

Winterizing your Roadtrek in Pictures

There a lot of opinions about winterizing. Water expands when it freezes and the force it can exert is enormous. It is essentially impossible to stop this expansion. If a pipe or valve is full of water when it freezes, the water will **make** the needed **volume**! Some things can expand and not break. It's a bit of a gamble. A little water won't normally be a problem, but if a valve or component is completely filled with water, something will give. The more water you remove from the system the less chance of something breaking.

Below is the process I went through to winterize my 2002 Versatile. While the process is similar for other models, be sure and check and follow the process in your manual. This article just documents my experience and is offered "as is" without any implied warranty.

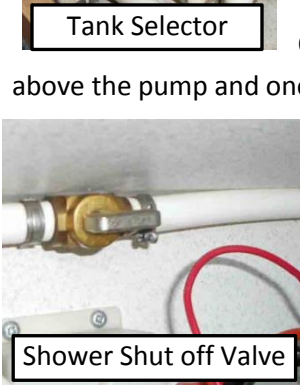


Turn off the fresh water pump switch on the monitor panel. Run the water in the sink to release the pressure.

Turn off the water heater switch. You should tape over the switch to remind yourself to fill the heater in the spring with water before running the heater again. Make sure the winter mode fresh water valve is in the open position. This valve connects the inside fresh water tank with the outside tank located below the driver seat. This so the water in both tanks will drain out. This valve is located under the bed on the passenger side of the vehicle. In the picture it is shown in the open position or summer mode. This way the two tanks operate as one large tank.



Just below the water pump is the tank selector valve with the red handle. This valve causes the pump to draw water from the inside or the outside fresh water tank. Make sure it is as shown so it draws from the outside tank or summer mode. When in winter mode, it draws from the upper tank. Changing from summer to winter mode requires that you switch both valves correctly.



Open both the hot and cold outside shower shut off valves. One is located above the pump and one behind it. They are shown in the open position



Remove the fresh water drain cap and drain any remaining water from the tank. The tank and drain cap are located under



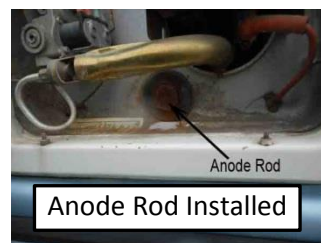
the vehicle below the driver's seat. You can see the cap if you open the gray and black water drain access door.

Open the outside shower cold water valve and run the pump briefly. This will draw any remaining water out of the pump inlet. Close the outside shower valve. Don't run the pump dry for more than a few seconds.



Relief Valve

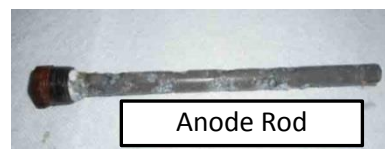
Locate the water heater relief valve behind a panel on the outside of the vehicle. It is shown in the open position in the picture. It is the metal tab with the blue ring. You want this valve in the open position as shown in the picture on the left. This releases any pressure and allows air to enter the tank so it will drain completely. Closed, the metal tab is horizontal.



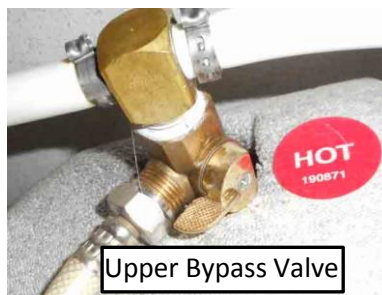
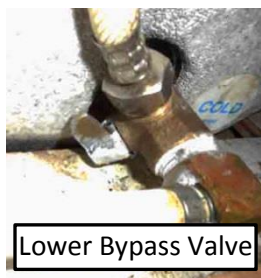
Careful when you do this next step; the six gallons of water in the tank will come out in a flood! Using a 1 1/16 inch or 27 mm socket wrench with an extension, remove the anode rod. It unscrews counter clockwise. You can find this tool at an auto parts store. It's very difficult to remove with pliers. With the right tool it's a snap. After the water has drained out, close the relief value.

Clean the deposits off of the anode rod. Just because it's a bit pitted does not mean that it must be replaced. It's designed to slowly be eaten away, sacrificing itself so the tank won't be damaged. This one is good for another year. Clean it with soap and water and it is good to go.

Replace the anode rod and tighten snugly. Use a little Teflon tape on the threads. This will reduce the chance of a leak and make it easier to remove next time. Start it with your fingers and don't cross the threads. It can take a little finesse to get it started, but resist the temptation to try and force it with the wrench. The trick is to keep it level while you turn. It wants to tilt due to gravity.



