

2022 Travato Water System

Truma-equipped Travatos beginning with the 2022 model year

V 1.0 4/15/2022

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Acknowledgements

Thanks to Larry Galbiati, who published the P4 panel schematics with internal flow maps, William Byerly Holt who investigated P4 airlocking, and Greg Schultz for advice and editing.

Applicability

The data herein is valid for 2022 and later model year Truma-equipped Travatos incorporating the Nautilus P4 Water Control Panel.

Introduction

The workings of the water system of the Travato are a mystery to most.

With the 2022 model year Winnebago replaced the water system of all Travatos, eliminating the various valves and fittings penetrating the coach body and consolidating them into a Nautilus P4 Water Control Panel featuring just two fluid inlet fittings – a Black Tank flush inlet and a City Water inlet for both fresh water and winterizing/sanitizing fluids, with 4 valves for system configuration.

On balance, these have been welcome changes and matching valve position and color to panel configuration labels greatly eases the task of water system management. For those who want to understand what each valve does, however, the system is not obvious.

This document is my attempt to provide better understanding of the 2022 Travato water system by consolidating available documentation and user experience into a series of conceptual plumbing schematics showing how water flows in the Travato under various valve settings.



FIGURE 1. NAUTILUS P4 WATER CONTROL PANEL

Use

These diagrams are for general understanding. Do not use them as is to attempt winterization. The Operator's Manual provides step-by-step instructions on how to winterize the Travato water system.

Operating Principles and Configurations

The Travato Water System is pressure fed. Much like your home's water system, water under pressure is fed to your fixtures and water heater, allowing water to flow when you demand it from a faucet. Unlike your home's water system, the water is normally drawn from an onboard tank by a pump which pressurizes the water lines. You periodically replenish the tank from a pressurized outside source, usually a potable water spigot, through the City Water inlet.

The Water System valves have several other configurations useful for using, filling, and cleaning or winterizing the system.

The Configurations

There are 6 configurations:

1. **Dry Camping** Configuration. The normal use configuration that draws water from the onboard tank using the onboard water pump to charge the coach fixtures.
2. **City Water** Configuration. This use configuration draws water from a pressurized outside source, such as a potable water spigot, and sends it directly to the fixtures. Found on residential RVs that connect to city water and sewer services for extended periods, it is less used by Travato operators.
3. **Powerfill** Configuration. The normal filling configuration, which draws water from a pressurized outside source to fill the fresh tank.
4. **Siphon Fresh** Configuration. The pump is used to siphon fresh water from an unpressurized source such as a tub or jerry can to fill the fresh tank. NOTE: the panel label incorrectly calls this SANITIZE.
5. **Sanitize** Configuration. The pump is used to siphon sanitizing solution into the tank from an unpressurized container, isolating the water heater to prevent damage. Note: the panel label shows the red valve in the wrong position for water heater isolation.
6. **Winterize** Configuration. The pump is used to siphon antifreeze into the plumbing and fixtures during winterization, isolating the fresh tank and water heater.

Each of these configurations is depicted in the diagrams at the end of this document.

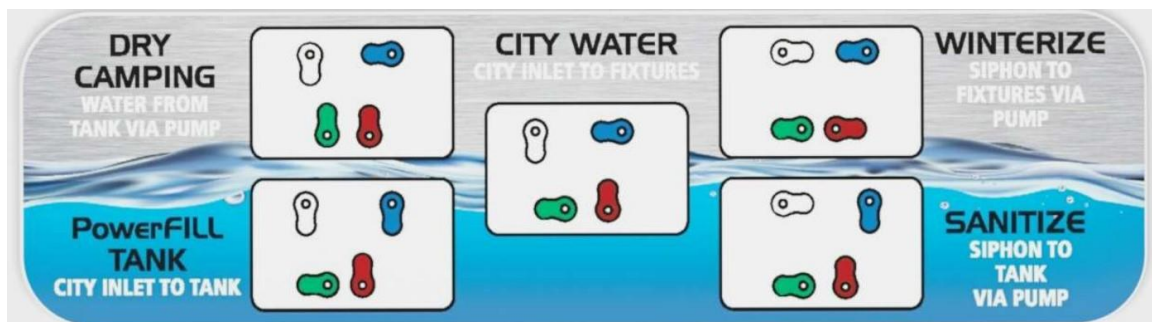


FIGURE 2. NAUTILUS P4 VALVE POSITION GUIDE LABEL SHOWING MOST CONFIGURATIONS.

