

## TSV MOBILE CLINIC WINTERIZATION CHECKLIST

**IF THE TEMPERATURE IS FORECAST TO DROP BELOW 34°F (1°C) IT IS IMPORTANT TO MAINTAIN MINIMUM HEAT IN THE CLINIC.**

**NOTE:** Follow the Winterization check list below if any of the following conditions apply:

- 1 – If the outside temperature is set to be below 32°F / 0°C and there is no Shore Power access.
- 2 – If the vehicle is being stored outside, or at a 3<sup>rd</sup> party destination, that cannot guarantee heated storage during the cold months.

### PARKING AND STORAGE:

Make sure all windows and doors are completely closed and locked, the ceiling vents are closed, and all the exterior lower compartments are closed as well.

If storing the vehicle over night or for a longer period of time, make sure your Shore Power is plugged in, Battery Disconnect switch is On, and Inverter switch is on as well. This will give you full Shore Power access. If you do not have Shore Power access while storing the unit, then follow the next section below for adding RV Anti-Freeze.

### BATTERIES:

Make sure all batteries are fully charged and storage compartment is closed and locked. If batteries are completely charged, they will not freeze.

Double check the Battery Disconnect switch and make sure it is in the off position when power is not needed. This will keep your unit from draining the batteries. If you are hooked up to Shore Power then of course you will keep the battery disconnect switch On.

### DRAINING BLACK WATER (SEWER TANK):

To drain the sewer tank, you will first want to find the nearest dump site (campgrounds, RV dealerships, marinas, truck stops, sporting goods stores, National parks) go to the passenger side exterior of the unit and remove the sewer hose cap. The sewer hose cap covers the drain valve and it is located on the lower half of the vehicle, behind the passenger rear wheels. Directly underneath the cap is a carrier tube where the sewer hose and funnel are located.

Once the cap is off, remove the sewer hose from the hose carrier and connect the funnel to the end of the hose. Make sure the 4 tabs line up when connecting the funnel or else it will not stay on the hose properly. After the funnel is connected to the hose you can then connect the assembly to the drain valve by turning it in the clockwise direction to lock it into position.

Last step, pull the handle outward to drain the tank. Leave in the drain position for at least 30 minutes to ensure tank is emptied. Do not forget to push handle back in afterwards to close the drain valve.

### DRAINING FRESHWATER:

To drain the freshwater system, depending on your model, you may have a small drain valve under your sink or you might have to pump it through the water system. If there is a drain valve for the freshwater system, turn the valve and completely drain fresh water until it's dry. If your model doesn't have a drain valve then you will use the same process above for draining the sewer tank. Connect your hose and funnel to the drain valve behind the rear passenger wheels, turn your water pump on (usually located in restroom or by a sink), and run your faucet until all the water is drained. If your unit has a restroom make sure to flush the toilet a few times as well. Once all water is drained and nothing is coming from the faucet you are good to go. Make sure to turn the pump off.

For Dental Units, follow ProCart III Instructions and manual on how to drain water from lines. This can be done using the purge pump and vacuum pump.

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### ADDING RV ANTI-FREEZE (ANTI-GELLING, NON-TOXIC):

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Once all water is removed from your unit, locate the fill spout on the exterior passenger side of the bus, it is usually white in color. Use a funnel to add 3-6 gallons of RV Anti-freeze into the fill spout. Typically the E350 and E450 units will take around 3 gallons, while the bigger F550 and Freightliner units will be closer to 6 gallons. It is always good to keep a few extra gallons in your storage compartment just in case.

Once your unit is filled with RV Anti-Freeze, go inside the vehicle restroom, and turn on the Water Pump Switch. If your unit doesn't have a restroom then your pump should either be located near your tank monitor display or the main sink. Once the pump is on, run all sinks on hot water until you see Anti-Freeze. Then run all the sinks on cold water until you see Anti-Freeze. Once you see Anti-Freeze coming from the faucets, wait 5 extra seconds for entire system to be winterized with Anti-Freeze. Flush the toilet until you see Anti-Freeze. Once Anti-Freeze is coming from all faucets and toilet is full the Winterization process is complete.

