

SERVICE MANUAL

IMPORTANT INFORMATION, KEEP FOR OPERATOR

888-994-7636, fax 888-864-7636 unifiedbrands.net

THIS MANUAL MUST BE RETAINED FOR FUTURE REFERENCE. READ, UNDERSTAND AND FOLLOW THE INSTRUCTIONS AND WARNINGS CONTAINED IN THIS MANUAL.

WARNING Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

NOTIFY CARRIER OF DAMAGE AT ONCE It is the responsibility of the consignee to inspect the container upon receipt of same and to determine the possibility of any damage, including concealed damage. Power Soak suggests that if you are suspicious of damage to make a notation on the delivery receipt. It will be the responsibility of the consignee to file a claim with the carrier. We recommend that you do so at once.

Manufacture Service/Questions 888-994-7636.

INTRODUCTION AND CONVENTIONS

PRODUCT INTRODUCTION

Thank you for purchasing a Power Soak ware washing machine. Your new Power Soak pot, pan and utensil washing machine will provide years of dependable, efficient and trouble-free service. As a Power Soak owner, you will benefit in numerous ways:

Your ware washing operation will be more efficient.

Pots, pans and utensils will be cleaner.

The overall level of sanitation in your scullery area will improve.

Ware washing hours will decrease as employee morale increases.

Chemical and water usage will decrease.

Every machine is manufactured to last, with only high-quality, heavy-duty, 14 gauge stainless steel used in its construction. All electrical components used in a Power Soak machine are of the highest quality. The faucets and drains are designed for quick filling and emptying of the machine's tanks. At Power Soak, we take pride in manufacturing the Power Soak line and are committed to standing behind our customers and products 100%. Should you ever need assistance, please contact us directly at the factory by dialing 888-994-7636 or fax: 601-371-9732.

EXPLANATION OF WARNING MESSAGES

Read, understand and follow all DANGER, WARNING, and CAUTION messages located in this guide and on the equipment.



Personal Injury and Property Damage Hazard Will result in serious injury or death. Will cause extensive equipment damage.

Property Damage Hazard Will result in property or equipment damage.

This manual provides information for:

PS-100





Chemical Hazard Will result in serious injury or death. Instructions, labels and Material Safety Data Sheets (MSDSs) should be supplied with all detergents and sanitizing chemicals. The manufacturers, importers and distributors of the cleaning chemicals are responsible for providing this information. Power Soak is not a chemical manufacturer, importer or distributor. Power Soak can assist the chemical representative but will not make specific brand recommendations.



Personal Injury Hazard Hazard from sharp objects, scalding, falling and/or drowning. Will result in serious injury or death.



Personal Injury Hazard HOT WATER! Wash sink water can exceed 120°F (49°C). Wear personal protective equipment to avoid scalding or burns.

Personal Injury Hazard To avoid damaging your Power Soak or risking personal injury, avoid washing small objects (such as spoons, forks, towels, scrub pads, or brushes...etc.)unless they are placed in the utensil basket or the designated utensil area of the AWI.

Children must not be allowed to play in the sinks, on countertops or with the controls of the Power Soak equipment. Cleaning or use of this machine must not be done by children without super vision. This machine can be used by children aged 8 years or above and by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they are given supervision and instruction concerning use of the appliance in a safe way and understand the hazards involved. There is a potential of drowning for any person whose head becomes submerged in the fluid contained in the sinks along with other hazards identified in this manual.

REQUIREMENTS FOR DETERGENTS AND SANITIZERS



THE POWER SOAK PS-100 REQUIRES A LOW-FOAMING DETERGENT THAT IS SAFE FOR HUMAN HANDS. THE DETERGENT SHOULD HAVE GOOD GREASE CUTTING ABILITIES BUT NOT HAVE AN EXCESSIVELY HIGH OR LOW PH LEVEL. A METAL/ALUMINUM-SAFE FORMULA IS RECOMMENDED. CONSULT A CHEMICAL PROVIDER FOR A SUITABLE DEEP CLEANING CHEMICAL.

Detergents

The PS-100 can use two types of detergents, one type for normal cleaning and one type for "Deep Cleaning" for more effective deep cleaning. The materials to be cleaned and the type of debris to be removed will be a factor in selecting the proper

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detergent. Provide this information to a chemical supplier when selecting the type of detergent. Use of the correct detergent in the Power Soak machine is critical to its washing performance. Improper detergents could damage the equipment. If there are problems with cleaning results, please contact the Power Soak service department 888-994-7636.

Sanitizers

The method of sanitizing used in the Power Soak PS-100 is a "chemical sanitizing" method. There are a number of products on the market that work well in this application. A chemical sales representative should assist in selecting the proper sanitizer. Ask the cleaning chemical provider to determine detergent concentration, sanitizer "parts per million" (ppm) and sanitizer submersion times to meet local health codes.

Power Soak Service Assistance

If a chemical sales representative is having difficulty selecting a detergent or sanitizer, or if there are poor results with the chemicals that a representative has recommended, please contact Power Soak at 888-994-7636.

OPERATION

CONTROL FEATURES



Start Button The green "Start" button is used to start the normal Power Soak wash cycle. Note: If water temperature is below 104°F in the wash tank the included wash tank heater will be activated and will warm the water to 115°F.

Stop Button The red "Stop" button is used to stop the wash cycle.

Detergent Solution Button located below the control face is to be depressed once to activate the optional solution dispenser. The soap dispenser will dispense the customer provided solution to the customer set duration within the dual pump chemical dispenser itself. The soap dispenser will release soap solution into the wash tank of the sink.

Sanitizer Solution Button located below the control face is to be depressed once to activate the optional solution dispenser. The sanitizer dispenser will dispense the customer provided solution to the customer set duration within the dual pump chemical dispenser itself. The sanitizer dispenser will release sanitizer solution into the sanitize tank of the sink.

OPERATING PROCEDURE



BE SURE TO ADJUST KNOBS ON THE SPRAY RINSE AND ALL WATER FAUCETS SO THAT THE WATER TEMPERATURE IS BELOW 120°F (49°C). TEMPERATURES HIGHER THAN WHAT IS RECOMMENDED CAN CAUSE SCALDING OR BURNS IF CONTACT IS MADE WITH A PERSON'S SKIN.

Preparing the Machine

At the beginning of each day, shift, or designated time fill the sinks with water that is metered to approximately the correct operating temperatures:

- Wash tank (115°F / 48°C)
- Rinse tank (75°F / 24°C)
- Sanitizer tank (75°F / 24°C)

All tanks should be filled to, but not above, the "waterline" marks. If your wash sink has dual waterlines, fill to the upper waterline when washing sheet pans held in racks and to the lower waterline for all other purposes. If your wash sink has dual waterlines, fill to the upper waterline when washing sheet pans held in racks and to the lower waterline for all other purposes.



CHEMICALS THAT ARE SAFE TO TOUCH WHEN MIXED WITH WATER CAN BE DANGEROUS TO TOUCH IN THE CONCENTRATED FORM. USE CHEMICAL RESISTANT GLOVES AND PROTECTIVE CLOTHING WHEN HANDLING CONCENTRATED CHEMICALS. CONSULT THE MANUFACTURERS LABEL FOR HANDLING AND SAFETY INFORMATION.

Dispense Chemicals

Add the appropriate chemicals to the wash and Sanitizer tanks of the sink.

Press & Release The Start Button

The Power Soak sink will display a strong "rolling" action from the Wash tank. This should continue un interrupted until the Stop Button is pressed and released.

PREVENTATIVE MAINTENANCE

The Power Soak PS-100 requires minimal, routine preventative maintenance. The following procedures should be done to ensure that the PS-100 remains reliable. If there are any questions regarding the preventative maintenance procedures, please contact the factory at 888-994-7636.



IF THE LIQUID LEVEL SENSORS ARE NOT CLEANED REGULARLY, THE MACHINE MAY FAIL TO OPERATE; OR IT MAY BE POSSIBLE TO RUN IT WITHOUT WATER, WHICH WILL CAUSE SERIOUS DAMAGE TO THE UNIT.



DAILY

Clean the liquid level sensors that are located on the side walls of the wash and sanitizer tanks. They are the white plastic discs with metal centers. Clean the sensor faces thoroughly. If cleaned regularly, a washcloth and soapy water are all that is required.



IMPORTANT: TURN OFF THE POWER TO THE UNIT AT THE MAIN BREAKER PRIOR TO PERFORMING THE FOLLOWING TASK!



MONTHLY

Clean the pump motor fan shroud with a damp, soapy cloth. The motor shroud is the "vented" cover located at the end of the motor (closest to the control panel). This will prevent grease and dust from accumulating in the cover's openings, which can obstruct the airflow that cools the motor.

Note: The motor bearings are permanently sealed and do not need to be greased.

