

# BASIC OPERATION GUIDE

This guide provides basic operational instructions pertaining to the components, devices, or equipment that may be installed on your motorhome. Please refer to the component manufacturer owner's manual for safety, troubleshooting, maintenance, and more detailed operating information.



Made to fit.

## Sanitizing the Fresh Water System

Applicable to all TMC Motorhomes

### BASIC OPERATION

#### ⚠ CAUTION

When using chlorine, pay particular attention to the cautions on the bottle label. Chlorine may burn skin. Use rubber gloves. Use safety glasses or face shield to protect eyes from material splashing. Chlorine splashed onto clothing can fade colors. Chlorine is poisonous to humans and animals. Keep children and pets away from area when performing sanitization procedures.

#### NOTICE

**DO NOT CONNECT YOUR WATER SUPPLY HOSE TO THE CITY WATER PORT OF YOUR MOTORHOME WHILE PERFORMING THIS PROCEDURE.** The fresh water holding tank would be bypassed, preventing proper sanitization and flushing of the fresh water system.

**Be sure to only use a diluted chlorine solution as a sanitizer and flush the water system thoroughly. Recap bottle and clean-up any utensils or appliances with soap and water.**

Sanitizing will help keep your water system fresh, safe, and discourage the growth of viral and bacterial contamination.

The fresh water system must be sanitized and disinfected:

- Upon delivery of the motorhome;
- At least once per year during continuous use;
- Prior to using the motorhome after it has been unused for prolonged periods of time;
- And, if you suspect the fresh water system has been contaminated in any way.

**DO NOT POUR BLEACH STRAIGHT INTO THE FRESH WATER HOLDING TANK.** Chlorine bleach must be diluted with clean, fresh water before it can be used as a safe sanitizing agent.

Prepare a solution of 1/4 cup household liquid chlorine bleach (5% sodium hypochlorite) to one gallon of water for every 15 gallons of tank capacity.

#### Examples:

- Prepare 2-2/3 gallons of solution for a 40 gallon tank.
- Prepare 3-1/3 gallons of solution for a 50 gallon tank.
- Prepare 5-1/3 gallons of solution for an 80 gallon tank.
- Prepare 6-2/3 gallons of solution for a 100 gallon tank.

This mixture creates a 50 PPM (parts per million) residual chlorine concentration for the sanitization process. This will act as quick-kill dosage for some harmful bacteria, viruses, and slime-forming organisms. Concentrations higher than 50 PPM may damage water lines and/or tank.

1. Turn off the water heater at the main switch and close the LP tank valve. **BYPASS THE WATER HEATER. CHLORINE CAN DAMAGE WATER HEATER COMPONENTS!**
2. Open all faucets and drain the fresh water tank by opening the tank drain valve. Close all faucets and the tank drain valve after the fresh water tank is empty.
3. With the fresh tank empty and all faucets and drains closed, pour the sanitizing solution into the fresh water tank via the gravity fill port. Be sure to add the proper amount of solution, depending on the size of your fresh water tank.
4. Top-off (completely fill) the fresh water tank.
5. Turn on the pump switch. Open all faucets (cold and hot) until the air is purged and water flows freely.
6. Close all faucets and top-of the fresh water tank again.  
**Allow the system to stand undisturbed for at least 3 hours.**

#### After the time period has ended:

7. Drain and flush the entire system by opening all faucets, the fresh water tank drain valve and the low point drain valves, while running the water pump AND adding potable water through the fresh water gravity fill port.  
**Be sure there is a continuous supply of fresh, potable water flowing into the gravity fill port while performing this flushing process.**



**IMPORTANT:** This guide may include information for suggested customer purchased items, and component parts on some vehicles that may be optional or not available on your particular model. The inclusion of this information does not indicate or imply that the components or options were at any time available, or can be retrofitted to your vehicle, and is subject to change. If you, the purchaser, have any questions or concerns regarding the information contained in this Basic Operation Guide, or information contained in individual appliance or component manufacturer's instructions, please contact your selling dealership or TMC Customer Care at (877) 855-2867 (EST-Indiana) for assistance. Component part and appliance manufacturers issue limited warranties covering portions of the vehicle not covered under TMC Limited Warranties. Copyright Thor Motor Coach, Inc. © TMC 020063 Rev 221202.

