

## Winter Protocol

Your conversion has been designed to operate all year round and in most weather climates. To accomplish that the mechanical area of the conversion needs to be kept above freezing.

We have designed the conversion to help achieve this by putting every water tank, fitting and connector in the mechanical area (including the graywater shut off going forward)

The assumption is that the end of the work-day is going to be the warmest part of the day especially as compared to first thing in the morning when it tends to be the coldest. So, we want to always keep water in the system. The end of the day it your best opportunity to get water into the conversion.

*Disclaimer: There is no guaranty that extreme cold or if your heat source stops during the night that you will not encounter freezing issues. Every precaution possible should be considered to each unique situation.*

*Tip: If your city water inlet with the garden hose end has frozen or does not allow you to get water in to the fresh water tank you can also take your hose used to fill and put it directly into the top of the tank by removing the built in lid.*

The conversion has a “Direct” plug on the rear exterior of the van. The mechanical room has an outlet right next to the mechanical room light switch that is powered by that plug.



If you run an extension cord to the plug and then a ceramic heater plugged to that outlet then in most cases in can be 70 degrees in there with the heater on low or medium. That will ensure your plumbing will keep from freezing overnight.

If electric is not available there may be an alternative option by using a Diesel Heater. These units burn diesel fuel and produce heat. The electric to run it can be supplied by a marine battery that can then be recharged during the day as needed. They require the exhaust to be released outside the unit and they require a fresh air source from the outside as well. See example below of diesel heaters and the links have short installation videos attached on what is involved

### **End of day:**

Turn off faucet above tub and open the sprayer nozzle to empty out the hose and nozzle into tub.

Empty Gray water tank.

Refill fresh water tank.

Plug in extension cord to Direct Plug on outside rear of conversion.

Plug Ceramic heater into Direct outlet inside mechanical area.

Close your rear doors and allow to run on low-medium overnight.

### **Beginning of the day:**

Make sure the heat ran overnight.

If the heat stopped during the night check that your system didn't freeze.

Using the provided adapter plug in the whole conversion to your cord.



With landline power to the conversion, you can prewarm your hot water tank prior to leaving. It can take 20+ minutes to super heat that water but usually takes much less time for this.

Your space heater is not needed during the day in the mechanical room in most cases. We find that Still water is what freezes meaning that overnight is your most vulnerable time for the unit to freeze.

*Disclaimer: Depending upon local weather conditions you may experience freezing issues during the day but that would be a localized issue and you should run the space heater accordingly*

*Tip: Your generator has additional plugs available so you can use the AC electric cord we provided in another outlet of the generator and plug that to your Direct Plug for the space heater*

## Products you may find helpful:

- Extension cord with lighted ends so you can see if power is going to the plug. Yellow Jacket 2805 10/3 Heavy-Duty 15-Amp SJTW Contractor Extension Cord with Lighted End; 50-Feet

[https://www.amazon.com/gp/product/B000BQO824/ref=ppx\\_yo\\_dt\\_b\\_search\\_asin\\_title?ie=UTF8&psc=1](https://www.amazon.com/gp/product/B000BQO824/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1)



- 110 Volt (not 12 Volt!) Pump

SHURflo Industrial Diaphragm Water Pump - 198 GPH, 1/2in. Port, Model Number 2088-594-154