What do the valves do?

The Nautilus P4 refers to the valves by color but doesn't name them. I've tried to give them functional names and lever positions.

| Valve Color | Valve name | Positions |
|-------------|----------------------|--|
| White | <i>Inlet* Feeds:</i> | Pump (sideways) Blue Valve (down) |
| Blue | <i>Send To:</i> | Fixtures (sideways) Fresh Tank (down) |
| Green | <i>Tank** Feeds:</i> | Pump (up) Nothing (sideways) |
| Red | <i>Water Heater:</i> | Connect (up) Bypass (sideways) |

*City Water Inlet. **Fresh Tank.

General Cautions

1. Make connections to the City Water inlet tight and turn the valve levers fully against their stops. If left partially turned, the valves will cross-connect the input and output ports and cause strange or possibly damaging behavior.
2. Turn off the water pump and external sources before changing valve configuration.
3. After configuring the valves, connect any external sources first, then turn on the water pump as required.
4. Do not depress the City Water inlet check valve stem (inside the fitting) when the system is pressurized (water pump is on). Permanent damage to the check valve will result.
5. The Nautilus Owner's Manual describes a "Blowout" configuration setting the valves to 45 degrees to be used for compressed air purging the lines of water during winterization. Winnebago does not use this configuration and does not recommend its use.

Airlocking in Siphoning Configurations

Some owners have reported that the pump may fail to siphon in Siphon Fresh, Sanitize, or Winterize configurations. This is caused by air entrapment in the water lines – *airlocking* – likely caused by loose connections that admit air to the system or incomplete turning of the valve levers.

To clear the entrapped air (courtesy William Byerly Holt):

1. With valves in desired siphoning configuration
2. Connect a hose from a city water (pressurized) source to the City Water inlet
3. Turn off the city water source
4. Turn on water pump
5. Turn on the city water source for a few seconds
6. Turn off water pump
7. Turn off city water source and disconnect hose
8. Hook up siphon hose and turn on water pump

Siphoning should begin. If not, try again.

Summary Table of Configurations, Connections, and Pump Settings

The 6 configurations can be grouped into 3 modes, use, fill, and clean. The chart below summarizes the valve name, positions, pump state, and inlet connections for all configurations. Within each mode group shaded cells indicate valve positions that differ between configurations. The valve names and modes are the author's terminology.

| Mode | Label | Function | City Water Inlet | White Valve | Blue Valve | Green Valve | Red Valve | Water Pump |
|-------|--------------|---|------------------|---------------------|---------------------|--------------------|----------------------|------------|
| | | | | <i>Inlet feeds:</i> | <i>Send to:</i> | <i>Tank feeds:</i> | <i>Water heater:</i> | |
| Use | Dry Camping | Draw from fresh tank using pump | Open | Blue Valve (down)* | Fixtures (sideways) | Pump (up) | Connect (up) | On |
| | City Water | Draw from pressurized source | Connected | Blue Valve | Fixtures | Nothing (sideways) | Connect | Off |
| Fill | Powerfill | Fill tank from pressurized source | Connected | Blue Valve | Tank (down) | Nothing | Connect | Off |
| | Siphon Fresh | Fill tank from unpressurized source | Connected | Pump (sideways) | Tank | Nothing | Connect | On |
| Clean | Sanitize | Charge tank from unpressurized source of sanitizer | Connected | Pump | Tank | Nothing | Bypass (sideways) | On |
| | Winterize | Charge plumbing with antifreeze from unpressurized source | Connected | Pump | Fixtures | Nothing | Bypass | On |

*in Dry Camping configuration the position of the White Valve doesn't matter. It's convenient to set it to "Blue Valve".

Study this table and you'll observe that:

1. The Green valve is changed only in Dry Camping, to connect the Fresh Tank to the water pump
2. City Water and Powerfill differ only in the position of the Blue valve – i.e., where the water goes.
3. The Red valve is changed to Bypass only in Sanitize and Winterize configurations to protect the Truma water heater.

Notes

References

[Nautilus P4 User's Manual](#)

[2022 Travato Operator's Manual](#)

Fresh Tank Draining

The Fresh Tank on all models can be quickly drained in Dry Camping configuration by opening just the Cold Line Drain valve and turning on the water pump to siphon the Fresh Tank's contents overboard.

