

GALLEY/HEAD SYSTEMS

WATER SYSTEM OPERATION

Fill fresh water tank at deck fill. The tank filler cap will be marked "water". When tank is full, water will back up through the vent hose and exit through a vent located on the side of the hull

To activate the water system, flip the "water pressure" switch on the electrical panel. This will start the pump and pressurize the system. When the pressure builds, the pump will shut off . With continued use of fresh water the pressure in the system is reduced, automatically re-starting the pump. Make sure there is water in the system while pump is in operation to prevent damage to the motor.

If pump kicks in frequently without system use, you may have a leak in the system and it should be checked. **Do not activate water heater unless there is water in the system.**

Opening the faucet will allow the pump to empty the tank. Flushing the tank and lines will be necessary for winterization. Refer to Maintenance & Winterization section for more information.

To operate shower, turn on hot & cold faucets until desired temperature is reached, while shower head is retracted at sink. Pull the shower head out and use. An "on-off" valve is located on the upper most portion of the shower head. This can be used to stop water flow at the head. However, this will not stop water flow at the sink. The faucets must be turned off to prevent system drainage.

REPAIR PARTS

Repair parts listed herein may be ordered through Seaward Products, Seaward Distributors and Dealers, or Dealer's Authorized Service Centers.

All parts will be shipped at prevailing prices.

When ordering repair parts, please give the following information:

1. The Part Number
2. The Part Description
3. The Model Number of the Heater
4. The Serial Number of the Heater

The Model Number and the Serial Number of the heater will be found on the rating plate located on the front panel.

For the Authorized Service Center nearest you, please contact Seaward Products.

CUSTOMER SERVICE

Seaward Products

15600 SALT LAKE AVENUE
CITY OF INDUSTRY, CA 91745
POST OFFICE BOX 566
LA PUENTE, CA 91747
PHONE: (818) 968-2117
FAX: (818) 330-5442

Seaward Products

POST OFFICE BOX 566
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WATER HEATERS

OWNER'S MANUAL FOR ELECTRIC/HEAT EXCHANGER WATER HEATERS

MODELS:

S600, S650, S700, S750

S1100, S1150, S1200, S1250

IMPORTANT SAFETY INSTRUCTIONS

WARNING: When using electrical appliances, basic safety precautions to reduce the risk of fire, electric shock, or injury to persons should be followed, including:

1. READ ALL INSTRUCTIONS BEFORE USING THIS WATER HEATER.
2. This water heater must be grounded. Connect only to properly grounded outlet. See "GROUNDING INSTRUCTIONS" found on Page 3, Item 7.
3. Install or locate this water heater only in accordance with the provided installation instructions.
4. Use this water heater only for its intended use as described in this manual.
5. Do not use an extension cord set with this water heater. If no receptacle is available adjacent to the water heater, contact a qualified electrician to have one properly installed.
6. As with any appliance, close supervision is necessary when used by children.
7. Do not operate this water heater if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
8. This water heater should be serviced only by qualified service personnel. Contact nearest authorized service facility for examination, repair, or adjustment.

SAVE THESE INSTRUCTIONS

WARNING:

This Water Heater is equipped with a heat exchanger. Extended engine coolant circulation through the heater may result in excessively hot water.

This Water Heater Tank and Heat Exchanger are made of aluminum. Do not use any caustic chemicals in Heat Exchanger or damage may occur. Use only engine manufacturers recommended coolant in coolant system. Damage that occurs to Heater due to chemical reaction by caustic chemicals is not under warranty.

CAUTION:

Hydrogen gas can be produced in a hot water system served by these heaters that have not been used for a long period of time (generally 2 weeks or more.) Hydrogen gas is extremely flammable. To reduce the risk of injury under these conditions, it is recommended that the hot water faucet be opened for several minutes at the kitchen sink before using and electrical appliance connected to the hot water system. If hydrogen is present, there will probably be an unusual sound such as air escaping through the pipe as the water begins to flow. There should be no smoking or open flame near the faucet at the time it is open.