[https://www.amazon.com/SHURflo-Industrial-Pump-Model-2088-594-154/dp/B07DM3RR1G?pd\\_rd\\_w=bUQWg&content-id=amzn1.sym.80b2efcb-1985-4e3a-b8e5-050c8b58b7cf&pf\\_rd\\_p=80b2efcb-1985-4e3a-b8e5-050c8b58b7cf&pf\\_rd\\_r=0D7142YMW0BJDPCCK56PM&pd\\_rd\\_wg=FSMqp&pd\\_rd\\_r=a09a7b60-6a82-48d3-9e6d-febac9ef5d96&pd\\_rd\\_i=B07DM3RR1G&psc=1&ref\\_=pd\\_bap\\_d\\_grid\\_rp\\_0\\_1\\_ec\\_pd\\_nav\\_hcs\\_rp\\_2\\_t](https://www.amazon.com/SHURflo-Industrial-Pump-Model-2088-594-154/dp/B07DM3RR1G?pd_rd_w=bUQWg&content-id=amzn1.sym.80b2efcb-1985-4e3a-b8e5-050c8b58b7cf&pf_rd_p=80b2efcb-1985-4e3a-b8e5-050c8b58b7cf&pf_rd_r=0D7142YMW0BJDPCCK56PM&pd_rd_wg=FSMqp&pd_rd_r=a09a7b60-6a82-48d3-9e6d-febac9ef5d96&pd_rd_i=B07DM3RR1G&psc=1&ref_=pd_bap_d_grid_rp_0_1_ec_pd_nav_hcs_rp_2_t)



- Faucet. Delta Foundations Single-Handle 1-Spray Shower Faucet in Chrome (Valve Included)

<https://www.homedepot.com/p/Delta-Foundations-Single-Handle-1-Spray-Shower-Faucet-in-Chrome-Valve-Included-B112900C/303669808>



- Stainless steel hose clamps. Everbilt 3/8- 7/8 in. Stainless Steel Hose Clamp (10-pack)

<https://www.homedepot.com/p/Everbilt-3-8-7-8-in-Stainless-Steel-Hose-Clamp-10-Pack-670655E/202262869#ratings-and-reviews>



- Diesel Heaters. LIKACI Diesel Heater All in One 8KW 12V /24V Portable Diesel Air Car Parking Heater with Bluetooth Control LCD Switch Display and Silent Oil Pump, Fast Heating, for RV, Garage, Car Trailer

[https://www.amazon.com/gp/product/B0CMC8KBR2/ref=sw\\_img\\_1?smid=ALSPFX2COU0B6&psc=1](https://www.amazon.com/gp/product/B0CMC8KBR2/ref=sw_img_1?smid=ALSPFX2COU0B6&psc=1)



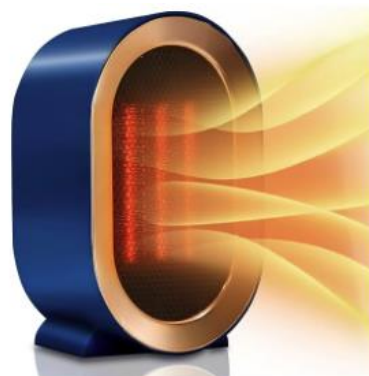
- Diesel Heaters. LF Bros 110V/12/24V 5KW Diesel Heater, All-in-One Air Diesel Parking Space Heater with Stylish Design for Small Space, Come with Remote Control and LCD Screen, Suitable for Home Shop Garage Camper

[https://www.amazon.com/LF-Bros-Parking-Stylish-Suitable/dp/B0C7BS72QG/ref=sr\\_1\\_8?crid=1YPJC62OYXPV9&dib=eyJ2IjoiMSJ9.tGxKCWam1KYyKmCYVRsXnhjzdoSv9HO0qbkgv7DA-U0UWeaVaV-yenD35rNvi29CD9CI6AWTsiaZulBMDH85D4p2Mhv8QGfRM6bPPqyh0HPvWqd0lhq50OX1nEP\\_F8gIRbzWL\\_HCOd5a8pNtd1gENEm252Ncy36B2CPSPDBUBKO8wJdgP5jzWlk0BskT0znJ2GTnWk7AxEbmYfWKJJctLkC-lvRR46qm5ZARmxah9g.kQfQVMZyoX2-2UUCtAEL9tXukioiCdHIY9WXDRIjMnA&dib\\_tag=se&keywords=diesel+heater&qid=1705865428&srefix=diesel+heater%2Caps%2C477&sr=8-8](https://www.amazon.com/LF-Bros-Parking-Stylish-Suitable/dp/B0C7BS72QG/ref=sr_1_8?crid=1YPJC62OYXPV9&dib=eyJ2IjoiMSJ9.tGxKCWam1KYyKmCYVRsXnhjzdoSv9HO0qbkgv7DA-U0UWeaVaV-yenD35rNvi29CD9CI6AWTsiaZulBMDH85D4p2Mhv8QGfRM6bPPqyh0HPvWqd0lhq50OX1nEP_F8gIRbzWL_HCOd5a8pNtd1gENEm252Ncy36B2CPSPDBUBKO8wJdgP5jzWlk0BskT0znJ2GTnWk7AxEbmYfWKJJctLkC-lvRR46qm5ZARmxah9g.kQfQVMZyoX2-2UUCtAEL9tXukioiCdHIY9WXDRIjMnA&dib_tag=se&keywords=diesel+heater&qid=1705865428&srefix=diesel+heater%2Caps%2C477&sr=8-8)