If you have a sink forward of the entry door then that means there is a sump pump under the sink. If your unit has this, first thing you will do is make sure your sump pump is On (Generator or Shore Power hooked up). Once you confirm the sump is On, dump Anti-Freeze in the sink and allow the sump pump to run for at least one minute to make sure the sump is full of Anti-Freeze. This may take 3 gallons or more of RV Anti-Freeze to accomplish.

For Dental Units, make sure RV Anti-Freeze is run through all the High-Volume Vacuum lines as well. You can do so by sucking 1 cup of RV Anti-Freeze through each unit's hose. Follow ProCart III Instructions and manual on complete process.

**Remember if you have a sump pump, you need to have the generator running or be plugged into shore power for the sump pump to work. If not and you try to dump Anti-Freeze down the sink, you will overflow it.**

**Sink Forward of Entry Door Means Sink Has a Sump Pump = Confirm Pump Is On , Pour Anti-Freeze in Sink Until Pump is Full**

### SHUT-DOWN PROCESS:

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Remove any liquids or items in the unit that may freeze.

Empty all items from refrigerator(s)

Make sure to lock all cabinets and to secure all equipment (devices, monitors, cameras, paper records). If shutting down for an extended period of time, remove all expensive and valuable items to be safe.

Remove any temperature sensitive items.

Make sure all circuit breakers in your unit are turned Off. The circuit breakers are located in one of the compartments that separates the driver's area from the rear clinic.

Double check all lights, generator switch, inverter switch, and any other equipment are Off.

Make sure all windows, doors, and lower compartments are shut and locked.

At this point you will either hookup to Shore Power or will go through the RV Anti-Freeze process to make sure the vehicle doesn't freeze when not in use.

**SHORE POWER = Cord plugged in, Battery Disconnect switch On, Inverter switch On**

**NO SHORE POWER = Battery Disconnect Off, follow the steps for RV Anti-Freeze process.**

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### PREPARING YOUR VEHICLE FOR STORAGE WITH SHORE POWER:

Make sure all windows and doors are completely closed and locked, and all ceiling vents are retracted and closed. If your vehicle has blinds or curtains close them.

Plug in the Shore Power cord if access is available.

120/240 VAC Panel: Make sure Main breaker is turned On. It is the only double Pole breaker in breaker box.

Make sure Inverter switch is turned On and Battery Disconnect switch is On. This will allow the system to run independently and the heaters to kick on when needed.

If your unit has an engine block heater you may plug it in to the nearest outlet. Block heater is usually located at front of the unit underneath the bumper.

### PREPARING YOUR VEHICLE FOR STORAGE WITHOUT SHORE POWER:

If you do not have access to Shore Power and your unit will be sitting overnight or longer, you will want to complete the RV Winterization process to ensure your unit does not freeze. (The full Winterization process can be found in the "TSV Mobile Clinic Winterization Check List".)

Remove all water from system by turning on bathroom pump and letting a sink run until dry. Once no more water is coming out from the sink you can shut it off.

Drain the sewer tank on the passenger exterior of the vehicle, using the sewer hose and funnel, which are located behind the rear passenger wheels. Once connected, pull drain lever outward to drain water from the vehicle. Wait 30 minutes to ensure all water is removed.

Once all water is removed, find the fill spout on the passenger side body of the bus, and fill with 3 gallons RV Anti-Freeze (Anti-Gel , Non-Toxic). Once all 3 gallons are in the unit, go back inside to the bathroom and run the pump with the sink on until you see RV Anti-Freeze. Once you do, flush all toilets to ensure the lines are filled with Anti-Freeze as well.

If all sinks and toilets are spitting out RV Anti-Freeze, the Winterization process is complete and you can turn off the bathroom pump.

Last step would be to check the Battery Disconnect switch, Inverter switch, and Bathroom Pump switch are all OFF so that the battery isn't being drained while not in use.