Cleaning The Motor Fan Shroud

The motor fan shroud is the "vented" cover located at the end of the motor closest to the control panel. Shut off the electrical supply at the electrical circuit breaker located in the wall mounted enclosure. Clean the pump motor fan shroud with a stiff bristle brush and a vacuum. If a brush and vacuum are unavailable, clean the shroud with a damp, soapy cloth. This will prevent grease and dust from accumulating in the openings of the cover and obstructing the airflow that cools the motor. Note: The motor bearings are permanently sealed and do not need to be greased.

Cleaning The Heating Element

Shut off the electrical supply at the system's electrical circuit breaker located in the wall mounted enclosure. Remove the cover plate located in the slanted surface of the back wall of the wash tank. Remove debris that has collected in and around the heating element. Install the cover plate when cleaning is completed. The cover plate must be installed after cleaning to prevent foreign objects from entering the pump suction and causing damage to the pump.

AS NEEDED

De-Lime The Wash Tank

Select a de-liming agent that is safe for plastics and stainless steel sinks. Follow the instructions on the package for mixing and fill the tank with water. Turn on the pump motor to circulate the mixture in the tank and pump manifolds.

TROUBLESHOOTING



THERE ARE HAZARDS TO UNTRAINED OR UNAUTHORIZED PERSONNEL. THE FOLLOWING PROCEDURES ARE PROVIDED FOR USE ONLY BY AN AUTHORIZED SERVICE AGENCY. NO FACILITY OWNER, MANAGER, EMPLOYEE OR OTHER UNAUTHORIZED PERSON SHOULD ATTEMPT TO PERFORM ANY OF THESE PROCEDURES. TO OBTAIN THE NAME OF A RECOMMENDED SERVICE AGENT IN YOUR AREA, PLEASE CALL THE POWER SOAK SERVICE DEPARTMENT AT 888-994-7636.

WHEN PERFORMING TROUBLESHOOTING PROCEDURES, THE AUTHORIZED SERVICE AGENCY WILL NEED TO OPEN THE POWER SOAK MACHINE'S MAIN ELECTRICAL ENCLOSURE COVER.

THE COVER TO THE ENCLOSURE MUST BE PROPERLY CLOSED BEFORE RECONNECTING THE POWER TO THE MACHINE.

WASH PUMP WILL NOT OPERATE: NON-HEATED WASH SINK CONTROLS			
Possible Cause	Solution		
Water Level Sensor	Fill water to waterline. Check to see if the Liquid level sensor has a red illuminated LED.		
	LED is not on: Clean the liquid level sensors as described in the "Preventive Maintenance" section of this manual.		
	LED is not on sensor clean: with an OHM meter, check for continuity between pin 12 against an exterior sink wall. If there is continuity the sensor is defective and needs to be replaced.		
Pump Contactor	Start button depressed contactor does not pull in check: Voltage across A1 and A2 is 20-28V		
	A1 and A2 do not have voltage: Check transformer for output and input voltage, if no secondary voltage present replace transformer.		
	A1 and A2 does have voltage: Replace contactor		

Thermal Overload Tripping	Verify there are no debris in the pump intake or impeller housing, if debris are in either area remove pump and clean.	
	Verify the correct voltage is used on the motor by utilizing a voltmeter while unit is running	
	3 Phase motor wired incorrectly: refer to wiring diagram to verify wash pump motor is set up correctly.	
	Defective pump motor, If amp draw to motor exceeds 10% of the motor rating and all of the above check out then replace motor.	
Transformer	The Transformer should output between 20-28V if this voltage is present the transformer is operating correctly.	
3 Amp Fuse	The fuse will blow if there is a current leak in the 24V circuit. Check the transformer for proper voltage across the fuse.	
	If fuse is blown examine wiring for any loose connections, replace fuse and attempt to start the sink.	

WASH PUMP WILL NOT OPERATE: HEATED WASH SINK CONTROLS

Heated controls have similar components to sinks without wash tank heaters with the exception of the following:

Possible Cause	Solution
Start button depressed and the safety contactor does not pull in.	 Check if water temperature is over 130°F if so drain water and fill sink with cold water see if contactor pulls in. Check Heater High limit Thermal Snap Disc for continuity (unplug with water below 130°F.
	Start button pressed, contactor pulls in: Check for voltage on T1, T2, and T3 this should match the unit's serial voltage. If not replace the contactor.

MOTOR STARTS, BUT MAKES NOISE

Possible Cause	Solution	
Debris lodged in the pump housing.	1. Turn the power off to the machine at the circuit breaker in the wall mounted electrical enclosure	
	2. Remove the motor assembly (see DISASSEMBLY/ASSEMBLY section). Be sure that the heater cover in the back wall of the wash tank is secure with no gaps around the edges that will allow foreign objects to enter the pump suction manifold.	
The motor fan cover has been dented or has collected debris.	1. Turn off the power to the machine at the circuit breaker in the wall mounted electrical enclosure	
	2. Remove the motor fan cover.	
	3. Straighten the cover or replace it if the cover is damaged, clean the debris and install the cover back onto the motor.	
The motor is rotating the in the wrong direction (only occurs when motor is first installed or replaced).	1. Turn off the power to the machine at the circuit breaker in the wall mounted electrical enclosure.	
	2. Change the wiring connection for the motor (This must be done by a qualified electrician).	

MOTOR STARTS, BUT LITTLE TO NO WATER FLOWS IN THE WASH TANK

Possible Cause	Solution	
The key that drives the impeller has fallen out of the	 Turn off the power to the machine at the circuit breaker in the wall mounted electrical enclosure Remove the motor assembly (see DISASSEMBLY/ASSEMBLY 	
motor shart keyway.	section).	
The pump impeller is broken or not connected to the motor shaft.	3. Inspect the assembly for issues.	
The motor is rotating the in the wrong direction (only occurs when motor is first installed or replaced).	Turn off the power to the machine at the circuit breaker in the wall mounted electrical enclosure and change the wiring connection for the motor (This must be done by a qualified electrician).	

THE CONTROL CIRCUIT FUSE "BLOWS" WHEN THE POWER IS TURNED ON		
Possible Cause	Solution	
The coil in the contactor or	1. Turn off the power to the machine at the circuit breaker in the wall mounted electrical enclosure.	
contactors is drawing too much	2. Replace the 3 Amp fuse.	
current. (Note only when Start button is depressed)	3. Check the Motor Contactor, Safety Contactor, and Operating contactor independently for proper function. (This can be done by disconnecting the wires leading to the A1 and A2 terminals on all contactors.)	
Defective Water level Board	1. Turn off the power to the machine at the circuit breaker in the wall mounted electrical enclosure.	
	2. Replace the 3 amp fuse.	
	3. Disconnect the NO connector.	
	4. You should see a red LED indicator lit on the water level board when water is filled above the sensor (Note the sensor has to be clean and the green/white wire needs to be properly secured in the rear of the sensor).	
	5. Check for voltage across L1 and L2 it should be between 20-28V. There should also be 20-28V to the NO circuit.	
	6. If the fuse does not blow with the NO connector disconnected check wiring for shorts to ground.	
	7. If the fuse "blows" when switched on replace the Water level board.	
The transformer is applying to much or too little voltage.	The Transformer should output between 20-28V if this voltage is present the transformer is operating correctly. If voltage is incorrect replace transformer.	

THE CONTROL CIRCUIT FUSE "BLOWS" WHEN THE DISPENSER BUTTONS ARE DEPRESSED

Possible Cause	Solution
Short to ground in the chemical dispenser box.	1. Turn off the power to the machine at the circuit breaker in the wall mounted electrical enclosure.
	2. Replace the 3 Amp fuse.
	3. Remove the Black/Yellow harness in the rear of the control check all pins against ground.
	4. If no shorts to ground are apparent you will have to replace the solid state timer.
Dispenser pump motor is defective.	Motor does not turn when button is depressed, and 24V DC voltage is detected at the motor terminals. Replace the dispense pump motor.

THE WATER LEVEL, BOARD LED INDICATES THAT THE TANK IS EMPTY WHEN IT IS ACTUALLY FULL

Possible Cause	Solution
The sensor is coated with debris.	Clean the face of the sensor with a washcloth and soapy water.
The wire connected to the sensor is loose or broken.	Check the nut that secures the wire to the sensor on the outside of the tank.

THE WATER GETS TOO HOT AND STOPS THE MACHINE

Possible Cause	Solution
Incorrect soap is creating too much foam. (Foam causes excess heat by reducing the efficiency of the pump and it insulates the top of the tank which holds in heat).	Change the wash solution and use a low foaming soap designed for continuous ware washing or reduce the quantity of low foaming soap that is added to the water.

The Operational contactor coil is	1. Turn off the power to the machine at the circuit breaker in the wall mounted electrical enclosure.
stuck open and is passing current to the heater when it should be off.	2. Unplug the quick connect wires from the operational contactor coil. Check for continuity across all legs of the contactor while the unit is off. If any leg is closed replace the contactor.
	3. Fill Wash sink with hot water over 115°F. Using a Multimeter check for continuity, if open replace the Heater Operating Thermal Snap Disc.

