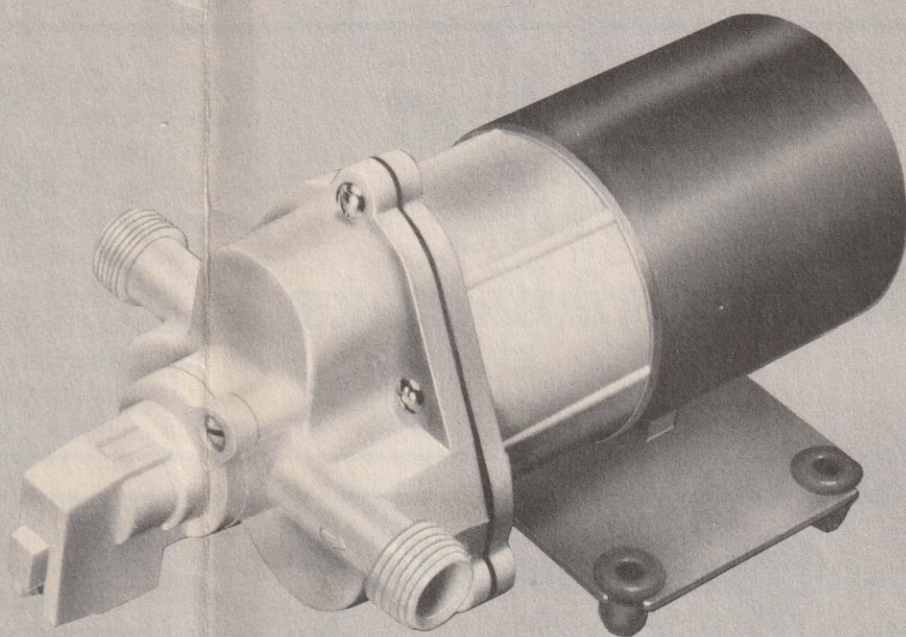


SHURflo

MODEL SERIES 200



INSTALLATION MANUAL

FORM 911-101 (11/80)

Location and Installation of Pump

The pump should be in a readily accessible location to allow easy service or repair if required.

The Model Series 200 Pump has excellent priming

characteristics. It can be located above, even with or below the water tank level. Secure the pump with screws through the rubber feet in the mounting plate. Take care not to tighten the screws so tight that they depress the rubber feet as this prevents the shock absorber effect and increases pump noise.

The water tank must be vented to the outside of the coach.

It is essential that a filter be used in the pump input line to prevent particles from entering the pump head. A tank filter or an in-line filter is ideal. Filter screen should be 50 mesh or smaller.

Electrical Wiring Requirements

The pump should be on a circuit of its own. Use 14 gauge wire up to 20 feet and 12 gauge wire from 20 feet to 50 feet. Run the same gauge ground wire back to the source, or chassis, or to a common ground. Do NOT use skin ground.

The fuse should be not less than 10 amps nor more than 15 amps. The switch amp rating should be equal to or more than the fuse. The switch is used to shut off the pump when the coach is not in use, in storage, in an emergency, or when traveling.

Plumbing Requirements

The inside diameter of the plumbing line is of utmost importance. If too small, it increases back pressure and reduces the flow causing excessive pump cycling. Main lines should be at least 1/2 inch in diameter and shorter "feeder" lines to the faucets should be 3/8 inch in diameter. All fittings used to join sections of the plumbing should have the same flow diameter as the lines. Filter screens should be removed from faucets as they may lime up or clog, thus causing a problem.

The output hose on the pump may be exposed to high pressure when the RV is connected to city water.

Use only high pressure potable water hose (Shurflo Part #007-003) or equal. Any length hose may be used on the input (non-pressure) side. The output hose should not exceed 24 inches to comply with most codes. Care should be taken to avoid any kinks in the line. Use hose clamps at both ends of each hose. Clamps prevent air leaks which can prevent proper priming.

Check valves used in the system must be a free flow design. If you can blow through it in the direction of the flow the valve is suitable. If you cannot, it may cause excessive restriction.

CAUTION: Do not use pipe dope on the input side of the pump. Pipe dope can get into the pump head and may cause failure.

Water purifiers must be on a separate line as they create high back pressure.

