

14 / WASTE SYSTEM

The waste water system in your trailer is made up of sinks, tub, shower, toilet, plumbing drain and vent lines. Waste water from the sinks and shower is contained in a "gray water" holding tank. Toilet waste is contained in a separate "black water" holding tank. The holding tanks make the system completely self-contained allowing you to dispose of waste at your convenience. In addition, there is a dump valve for each holding tank, the toilet, "P" traps at each sink and shower drain, and an indicator on the monitor panel for each tank. Each holding tank is vented through the roof to reduce the buildup of interior odors. A flexible sewer hose and several fittings are required to connect the holding tank outlet to the inlet of an approved waste water dump station or sewer system.

The drain and waste plumbing is very similar to that used in your home. The plumbing is made of plastic, is durable and resistant to most chemicals.

TOILET

Your trailer is equipped with a marine/RV-type toilet. It operates from water supplied either by the fresh water tank or from an exterior water supply connected at the city water hook-up. (The water pump must be turned on when utilizing the water from the fresh water tank.) The toilet flushes directly into the black water tank. Most models have pedals or hand-operated levers that operate independently. One opens a water valve to fill the bowl, the other operates the valve in the bottom of the bowl, permitting the contents to be flushed into the black holding tank. Complete instructions and care for the model installed are located in your Owner's Information Packet.

OPERATION

Depress the pedal about half-way to fill the toilet bowl prior to use.

Depress the pedal completely to flush the contents into the holding tank. Refill the bowl about half-way after flushing, if desired.

When flushing the toilet, make sure all contents are flushed out. If toilet tissue gets caught between the seal and the valve, the toilet may allow odors from the holding tank into the interior of the trailer.

The water in the "P" traps also prevents odors from passing through the traps and venting into the trailer interior. Evaporation, particularly in a little used shower can make the "P" trap ineffective and allow odors to back up into the trailer interior. Make sure there is water in the traps.

NOTE: Do not open the holding tank dump valves unless properly connected to a sewer receptacle.

NOTE: Prime the waste holding tank with an odor control chemical and one or two gallons of water at the start of each trip. Vehicle movement helps to liquefy solids for easier dumping.

SOLID BUILD-UP

The most common problem associated with the waste system is solid build up. Use plenty of water when flushing the toilet, and keep the tank valves closed until ready to flush the system to reduce the risk of build up. Should you ever have a build up of solids, close the valves, fill the tanks about $\frac{3}{4}$ -full with fresh water, drive a distance to agitate the solids and drain the tanks.

Use of a holding tank deodorizing product is also highly recommended. Many deodorizing products are available from RV dealers or wherever camping supplies are sold.

HOLDING TANKS

The holding tanks provide maximum flexibility and convenience for complete self-contained operation. The tanks terminate at a three-inch drain fitting under the the trailer. Each holding tank has a separate dump valve. The dump valve is a quick opening, knife-type, slide valve.

Each waste tank is made of seamless molded plastic, and will not corrode. To insure proper operation of the toilet, dump valves, monitor, and holding tanks, **never** flush the following items down the toilet. See the “**Care & Maintenance**” chapter for more information on toilet and holding tank cleaning.

Facial and/or wet strength tissues, paper towels sanitary products (including those labeled “flushable”).

Colored toilet paper. Use the inexpensive white toilet tissue as it dissolves easily. Biodegradable tissue is recommended and available at RV supply stores.

Detergents, bleach, lye, petroleum products or ammonia

Automotive antifreeze, alcohols, or acetones.

Grease or oil from cooking, table scraps or other solids that may cause clogging.

Use only potable antifreeze products, which are approved by the toilet and tank manufacturers, when winterizing the trailer.

Whenever the waste system is not connected to a sewer receptacle, the dust cap should be kept on the

drain connection to prevent dust and/or dirt from entering the connection and damaging the dump valves.

HOLDING TANK MONITOR

The level in each holding tank is indicated on the monitor panel. To check the level, press the switch for the tank and check the indicator light.

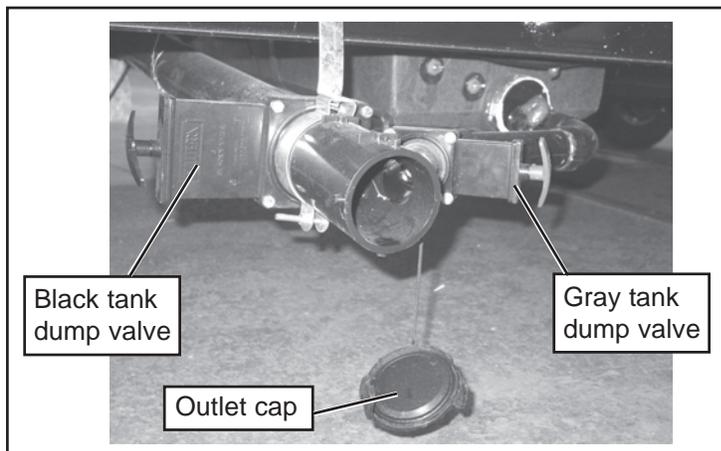
DUMPING THE HOLDING TANKS

During self-containment, the sewer line is securely capped to prevent leakage of waste material onto the ground or pavement. Do not pull the holding tank knife valves open when the protective cap is installed on the pipe. Always drain the tank into an acceptable sewer inlet or dump station.