Low Point Drains

K/KL: beneath driver's side bed.

G/GL: behind panel at shower entry.

Truma Drain

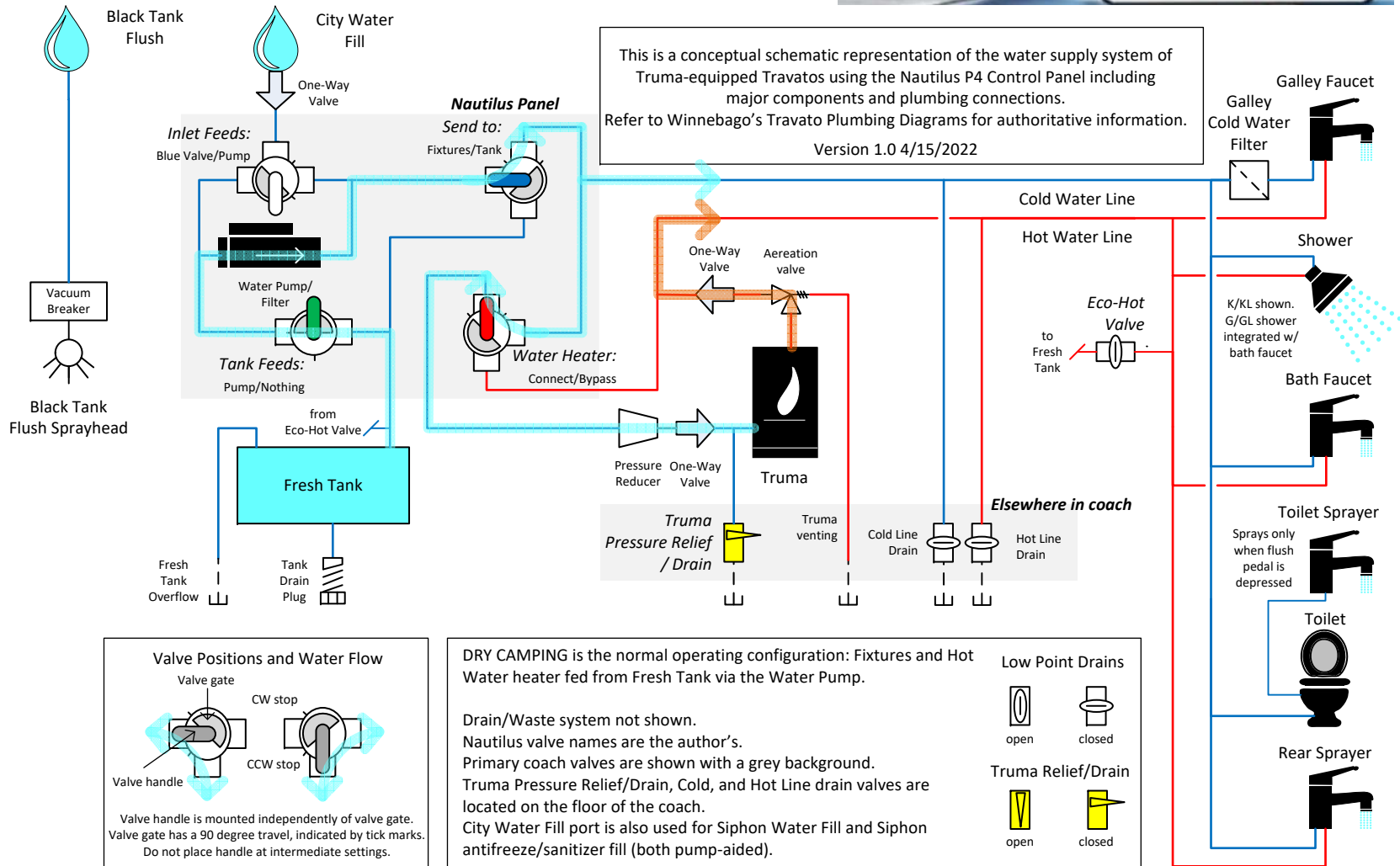
K/KL: beneath driver's side bed

