

# Warewashing Systems

# INSTALLATION, OPERATION, AND SERVICE MANUAL



### CONSERVER® XL-E & XL HH DISHMACHINES

Conserver® XL-E/XL HH Manual • Rev L • 07610-003-92-84 • Issued: 1-6-2014 • Revised: 11-5-2016

### MANUFACTURER'S WARRANTY

#### ONE YEAR LIMITED PARTS AND LABOR WARRANTY

### ALL NEW JACKSON DISHWASHERS ARE WARRANTED TO THE ORIGINAL PURCHASER TO BE FREE FROM DEFECTS IN MATERIAL OR WORKMANSHIP, UNDER NORMAL USE AND OPERATION, FOR A PERIOD OF (1) ONE YEAR FROM DATE OF PURCHASE, BUT IN NO EVENT TO EXCEED (18) EIGHTEEN MONTHS FROM DATE OF SHIPMENT FROM THE FACTORY.

Jackson WWS agrees under this warranty to repair or replace, at its discretion, any original part which fails under normal use due to faulty material or workmanship during the warranty period, providing the equipment has been unaltered, and has been properly installed, maintained, and operated in accordance with the applicable factory instruction manual and failure is reported to an authorized service agency within the warranty period. This includes the use of factory-specified genuine replacement parts, purchased directly from a Jackson-authorized parts distributor or service agency. Use of generic replacement parts may create a hazard and void warranty certification.

The labor to repair or replace such failed part will be paid by Jackson WWS, within the continental United States, Hawaii, and Canada, during the warranty period provided a Jackson WWS authorized service agency, or those having prior authorization from the factory, performs the service. Any repair work by persons other than a Jackson WWS authorized service agency is the sole responsibility of the customer. Labor coverage is limited to regular hourly rates; overtime premiums and emergency service charges will not be paid by Jackson WWS.

Accessory components not installed by the factory carry a (1) one year parts warranty only. Accessory components such as table limit switches, pre-rinse units, etc. that are shipped with the unit and installed at the site are included. Labor to repair or replace these components is not covered by Jackson WWS.

This warranty is void if failure is a direct result from shipping, handling, fire, water, accident, misuse, acts of God, attempted repair by unauthorized persons, improper installation, if serial number has been removed or altered, or if unit is used for a purpose other than originally intended.

#### TRAVEL LIMITATIONS

Jackson WWS limits warranty travel time to (2) two hours and mileage to (100) one-hundred miles. Jackson WWS will not pay for travel time and mileage that exceeds this, or any additonal fees—such as those for air or boat travel—without prior authorization.

#### WARRANTY REGISTRATION

To register your product, go to www.jacksonwws.com or call 1-888-800-5672. Failure to register your product will void the warranty.

#### REPLACEMENT PARTS WARRANTY

Jackson replacement parts are warranted for a period of (90) ninety days from date of installation or (180) one-hundred-eighty days from the date of shipment from the factory, whichever occurs first.

#### **PRODUCT CHANGES AND UPDATES**

Jackson WWS reserves the right to make changes in the design and specification of any equipment as engineering or necessity requires.

THIS IS THE ENTIRE AND ONLY WARRANTY OF JACKSON WWS. JACKSON'S LIABILITY ON ANY CLAIM OF ANY KIND, INCLUDING NEGLIGENCE, WITH RESPECT TO THE GOODS OR SERVICES COVERED HEREUNDER, SHALL IN NO CASE EXCEED THE PRICE OF THE GOODS OR SERVICES OR PART THEREOF WHICH GIVES RISE TO THE CLAIM.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING FOR FITNESS OR MERCHANTABILITY, THAT ARE NOT SET FORTH HEREIN, OR THAT EXTEND BEYOND THE DURATION HEREOF. UNDER NO CIRCUMSTANCES WILL JACKSON WWS BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECT OR CONSEQUENTIAL, OR FOR DAMAGES IN THE NATURE OF PENALTIES, ARISING OUT OF THE USE OR INABILITY TO USE ANY OF ITS PRODUCTS.