8. Continue this flushing process for several minutes and until the chlorine odor is not detected at the faucets.
9. Close all drain valves and faucets and fill the fresh water tank as you normally would. Make sure the water system is purged of air.
10. If chlorine is still detected, empty the fresh water holding tank and refill.
11. Finally, close the water heater bypass valve(s) and confirm that the water heater's storage tank is full before turning on the water heater.

**NOTES:**

- Chlorine solutions may damage components of some water heaters and heat exchangers. It is recommended to bypass the water heater when sanitizing the fresh water system.
- Chlorine solutions may damage the filtration cartridge of some water filters and/or water softeners. Bypass water filters, or remove filter cartridges, or change filter cartridges when sanitizing the fresh water system.

## Low Point Drain Valves

Low point drain valves are used to drain the fresh-water system whenever maintenance, sanitizing, or winterizing is required. The valves are installed in at the lowest point of the water system, thus providing a complete freshwater system evacuation. The valves allow draining the hot and cold water lines. The freshwater holding tank may have a separate drain valve.



Typical low-point drain valves

**NOTE:** Review the freshwater system diagrams, which indicate the location of the freshwater holding tank drain valve, low point drain valves, and water heater bypass valves for your motorhome. These diagrams are available through your TMC Owners Resource on-line account and are included in the Schematic Diagrams set for your motorhome.

## Water Heater Bypass Valves

**⚠ WARNING**

**NEVER OPERATE A WATER HEATER IF ITS WATER SUPPLY SHUT-OFF OR BYPASSED. SEVERE DAMAGE TO THE WATER HEATER WILL RESULT, ALONG WITH A RISK OF FIRE.**

**NOTICE**

**Tankless water heater installations may not include bypass valves. Review the manufacturer's instructions regarding any cautionary statements they may have concerned with the introduction of sanitizing and winterizing chemicals to the water heater and its components.**

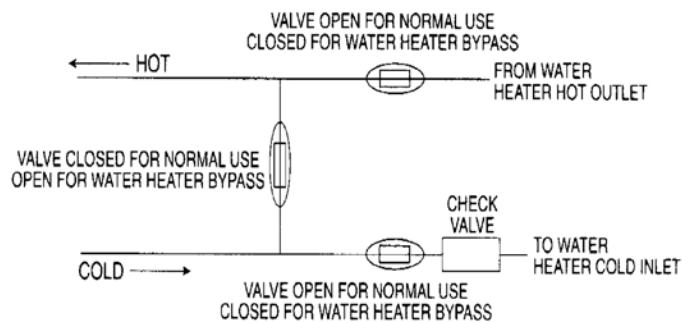
A water heater bypass valve system may be installed inside your motorhome, usually behind the water heater, in a cabinet or maintenance access area. Bypass valves are used for water heater maintenance operations or when the manufacturer of the water heater cautions against introducing sanitizing and winterizing chemicals to the water heater and its components (see Sanitizing and Winterizing sections of this manual).

To bypass the water heater:

1. Close the valves leading to the cold water inlet and hot water outlet of the water heater.
2. Open the valve between the hot and cold water lines.

When the water heater is bypassed for winterizing, be sure to remove the drain plug and drain the water heater's tank. Refer to the manufacturer's instructions for long term storage and winterizing procedures.

When water system sanitizing activities are completed or when putting the water heater back in service, return the bypass valves to their normal positions so that the water heater will have a fresh and replenishing supply of water for normal operations.



Water Heater Bypass Valve diagram