G/GL: under dinette seats near Truma

Change History

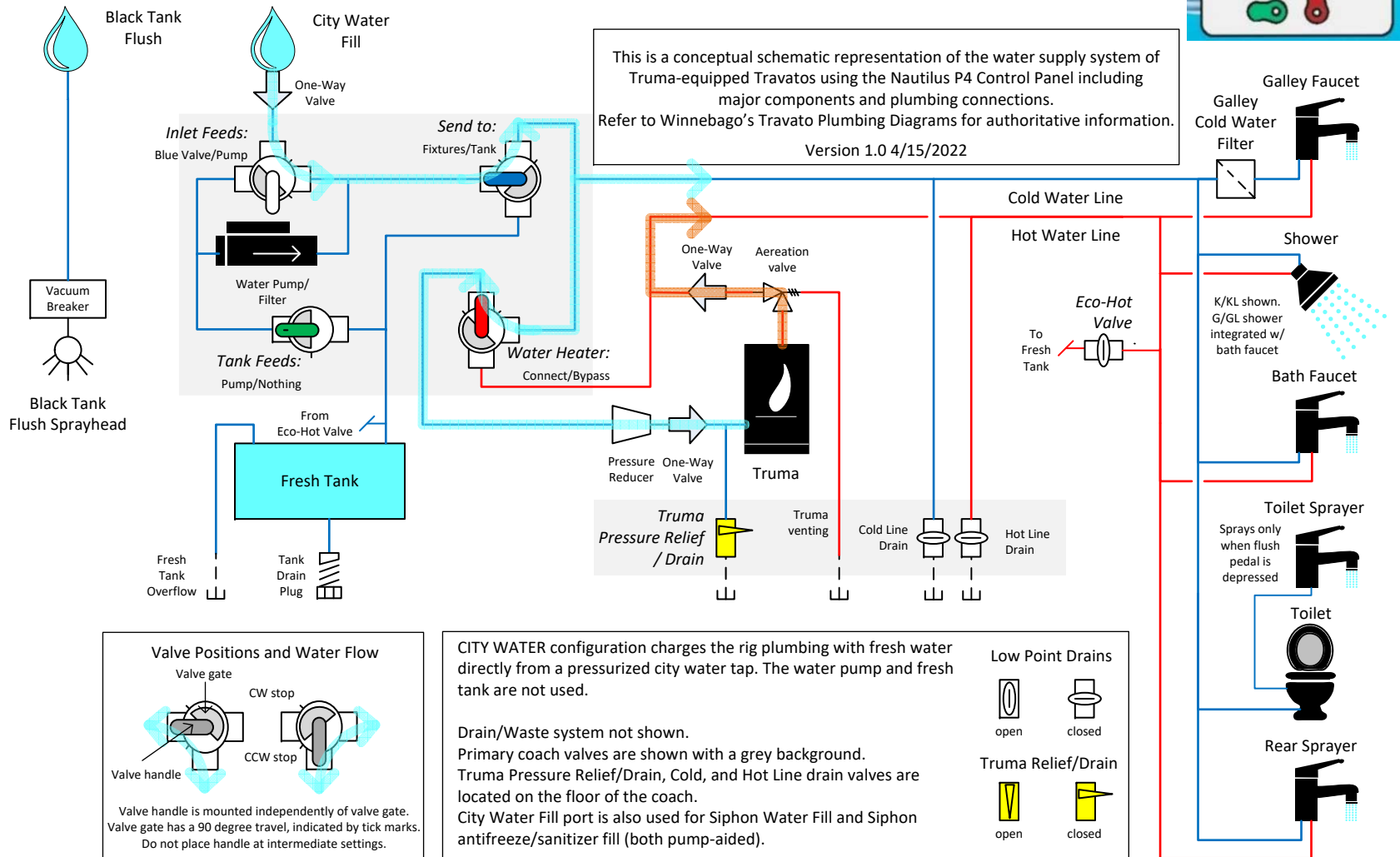
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2022 TRAVATO WATER SYSTEM DRY CAMPING configuration