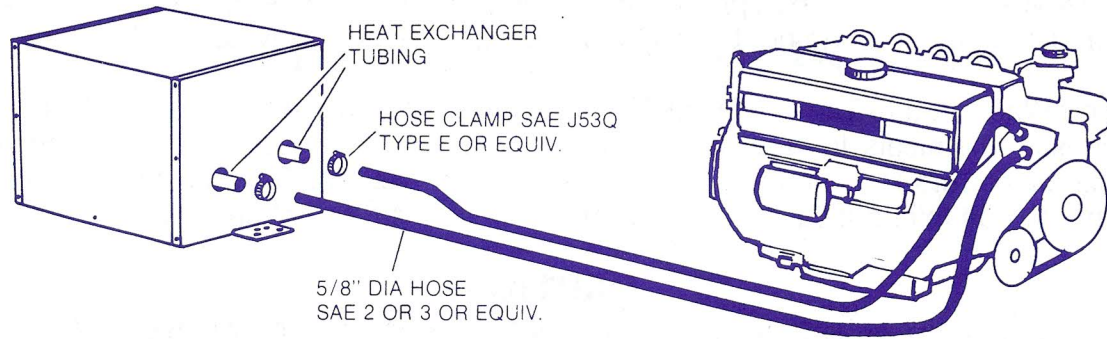
OPERATING INSTRUCTIONS

1. Fill water system and completely fill tank.
2. Locate and turn remote electrical switch to "ON".
3. Turn switch to "OFF" position prior to draining water system.

NOTE: Do not operate heater without element being submerged in water.

MAINTENANCE

1. Check heat exchanger lines for leaks at regular intervals. A leak in the system will cause coolant loss and may damage engine.
2. Flush tank periodically.
3. Drain tank if subjected to temperatures less than 32°F, to prevent freezing and possible damage.



INSTALLATION

1. Locate water heater at or below engine level as close to engine as possible.
2. Secure mounting brackets to structure with eight #12 minimum screws or 1/4-20 minimum cap screws and nuts.
3. Connect cold water supply and hot water outlet to heater.
4. Connect heat exchanger system described in figure above.
5. Pressure temperature relief valve is factory installed. The pressure relief shall limit the pressure to 127.5 PSI (879.3 KPA) minimum, 150 PSI (1034.2 KPA) maximum.

The valve must be oriented, provided with tubing, or otherwise installed so that discharge can exit only within 6 inches above, or at any distance below the structural floor, and cannot contact any live electrical part.

Install replacement temperature and pressure protective equipment required by local codes, but not less than a combination temperature and pressure relief valve certified as meeting the requirements for relief valves and automatic gas shutoff devices for hot water supply systems, ANSI Z21.22 by a nationally recognized testing laboratory that maintains periodic inspection of production of listed equipment or materials.

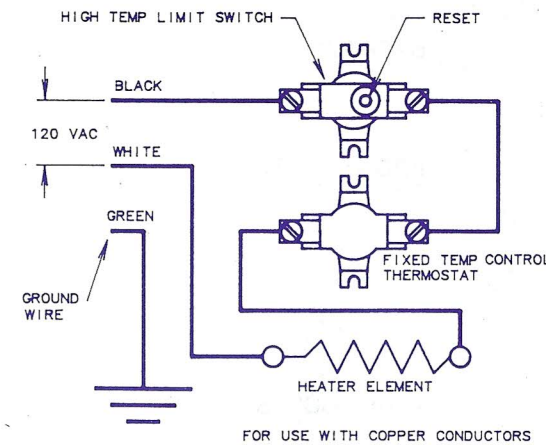
6. Connect the electrical supply by a qualified electrician. The electrical supply shall be permanent wiring, armoured cable or conduit, per national electrical code NFPA 70, with a minimum capacity of 1500 watts.
7. **GROUNDING INSTRUCTIONS:** The supply ground shall be connected to the green wire located in the water heater wiring compartment. Do not place switch in the grounding circuit.

Use a UL-Listed ON-OFF switch rated 15 AMP/120 VAC in the black supply line on 120 Volt models. Use a UL-Listed double pole ON-OFF switch rated 10 AMPS/220-240 VAC in the red and black supply lines on 220 Volt models.

The heater is equipped with a high limit switch which can be manually reset. If the limit switch activates, proceed as follows:

- Turn power off at main power panel or remote switch
- Remove wiring access cover
- Depress red button on high temperature limit
- Replace cover and turn power on
- If temperature limit switch reactivates, contact a Seaward Products authorized service center.

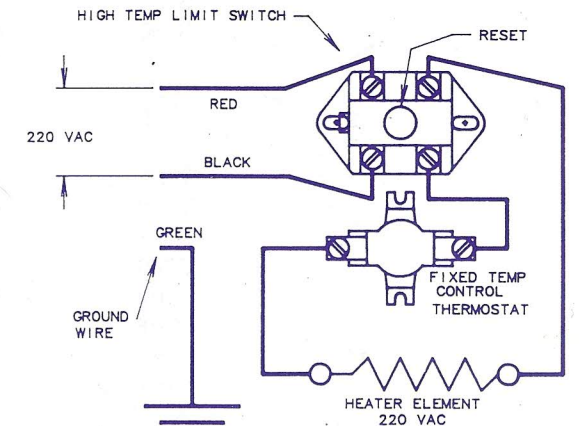
WIRING DIAGRAM FOR 120V



CAUTION !
TO REDUCE RISK OF SHOCK
OR FIRE USE ONLY ON A UTILITY
SYSTEM HAVING A MAXIMUM
120/250 VOLT, THREE WIRE SYSTEM.