THE CHEMICAL DISPENSER PUMP RUNS, BUT DOES NOT PUMP THE CHEMICAL

Possible Cause	Solution
The hose has been punctured or ruptured.	Replace the defective hose with a new hose.
The fitting has not been screwed onto the chemical container properly.	 Unscrew the fitting from the container; check the threads and face of the fittings for damage. Carefully screw the fitting back onto the container so that the fitting seats properly against the container opening.

CONTROL PANEL COMPONETS

PUMP CONTACTOR

The pump contactor feeds high voltage power to the pump motor. This contactor has a 24V latching coil across terminals A1 and A2. If the contactor is malfunctioning it would affect the wash pump motor. Begin checking the contactor as follows:

TURN POWER OFF AT BREAKER PANEL.

If there is 24V across the coil (terminals A1 and A2) and the contactor does not pull in, the contactor is defective.

Remove the wires from terminals T1, T2, and T3 (if 3 phase) on the thermal overload. Push the contactor closed manually and check for continuity across pump contactor terminals L1 and T1, L2 and T2, L3 and T3. If there is no continuity present on any of these, the contactor is defective.

THERMAL OVERLOAD

The thermal overload protects the Pump motor from overamp conditions. The blue reset button should be in the down position (automatic reset). The dial should be set at 115% of the motors FLA denoted on the serial tag. The trip indicator is located between the dial and the symbol"LR2". The thermal overload can be checked as follows:

TURN POWER OFF AT BREAKER PANEL.

Remove the wires from terminals 95 and 96. Make sure the thermal overload is not tripped. If the thermal overload is tripped, reset it. If the thermal overload has tripped recently, you may have to wait several minutes for it to cool down before it will reset.

Check for continuity across terminals 95 and 96. If no continuity, the thermal overload is defective or the reset is tripped. Make sure the T1, T2, and T3 terminals on the pump contactor are tight. Remove the wires from terminal T1 and T3 on the thermal overload. Check for continuity across T1 on the pump contactor and T1 on the overload, T2 on the pump contactor and T2 on the overload, T3 on the pump contactor and T3 on the overload. If no continuity on any of these, the overload is defective.

SAFETY CONTACTOR & HEATER CONTACTOR (WASH TANK HEAT MODELS ONLY)

The Safety contactor feeds the pump motor contactor and the Heater contactor with the source high voltage. It contains a 24V coil that pulls in once the start button is depressed. The only condition where the safety contactor will not pull in is when water temperature is above 135°F the high limit snap disc has failed or the pump motor thermostat has tripped.

The Heater contactor has a 24V coil that only pulls in when the start button is depressed and the water temperature is below 115°F. The heater contactor coil is connected to the operational temperature snap disc to regulate the wash tank temperature from $104^{\circ}F$ - $115^{\circ}F$ +/- $5^{\circ}F$. The heater contactor is connected to the heater element based on the supplied wiring diagram.

To check the heater and safety contactors do the following:

TURN POWER OFF AT BREAKER PANEL.

Unplug all connections manually depress the coil, check for continuity across L1 to T1, L2 to T2, and L3 to T3 if no continuity is present the contactor is defective. If the contactor presents continuity plug in all connections and proceed. Fill the wash tank to fill line, Press the green start button and examine the following:

Use a multimeter to check coil terminals A1 and A2 for 20-28V across the coil. If voltage is recorded, and the contactor is not pulling in, the contactor is defective replace as necessary.

If no coil voltage is read on a multimeter check Thermal snap disc's for proper function.

PUSH ON / PUSH OFF START AND STOP BUTTONS

TURN POWER OFF AT BREAKER PANEL.

The start and stop buttons are connected to the 24V circuits that switches all components on. The start and stop buttons can be checked as follows:

The stop button should have continuity at rest and no continuity when pushed in. The start button should have no continuity at rest and continuity when pushed in. Remove the wires before checking for continuity, if either switch does not have the proper continuity replace the button.

LIQUID LEVEL CONTROL AND SENSOR

The liquid level control sends a trickle current (1/1000 amp) out terminal LCO to the liquid level sensor. If there is water in the wash sink, the current passes through it to the wash sink wall and back to the liquid level sensor to terminal GND. After the circuit is complete, the relay in the liquid level control will close sending current to operate the various components in the control panel. If the red indicator light is "on" the liquid level control senses water. A 10 second time delay is timed after the control has not sensed water. The purpose of this delay is to prevent rapid cycling of the relay should the water rise and fall below the sensor while the sink is filling or running. At the end of the time delay, the relay in the liquid level control will open to stop the pump.

The sensor that is located on the top of the sink is the only sensor used. Check the rear of the sensor to ensure proper connection of the white and green wire.

HEATER HIGH LIMIT THERMAL SNAP DISC / 130°F

The Heater Thermodisc is a protection device. The Hi-limit Bi-metallic snap disc switch for water temperature (switch must be closed if water temperature is below $130^{\circ}F + -5^{\circ}F$). Entire unit will not function until water is drained and colder water is introduced. Unplug 14 pin connector and check sockets 9 and 10 for a short to ground. The snap disc should read less than 1 ohm when closed. Replace if open with water temperature under $130^{\circ}F$. The sensor is located in the sensor pad on the rear of the unit sink see sensor pad on how to remove.

HEATER OPERATING THERMAL SNAP DISC / 115°F

The operating Thermal snap disk controls the on/off cycle of the sinks heater based on water temperature. The switch will be closed if water temperature is below $115^{\circ}F$ +/- $5^{\circ}F$ and will automatically reset at $104^{\circ}F$ +/- $5^{\circ}F$. Unplug 14

pin connector and check sockets 7 and 8 for a short against ground. The snap disc should read less than 1 ohm when closed. Replace if open when water temperature is under 115°F. The sensor is located in the sensor pad on the rear of the unit sink see the disassembly section for details on how to remove.

MOTOR THERMOSTAT (MTR-TSAT)

The Motor Thermodisc is a protection device only the motor. If the temperature of the motor reaches 180°F, the disc opens, cutting off power to the contactors, and power to the motor. Check for a short to ground between the 2 brown quick connect wires. If open and the motor is not hot motor will need to be replaced as the thermodisc cannot be replaced.

TRANSFORMER

The Transformer reduces the incoming power supply voltage to 24 volts. The transformer source power should match the units serial tag. Per the wiring diagram one leg should be placed into the COM tab the correct voltage will need to be selected between the 208 and 240 volt models. The 480 volt model transformer will have a single tab labeled as "480". The output voltage can be checked at the 3 amp fuse it should read between 20-28V.

On single phase heated models the 208/240V to 24V transformer comes with a 4 amp resetable internal breaker. If this breaker trips and the 3 Amp inline fuse is not open there is an internal fault with the transformer. If the 3 amp fuse is open there is a defective component or a short in the 24V circuit, check all connections.

HEATER ELEMENT

The heater in a Power Soak sink is rated at 7000 watts. It includes 3 individual 2333 watt heater elements.

To check operations of the heat element, first turn the power off at the breaker. Disconnect wires from the Heater contactor, check each heater lead to ground for short. If no short is found refer to the list below to check the heater for internal faults.

Heater Resistance Chart

Connection	Heater Rated Voltage	Phase	Resistance (ohms)
T1-T2		1	6.2
T1-T3			
T1-T2	208	3	12.4
T3-T2			
SINGLE ELEMENT		~	18.5
T1-T2		1	8.2
T1-T3	240		
T1-T2		3	16.8
T3-T2			
SINGLE ELEMENT		~	24.7
T1-T3	380		
T1-T2		3	41.2
T3-T2			
SINGLE ELEMENT		~	61.9
T1-T3			
T1-T2	480	3	65.8
T3-T2			
SINGLE ELEMENT		~	98.8

The heater should be within a 10% variance of the value of the chart.

If the reading varies significantly from the chart above, the heater may be defective, or there may be a broken wire or loose connection. Electrically, the Heater is three separate elements, each of 2333 watts. When replacing, note how the existing Heater is wired, and refer to the schematic when wiring a new heater.

PARTS LIST MOTOR AND PUMP ASSEMBLY



The part numbers for the Volute (1), Impeller (6) and Motor (16) are different for the different configurations of machines. Contact the Power Soak Service Department (888-994-7636) and provide the serial number of the machine for help with the part numbers.