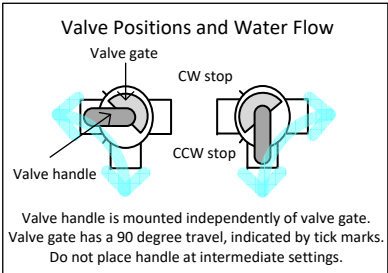
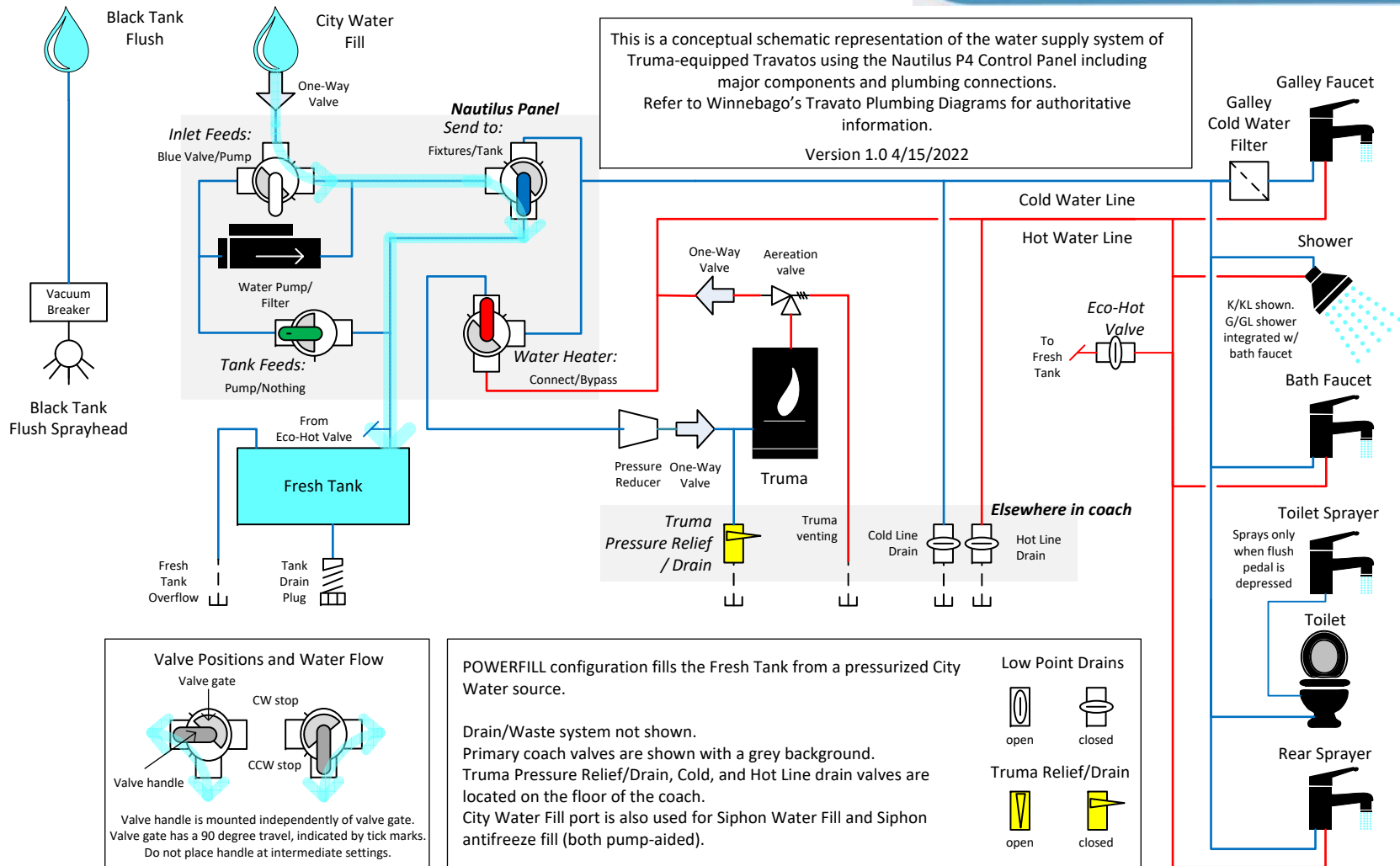


2022 TRAVATO WATER SYSTEM

CITY WATER configuration



2022 TRAVATO WATER SYSTEM POWERFILL configuration



POWERFILL configuration fills the Fresh Tank from a pressurized City Water source.

Drain/Waste system not shown. Primary coach valves are shown with a grey background. Truma Pressure Relief/Drain, Cold, and Hot Line drain valves are located on the floor of the coach. City Water Fill port is also used for Siphon Water Fill and Siphon antifreeze fill (both pump-aided).