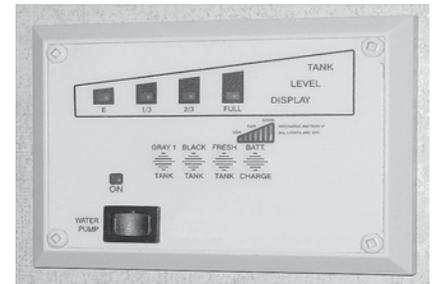
Drain the holding tanks only when they are at least 3/4-full. If necessary, fill the tanks with water to 3/4-full. This provides sufficient liquid to allow complete flushing of waste material into the sewer line.

Whenever possible, drain the tanks before traveling. Waste water and sewage in the holding tanks reduce the carrying capacity of the trailer, and there's no sense driving around with it.

During extended hookups, waste materials will build up in the tank and cause serious plugging if the tank valves are left open. Keep the valves closed until the tanks are 3/4-full, then dump into the sewage system. When not connected to a sewage system, keep the protective cap in place on the drain line fitting.



Holding tank drain outlet and valves (typical)



Monitor Panel (Varies depending on model)

NOTE: Local or State regulations may prohibit highway travel unless the holding tank outlet is securely capped.

WARNING

Holding tanks are enclosed sewer systems and as such must be drained into an approved dump station. Both black and gray water holding tanks must be drained and thoroughly rinsed regularly to prevent accumulation of harmful or toxic materials.



Do not use the fresh water hose you use for filling the fresh water tank or connecting to city water to rinse the sewer hose. Harmful or toxic materials could come into contact with the fresh water hose and could contaminate the fresh water supply, tank and plumbing system. Always use a separate hose for rinsing the sewer system components.

Please ... Practice good housekeeping when draining wastes at a campsite or disposal station. Be a good RV citizen and leave the site in good order. Leave it the way you would like to find it. Above all, do not pollute.

To dump the holding tanks:

1. Turn the outlet cap counterclockwise to remove it.
2. Attach the sewer hose to the holding tank outlet by turning counterclockwise, locking the end levers over the termination end.
3. Place the other end of the sewer hose into an approved dump station inlet. Push it far enough into the opening to be secure. Adapters may be required between the line and the inlet. Arrange the hose so it slopes evenly to the sewer inlet. Avoid sharp bends.
4. Open the black tank termination valve (the larger one) and drain. Grasp the valve handle firmly and slide the valve open with a quick, steady pull. Allow enough time for the tank to drain completely. Rinse and flush the tank through the toilet. When the tank is empty, push the valve handle back in to close the valve. Run enough water (up to five gallons) into the tank to cover the bottom. This will help to break up solids and reduce “pyramiding” of solid wastes.
5. To drain the gray water tank, open the gray tank termination valve (the smaller one) and drain. Drain the gray tank last to aid in flushing the outlets and hose. When the tank is empty, push the valve handle back in to close the valve.
6. Disconnect sewer hose, reinstall termination cap on the outlet.
7. Rinse out the sewer hose with fresh water and remove the sewer hose from the dump station.
8. Replace the sewer or dump station covers, and store the sewer hose and fittings.

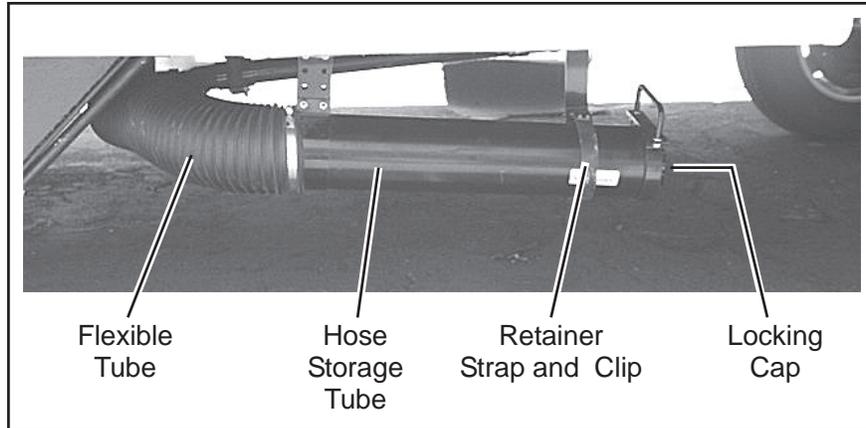
SWING-AWAY WASTE TANK DRAIN HOSE CADDY

(IF EQUIPPED)

The swing-away black tank drain hose caddy is a convenient extension of the waste drain outlet fitting. It allows some flexibility in attaching and positioning the waste drain hose at a dump station. It also provides a storage solution for the waste tank drain hose.