#### **ITEMS NOT COVERED**

THIS WARRANTY DOES NOT COVER CLEANING OR DELIMING OF THE UNIT OR ANY COMPONENT SUCH AS, BUT NOT LIMITED TO, WASH ARMS, RINSE ARMS, OR STRAINERS AT ANYTIME. NOR DOES IT COVER ADJUSTMENTS SUCH AS, BUT NOT LIMITED TO, TIMER CAMS, THERMOSTATS, OR DOORS BEYOND (30) THIRTY DAYS FROM THE DATE OF INSTALLATION. IN ADDITION, THE WARRANTY WILL ONLY COVER REPLACEMENT WEAR ITEMS SUCH AS CURTAINS, DRAIN BALLS, DOOR GUIDES, OR GASKETS DURING THE FIRST (30) THIRTY DAYS AFTER INSTALLATION. ALSO, NOT COVERED ARE CONDITIONS CAUSED BY THE USE OF INCORRECT (NON-COMMERICAL) GRADE DETERGENTS, INCORRECT WATER TEMPERATURE OR PRESSURE, OR HARD WATER CONDITIONS.

## **REVISION HISTORY**

Revision Letter	Revision Date	Made by	Applicable ECNs	Details
A	01-06-14	MHH	ECN 8241	Release to production.
В	08-18-14	KAP	ECN 8305	Removed pg 17, updated part on page 20.
С	08-29-14	KAP	N/A	Updated part on pg. 27.
D	10-14-14	KAP	N/A	Added 208 volt schematic on page 32. Updated available electrical characteristics on pg. 4. Updated Dimensions pg. 1 Updated part on pg. 29
E	04-06-15	KAP	N/A	Inserted note pertaining to corner installation pg. 2
F	04-16-15	KAP	N/A	Updated hood assembly on pg. 20 Added reed swtich
G	08-25-15	KAP	N/A	Added Sleeve Hood Spacer to parts breakdown on pg. 20.
Н	09-25-15	KAP	N/A	Inserted High Hood options throughout manual.
J	02-12-16	JH	N/A	Added electrical requirements for 230V machine. Replaced schematic on pg. 41 with Rev C.
к	03-02-16	JH	N/A	Corrected view on pg. 36 to show the gasket on top. Updated the view on pg. 27 to show the correct valve. Added Operating Times to pg. 4.
L	11-05-16	JH	ECN 8417 N/A	Changed timer from 05945-111-35-32 to 05945-004-11- 78. Audited manual and corrected all incorrect P/Ns. Complete update of the manual to new format.

### NOMENCLATURE



# Warewashing Systems

**Conserver**<sup>®</sup> **XL-E** Door-type dishmachine; chemical-sanitizing, single-rack.

### Conserver® XL HH

Door-type dishmachine; chemical-sanitizing, single-rack with high hood.

	technical support for all of the dishmachines detailed in this manual. We strongly
	recommend that you refer to
	this manual before making a
	call to our technical support
	staff. Please have this manual
	with you when you call so
Model:	that our staff can refer you, if
	necessary, to the proper page.
Serial No.:	Technical support is not available on holidays.
Installation Date:	Contact technical support toll free at 1-888-800-5672
Sanviaa Ban Nama	
Service Rep. Name	Technical support is available
Phone Number:	for service personnel only.

The

manufacturer

provides

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### **GUIDES**



### SYMBOLS



- risk of injury to personnel.



- risk of damage to equipment.



- risk of electrical shock.



caustic chemicals.



- reference data plate.



- lockout electrical power.