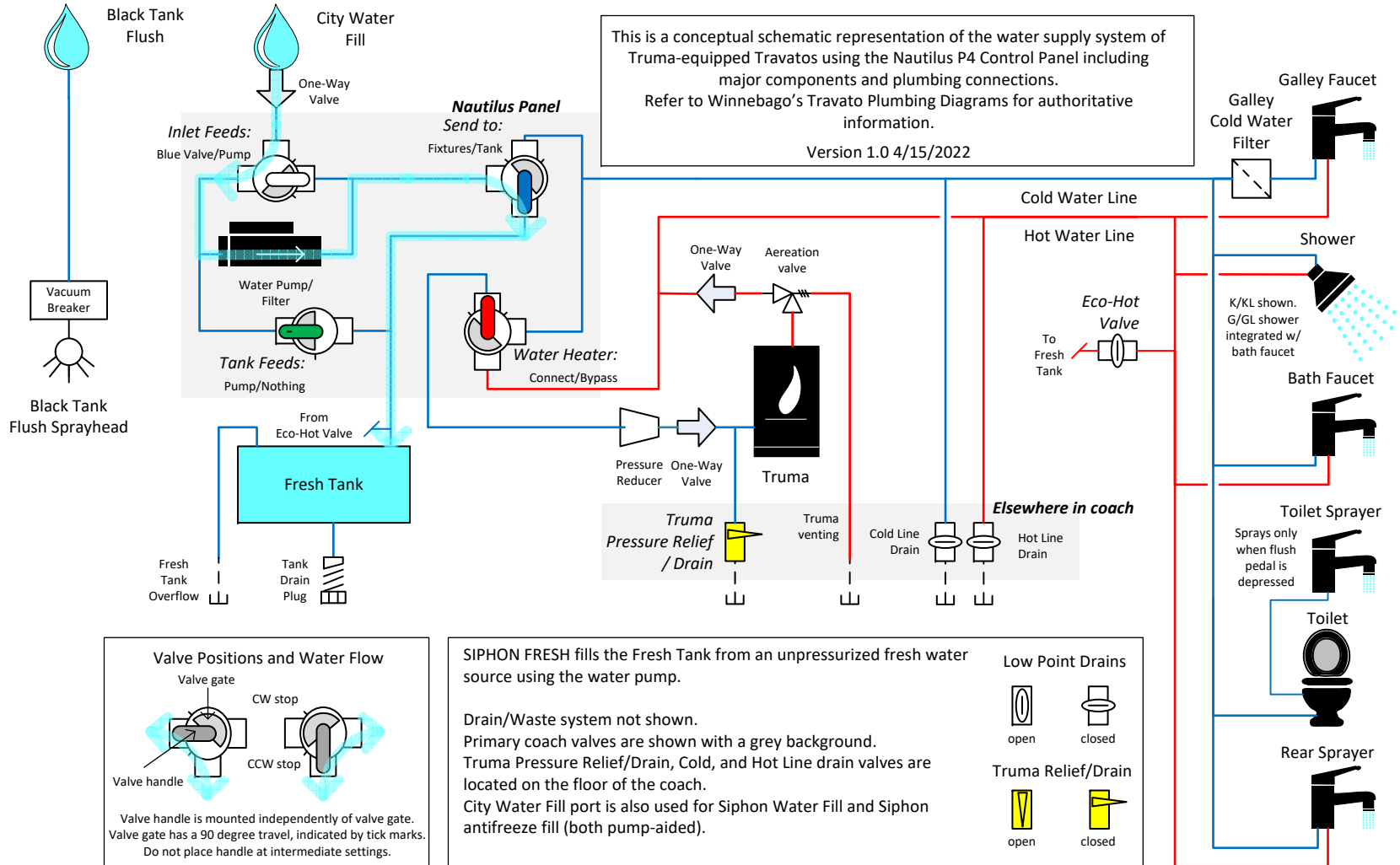
Low Point Drains
 open closed

Truma Relief/Drain
 open closed

2022 TRAVATO WATER SYSTEM SIPHON FRESH configuration



Important note:
SIPHON FRESH configuration is wrongly called SANITIZE on the Nautilus P4 panel label. DO NOT use this configuration for sanitizing. Permanent damage to the Truma will occur!