"Check Out" Procedure

Examine the installation. Is it complete . . . Are the clamps tight . . . Are there any kinks in the hose . . . Is the fuse good . . . etc?

Use a fully charged battery or 12 volt DC converter of at least 10 amp capacity.

INITIAL OPERATION

1. Fill the tank with water
2. Open all faucets . . . Hot and Cold.
3. Switch pump to "On" position. Allow time for the hot water tank to fill. Shut off each faucet as flow becomes steady and free of air. Shutting off the last faucet should cause the pump to shut off.

To check for leaks we recommend a positive pressure check with a pressure gauge. A drop in pressure with all faucets off will indicate a leak in the system. Correct all leaks no matter how small.

Trouble Shooting

Any or all of the following problems can be caused by loose pump head screws.

Motor does not operate—Is the battery charge too low? Are the wires disconnected. Is the switch in the "on" position? Is the fuse good? Is the pump head frozen? If so, place a lamp bulb near the pump to thaw.

Pump runs but water does not appear—Is there water in the tank? Are there kinks in the hose? Is air leaking into the inlet hose or fittings? Is the inlet line clogged? To check, remove the outlet hose and try again. If water flows the problem is further on in the system.

Motor runs but water sputters—Indicates air getting into the lines. Check hose and clamps on the input side of the pump. Restart and allow air to clear from the lines and hot water tank.

Pump cycles (rapid on/off)—Cycling of the pump is normal if the flow of water is restricted to less than the flow capacity of the pump. For example, a faucet partially opened. Under these conditions the pump will cycle on and off in a rhythmic interval.

Abnormal cycling—If the pump cycles on and off when all faucets are closed, something is wrong. Most likely there is a leak somewhere. Check faucets for dripping and especially the toilet valve. Correct any leak no matter how small. Also check the city water input.

If no leak can be detected, shut off the pump. Remove the output line. Insert a cap or plug in the open end. You can make a plug from a barb fitting with a cap tightly screwed on the threads.

If a threaded fitting, use a cap or plug. Either way—there must be **no** leak. Turn the pump switch on. The pump should come on, run a few seconds and shut off. If the pump remains off the problem is **not** the pump. The problem is in the system. If however, the pump goes on and off there may be a problem in the pump. There may be an internal pump leak which allows water to escape from the high pressure area back into the low pressure inlet area causing the pump to cycle. This may be caused by a valve held open by a foreign particle or by a crack in the casting.

Pump does not shut off—The wall switch may be used for temporary control of the pump. A low battery may be the cause. Voltage should be 10¼ volts or more to the pump. Low voltage may provide energy enough for the motor to run but not enough for it to reach shut off pressure. Also the switch mechanism may be stuck. Try tapping the switch cap on the end of the pump with the handle of a screwdriver.

Should you be unable to isolate the problem, contact Shurflo via one of the toll free numbers and request the name of the nearest Shurflo service centers for professional help.

Winterizing Your RV Water System

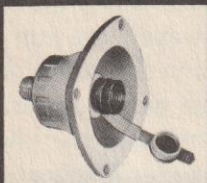
Satisfactory winterizing requires draining the water from the entire water system. Because of the check valve mechanism built into the pump blowing the lines will not remove the water from the pump and tank. For the best results in removing all the water from your water system, follow the four steps below:

1. Drain the water tank through the drain on the tank. If the tank has no drain then open a faucet and allow

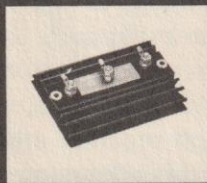
the pump to pump the tank dry.

2. Now drain the lines by opening the lowest outlet or drain in the system.
3. Remove the outlet hose on the pump. Turn the pump on, allowing the pump to pump out any remaining water . . . about a cupful. A towel or rag can be used to catch this water. Should you wish to blow the lines out with air, apply the air nozzle to the system where the outlet hose has been removed. Be sure all valves are open.
4. Having removed the water from the system, attach the pump hose now . . . or later. The system is now winterized. NOTE: It is much easier to winterize using the potable antifreeze solutions available.

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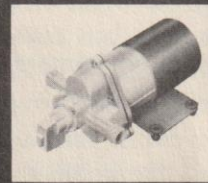
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