**NOTICE** - important note.

### **ABBREVIATIONS & ACRONYMS**

ANSI - American National Standards Institute
CFM - Cubic Feet per Minute
GHT - Garden Hose Thread
GPH - Gallons per Hour
GPG - Grains per Gallon
HP - Horse Power
Hz - Hertz
ID - Inside Diameter
kW - Kilowatts
NFPA - National Fire Protection Association
NPT - National Pipe Thread
PSI - Pounds per Square Inch
V - Volts

# **XL-E DIMENSIONS**



All dimensions from the floor can be increased 1 1/2" using the machine's adjustable feet.





E1	MAIN ELECTRICAL CONNECTION (1.125" DIA HOLE) (Located on back of control box)
W	MAIN INLET WATER CONNECTION (½ NPT-F)
D	DRAIN CONNECTION (2" NPT-F)
DET	DETERGENT BULKHEAD ACCESS (.875" DIA HOLE)
SAN**	SANITIZER INLET

RA	RINSE-AID INLET
CP	N/A
S*	N/A
C*	N/A
VI	N/A
V2	N/A

# XL HH DIMENSIONS



E1	MAIN ELECTRICAL CONNECTION (1.125" DIA HOLE) (Located on back of control box)
W	MAIN INLET WATER CONNECTION (1/2 NPT-F)
D	DRAIN CONNECTION (2" NPT-F)
DET	DETERGENT BULKHEAD ACCESS (.875" DIA HOLE)
SAN**	SANITIZER INLET

RA	RINSE-AID INLET
СР	N/A
S*	N/A
C*	N/A
VI	N/A
V2	N/A

**NOTE:** Please remove the front dress panel from the dishmachine if mounting dishmachine for a corner installation and attaching side tables. Corner installation will trap panel making it difficult to remove.



# **OPERATING CAPACITIES**

Model Designation:	XL-E	XL HH
Operating Capacity:		
Racks per Hour Dishes per Hour Glasses per Hour	39 624 1404	39 624 1404
Tank Capacity (Gallons):		
Wash Tank	1.03 (40.2 GPH)	1.61 (62.8 GPH)
Electrical Loads (as applicable):		
Wash Motor HP	3/4	3/4
Operating Times (seconds):		
Wash	42	43
Rinse	25	25
Dwell	20	18

NOTE: Always refer to the machine data plate for specific electrical and water requirements. The material provided on this page is for reference only and is subject to change without notice.

### **CHEMICAL SANITIZING**

Water Temperatures (°F):		
Minimum Wash Temperature	120	120
Minimum Rinse Temperature	120	120
Incoming Water Temperature	120	120
Other Water Requirements:		
Water Flow Pressure (PSI)	20 +/- 5	20 +/- 5
Flow Rate Minimum (GPM)	6.18	9.66
Water Line Size (NPT)	1/2"	1/2"
Drain Line Size (NPT)	2"	2"
Minimum Chlorine Required (PPM)	50	50



All electrical ratings provided in this manual are for reference only. Always refer to the machine data plate to get exact electrical information for this machine. **All electrical work performed on machines should be done in accordance with applicable local, state, territorial, and national codes.** Work should only be performed by qualified electricians and authorized service agents.

Note that all electrical wiring used in this series of machines must be rated, at a minimum, for 212  $^{\circ}$ F (100  $^{\circ}$ C), and that only copper conductors must be used.

Where applicable, heating element amperage draws have been adjusted for the assumed input voltage. The manufacturer assumes incoming voltages will be either 115, 208, 230, or 460 Volts. Some heating elements used in the machines are rated for other voltages, such as 240 Volts and 480 Volts. Always verify the amperage draw of the machine in operation when sizing circuit protection.

#### **Available Electrical Characteristics:**

- 115 V, 60 Hz, Single-phase
- 115 V, 50 Hz, Single-phase
- 230 V, 60 Hz, Single-phase

### Conserver<sup>®</sup> XL-E Electrical Characteristics

VOLTS	115	230
PHASE	1	1
FREQ	60	60
WASH MOTOR AMPS	10.0 A	5.0 A
TOTAL LOAD	10.0 A	5.0 A

### Conserver<sup>®</sup> XL HH Electrical Characteristics

VOLTS	115	230
PHASE	1	1
FREQ	60	60
WASH MOTOR AMPS	10.0 A	5.0 A
TOTAL LOAD	10.0 A	5.0 A

## **INSTRUCTIONS**

### VISUAL INSPECTION

Do not throw away the container if damage is evident!