120 VOLT AC

WIRING DIAGRAM FOR 240V

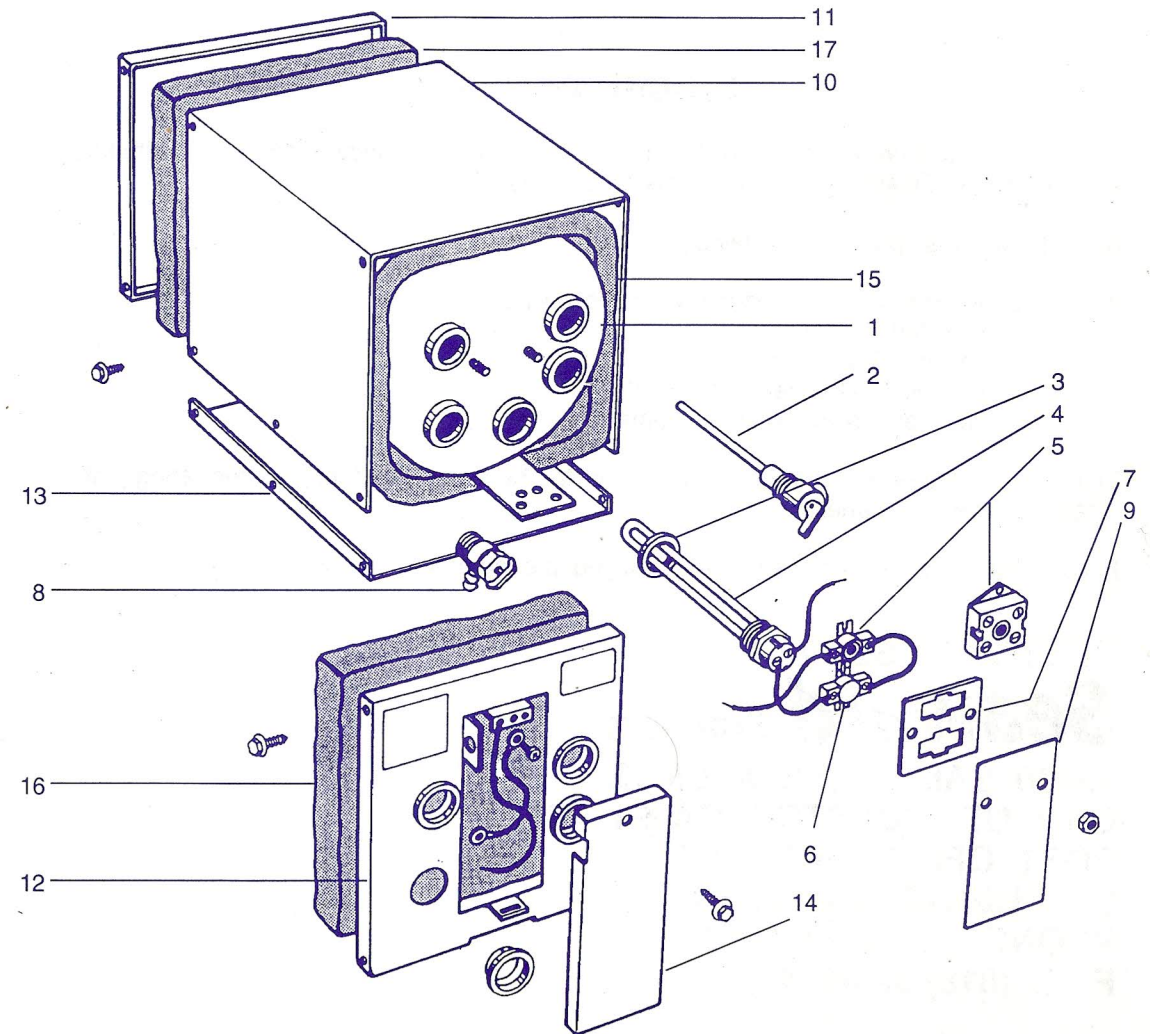


240 VOLT AC

**PARTS LIST
MODELS
S600, S650, S700, S750
S1100, S1150, S1200, S1250**

ITEM	MODEL NO.	PART. NO.	DESCRIPTION
1.	S600/S700 S1100/S1200	80253 80254	TANK ASSEMBLY
2.	ALL MODELS	73127	TEMPERATURE/PRESSURE VALVE
3.	ALL MODELS	73124	HEATING ELEMENT GASKET
4.	120 VOLT	73364	HEATING ELEMENT
	240 VOLT	73365	
5.	120 VOLT	73128	HIGH LIMIT SWITCH
	240 VOLT	73154	
6.	ALL MODELS	73129	THERMOSTAT
7.	120 VOLT	73148	THERMOSTAT MOUNTING PLATE
	240 VOLT	73171	
8.	ALL MODELS	73123	DRAIN VALVE
9.	ALL MODELS	73145	WIRE SHIELD
10.	S600	73137	JACKET
	S700	73283	
	S1100	73166	
	S1200	73287	
11.	S600	73140	BACK PANEL
	S700	73286	
	S1100	73169	
	S1200	73290	
12.	S600	73139	FRONT PANEL
	S700	73285	
	S1100	73168	
	S1200	73289	
