



XTD OWNER'S GUIDE

Congratulations on your purchase of a new Valiant XTD and thank you for your business! An overland trailer may seem simple enough, but it's actually a pretty complex piece of equipment with a lot of different parts. It's basically a house, just a really small house you're going to go launch off of muddy potholes, drag through streams and boulder fields, then leave out in the sun / rain / snow until you do it again. As such, we've put together a guide to help you better understand how to use and take care of this contraption.

Periodic maintenance:

1. Grease the rear door hinge and tongue box hinges (if equipped). This is the large continuous hinge on top of the rear hatch. There isn't a grease fitting, but liberally spray WD-40 or similar into the seams of the hinge frequently. Particularly if it is not used for a while (ie. over winter), spray it with lubricant before opening to prevent bending the hinge if it has gotten stiff.
2. The Timbren independent suspension has a grease fitting on the main bushing. This should be greased once every 3,000 miles to prevent bushing failure. We recommend Lucas "Red N Tacky" grease. This fitting is accessed underneath the axle, you'll see a hole in the bottom of the axle's swing arm. If you have a grease gun with a flexible rubber hose it makes it easier to get in there.
3. The EZ-Lube hubs should be greased on the same schedule as the axles, we recommend a the same Red N Tacky grease. This can be done easily by removing the rubber cap on the hubs, which allows you to access the grease fitting.

4. Some tongue jacks will also have a grease fitting on top, greasing these periodically will keep the jack operating smoothly.
5. If your trailer has a Lock N Roll hitch system, there is a needle grease fitting on both the trailer and vehicle side couplers. These look like a small bolt head, and can only be greased by using a needle adapter on your grease gun. Red N Tacky can be used on these as well. Grease these as needed to keep them moving smoothly.

6. Windows and Doors:

Your Tern Overland windows and doors use Acrylic instead of glass.

DO NOT USE GLASS CLEANER WITH AMMONIA

You can clean the windows with regular soap and water, or any acrylic-safe cleaner. You can also polish scratches out of the acrylic using a Novus polish kit.

7. If you have awnings or anything else with zippers on the trailer, get some zipper lube. That stuff is going to get blasted by all the crap flying off of your vehicle and your zippers will fill so full of grit you won't be able to use them. Keep them clean and hit them with some zipper lube once in a while and it'll make your life a lot easier.

Powder Coat:

The powder coat finish on your trailer is very durable, however it can be scratched so be mindful. All powder coated parts have been coated in 2 stages, with a grey zinc primer and the color applied on top. If you get a chip or scratch, the primer is designed to prevent chips from spreading. That being said, it is a good idea to inspect your trailer periodically (particularly the steel parts such as the trailer frame) for rock chips, and touch any up with paint to prevent rust.

Rear hitch receiver:

1. This is only for carrying accessories such as bike racks, etc. Do not exceed 300lbs on this hitch.

Towing:

1. Your trailer's jack has a 2000 lb capacity, do not exceed this.
2. Always verify your hitch and coupler are securely locked into place before towing. Safety chains and trailer lights must also be connected while towing.
3. Do not exceed 75 mph while towing the trailer.
4. Always verify tire pressure is at 29-38 psi and wheel torque is at 100-110 ft lbs.

Stabilizing Jacks (If equipped):

1. Use caution when using leveling jacks, especially when lifting tires off of the ground. Lifting the trailer to the point where tires come off the ground is not recommended except for maintenance or to change a tire.
2. Never attempt to lift a tire off the ground using just one leveling jack.
3. Never use an impact or other electric drill to raise/lower the jacks, this may damage the jacks's threads.

Electrical:

The electrical system is probably the most complex part of your trailer and the thing most people are not very familiar with. The electrical system is split into 2 main parts:

1. The 110v AC system
2. The 12v DC system

The AC side runs all of the household outlets in the trailer, you would use these for any small appliances you would normally plug in at home. These outlets are powered one of 2 ways:

1. When connected to shore power (meaning you have an extension cord running from the input on the side of the trailer to an outside power source.

2. When your on-board inverter is on (if equipped). Your inverter's job is to take 12v DC power from the on-board batteries and turn it into AC power so that you can use those household outlets while you're out camping. Keep in mind the inverter can only output 1000 watts, and it is drawing on your batteries. 1000 watts is enough to run a small single-cup keurig coffee maker, a TV, charge a laptop, etc. It may not be able to do all of that at the same time. If you attempt to run too many things off of the inverter and exceed it's 1000w capacity, it will set an error code and shut itself off.

The inverter can be turned on and off via the remote panel mounted in the galley.

The DC (battery) side of the electrical system is powered whenever your battery(s) is turned on using the battery display panel, or when you are plugged into shore power.

This side of the system gives power to all of the USB ports, 12v socket outlets, interior lights, water pump (if equipped), furnace (if equipped), and any other 12v accessories you may have on board.

The large battery switch in the galley disconnects or connects the batteries to the trailer's circuits.