SETUP AND OPERATION

Note: The setup steps should be done before the first use of the dump system. You can do it any time, but it can

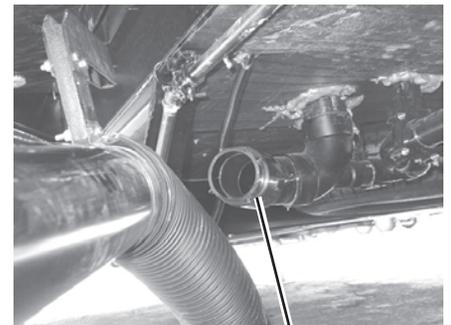
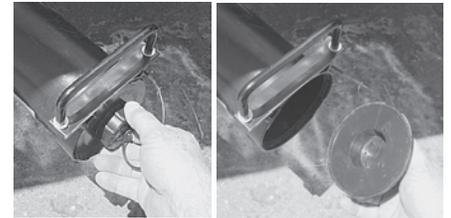
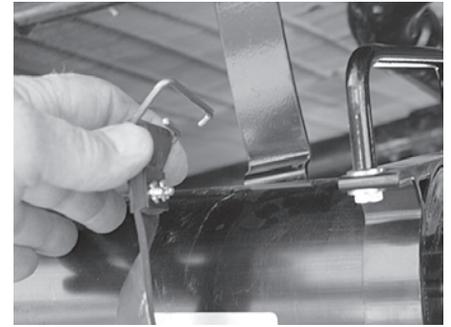


Swing Away Waste Tank Drain Hose Caddy

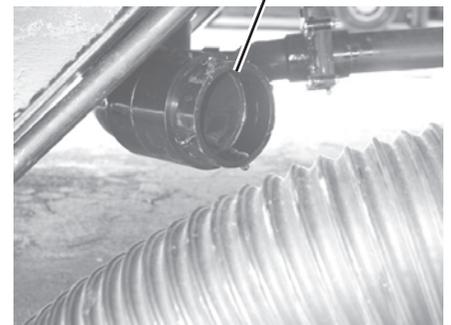
be unpleasantly messy after the dump system has been used.

1. Release the hose storage tube by detaching the rubber strap clipped to the support bracket.
2. Swing the tube toward the outside of the trailer body.
3. Remove by cap on the end of the tube by rotating the cap to align the locking tabs with the indents in the cap. Pull the cap off.
4. Under the trailer, pull the flexible tube away from the main waste outlet. The tube is not clamped, and will retract easily.
5. Guide your sewer hose with outlet fitting attached through the lower end of the storage tube and out the other end. Attach the sewer hose outlet fitting to the trailer drain outlet fitting. Twist the hose to lock the hose fitting to the drain outlet fitting.
6. Replace the flexible tube around the outlet fitting.
7. The other end of the sewer hose can be compressed and stored inside the hose caddy tube. Replace the tube cap, align the locking tabs and turn the cap to lock it in place.
8. Swing the caddy tube back under the trailer and secure it with the rubber strap and clip to the support bracket.

When you are ready to dump the holding tanks, release the tube from the support, swing it out, remove the cap, extend the hose and follow the normal dumping procedure, outlined on the previous page.



Waste Tank Outlet Fitting



HOLDING TANK CARE

The holding tanks are virtually trouble-free. The most common problem is also an unpleasant one — clogging. You can reduce the chance of clogging by remembering the following:

- ▶ Keep the black water tank knife valve closed. Fill the tank to at least 3/4-full before draining. Be sure to cover the tank bottom with water after draining.
- ▶ Use only toilet tissue formulated for use in septic tank or RV sewer systems.
- ▶ Use only cleaners that are approved for use in septic tank or RV sewer systems.
- ▶ Use a special holding tank deodorizer chemical approved for use in RV sewer systems. These chemicals aid the breakdown of solid wastes and make the system much more pleasant to use.
- ▶ Do not put facial tissue, paper, automotive anti-freeze, household toilet cleaner or sanitary napkins in the holding tanks.
- ▶ Do not put anything solid in either tank that could scratch or puncture the tank.
- ▶ Keep both knife valves closed and locked, and the drain cap tightly in place when on the road.

If the drain system does get clogged:

- ▶ Use a hand-operated probe to loosen stubborn accumulations.
- ▶ Seriously clogged P-traps may require disassembly. Be careful not to overtighten when reassembling.
- ▶ Do not use harsh household drain cleaners.
- ▶ Do not use motorized drain augers.
- ▶ Sometimes the holding tank valve will get clogged. In this case, a hand-operated auger may be necessary. Be ready to close the valve quickly once the clog is cleared.

SAN-T-FLUSH (OPTIONAL)

If equipped, the San-T-Flush kit has been installed to rinse the interior of the black tank. Similar to the water fills located on the exterior of the unit, a separate hookup is placed on the exterior.

Flush the tank after dumping by connecting the sewer hose and attaching a garden hose - *not your fresh water hose* - to the inlet labeled "Sewer Valve Must be Open When Using This Inlet" OR "Black Tank Flush." Open the water supply to full pressure to flush tank. When water runs clear from sewer hose, shut off water supply and disconnect garden hose from source. Do not disconnect hose from flush inlet until water has drained from system.

- ▶ DO NOT leave any hose connected when not in use.
- ▶ DO NOT add any check valves to this system.