13.	S600	73138	BASE
	S700	73284	
	S1100	73170	
	S1200	73288	
14.	S600/S1100	73141	WIRE ACCESS COVER
	S700/S1200	73291	
15.	S600/S700	73146	INSULATION WRAP
	S1100/S1200	73175	
16.	S600/S700	73147	INSULATION FRONT
	S1100/S1200	73176	
17.	S600/S700	73330	INSULATION BACK
	S1100/S1200	73331	

EXPLODED VIEW



ng Your Water System

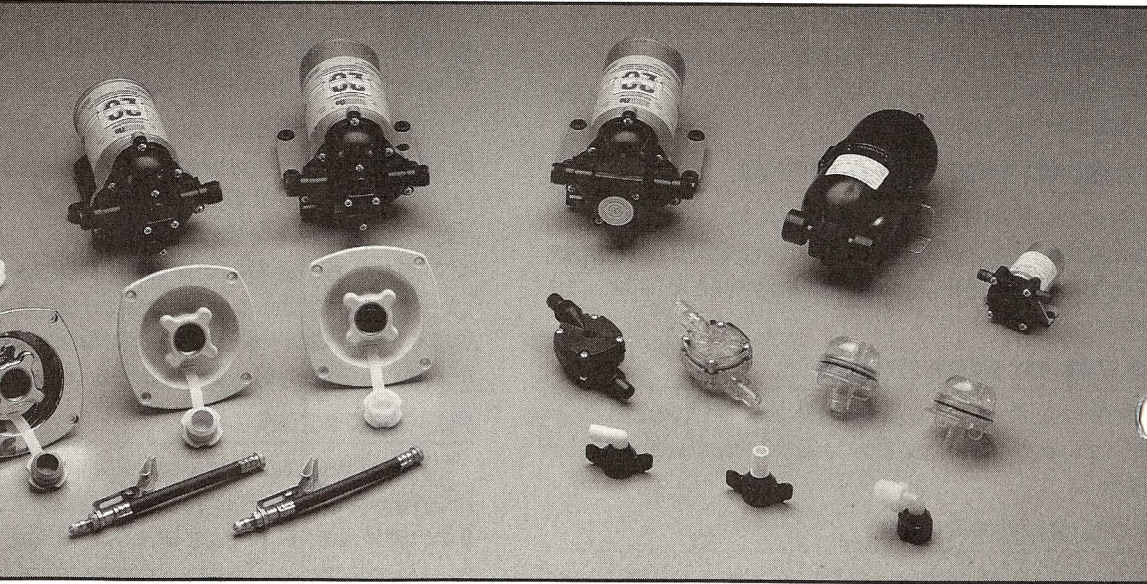
terizing requires draining the water from the entire e of the check valve mechanism built into the pump l not remove the water from the pump and tank. in removing all the water from your water system, s below.

er tank through the drain on the tank. If the tank en open a faucet and allow the pump to pump the

lines by opening the lowest outlet or drain in the

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. See your local RV Dealer.