Item	Part Number	Description
1	VARIES	VOLUTE
2	-	PIN (PART OF VOLUTE)
3	-	STUD (PART OF VOLUTE)
4	27478	PUMP IMPELLER BOLT
5	27479	PUMP GASKET (FIBER WASHER)
6	VARIES	IMPELLER
7	27477	PUMP IMPELLER KEY
8	27475	PUMP QUAD RING SLEEVE
9	27481	PUMP SHAFT SLEEVE
10	27480	PUMP MECHANICAL SEAL ASSY
11	27476	0-RING - SEAL PLATE
12	27483	PUMP CAP SCREW SEAL PLATE
13	27525	SEAL PLATE SELF-DRAIN
14	28312	WASHER
15	28264	NUT
16	VARIES	MOTOR

60 Hz Motor And Impeller Gen 3 Wash Sink (Jets every 6")

HP	SIDE	WASH Sink Length	WASH Sink Width	PHASE	VOLT	MOTOR Part #	IMPELLER PART #
2	LH	30"-36"	24.75"- 28.75"				27590
2	LH	30"-36"	31.75"				PS_27592
2	LH	42"-48"	24.75"- 31.75"	-	240	42618/	PS_27592
2	RH	30"-36"	24.75"- 28.75"		208/	49060	27591
2	RH	30"-36"	31.75"				27593
2	RH	42"-48"	24.75"- 31.75"				27593
2	LH	30"-36"	24.75"- 28.75"				27590
2	LH	30"-36"	31.75"				PS_27592
2	LH	42"-48"	24.75"- 31.75"		80	42619/	PS_27592
2	RH	30"-36"	24.75"- 28.75"	3	8/240/4	49057	27591
2	RH	30"-36"	31.75"		20		27593
2	RH	42"-48"	24.75"- 31.75"				27593
3	LH/ RH	54"-72"	24.75"- 31.75"			42620	27594

60 Hz Motor And Impeller Gen 4 Wash Sink (Jets every 3")

HP	SIDE	WASH Sink Length	WASH Sink Width	PHASE	VOLT	MOTOR Part #	IMPELLER PART #
2	LH	30"-42"	24.75"- 28.75"	1	240	42618/	PS_27592
2	RH	30"-42"	24.75"- 28.75"	1	208/	49060	27593
2	LH	30"-42"	24.75"- 31.75"			42619/ 49057	PS_27592
2	RH	30"-42"	24.75"- 31.75"	2	t0/480	42619/ 49057	27591
3	LH/ RH	48"	24.75"- 28.75"	3	208/24	40600	07504
3	LH/ RH	42"-48"	31.75"			42020	27394

50 Hz Motor And Impeller Gen 3 Wash Sink (Jets every 6")

HP	SIDE	WASH Sink Length	WASH Sink Width	PHASE	VOLT	MOTOR Part #	IMPELLER Part #
2	LH	20" 26"					27590
	RH	30 - 30		1	220	29513/ 49055	27591
2	LH/ RH	42"	24.75"-				27594
	LH	20" 26"	28.75"				27590
2	RH	30 -30		3	380	29515/	27591
2	LH/ RH	42"		3		49056	27594

WASH TANK HEATER

Part Number	Description
37345	HEATER SINK 208V 7KW WATLOW - 7' LEADS
37346	HEATER SINK 240V 7KW WATLOW - 7' LEADS
43091	HEATER ELEMENT 380V (7000W) W/ 7FT LEADS
37347	HEATER SINK 480V 7KW WATLOW - 7' LEADS
27934	HEATER GASKET
27900	HEATER COVER
PS_14424	1/4"-20 NYLOCK NUTS
42645	ACORN NUT #10-24, LOCKING, S/S
27833	WELD STUD 10-24 X 1⁄2" S/S

CONTROL PANEL

Part Number	Description
45564	CONTROL BOX PS-100 208/60/3, W/HEAT
45565	CONTROL BOX PS-100 230/60/3, W/HEAT
45567	CONTROL BOX PS-100 208/60/3, W/HEAT
45568	CONTROL BOX PS-100 208/60/1, W/HEAT
45570	CONTROL BOX PS-100 230/60/1, W/HEAT
50546	CONTROL PANEL PS-100 208/60/3, NO HEAT
50547	CONTROL PANEL PS-100 230/60/3, NO HEAT
50548	CONTROL PANEL PS-100 208/60/1, NO HEAT
50549	CONTROL PANEL PS-100 230/60/1, NO HEAT

CHEMICAL INJECTOR ASSEMBLY



Item	Part Number	Description
1	28454	THERMODISC SWITCH WATER OVERTEMP, 135°F
2	29077	SENSOR PAD RETAINING PLATE 1" X 3.5"
3	27870	THERMODISC SWITCH WATER OPERATING TEMP, 115°F
4	27322	SENSOR PAD
*	27869	HARNESS WIRING WASH/HEAT SENSORS, PS-100
*	28928	HEAT SINK COMPOUND
*	PS_14424	1/4"-20 NYLOCK NUTS
*	42645	ACORN NUT #10-24, LOCKING, S/S
*	27833	WELD STUD 10-24 X 1/2" S/S
*	23987	SENSOR LIQUID LEVEL (FLAT) REV J
*	23988	GASKET LIQUID LEVEL SENSOR NATURAL

*Not Shown



Item	Part Number	Description
1	27854	CHEMICAL INJECTOR
2	27855	GASKET CHEMICAL INJECTOR
3	27856	NYLON NUT 3/4 -10 UNC
4	28553	PIPE PLUG, 1/8" HEX HEAD NYLON

WASH SINK CONTROL (HEATED 208/60/3 CONTROL (45564) PICTURED)



Item	Voltage	Phase	Part Number	HEATED WASH SINK CONTROL Description
1	Х	Х	50834	PS-100 CONTROL PANEL WELDMENT
2	Х	Х	SF3-188	SCREW 1/4-20 X 1" SNAKE EYES VP PAN HEAD
3	Х	Х	103-020	NUT HEX 1/4"-20 S/S
4	Х	Х	122192	WATER LEVEL BOARD ASM
	208/240		137441	TRANSFORMER, 40VA 208/240V - 24
5	480	3	137694	TRANSFORMER, 40VA 480V-24
	208/240	1	121716	TRANSFORMER, 75VAC, 208/240V/24
6	208-480	3	Z003888	TERMINAL BLOCK 3-POLE
0	208/240	1	Z003887	TERMINAL BLOCK 2-POLE
	208-240	2	29446	OVERLOAD 7-10 AMP LRD14
7	480	3	29447	OVERLOAD 4-6 AMP RANGE LRD10
	208-240	1	29445	OVERLOAD 9-13 AMP RANGE LRD16
8	Х	Х	77853	FUSE 3.0 AMP TYPE 3 AG
9	Х	Х	77854	FUSE HOLDER TYPE 3 AG
10	208-480	3	148102	CONTACTOR, 3 POLE 24VAC COIL 40FLA
10	208-240	1	50541	CONTACTOR 50FLA, 24V COIL
11	Х	Х	41655	CONTACTOR, MOTOR, 24VAC COIL
12	Х	Х	31199	HARNESS, CONTROL OUT, HEAT/CHEMICAL DISP
13	Х	Х	31206	GASKET, CONTROL ENCLOSURE, PS-100, W/HEAT
14	Х	Х	31932	START SWITCH GREEN MX/PS-100
15	Х	Х	31933	STOP SWITCH RED / MX /PS-100
16	Х	Х	29231	SOAP DISP METAL SWITCH
17	Х	Х	29230	BUTTON GUARD CHEMICAL DISPENSER
18	Х	Х	119829	LUG, GROUND 14-6 AWG
19	Х	Х	28703	SCREW #6-32 X 1/2" PAN PHL MCH S/S
20	Х	Х	28704	NUT HEX #6-32 S/S
21	Х	Х	41943	SCREW, #6-32 X 1-1/4" LG PAN HD, PHIL, SS
22	Х	Х	41942	SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS
29	Х	Х	31187	OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP
*	Х	Х	31198	HARNESS, CONTROL ENCLOSURE, PS-100 W/HEAT, LOW VOLTAGE
*	208-480	3	46573	HARNESS, CONTROL ENCLOSURE, PS-100 W/HEAT, HIGH VOLTAGE, 3PH
	208-240	1	46571	HARNESS, CONTROL ENCLOSURE, PS-100 W/HEAT, HIGH VOLTAGE, 1PH
34	Х	Х	31214	PS-100 ENCLOSURE ASSEMBLY
35	Х	Х	27833	STUD 10-24 X 1/2" S/S CD WELD
36	Х	Х	103-026	NUT HEX #10-2455
37	Х	Х	FANUT0404	NUT #10 "U" TINNERMAN
38	Х	Х	137766	SCREW, 10-32 x 5/8" S/S