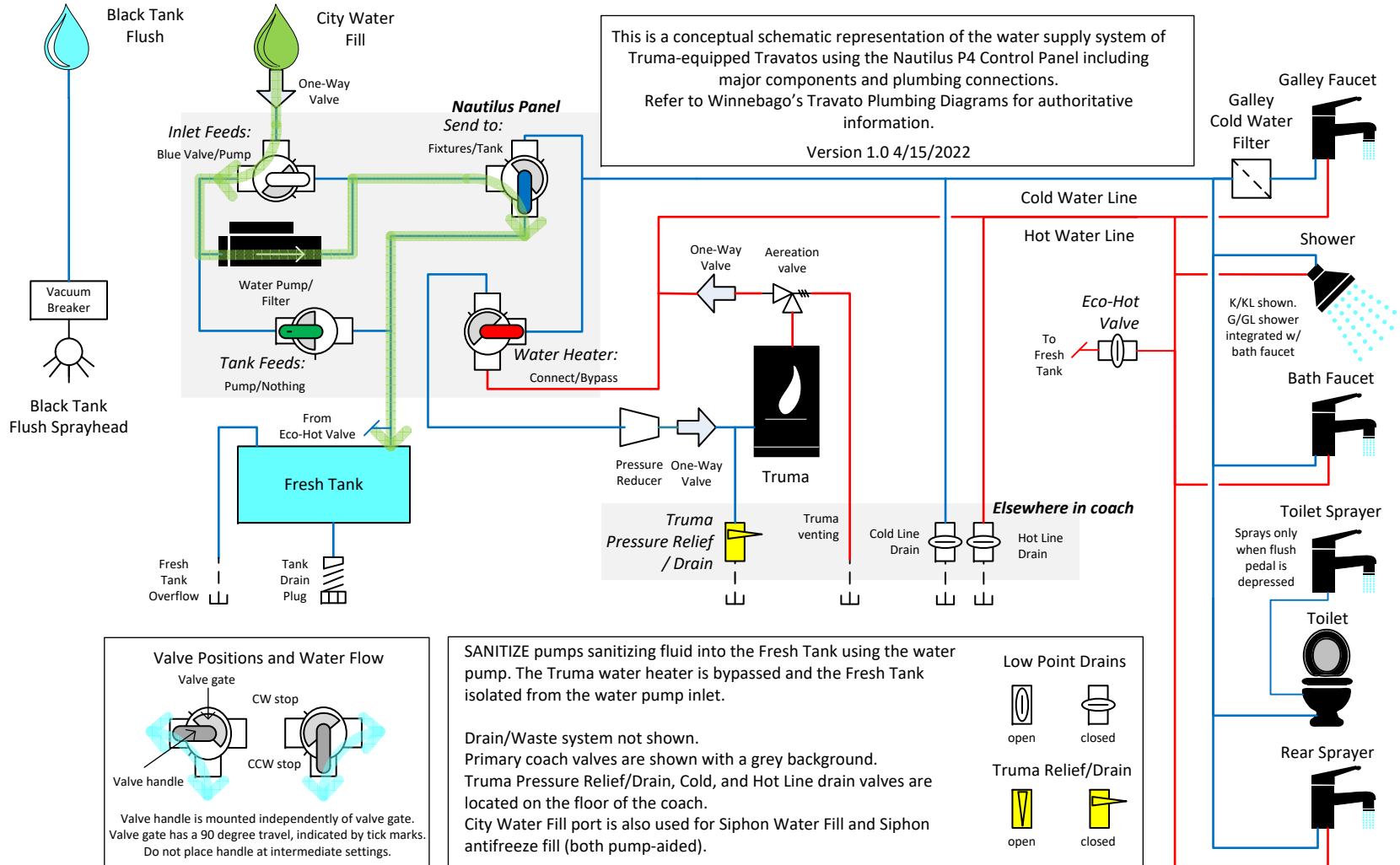


2022 TRAVATO WATER SYSTEM

SANITIZE configuration



Important note:
DO NOT set the Red valve to the UP position as shown on the Nautilus P4 panel label! Permanent damage to the Truma will result. To sanitize, the Red valve must be set to the sideways (bypass) position as shown here.



2022 TRAVATO WATER SYSTEM WINTERIZE configuration