Inside the van find the water heater and set the upper and lower by-pass valves to bypass the water heater. The valves in the picture are shown in the bypass position. These valves can be a little difficult to operate. Bypassing the water heater avoids the problem of having to fill it with 6 gallons of antifreeze! **It's really important to put the valves back into the normal position when you de-winterize.**



You can use compressed air and blow most of the water out of the system. This might be good enough, but it's difficult to get all the water out. More importantly it might not get all the water out of the pump. If you are going to use compressed air to blow out the



lines, adjust the pressure on your compressor down to 30psi. If you can't adjust the pressure, be very careful not to overpressure the plumbing system. **You can do serious damage if the pressure is too high!**

Using an adapter found at RV stores, inject air into the system at the city water connection. There is a check valve directly above the inlet and it will usually hold air. Starting with the inside shower valves open each in turn and catch any water in a bucket. The air will blow most of it out. Move to the toilet and then the sink and finally the outside shower.

Add air as required during the process.

Open the city fill valve and blow any water out of this valve and into the freshwater tank. The valve is the one with the red handle in the picture. It's shown in the closed position. In the on position it will be horizontal. You might want to switch the tank selector valve and repeat this step to blow air into the upper tank as well to clear any water out of this two way valve. Be sure and be aware of which mode you are in when you finish.



Remove the compressed air fill adapter and push your finger up into the fitting to open the check valve to drain any water in the valve. If don't use compressed air, this is an important step, because the antifreeze won't be drawn into this area. You should open the city fill valve when you do this do allow the water to drain out of that valve as well. Close the city water fill now so you won't forget!

The method described below to insert antifreeze is common in the industry and you can buy a kit to make the connection, but the parts can be obtained at your local home center.

Unlike the method where you pour antifreeze into the fresh water tank, this method avoids putting antifreeze into the fresh water tank. We've found that it takes a lot of flushing to get the taste of the antifreeze out of the water. This is not surprising given the large surface area inside the tank. The pipes and valves which make up the rest of the system represent a much smaller surface area. It also has the advantage of requiring much less antifreeze.

IMPORTANT! Close the city water fill valve. If you don't do this when you do the next step, you will make a mess! The city fill valve connects to the outlet of the pump. When you start pumping antifreeze the antifreeze will flow from the output of the pump through the city fill valve to the disconnected pump inlet. Make sure the outside shower, sink and inside shower valves are all closed.



Unscrew the fitting which connects to the pump inlet and attach a hose with the other end inserted into a bottle of RV antifreeze. You can get the fitting and tubing at Home Depot or Lowes.



Turn on the pump. It will draw a small amount of antifreeze, but the pump should stop.

Starting at the inside shower valve, open the hot and then the cold and you should quickly see pink antifreeze. Turn the valve off when you do. Have a bucket under the valve to catch the antifreeze!

Operate the toilet and look for the pink anti-freeze.

Do the same with the sink, both hot and cold valves. Go outside and open the outside shower, hot and cold valves and look for the pink antifreeze.

Do NOT open the city fill valve, because you will pump antifreeze onto the floor!

It should take less than a gallon of antifreeze to do this.

Remove the jug of antifreeze, but I would leave the inlet disconnected until spring. Be sure and turn off the pump! Also leave the city fill valve open. It think it's less likely to be damaged if it's in the open position.

If you have not dumped the grey and black water tanks you should do so now.

If you have a macerator pump, you should protect this device.

Pour about ½ gallon in the sink and a ½ gallon into the toilet.

Use a bucket to catch the material and with the black water valve open, dump for a few seconds until you see pink. Close the black water valve and then open the gray water valve and run the pump for a few seconds until you see pink again. Close the valve and you are done.

Pour few cups of antifreeze down the lavatory sink if you have one. Do the same for shower drain in the floor. Every drain has a trap and traps hold water. You covered the sink in the prior step.

Don't forget to remove any bottled water or other items which might freeze.

Lastly be sure the batteries are all charged. A discharged battery will freeze and crack the case.

When you de-winterize don't forget to set the water heater bypass valves back to the normal position and then refill the hot water tank by running the hot water faucet until you get water in a steady stream. Complete this before you turn the heater on. It will and should take a while because you have to fill the 6 gallon tank. If it comes out quickly, then your tank may still be bypassed.

Happy travels.

Revised 11/18/2016