When you are out camping, all you need to do is turn the main battery switch "on", and all of the 12v systems will start working.

Charging the batteries (if equipped):

The on-board batteries are a deep cycle LiFePO4 chemistry. There are several ways in which these can be charged. **An important note regarding the lithium batteries:** The batteries are wrapped in a warming jacket which is operated by one of the switches in the galley. Some earlier trailers will not have a physical switch for the battery warmer as it is built into the batteries and operates automatically. **If the batteries drop below 32 degrees they will not take a charge.** If the battery temp is below or near freezing, turn on the battery warmer switch. This will require the trailer to be connected to an external power source either via the shore power plug or your vehicle's 7-way trailer connector.

1. Plugging into shore power (via the external power input). This is recommended every time you get ready for a trip, or if you are going to be storing the trailer for an extended period. The smart charger is built into the trailer's main electrical panel. It will take roughly 24 hours for your batteries to reach a full charge once drained while plugged into shore power. This smart charger knows when the batteries reach a full charge and will go into "maintenance" mode, meaning you can leave it plugged in as long as you like and it will keep the batteries topped off.
2. If your vehicle's 7-pin connector supports charging, the batteries will charge off of your vehicle while you drive. This is a much slower process than plugging into shore power as it's relying on the output from your vehicle's alternator. Do not expect a 6 hour drive to fully charge a dead battery.
3. If your trailer is equipped with on-board solar, the batteries will start to charge when the panel is getting sunlight. The battery switch must be "on". If you purchased one of our portable solar kits, you can charge your batteries by deploying your portable panel kit and plugging it into the 2-prong port on the side of the trailer. Charging rates from solar will change dramatically with sunlight intensity. If appliances are pulling battery power, the panels may not produce enough to fully compensate for the draw but they will help. If no appliances are drawing power, the panels will be actually charging the batteries.

Water system (if equipped):

1. If your trailer has an on-board water system, it needs to be winterized before being exposed to freezing temps. Do this by running the water until you've run the tank dry. Next, add 2-3 gallons of RV antifreeze to the water tank. Run the faucet (both hot and cold) until you see pink antifreeze coming out. Repeat this for the shower / exterior sprayer if you have one. In the spring, flush out the antifreeze with plenty of water. Remember tank water should not be used for drinking.
2. Do not run the pump dry or it could be damaged.

3. Do not travel with tank “topped off”. When filling, once water tank is full and water is coming out of the fill door, run the pump for 15 seconds to lower the water level in the tank to a good level for transit.
4. Always turn the pump switch “off” when not in use.
5. Consult the owner’s manual for the water heater for any other issues.

Furnace:

If your trailer is equipped with a Propex furnace, there are a few things to pay attention to:

1. Before turning the thermostat on, make sure your propane is on. If not, the unit will attempt to light and set an error code (indicated by a flashing red light on the thermostat). This needs to be reset but pressing the extremely tiny reset button on the bottom left of the thermostat. It is hidden inside a little pinhole, you need something smaller than a paperclip to press it.
 - * Press the reset button once, wait 1 second, press again. Consult the thermostat’s manual if needed.
2. Do not turn off the main battery power until the furnace is done running. Cutting power to the unit while it is running can cause problems (so they say).

Roof Rack:

The roof rack itself can handle 1500 lbs when the trailer is not moving, this is called the “static load”. The limiting factor is the trailer’s axles (3500 lbs total). This means your static load limit on the roof rack is:

Static* = 3500 lbs - empty trailer weight - gear stored inside

*(not to exceed 1500 lbs)

Your weight limit on the roof rack when the trailer is moving is the “dynamic load”. To reduce the risk of tipping the trailer over, the dynamic limit is 600 lbs.

Post-Purchase Modifications:

We build the XTD and XTD mini in a way that allows relatively easy modification to the interior. Your interior side walls / ceiling are a 1/4" plywood with studs behind (like a house). If you're not sure where a stud is, know that there are always studs on either sides of windows and doors. You may also see a small finishing nail hole on the wall, there is likely a vertical stud in that location. Everything else is either 1/2" or 3/4" plywood.

If you want to attach something light, normal drywall anchors will work well in the 1/4" wall panels. If you want to attach something heavy (like you're building a cabinet, shelf, etc, it is best to either find a stud, or use a combination of glue and screws to attach a board to the wall which you can then build off of. Avoid putting anything through the wall in close proximity to an outlet, control panel, etc.

If you want to attach anything additional to the exterior aluminum, the same principles apply, although most items can be attached using self-tapping sheet metal screws. When doing this, keep in mind you should either use silicone or preferably a rubber-backed sealing washer on the screw to prevent water from seeping around the screw. Use only stainless steel hardware. Heavier items will require larger self-tapping screws, or ideally rivet nuts.

We won't void your warranty for making modifications, we just won't warranty your work! If you go rearranging your electrical setup and fry the inverter, we're not buying you a new one.

Jordan Mccullugh (Owner)
Valiant Expedition Trailers, LLC
Idaho Falls, ID
(208) 269-4539