More Quality Products from SHURflo



SHURflo
TO BE SURE

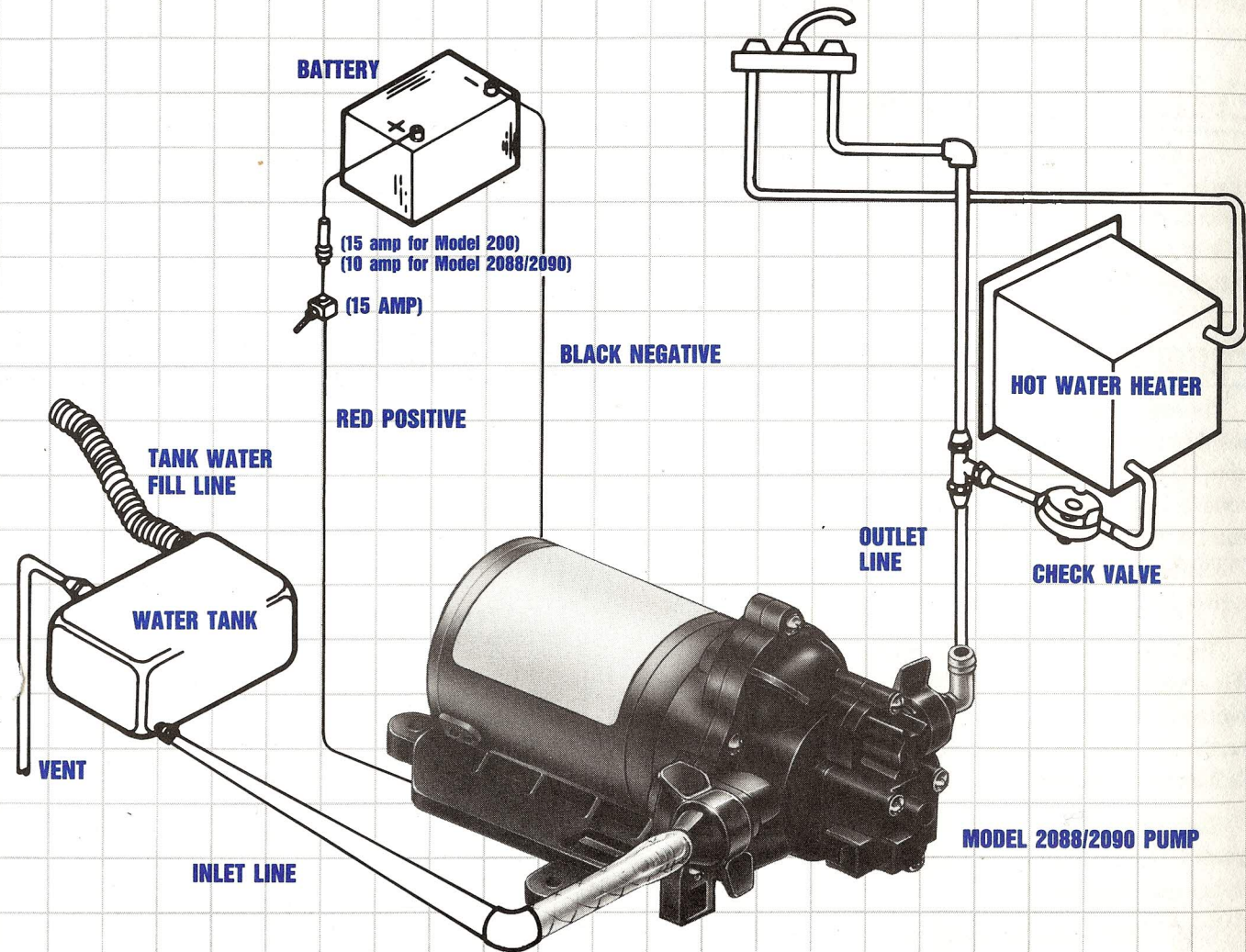
SHURflo SERVICE CENTERS

12650 Westminster Avenue
Santa Ana, California 92706-2100
(800) 854-3218 • (714) 554-7709

52748 Park Six Court
Elkhart, IN 46514-5427
(800) 762-8094 • (219) 262-0478

SHURflo

TO BE SURE



Model Series 2088/2090 RV and Marine Installation Manual

Installation of Pump

in a readily accessible location to allow easy service

8/2090 Pump has excellent priming characteristics. When installed above or below the water tank level. Secure the pump with the rubber feet in the mounting plate. Take care not to pull down on the pump that they depress the rubber feet as this prevents

Wiring Requirements

and that the pump be on a circuit of its own. However, it should not be connected by other 12 VDC electrical devices provided the proper current protection is used for the TOTAL (All devices must meet the minimum acceptable wire sizes are listed in the wiring gauge from 20 to 50 feet, and 10 gauge over 50 feet.

Requirements

The diameter of the plumbing line is of utmost importance. If too small, it will restrict and reduce the flow causing excessive pump pressure. The diameter should be at least 1/2 inch in diameter and shorter "feeder" lines should be 3/8 inch in diameter. All fittings used to join sections should have the same flow diameter as the lines. Use a pipe thread sealant #170-019-00 or a SHURflo "SHUR-Guard" Twist-On Sealant. (Available in 1/2" barb inlet or 1/2" pipe inlet.)

The pump may be exposed to high pressure when the system is primed. Use only high pressure potable water hose. Route hoses away from the pump. Care should be taken to avoid any kinks in the hoses at both ends of each hose. Clamps prevent air leaks during priming.

The system must be a free flow design. If you can blow air through the flow the valve is suitable. If you cannot, it may not be suitable.

Use pipe dope on the input side of the pump. Pipe dope on the pump head and may cause failure.

It should be on a separate line as they create high back

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.