1 X X 50834 PS-100 CONTROL PANEL WELDMENT 2 X X SF3-188 SCREW 1/4-20 X 1" SNAKE EYES VP PAN HEAD 3 X X 103-020 NUT HEX 1/4"-20 X/S 4 X X 122192 WATER LEVEL BOARD ASM 5 208/240 3 137441 TRANSFORMER, 40VA 208/240V - 24 6 208-480 3 2003888 TERMINAL BLOCK 3-POLE 208-240 1 20446 OVERLOAD 7-10 AMP LRD14 208-240 1 29446 OVERLOAD 7-10 AMP LRD14 208-240 1 29445 OVERLOAD 9-13 AMP RANGE LRD16 8 X X 77853 FUSE 3.0 AMP TYPE 3 AG 9 X X 77854 FUSE HOLDER TYPE 3 AG 11 X X 41655 CONTACTOR, MOTOR, 24VAC COIL 12 X X 50703 CHARNES, CONTROL ENCLOSURE, PS-100, W/HEAT 14 X X 31206 GASKET, CONTROL ENCLOSURE, PS-100, W/HEAT 14	ltem	Voltage	Phase	Part Number	NON-HEATED WASH SINK CONTROL Description
2XXSF3-188SCREW 1/4-20 X 1" SNAKE EYES VP PAN HEAD3XX103-020NUT HEX 1/4"-20 S/S4XX122192WATER LEVEL BOARD ASM5208/2403137441TRANSFORMER, 40VA 208/240V - 246208/24012003888TERMINAL BLOCK 3-POLE7208-240329446OVERLOAD 7-10 AMP LRD14208-240129445OVERLOAD 7-10 AMP LRD14208-240XX77853FUSE HOLDER TYPE 3 AG11XX77854FUSE HOLDER TYPE 3 AG12XX31206GASET, CONTROL DUT, NO HEAT, CHEMICAL DISPENSER13XX31206GASET, CONTROL ENCLOSURE, PS-100 W/HEAT14XX31933STOP SWITCH RED / MX /PS-10015XX29231SOAP DISP METAL SWITCH16XX29230BUTTON GUARD CHEMICAL DISPENSER17XX28703SCREW, #6-32 X 1/2" PAN PHL MCH S/S<	1	Х	Х	50834	PS-100 CONTROL PANEL WELDMENT
3XX103-020NUT HEX 1/4"-20 S/S4XX122192WATER LEVEL BOARD ASM5208/2403137441TRANSFORMER, 40VA 208/240V - 246208/24032003888TERMINAL BLOCK 3-POLE208-2401204850VERLOAD 7-10 AMP LRD147208-2401294460VERLOAD 9-13 AMP RANGE LRD168XX77853FUSE 3.0 AMP TYPE 3 AG9XX77854FUSE HOLDER TYPE 3 AG11XX41655CONTACTOR, MOTOR, 24VAC COIL12XX50703HARNESS, CONTROL OUT, NO HEAT, CHEMICAL DISPENSER13XX31206GASKET, CONTROL ENCLOSURE, PS-100, W/HEAT14XX31933STOP SWITCH GREEN MX/PS-10015XX29230BUTTON GUARD CHEMICAL DISPENSER16XX29230BUTTON GUARD CHEMICAL DISPENSER17XX29230BUTTON GUARD CHEMICAL DISPENSER18XX119829LUG, GROUND 14-6 AWG19XX28704SCREW, #6-32 X 1-1/4" LG PAN HD, PHIL, SS20XX41943SCREW, #6-32 X 1-1/4" LG PAN HD, PHIL, SS21XX41943SCREW, #6-32 X 1-1/4" LG PAN HD, PHIL, SS22XX41943SCREW, #6-32 X 1-1/4" LG PAN HD, PHIL, SS23XX41943SCREW, #6-32 X 1-1/4" LG PAN HD, PHIL, SS24X <td>2</td> <td>Х</td> <td>Х</td> <td>SF3-188</td> <td>SCREW 1/4-20 X 1" SNAKE EYES VP PAN HEAD</td>	2	Х	Х	SF3-188	SCREW 1/4-20 X 1" SNAKE EYES VP PAN HEAD
4XX122192WATER LEVEL BOARD ASM5208/2403137441TRANSFORMER, 40VA 208/240V - 246208/24032003888TERMINAL BLOCK 3-POLE208/24012003887TERMINAL BLOCK 2-POLE7208-240329446OVERLOAD 7-10 AMP LRD148XX77853FUSE 3.0 AMP TYPE 3 AG9XX77854FUSE HOLDER TYPE 3 AG11XX41655CONTACTOR, MOTOR, 24VAC COIL12XX50703CHEMICAL DISPENSER13XX31206GASKET, CONTROL UN, NO HEAT, CHEMICAL DISPENSER14XX31932START SWITCH GREEN MX/PS-10015XX31933STOP SWITCH RED / MX /PS-10016XX29230BUTTON GUARD CHEMICAL DISPENSER17XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S18XX28704NUT HEX #6-32 S/S20XX41943SCREW, #6-32 X 1/4 LG, PAN HD, PHIL, SS21XX31187OVERLAY, CONTROL, PS-100 WHEAT, SOAP29XX50544HARNESS, CONTROL ENCLOSURE, PS-10014XX50545HARNESS, CONTROL ENCLOSURE, PS-10015XX31187OVERLAY, CONTROL ENCLOSURE, PS-10016XX50544HARNESS, CONTROL ENCLOSURE, PS-10017XX50545HARNESS, CONTROL ENCLOSURE, PS-100 <td>3</td> <td>Х</td> <td>Х</td> <td>103-020</td> <td>NUT HEX 1/4"-20 S/S</td>	3	Х	Х	103-020	NUT HEX 1/4"-20 S/S
5208/2403137441TRANSFORMER, 40VA 208/240V - 24A208-84032003888TERMINAL BLOCK 3-POLE208/24012003877TERMINAL BLOCK 2-POLE7208-240329446OVERLOAD 7-10 AMP LRD148XX77853FUSE 3.0 AMP TYPE 3 AG9XX77854FUSE HOLDER TYPE 3 AG11XX41655CONTACTOR, MOTOR, 24VAC COIL12XX50703GASKET, CONTROL OUT, NO HEAT, CHEMICAL DISPENSER13XX31926GASKET, CONTROL ENCLOSURE, PS-100, WHEAT14XX31932START SWITCH GREEN MX/PS-10015XX29230BUTTON GUARD CHEMICAL DISPENSER16XX29230BUTTON GUARD CHEMICAL DISPENSER17XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX411942SCREW, #6-32 X 1/2" PAN PHL MCH S/S21XX411943SCREW, #6-32 X 1/4 LG, PAN HD, PHIL, SS22XX411942SCREW, #6-32 X 1/4 LG, PAN HD, PHIL, SS29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP14XX50544HARNESS, CONTROL, ENCLOSURE, PS-10029XX50545HARNESS, CONTROL, ENCLOSURE, PS-10020XX50545HARNESS, CONTROL, ENCLOSURE, PS-10021XX50545HARNESS, CONTROL, ENCLOSURE, PS-10022X </td <td>4</td> <td>Х</td> <td>Х</td> <td>122192</td> <td>WATER LEVEL BOARD ASM</td>	4	Х	Х	122192	WATER LEVEL BOARD ASM
0 208-4803Z003888TERMINAL BLOCK 3-POLE208/2401Z003887TERMINAL BLOCK 2-POLE7 208-240329446OVERLOAD 7-10 AMP LRD148XX77853FUSE 3.0 AMP TYPE 3 AG9XX77854FUSE HOLDER TYPE 3 AG11XX41655CONTACTOR, MOTOR, 24VAC COIL12XX50703HARNESS, CONTROL OUT, NO HEAT, CHEMICAL DISPENSER13XX31206GASKET, CONTROL ENCLOSURE, PS-100, W/HEAT14XX31932START SWITCH GREEN MX/PS-10015XX29230BUTTON GUARD CHEMICAL DISPENSER18XX29230BUTTON GUARD CHEMICAL DISPENSER19XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX411943SCREW, #6-32 X 1/4 LG, PAN HD, PHIL, SS21XX50544HARNESS, CONTROL, PS-100 W/HEAT, SOAP22XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP23XX50544HARNESS, CONTROL, PS-100 W/HEAT, SOAP24XX50545HARNESS, CONTROL, ENCLOSURE, PS-100 NO HEAT, LGW VOLTAGE34XX3124PS-100 ENCLOSURE, ASHBLY35XX3124PS-100 ENCLOSURE ASSEMBLY36XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XX103-026 <td>5</td> <td>208/240</td> <td>3</td> <td>137441</td> <td>TRANSFORMER, 40VA 208/240V - 24</td>	5	208/240	3	137441	TRANSFORMER, 40VA 208/240V - 24
0208/2401Z003887TERMINAL BLOCK 2-POLE7208-240329446OVERLOAD 7-10 AMP LRD148XXX77853FUSE 3.0 AMP TYPE 3 AG9XXX77854FUSE HOLDER TYPE 3 AG11XXXX41655CONTACTOR, MOTOR, 24VAC COIL12XXX50703HARNESS, CONTROL OUT, NO HEAT, CHEMICAL DISPENSER13XXXX31206GASKET, CONTROL ENCLOSURE, PS-100, W/HEAT14XXX31932START SWITCH GREEN MX/PS-10015XX29231SOAP DISP METAL SWITCH16XXXX29230BUTTON GUARD CHEMICAL DISPENSER18XXX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XXXX28704NUT HEX #6-32 S/S21XXXX31187SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XXX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP14XXX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP15XXXX41943SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS20XXX41943SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS21XXX50544HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, LOW VOLTAGE14XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP21XXXX50545HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH23XXXX <t< td=""><td>6</td><td>208-480</td><td>3</td><td>Z003888</td><td>TERMINAL BLOCK 3-POLE</td></t<>	6	208-480	3	Z003888	TERMINAL BLOCK 3-POLE
208-240329446OVERLOAD 7-10 AMP LRD14208-240129445OVERLOAD 9-13 AMP RANGE LRD168XX77853FUSE 3.0 AMP TYPE 3 AG9XX77854FUSE HOLDER TYPE 3 AG11XX41655CONTACTOR, MOTOR, 24VAC COIL12XX50703HARNESS, CONTROL OUT, NO HEAT, CHEMICAL DISPENSER13XX31206GASKET, CONTROL ENCLOSURE, PS-100, W/HEAT14XX31932START SWITCH GREEN MX/PS-10015XX29231SOAP DISP METAL SWITCH16XX29230BUTTON GUARD CHEMICAL DISPENSER18XX119829LUG, GROUND 14-6 AWG19XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX41943SCREW, #6-32 X 1-1/4" LG PAN HD, PHIL, SS21XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP29XX50544HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, LOW VOLTAGE*XX50545HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH*XX31214PS-100 ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XX137766SCREW, 10-32 x 5/8" S/S <td>0</td> <td>208/240</td> <td>1</td> <td>Z003887</td> <td>TERMINAL BLOCK 2-POLE</td>	0	208/240	1	Z003887	TERMINAL BLOCK 2-POLE
1 208-240 1 29445 OVERLOAD 9-13 AMP RANGE LRD16 8 X X 77853 FUSE 3.0 AMP TYPE 3 AG 9 X X 77854 FUSE 10.0 AMP TYPE 3 AG 11 X X 41655 CONTACTOR, MOTOR, 24VAC COIL 12 X X 50703 HARNESS, CONTROL OUT, NO HEAT, CHEMICAL DISPENSER 13 X X 31206 GASKET, CONTROL ENCLOSURE, PS-100, W/HEAT 14 X X 31932 START SWITCH GREEN MX/PS-100 15 X X 29231 SOAP DISP METAL SWITCH 16 X X 29230 BUTTON GUARD CHEMICAL DISPENSER 18 X X 119829 LUG, GROUND 14-6 AWG 19 X X 28703 SCREW #6-32 X 1/2" PAN PHL MCH S/S 20 X X 28703 SCREW, #6-32 X 1/4 LG, PAN HD, PHIL, SS 21 X X 119829 COVERLAY, CONTROL, PS-100 W/HEAT, SOAP 22 X X 41943 <td< td=""><td>7</td><td>208-240</td><td>3</td><td>29446</td><td>OVERLOAD 7-10 AMP LRD14</td></td<>	7	208-240	3	29446	OVERLOAD 7-10 AMP LRD14
8XX77853FUSE 3.0 AMP TYPE 3 AG9XX77854FUSE HOLDER TYPE 3 AG11XX41655CONTACTOR, MOTOR, 24VAC COIL12XX50703HARNESS, CONTROL OUT, NO HEAT, CHEMICAL DISPENSER13XX31206GASKET, CONTROL ENCLOSURE, PS-100, W/HEAT14XX31932START SWITCH GREEN MX/PS-10015XX29231SOAP DISP METAL SWITCH16XX29230BUTTON GUARD CHEMICAL DISPENSER18XX119829LUG, GROUND 14-6 AWG19XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX41943SCREW, #6-32 X 1/4 LG, PAN HD, PHIL, SS21XX41943SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS22XX41943SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX31187OVERLAY, CONTROL ENCLOSURE, PS-100*XX50544HARNESS, CONTROL ENCLOSURE, PS-100*XX50732HARNESS, CONTROL ENCLOSURE, PS-100*XX31214PS-100 ENCLOSURE, ASSEMBLY34XX27833STUD 10-24 X 1/2" S/S CD WELD35XX103-026NUT HEX #10-245537XXFANUT0404NUT #10 "U" TINNERMAN38XX137766SCREW, 10-32 x 5/8" S/S	'	208-240	1	29445	OVERLOAD 9-13 AMP RANGE LRD16
