacing tires, ensure replacements meet or exceeds tire weight rating.

Refer to the maintenance schedule in the appendix for required service intervals and refer to the individual component manufacturer's warranty/manual for specific operating and maintenance instructions.



FRAME, SUSPENSION, BRAKE, BEARINGS, WHEELS & TIRES

APPENDIX

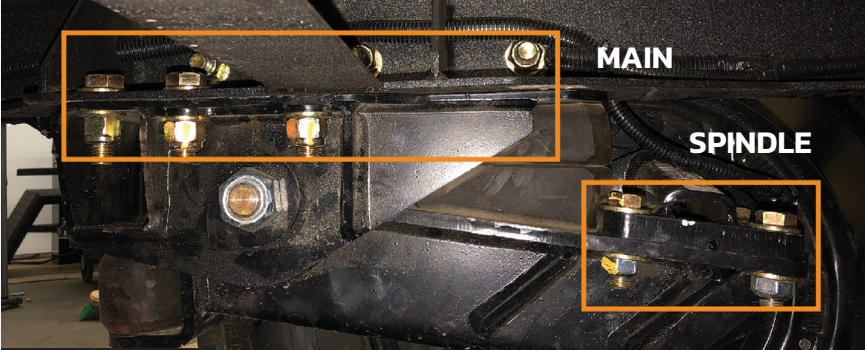


Fig 7.1 Suspension

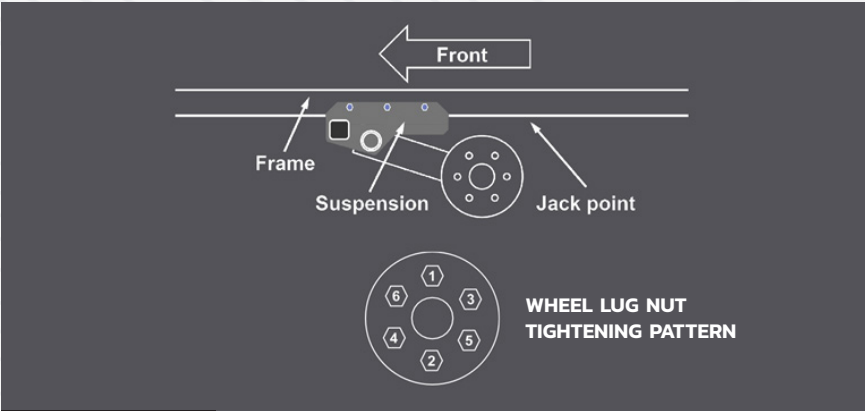


Fig 7.2 Suspension



Fig 7.3 Suspension

The background is a solid orange color. Overlaid on this are two large, stylized snowflake shapes in a lighter shade of orange. The snowflakes are composed of thick, rounded lines radiating from a central point, creating a simple, modern aesthetic. One snowflake is positioned slightly behind and to the right of the other, creating a sense of depth.

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, and hot water heater. Remove the drain plug in the hot water heater located in the hot water heater compartment on the outside of the unit. **REMEMBER** this drain plug is under pressure, release this pressure by opening the hot water tap in unit and then remove drain plug from the hot water heater.
2. Leave the dump valve in the open position.
3. Flush the entire water system with NON-TOXIC RV anti-freeze by:
 - a. Replace hot water drain plug;
 - b. Insert end of line into a container of RV anti-freeze. Turn pump on to pressurize system with RV anti-freeze;
 - c. Open each faucet, one at a time, both hot and cold and run slowly until anti-freeze begins
 - d. to flow out of the faucet. Ensure RV anti-freeze is run through the shower head;
 - e. Turn pump off and open all taps to relieve pressure; leave all taps open.
 - f. Remove hot water drain plug;
 - g. Close the dump valve(s).
 - h. 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 support reference support.offgridtrailers.com

IMPORTANT NOTE: Hot water heater located outside the unit, may vary depending on the type of Off Grid Trailers unit you own. The Hot water heater heat exchanger is the most prone to freezing.



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.
- Wax the jack every 6 months to prevent rusting.
- 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.



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/lash, 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
	12 Months or 20000 kms/12000 miles	Grease suspension bushings
Frame	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
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.

MAINTENANCE NOTES

[illegible]

MAINTENANCE NOTES

[illegible]

MAINTENANCE NOTES

[illegible]

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.

(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/mailed 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. 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.
6. 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.
7. 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.

Note: If you plan to stop by the factory to have warranty work done on your unit, we require advance notice through an appointment.

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 2.0

MAIN FUSE/ POWER SHUT OFF

FUSE BOX
INVERTER

WATER HEATER / OPTIONAL FURNACE

WATER FILL

BATTERIES CHARGER / CHARGER PORT

FRIDGE

KITCHEN

WATER DRAIN



PANDO 2.0

MAIN FUSE/ POWER SHUT OFF

WATER HEATER / OPTIONAL FURNACE

FUSE BOX
INVERTER



BATTERIES CHARGER / CHARGER PORT



FRIDGE

WATER DRAIN



KITCHEN



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™**