It is important that the ground wire (negative) back to the source, or chassis, or to a common ground be the same wire size used as the supply wire (positive).

The system's on/off switch must be rated at 10 amps (minimum), and be on the pump's positive lead. This switch will allow the pump to be shut off when not in use, in storage, in an emergency, or when traveling."

LIMITED WARRANTY

Save This Warranty

SHURflo warrants its pump to be free of defects in workmanship and materials for one year beginning with the purchase date of the unit or in the absence of proof of the purchase date then one year from the date of manufacture as shown on the pump. Warranty is limited to the replacement of or the cost of the original pump.

WARRANTY PROCEDURE

Each and every pump has been operated and tested before being shipped from the SHURflo factory. In the event you feel the pump is not operating correctly we suggest:

You communicate with the SHURflo factory by phone or letter. You will be asked to return the pump to the factory or if more appropriate, to the nearest SHURflo Official Service Center.

Upon inspection, if the pump itself is found to be faulty the pump will be repaired or replaced. During the warranty period there will be no charge for parts or labor used in the repair of the pump. However, we have no control over the location of the pump in the unit, how it is installed, nor its accessibility for repair. There may be a charge for removal and reinstallation of the pump. We are not responsible for such charges.

If you wish to repair the pump yourself you may do so without voiding the warranty provided you use SHURflo parts and assemble the pump correctly.

Or, you may send the pump to us for prompt repair. Package it carefully to avoid shipping damage—enclose your name and address, the date of purchase of your unit and the Brand name — plus Three Dollars for return postage. We will process the pump and have it on the way back within 48 hours.

The above represents our warranty policy. Under no circumstances will we assume nor accept responsibility for unauthorized expenditures.

SHURflo

"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.

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,

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.

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 the fitting is threaded, 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 10.5 volts or more to the pump. If the motor runs but the pump does not switch off, it may be air in the lines or a valve problem. Try valve replacement kit #94-232-00. If the motor draws current but does not run, it may hum. It may be a switch problem. Try switch replacement kit #94-230.