9XXX77854FUSE HOLDER TYPE 3 AG11XX41655CONTACTOR, MOTOR, 24VAC COIL12XX50703HARNESS, CONTROL OUT, NO HEAT, CHEMICAL DISPENSER13XX31206GASKET, CONTROL ENCLOSURE, PS-100, W/HEAT14XX31932START SWITCH GREEN MX/PS-10015XX29231SOAP DISP METAL SWITCH16XX29230BUTTON GUARD CHEMICAL DISPENSER17XX29230SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX28704NUT HEX #6-32 S/S21XX28704SCREW, #6-32 X 1/4" LG PAN HD, PHIL, SS22XX41943SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 N HEAT, LOW VOLTAGE*XX31214PS-100 ENCLOSURE, PS-100 N HEAT, HIGH VOLTAGE, 1PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XX137766SCREW, 10-32 x 5/8" S/S	8	Х	Х	77853	FUSE 3.0 AMP TYPE 3 AG
11XX41655CONTACTOR, MOTOR, 24VAC COIL12XX50703HARNESS, CONTROL OUT, NO HEAT, CHEMICAL DISPENSER13XX31206GASKET, CONTROL ENCLOSURE, PS-100, W/HEAT14XX31932START SWITCH GREEN MX/PS-10015XX31933STOP SWITCH RED / MX /PS-10016XX29231SOAP DISP METAL SWITCH17XX29230BUTTON GUARD CHEMICAL DISPENSER18XX119829LUG, GROUND 14-6 AWG19XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX28704NUT HEX #6-32 S/S21XX41943SCREW, #6-32 X 1/4 LG, PAN HD, PHIL, SS22XX41943SCREW, #6-32 X 1/4 LG, PAN HD, PHIL, SS29XX41943SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SOAP DISP*XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 N HEAT, LOW VOLTAGE*XX31214PS-100 ENCLOSURE, ASSEMBLY34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XX50764SCREW, 10-32 x 5/8" S/S	9	Х	Х	77854	FUSE HOLDER TYPE 3 AG
12XX50703HARNESS, CONTROL OUT, NO HEAT, CHEMICAL DISPENSER13XX31206GASKET, CONTROL ENCLOSURE, PS-100, W/HEAT14XX31932START SWITCH GREEN MX/PS-10015XX29231SOAP DISP METAL SWITCH16XX29230BUTTON GUARD CHEMICAL DISPENSER17XX29230BUTTON GUARD CHEMICAL DISPENSER18XX119829LUG, GROUND 14-6 AWG19XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX28704NUT HEX #6-32 S/S21XX41943SCREW, #6-32 X 1/4 LG, PAN HD, PHIL, SS22XX41943SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, LOW VOLTAGE*XX50732HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XX137766SCREW, 10-32 x 5/8" S/S	11	Х	Х	41655	CONTACTOR, MOTOR, 24VAC COIL
13XX31206GASKET, CONTROL ENCLOSURE, PS-100, W/HEAT14XX31932START SWITCH GREEN MX/PS-10015XX31933STOP SWITCH RED / MX /PS-10016XX29231SOAP DISP METAL SWITCH17XX29230BUTTON GUARD CHEMICAL DISPENSER18XX29230SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX28704NUT HEX #6-32 S/S21XX28704SCREW, #6-32 X 1/4 LG, PAN HD, PHIL, SS22XX41943SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, LOW VOLTAGE*208-240350545HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XX137766SCREW, 10-32 x 5/8" S/S	12	Х	Х	50703	HARNESS, CONTROL OUT, NO HEAT, CHEMICAL DISPENSER
14XX31932START SWITCH GREEN MX/PS-10015XX31933STOP SWITCH RED / MX /PS-10016XX29231SOAP DISP METAL SWITCH17XX29230BUTTON GUARD CHEMICAL DISPENSER18XX119829LUG, GROUND 14-6 AWG19XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX28704NUT HEX #6-32 S/S21XX41943SCREW, #6-32 X 1-1/4" LG PAN HD, PHIL, SS22XX41942SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH*208-240350545HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XX137766SCREW, 10-32 x 5/8" S/S	13	Х	Х	31206	GASKET, CONTROL ENCLOSURE, PS-100, W/HEAT
15XX31933STOP SWITCH RED / MX / PS-10016XX29231SOAP DISP METAL SWITCH17XX29230BUTTON GUARD CHEMICAL DISPENSER18XX119829LUG, GROUND 14-6 AWG19XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX28704NUT HEX #6-32 S/S21XX41943SCREW, #6-32 X 1/4 LG, PAN HD, PHIL, SS22XX41943SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, LOW VOLTAGE*208-240350545HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT #10 "U" TINNERMAN38XX137766SCREW, 10-32 x 5/8" S/S	14	Х	Х	31932	START SWITCH GREEN MX/PS-100
16XX29231SOAP DISP METAL SWITCH17XX29230BUTTON GUARD CHEMICAL DISPENSER18XX119829LUG, GROUND 14-6 AWG19XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX28704NUT HEX #6-32 S/S21XX41943SCREW, #6-32 X 1/4 LG, PAN HD, PHIL, SS22XX41942SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP*XS0544HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, LOW VOLTAGE*208-240350545HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT #10 "U" TINNERMAN38XX137766SCREW, 10-32 x 5/8" S/S	15	Х	Х	31933	STOP SWITCH RED / MX /PS-100
17XX29230BUTTON GUARD CHEMICAL DISPENSER18XX119829LUG, GROUND 14-6 AWG19XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX28704NUT HEX #6-32 S/S21XX41943SCREW, #6-32 X 1/4" LG PAN HD, PHIL, SS22XX41943SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX41942SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, LOW VOLTAGE*208-240350545HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XX137766SCREW, 10-32 x 5/8" S/S	16	Х	Х	29231	SOAP DISP METAL SWITCH
18XX119829LUG, GROUND 14-6 AWG19XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX28704NUT HEX #6-32 S/S21XX41943SCREW, #6-32 X 1-1/4" LG PAN HD, PHIL, SS22XX41942SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX41942SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX41942SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, LOW VOLTAGE*208-240350545HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XX137766SCREW, 10-32 x 5/8" S/S	17	Х	Х	29230	BUTTON GUARD CHEMICAL DISPENSER
19XX28703SCREW #6-32 X 1/2" PAN PHL MCH S/S20XX28704NUT HEX #6-32 S/S21XX41943SCREW, #6-32 X 1-1/4" LG PAN HD, PHIL, SS22XX41942SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX41942SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, LOW VOLTAGE*208-240350545HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XX137766SCREW, 10-32 x 5/8" S/S	18	Х	Х	119829	LUG, GROUND 14-6 AWG
20XX28704NUT HEX #6-32 S/S21XX41943SCREW, #6-32 X 1-1/4" LG PAN HD, PHIL, SS22XX41943SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX41942SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, LOW VOLTAGE*208-240350545HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XX137766SCREW, 10-32 x 5/8" S/S	19	Х	Х	28703	SCREW #6-32 X 1/2" PAN PHL MCH S/S
21XX41943SCREW, #6-32 X 1-1/4" LG PAN HD, PHIL, SS22XX41942SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 N0 HEAT, LOW VOLTAGE*208-240350545HARNESS, CONTROL ENCLOSURE, PS-100 N0 HEAT, HIGH VOLTAGE, 3PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XX137766SCREW, 10-32 x 5/8" S/S	20	Х	Х	28704	NUT HEX #6-32 S/S
22XX41942SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 N0 HEAT, LOW VOLTAGE*208-240350545HARNESS, CONTROL ENCLOSURE, PS-100 N0 HEAT, HIGH VOLTAGE, 3PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XX137766SCREW, 10-32 x 5/8" S/S	21	Х	Х	41943	SCREW, #6-32 X 1-1/4" LG PAN HD, PHIL, SS
29XX31187OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, LOW VOLTAGE*208-240350545HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH34XX50732HARNESS, CONTROL ENCLOSURE, PS-100 	22	Х	Х	41942	SCREW, #6-32 X 1/4 LG, PAN HS, PHIL, SS
*XX50544HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, LOW VOLTAGE*208-240350545HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH208-240150732HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 1PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XXFANJT0404NUT #10 "U" TINNERMAN38XX137766SCREW, 10-32 x 5/8" S/S	29	Х	Х	31187	OVERLAY, CONTROL, PS-100 W/HEAT, SOAP DISP
208-240350545HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH208-240150732HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 1PH34XX31214PS-100 ENCLOSURE ASSEMBLY35XX27833STUD 10-24 X 1/2" S/S CD WELD36XX103-026NUT HEX #10-245537XXFANJT0404NUT #10 "U" TINNERMAN38XX137766SCREW, 10-32 x 5/8" S/S	*	Х	Х	50544	HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, LOW VOLTAGE
208-240 1 50732 HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 1PH 34 X X 31214 PS-100 ENCLOSURE ASSEMBLY 35 X X 27833 STUD 10-24 X 1/2" S/S CD WELD 36 X X 103-026 NUT HEX #10-2455 37 X X FANJT0404 NUT #10 "U" TINNERMAN 38 X X 137766 SCREW, 10-32 x 5/8" S/S	*	208-240	3	50545	HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 3PH
34 X X 31214 PS-100 ENCLOSURE ASSEMBLY 35 X X 27833 STUD 10-24 X 1/2" S/S CD WELD 36 X X 103-026 NUT HEX #10-2455 37 X X FANJT0404 NUT #10 "U" TINNERMAN 38 X X 137766 SCREW, 10-32 x 5/8" S/S		208-240	1	50732	HARNESS, CONTROL ENCLOSURE, PS-100 NO HEAT, HIGH VOLTAGE, 1PH
35 X X 27833 STUD 10-24 X 1/2" S/S CD WELD 36 X X 103-026 NUT HEX #10-2455 37 X X FANJT0404 NUT #10 "U" TINNERMAN 38 X X 137766 SCREW, 10-32 x 5/8" S/S	34	Х	Х	31214	PS-100 ENCLOSURE ASSEMBLY
36 X X 103-026 NUT HEX #10-2455 37 X X FANUT0404 NUT #10 "U" TINNERMAN 38 X X 137766 SCREW, 10-32 x 5/8" S/S	35	Х	Х	27833	STUD 10-24 X 1/2" S/S CD WELD
37 X X FANUT0404 NUT #10 "U" TINNERMAN 38 X X 137766 SCREW, 10-32 x 5/8" S/S	36	Х	Х	103-026	NUT HEX #10-2455
38 X X 137766 SCREW, 10-32 x 5/8" S/S	37	Х	Х	FANUT0404	NUT #10 "U" TINNERMAN
	38	Х	Х	137766	SCREW, 10-32 x 5/8" S/S

