

Troubleshooting Problems

Nothing happens when Machine is switched on

- GFCI may need to be reset
- Motor needs to be reset
- Motor is not operating

Machine starts but immediately stops

- Power supply is inadequate

Machine starts with low pressure

- Machine is starved for water
- Pressure is leaking out of system
- Adjustable nozzle issues
- Lime build up is hampering the pump
- Unloader valve needs adjustment
- Pump may need rebuilding

Machine starts with high pressure, but then the pressure drops

- Air is entering the system
- Machine is starved for water

Machine is loud, shuddering, or vibrating and not producing pressure

- Machine is starved for water
- Air is entering the system
- Temperature relief valve is discharging
- Unloader valve needs adjustment

Machine is not dispensing soap or sanitizing agent

- Chemical containers are empty
- Chemical is too thick or viscous
- Solenoid(s) do not have gravity assist
- Chemical feed tubing is cracked or leaking
- Pressure switch for AutoChem feature needs adjusting
- Chemical feed devices are not functioning properly

Machine is constantly dispensing soap or sanitizing agent

- Pressure switch for AutoChem feature needs adjusting

Machine will only dispense soap or sanitize in low pressure nozzle setting

This is normal. It's called the AutoChem feature, and has some distinct advantages. Please see the Operation section titled AutoChem feature, or the Troubleshooting Solutions section titled...

- Pressure switch for AutoChem feature needs adjusting

Troubleshooting Solutions

GFCI may need to be reset

Depress the Reset button on the GFCI and release. Make sure to verify that the supply power is adequate, on a dedicated line with a 20 amp circuit breaker.

Chemical is too thick or viscous

Thick, dense, or viscous chemicals may have difficulty flowing through the small diameter poly-tubing. The same chemical may need to be diluted, or may even be available in a thinner form from the supplier.

Try running colored water in place of the chemical. If the water draw and mixes with the high pressure spray, your standard chemical may be too thick.

Power supply is inadequate

Systems require one dedicated 20 amp appliance circuit for 115 Volt 60 Hertz, or one dedicated 10 amp appliance circuit for either the 230 Volt 50 Hertz or 230 Volt 60 Hertz systems. Check for the capacity of the circuit or for any other loads on the dedicated line.

Pressure is leaking out of system

Determine whether there may be a leak in the Machine itself. Inspect all fittings and hoses in the targeted section of the system for leaks. Tighten or replace if necessary any leaking hoses or fittings.

Adjustable nozzle issues

Check the push/pull adjustable nozzle for its position. Pushed out is the low pressure position. Pulled in is the high pressure position.

Inspect the high pressure spray pattern. If the pattern appears inconsistent, the nozzle may be worn and may need replacing.

Lime build up is hampering the pump

Check for lime build-up on visible fittings in the float tank. Lime build-up may cause the pump to fail. If deliming of the machine was last done over one month ago, use the Sage Systems Deliming assembly and a deliming solution to delime the Machine.

Unloader valve needs adjustment

Call the dedicated Sage Technician at (888) 757-3784 for assistance in adjusting the unloader valve, or see the Service section of this manual. Please note, special tools are required for proper Unloader valve adjustment. Sage Systems suggests that only authorized Service Agents set or adjust Unloader Valves.

Motor needs to be reset

If the unloader valve is adjusted improperly, the machine may operate at too high a pressure, or may work inefficiently, causing the Machine to draw too many amps for the line. This can create an overload of the motor, which has built in overload protection. The reset button is on the back end of the motor. Make sure to adjust the unloader valve to correct this problem permanently.

Motor is not operating

Very rarely are motors worn out to the point of necessary replacement. Any service on a motor is handled through the local authorized Leeson service agent in your area. Refer to the Leeson service guide for a listing.

Machine is starved for water

Starving the pump for water will cause serious damage to the pump. Check that the water supply is open, and the float tank is filling with water.