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

GROHE AMERICA



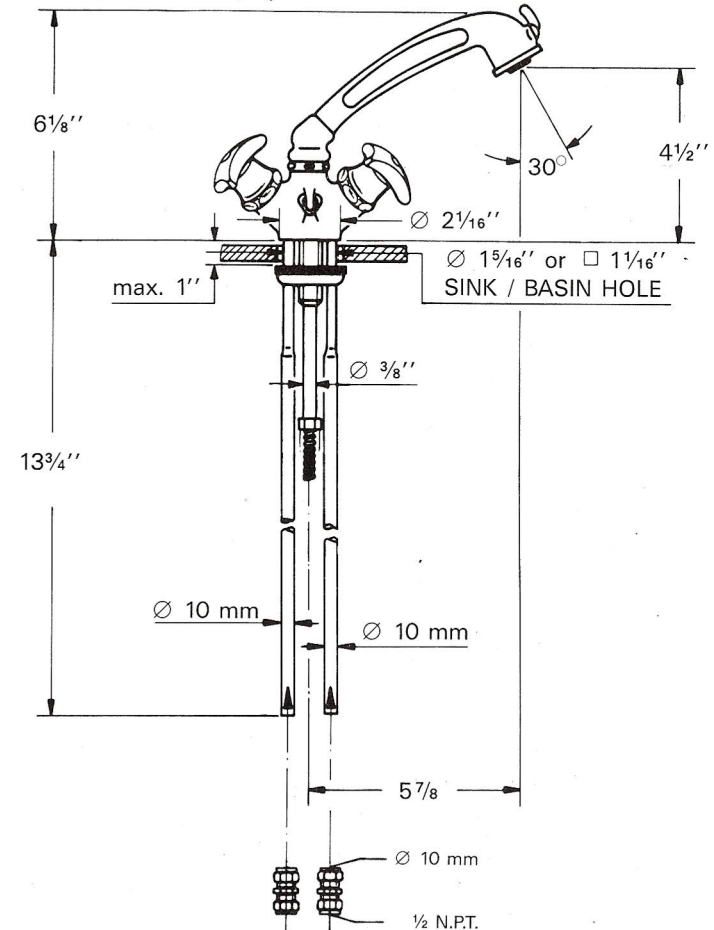
31 546 and variants



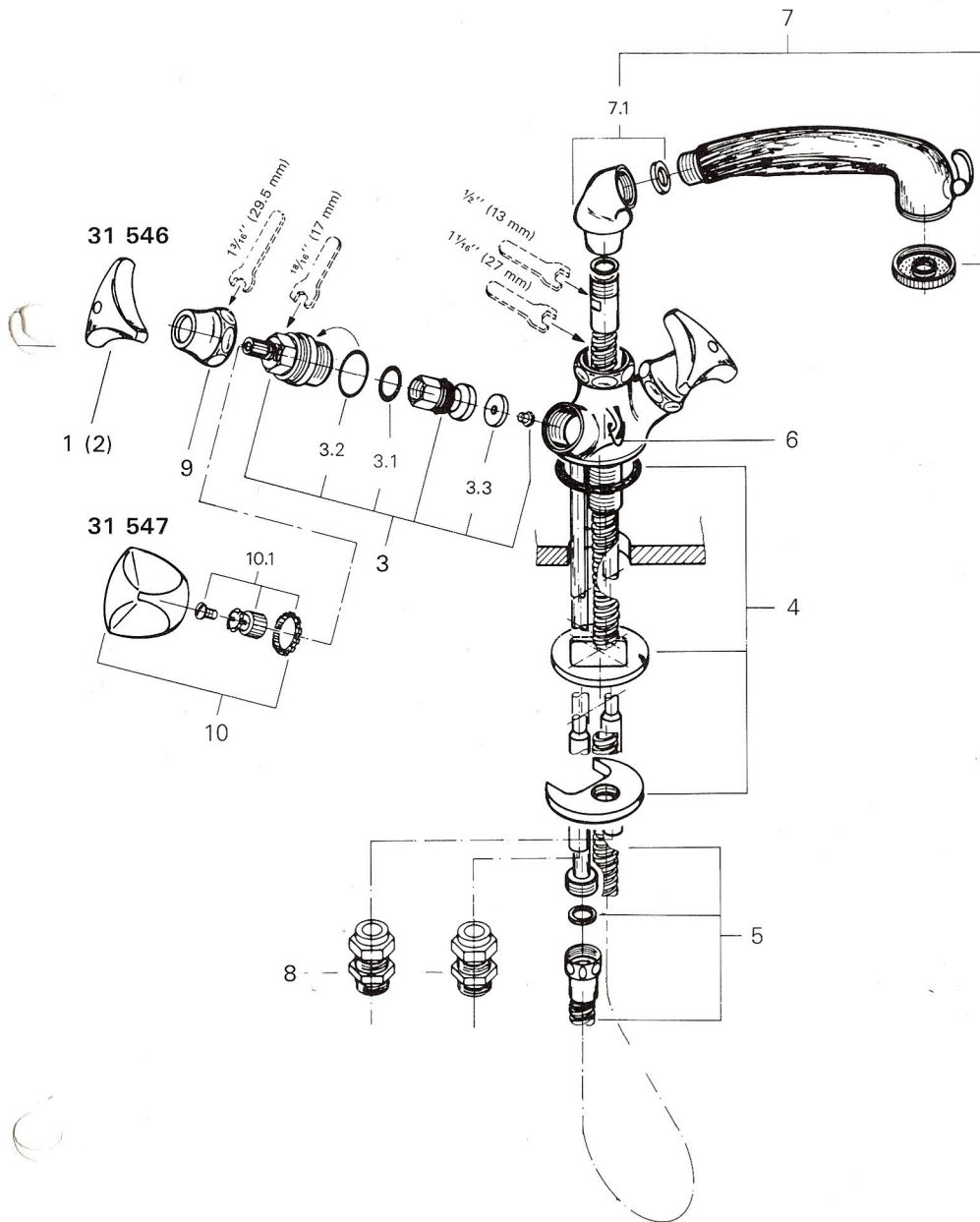
Sink mixer

Technical Product Information

Installation dimensions



Replacement parts



Specification

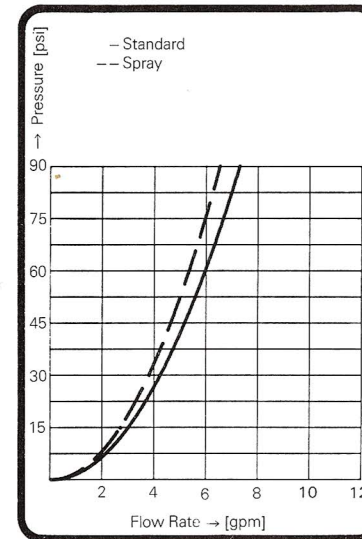
Application

- Pressurized storage heaters
- Thermally controlled instantaneous heaters (set flow temperature to 120° F.)
- Hydraulically controlled instantaneous heaters

Operation with low pressure storage heaters (displacement water heaters) is **not** possible.