- Ceramic heaters. BZGG Space Heater, Electric Heater for Indoor Use, Small Portable Heaters for Office Patio Garage Home Use, Mini Desk Ceramic Heaters with Overheat & Tip-Over Protection

[https://www.amazon.com/gp/product/B0BGC1RJP8/ref=ppx\\_yo\\_dt\\_b\\_asin\\_title\\_o01\\_s00?ie=UTF8&th=1](https://www.amazon.com/gp/product/B0BGC1RJP8/ref=ppx_yo_dt_b_asin_title_o01_s00?ie=UTF8&th=1)





- Ceramic heaters. Lasko 1500W 9.2 in. Gray Electric Tabletop Ceramic Space Heater with Adjustable Thermostat and Overheat Protection

<https://www.homedepot.com/p/Lasko-1500W-9-2-in-Gray-Electric-Tabletop-Ceramic-Space-Heater-with-Adjustable-Thermostat-and-Overheat-Protection-754200/100669067>



- Appliance cord. Appliance Flat Extension Cord - 6ft Heavy Duty Gray Flat Plug Extension Cord Wire for Air Conditioner, Refrigerator & All Major Appliances - 14 Gauge High Voltage 3 Prong Extension Cord Appliance Cord

[https://www.amazon.com/gp/product/B09Q9WMTDB/ref=ppx\\_yo\\_dt\\_b\\_search\\_asin\\_title?ie=UTF8&th=1](https://www.amazon.com/gp/product/B09Q9WMTDB/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&th=1)



- Electrical Adapter. Marinco Shore Power Straight Adapters

[https://www.amazon.com/Marinco-Power-S15-30-Adapter-Straight/dp/B009IJL7JW?pd\\_rd\\_w=ylUkw&content-id=amzn1.sym.80b2efcb-1985-4e3a-b8e5-050c8b58b7cf&pf\\_rd\\_p=80b2efcb-1985-4e3a-b8e5-050c8b58b7cf&pf\\_rd\\_r=K18BJDCB03YXJ3VA1KWD&pd\\_rd\\_wg=eA5nE&pd\\_rd\\_r=5b04cf4f-dee3-4212-aa30-708f53d6aaff&pd\\_rd\\_i=B009IJL7JW&psc=1&ref=pd\\_bap\\_d\\_grid\\_rp\\_0\\_1\\_ec\\_pd\\_nav\\_hcs\\_rp\\_1\\_i](https://www.amazon.com/Marinco-Power-S15-30-Adapter-Straight/dp/B009IJL7JW?pd_rd_w=ylUkw&content-id=amzn1.sym.80b2efcb-1985-4e3a-b8e5-050c8b58b7cf&pf_rd_p=80b2efcb-1985-4e3a-b8e5-050c8b58b7cf&pf_rd_r=K18BJDCB03YXJ3VA1KWD&pd_rd_wg=eA5nE&pd_rd_r=5b04cf4f-dee3-4212-aa30-708f53d6aaff&pd_rd_i=B009IJL7JW&psc=1&ref=pd_bap_d_grid_rp_0_1_ec_pd_nav_hcs_rp_1_i)



These products listed are a combination of items used as well as examples of products you can use to help address these issues.

We are available to discuss your unique situation as well.

**Please call us in the office at 866-484-7666**

**Monday thru Thursday: 9-4**

**Friday: 9-3**



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