Verify that the water supply to the float tank is 4.0 gpm (15 lpm) and 30 psi (2 bar) minimum. If the float tank does not remain sufficiently full to cover the float tank outlet port while the machine is running, the inlet water flow or pressure is insufficient.

Observe the water level in the float tank with the Machine on and Spray Gun spraying. The water level should never drain down to the outlet fitting that leads into the Machine. If the water level does drop and does not refill, adjust the float arm for shut off about 1" (2.5 cm) below the overflow rim.

Check for kinks or leaks in the water supply hose. Inspect the two filter screens, and clean or replace if necessary. The first is in the supply hose at the float tank. The second is in the in-line water filter inside the Machine, just after the tank feeds through the Machine wall.

Pump may need rebuilding

These direct drive pumps can often run smoothly for 5 years, given proper regular maintenance and care. However, worn piston cups, seals, and o-rings can cause a lack of pressure in the pump. Three different pump repair kits are available for pump refurbishment, the Seal kit, Valve kit, and Inlet valve kit. The pump should not ever need to be completely replaced, unless there is significant damage or a crack in the pump housing.

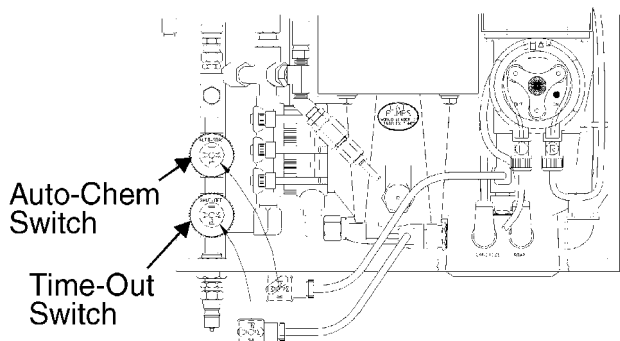
Pressure switch for AutoChem feature needs adjusting

The rear pressure switch controls the AutoChem feature. At the factory, the rear switch is wired terminals 1-3, allowing chemical flow at pressures below the set point, and stopping chemical flow at pressures above the set point.

If the machine is not dispensing chemical in low-pressure with the soap or sanitize buttons pressed, the pressure switch wiring may have failed, or the switch itself may have failed. Remove the connector from the top of the switch and inspect the connections.

If the machine is constantly dispensing chemicals, the pressure switch may have become unadjusted or failed. Turn the upper half of the switch counter-clockwise to decrease the switch point to fall between the high and low pressures. The feed should work in low pressure, and stop in high pressure for AutoChem to work properly. The switch can be set to allow chemical feed in both low and high pressures.

For soap and sanitize to work in low and high pressure, turn the upper half of the switch clockwise to increase the kickover point above the high pressure, but less than the unloaded pressure. The feed should work in low pressure and high pressure, but stop when unloaded into bypass mode. However, the setting should never allow chemical feed when the trigger is released and the pressure rises as the machine unloads into bypass mode.



Air is entering the system

Start the Machine and spray the Spray Gun in RINSE mode. If the problem persists, see the preceding section, Machine is starved for water. If the problem only occurs in SOAP or SANITIZE modes, read the following suggestions.

Verify that the chemical containers are not empty and drawing air into the chemical feed devices. Check that the chemical is moving through the tubing. If not, check the tubing for leaks or cracks.

Chemical containers are empty

Verify that the chemical containers are not empty and drawing air into the chemical feed devices.

Temperature relief valve is discharging.

If the water temperature exceeds 165oF (74oC), the temperature relief valve will discharge recirculated water, and draw in fresh cooler water from the float tank.