Specification for sink mixer with hand-held spray

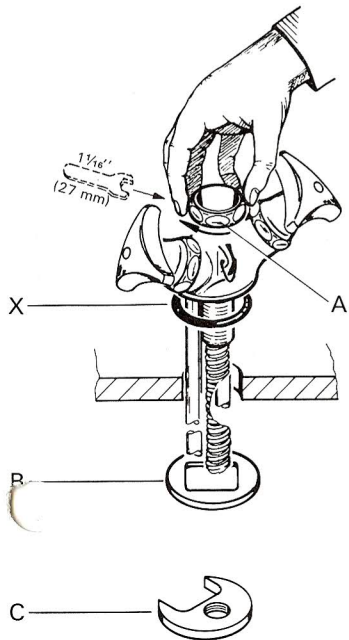
- Flow pressure
 - min. 7 p.s.i.
 - recommended 15 — 70 p.s.i.
 - greater than 75 p.s.i., fit pressure reducing valve
- Working pressure — max. 150 p.s.i.
- Test pressure 230 p.s.i.
- Flow rate: see graph Fig. ①
- Temperature
 - max. (hot water inlet) 160° F.
 - recommended (economy setting) 140° F.
- water connection
 - hot — LH
 - cold — RH



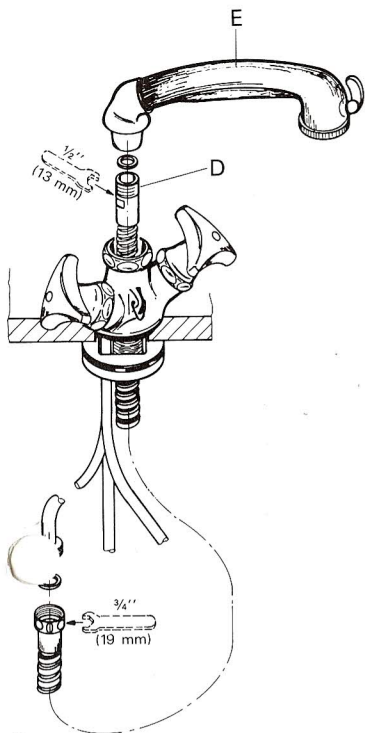
①

Note

Major pressure differences between cold and hot water supply should be avoided.



②



③

Installation

Flush pipes through thoroughly

Prepare sink unit

Drill 1-5/16" hole for mixer.

See dimensioned drawings on fold out page I.

Fit mixer, see Fig. ②

Proceed as follows:

1. Fit-O-ring supplied (X).
2. Insert mixer in sink unit.
3. Push on washer (B) and screw nut (C) on at least one turn by turning fixing tube (A).
4. Fixing tube (A) by turning clockwise with a 1 1/16" A/F open ended spanner.

Connect mixer

— Hot water connection = LH

— Cold water connection = RH

We recommended using flexible pressure hoses to facilitate assembly or for extension purposes.

Connect shower hose (D), see fig. ③

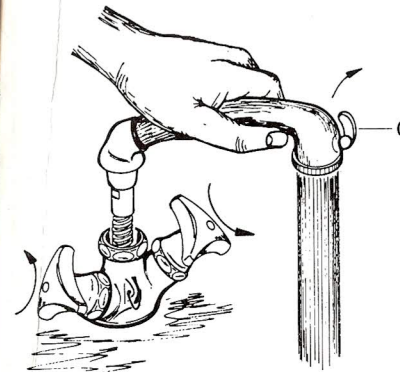
Proceed as follows:

Insert shower tube (D) from below into body.

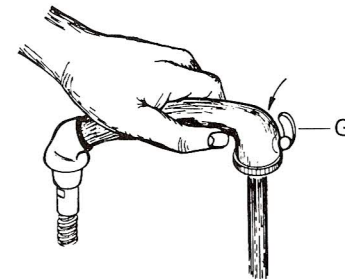
Connect handspray (E).

(Do not use any additional seals)

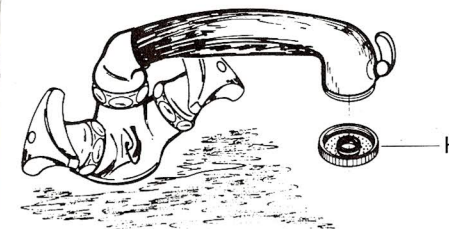
Fit shower tube (D) and secure on center copper pipe, see fig. ③.



④



⑤



⑥

Open angle stops

Check connections for leakage

Operation

a) Handles

RHS

LHS

△ cold water

△ hot water

b) Handspray, see fig. ④ and ⑤.

Turn handles

Turn changeover control (G) clockwise

△ spray jet

Turn changeover control (G) anticlockwise

△ standard jet.

Maintenance and Care

Maintenance see fig. ⑥.

Unscrew and clean spray disc (H), see fold-out page II.

Only original Friedrich Grohe replacement parts may be used.

Care

Instructions for care of this sink mixer will be found in the Instructions for Care supplied.