*Not Shown

*Not Shown



Item	Part Number	Description			
1	27865	DUAL PUMP CHEMICAL DISPENSER BOX W/ELEMENT			
2A	20225	LOCK			
2B	29233	KEY			
3	28901	DVERLAY			
4	29238	SPRING CONE			
5	29237	#8-32 X $\frac{1}{2}$ " Phillips counter sunk flat head screw			
6A		PUMP BODY			
6B		ROLLER PUMP ASSEMBLY			
6C	29240	10-32 X 1-1/4 PHILLIPS PAN HEAD MACHINE SCREW			
6D		PUMP FACEPLATE			
6E		PINCH TUBE			
7	29239	10-24 X 1-3/4 PHILLIPS PAN HEAD MACHINE SCREW			
8	29230	BUTTON GUARD			
9	29231	SWITCH			
10	28704	HEX NUT, 6-32 UNF			
11	28067	WIRING HARNESS			
12	28703	6-32 UNC X 1/2" LONG MACHINE SCREW			
13	29232	BRIDGE RECTIFIER			
14	FL TPE0201	DOUBLE SIDED ADHESIVE PAD ¾" WIDE 1" LONG			
15	29234	PUMP MOTOR/GEARBOX			
16	29233	SOLID STATE TIMER			
17	34381	VELCRO DOT, 1.375 DIA, LOOP SIDE			
18	34380	VELCRO DOT, 1.375 DIA, HOOK SIDE			
19	27938	KAY BOX LOCKING TAB			
20	27858	GASKET			
*	44287	HARNESS, INTERNAL, CHEM DISPENSER, DUAL			

*Not Shown

MISCELLANEOUS

Part Number	Description
28065	WIRING HARNESS EXTENSION - 3FT
28066	WIRING HARNESS EXTENSION - 6FT

DISASSEMBLY/ASSEMBLY PROCEDURES



THIS ASSEMBLY WILL WEIGH APPROXIMATELY 45 POUNDS AND MUST BE SUPPORTED SO THAT IT DOES NOT DROP ON THE FLOOR WHEN IT IS REMOVED.

BEFORE STARTING DISASSEMBLY PROCEDURES, TURN OFF POWER AT THE BREAKER PANEL.





MOTOR AND PUMP

Disassembly

Tools Needed:

- 9/16" socket
- 18" socket extension
- 3/8" ratcheting wrench
- 1/2" socket
- 5/16" Allen wrench
- Phillips head screw driver
- 1/4" Flat head screw drivers

To service the pump or motor the wash tank must be empty. Refer to the illustration above for the following.

- 1. Remove the black/yellow harness attached to the rear of the control box.
- Remove item Phillips head screws on the control, once control door is open remove the black, red, and (if equipped) blue wires from the thermal overload. Remove the motor harness and cord from the control.
- 3. Put the Phillips head screws back in the control face.
- 4. Remove the acorn nuts and nuts from the studs with a 1/2" and 9/16" socket and 18" extension on the ratcheting wrench.
- 5. Place control in an area under the sink that is free of water.
- 6. Remove nuts (15) from the back of the adaptor plate (13) with the 9/16" socket and ratcheting wrench.
- 7. Mark the motor (14), adaptor plate (13), and volute (1) for reassembly orientation.