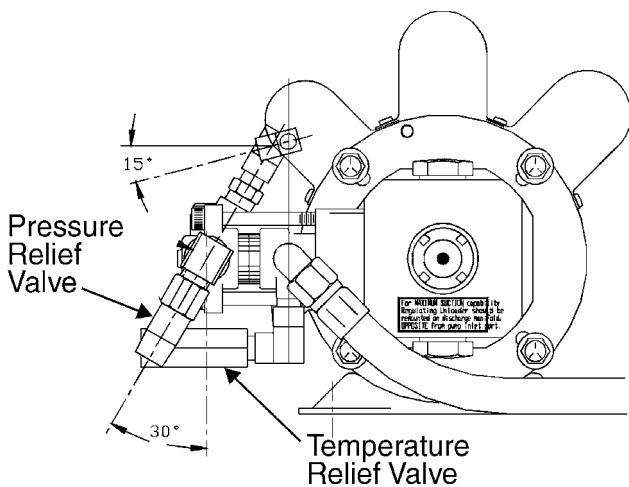
However, if the supply water from the float tank is too hot, the pump can be severely damaged.

Solenoid(s) do not have gravity assist

For gravity fed systems (those with solenoid valves), verify that the lowest point of the chemical container(s) is at least 6 in (15 cm) above the solenoid valve.

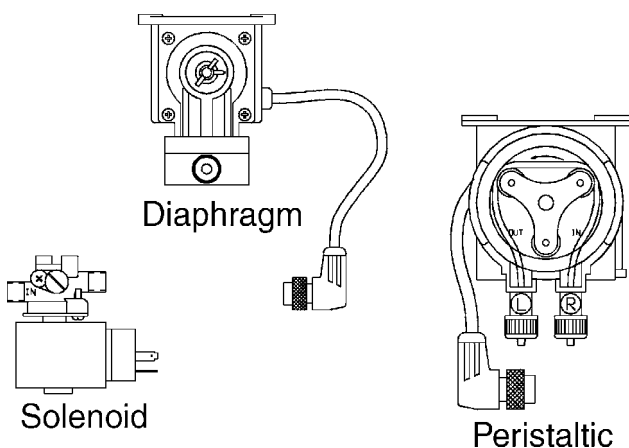
Chemical feed tubing is cracked or leaking.

If chemical is not flowing through the line, inspect the clear feed tubing for leaks or cracks.



Chemical feed devices are not functioning properly

Switch the Machine to ON and into the Soap or Sanitize position, whichever is in question. Switch the Spray Gun nozzle to low pressure (pushed out) to activate the AutoChem feature.



Solenoid valves

Remove the suspect valve's tubing from the check valve fitting by pushing in on the fitting ring while pulling on the tube. With a pipet bulb or other suction

device, apply suction to the tubing. If suction is held, the valve is closed and functioning properly. Begin spraying. Now apply suction again. If suction is created, the valve is open and functioning properly. If suction is held, the solenoid valve is not open, and needs replacing.

Peristaltic Pumps

Begin spraying. If the pump does not turn, repair or replace the pump. If the pump turns, but does not move chemical through the tubing, there is a leak before, in, or after the pump. Remove and check the tubing before and after the pump. Draw suction with a pipet bulb or other suction device at one end while sealing off the other end with a finger. If necessary, remove the tubing and ends from inside the pump, and check with suction. Replace any leaking tubings.

Diaphragm Pumps

Begin spraying. If the adjustment knob area is not visibly nutating, disconnect the pump from the plug connection, and install a temporary replacement. If the replacement works, remove the old and finish installing the new.

If the knob area nutates, but the chemical in the tubing appears to sway back and forth without flowing, then inspect the check valve instead.

Quick Disconnect is not seated properly

Start the machine. Disconnect all Hoses with Quick Disconnect sockets from the QD plugs on the machine or remote panel. All QD plugs should not leak when the system is pressurized. One at a time, engage the QD socket to each plug by pulling back on the socket ring, pressing completely onto the plug, and releasing the ring. The ring should return to flush with the top of the socket, and a pull should not disconnect the two. Also the union should not leak when pressurized. If connection is not possible or secure, or if there is a leak before or after connection, replace first the plug, and retest. Then, replace the socket and retest.