- 8. Slide the pump end out from the volute (1).
- 9. Holding the impeller (6) to keep it from turning, loosen the washer head cap screw (4), and remove the screw and gasket.
- 10. Slide the impeller (6) off of the shaft and remove the key (2).
- 11. Remove the seal/sleeve as a unit by pulling it off of the shaft. Some corrosion may prohibit movement and a lubricant may be used to penetrate between the sleeve and motor shaft.
- 12. With the impeller (6) and key (2) removed, the shaft sleeve (9) and the mechanical seal assembly (10) can be removed.
- 13. Remove O-ring (8) from the shaft sleeve (9).
- 14. With the shaft sleeve (9) removed, the seal rotating assembly can be pulled off of the shaft sleeve.
- 15. Mark the adaptor plate (13) and motor to insure proper re-assembly. Remove Allen screws (12) from the adaptor plate (13). Take the adaptor plate (13) off the motor (16).
- 16. Remove O-ring (11) from adaptor plate (13).
- 17. With the adaptor plate removed, the seal seat can be removed using a screwdriver or by using your fingers.

Inspection



Impeller blades and support structure are free of grooves and cracks

Holes are drilled by the manufacturer for balancing the impeller

NEW IMPELLER

Impeller blades have been damaged by foreign object entering the suction manifold and lodging in the pump housing.



DAMAGED IMPELLERS

Inspect the components for damage or signs of wear. Examine the Adapter O-Ring (11) and the Sleeve O-Ring (8) to see that they do not have nicks, cuts or flat spots. Both faces of the Mechanical Seal must be smooth and free of nicks or scratches. The motor shaft must spin by hand with a smooth rotation and no rubbing noise. Replace components if they are defective. The pump impeller must not have cracks or deep grooves in the fins or support structure.

Assembly

- Push the mechanical seal seat squarely into the seal bore of the adaptor plate by using fingers. A little lube can be used on the seal bore of the adaptor plate. Make sure the ceramic side is up and it is fully seated.
- 2. Install the adaptor plate and tighten (4) screws, which hold it to the motor face. Make sure the marks made in step 7 above line up.
- 3. Install O-ring into the groove of the adaptor plate.
- 4. Coat the shaft sleeve lightly with lube. Install the mechanical seal on the shaft sleeve using your hand to push against the seal face. Make sure rubber seal bellows are seated against sleeve shoulder and carbon seal face is not scratched or chipped.
- 5. Slide the shaft sleeve onto the motor shaft and install the O-ring on the groove of the sleeve. Using lube or grease on the O-ring will help hold the ring in place temporarily until the impeller is secured.
- 6. Install the key on the motor shaft and place the impeller on the motor shaft engaging the key.
- 7. Put the gasket on the washer head cap screw.

- Install the impeller cap screw by holding the impeller, push the impeller back against the sleeve and the other hand tighten the screw to 23-ft lbs. of torque. (Do not over tighten as this could cause the gasket to squeeze out, become deformed and not seal properly.
- 9. Slide the pump end on the (3) studs of the volute. The motor junction box should be at the bottom.
- 10. Install (3) nuts on the studs and tighten to 23-ft.lbs.
- 11. Reinstall the control box using the (4) hex nuts tighten to 11 ft-lbs. Place (4) acorn nuts on the remaining threads also at 11 ft-lbs.
- 12. Plug in the motor wires to the thermal overload in the control.
- 13. Reconnect the black/yellow cable to the rear of the control.
- 14. Turn power on at the breaker panel.
- 15. Fill the wash sink up with water.
- 16. Start the wash sequence and inspect for proper function.

HEATING ELEMENT

Disassembly

Tools Needed:

- Phillips screwdriver
- Flat head screwdriver
- 7/16" socket and ratcheting wrench
- Fishing tape or string (optional)
- Duct tape (optional)
- 1. Drain the wash sink.
- 2. Remove the cover by removing (4) 7/16" acorn nuts from the outside bottom surface of the wash tank
- 3. Remove the (4) flat head screws on the cover plate inside the wash tank on the slanted surface of the back wall.
- 4. Remove the (4) 7/16" nuts from the heater element mounting plate on the bottom side of the wash tank.
- 5. Remove the (4) Phillips head screws on the control panel and open the control panel.

NOTE: Note how the existing Heater is wired to the contactor (it is helpful to take a picture or make a sketch of the wire connections).

6. Disconnect the wiring to the heater contactor.

NOTE: To assist with reassembly, connect fishing tape or string to the heater wires.

- Remove the heating element from the back wall of the sink by maneuvering through the Heater access plate in the wash sink while pulling the element wires through the conduit.
- 8. Remove the gasket to the heating element.

Inspection

Examine the gasket for cracks or tears. Examine the wires extending out of the base of the element. The insulation on the wires must not be burned, cracked or missing. The connectors on the end of the wire must be free of corrosion, crimped tight on the wire and no broken wires. Clean debris off the heating element coils and inspect the coils for cracks or burned areas on the surface of the coil. Replace any defective part with a new part.

Assembly

- 1. Place the gasket on the bottom surface of the heating element mounting plate.
- 2. Insert the heating element though the opening in the back wall of the wash tank.
- 3. Push the wires through the center opening and align the studs with the mounting holes on the bottom surface of the tank.

- 4. Install the (4) 7/16" nuts on outside surface of the tank to secure the heating element to the bottom of the tank.
- 5. Tighten the nuts to pull the mounting base snug against the bottom surface of the tank and then turn the nut another $\frac{1}{2}$ turn to secure the element.
- 6. Fill the tank with a few inches of water and check for leaks around the heating element mounting holes.
- 7. Connect the heater wires to fishing tape or string and pull through the conduit into the control panel.
- 8. Reconnect the heater wires to the contactor as previously noted.
- 9. Install the cover over the heater access opening inside the wash tank.

NOTE: Be sure that the cover is seated well with no gaps around the edges that will allow debris to enter the pump suction manifold.

- 10. Reinstall the heater conduit box on the bottom of the wash tank using the (4) 7/16" acorn nuts.
- 11. Turn the power on at the breaker panel.
- 12. Start a wash cycle and check the operating temperature of the water.
- 13. The water should heat to approximately 115°F within two hours or less.

SENSOR PAD

Disassembly

Tools Needed:

- 7/16" socket and ratcheting wrench
- Multimeter
- To access the contents of the Sensor Pad, unbolt the mounting bracket that holds the sensor pad and remove the sensor pad from the back side of the wash tank.
- 2. Lift the retainer plate out of the rubber pad and then remove the electrical components.

Inspection

Examine the wires for damage to the insulation. Test each of the components for proper function. Unplug the spade connectors from the tabs on the thermo-disc and use an Ohm meter to measure the resistance across the tabs of the thermo-disc. Individually check each tab connection for continuity to the mounting flange. Continuity to the flange would indicate a defective thermo-disc that will need to be replaced.

Assembly



1. Place the components back into the rubber pad and secure them in place with the retainer plate.

NOTE: It is very important to use heat sink compound on the side of the thermal snap disc that will be placed against the surface of the tank to ensure good heat transfer.

- 3. Slide the pad assembly back into the mounting bracket and bolt the bracket to the side of the wash tank.
- 4. Turn on power at the breaker panel

- 5. Fill the wash tank.
- Start a wash cycle the water should heat to approximately 115°F in 2 hours or less.

CHEMICAL DISPENSER (OPTIONAL)

A chemical dispenser can be purchased from Power Soak. The dispenser that is purchased from Power Soak will be mounted under the drain board on the "clean side" of the sink assembly and contain two or three pumps, depending on the application. The wiring harness has connections to supply power and operating signals to the chemical dispenser pumps. Malfunctions in the chemical dispenser can lower the operating voltage of the PS-100 to levels that are unacceptable and will cause problems with the operation of the PS-100 control system. See the chemical dispenser literature for more information on the operation and service of the dispenser.

REPLACEMENT PARTS

To order parts, contact your Authorized Service Agent. Supply the model designation, serial number, part description, part number, quantity, and when applicable, voltage and phase.

CONTACT US

If you have questions pertaining to the content in this manual, contact Power Soak at 888-994-7636.

WIRING DIAGRAMS

WASH TANK HEAT 208/240V 3 PHASE



WASH TANK HEAT 480V 3 PHASE



WASH TANK HEAT 208/240V SINGLE PHASE



NO WASH TANK HEAT 208/240V SINGLE PHASE



NO WASH TANK HEAT 208/240V 3 PHASE



Service Log

Model No:	Purchased From:
Serial No:	Location:
Date Purchased:	Date Installed:
Purchase Order No:	For Service Call:

Date	Maintenance Performed	Performed By