Before installing the unit, check the packaging and machine for damage. If the packaging is damaged, the machine might also be damaged. If there is damage to both the packaging and machine, do not throw away the packaging. The dishmachine has been inspected and packed at the factory and is expected to arrive to you in new, undamaged condition. However, rough handling by carriers or others might result in damage to the unit while in transit. If so, do not return the unit to the manufacturer; instead, contact the carrier and ask them to send a representative to the site to inspect the damage and complete an inspection report. You must contact the carrier within 48 hours of receiving the machine. Also contact the dealer that sold you the unit.

# MACHINE

UNPACKING THE While removing the machine from the packaging, ensure that there are no missing parts. If an item is missing, contact the manufacturer immediately.

# DISHMACHINE

LEVEL THE The dishmachine must be level in its operating location to prevent damage to the machine during operation and to ensure the best results. The unit comes with four adjustable bullet feet, which can be turned using a pair of channel locks (or by hand if the unit can be raised safely). Ensure that the unit is level from side-to-side and front-toback before making any connections.

### PLUMBING THE DISHMACHINE

The plumber MUST flush the incoming water line!

A water hardness test must be performed.

Plumbing connections must comply with all applicable local, state, and national plumbing codes. The plumber is responsible for ensuring that the incoming water line is thoroughly flushed before connecting it to any component of the dishmachine. It is very important to remove all foreign debris from the water line that might potentially get trapped in the valves or cause an obstruction. Any valves that are fouled as a result of foreign matter left in the water line-and any expenses resulting from this fouling-are not the responsibility of the manufacturer.

A water hardness test must be performed. A hardness test kit can be found on the warning tag that is attached to the incoming plumbing connection on the back of the machine. If water hardness is higher than 5 GPG, install a water softener or install the optional HTS-11 (scale prevention and corrosion control). Please contact the manufacturer to purchase the HTS-11.

# **CONNECTIONS:** WATER HARDNESS 5 GPG

WATER SUPPLY If water hardness is higher than 5 GPG and a water softener is not being used, install the HTS-11 into the water line before the dishmachine's incoming water connection point using copper pipe. Observe proper inlet/outlet water directions. Flow directions are molded into the top of the head. It is recommended that a water shut-off valve **HIGHER THAN** be installed before installing the HTS-11 to allow access for service. Plumb from the HTS-11 outlet to the incoming water connection point using copper pipe (or order the flexible hose kit offered by manufacturer).

# **INSTRUCTIONS**

WATER SUPPLY **CONNECTION:** WATER HARDNESS OF 5 GPG for service. **OR LOWER** 

If water hardness tests at 5 GPG or lower, install the water supply line to the dishmachine's incoming water connection point using copper pipe (or order the flexible hose kit offered by the manufacturer). It is recommended that a water shut-off valve be installed in the water line between the main supply and the machine to allow access

### PRESSURE REGULATOR

Take care not to confuse static pressure with flow pressure!

The manufacturer has an optional water pressure regulator to accommodate areas where water pressure fluctuates or is higher than the recommended pressure. Take care not to confuse static pressure with flow pressure: static pressure is line pressure in a "no flow" condition (all valves and services are closed); flow pressure is the pressure in the fill line when the valve is opened during the cycle.

SHOCK ABSORBER	It is suggested that a shock absorber (not supplied) be installed on the incoming water
	line. This prevents water hammer (hydraulic shock)-induced by the solenoid valve
	as it operates—from causing damage to the equipment.

**CONNECTING THE** The drains for the models covered in this manual are gravity discharge drains. All piping DRAIN LINE to the machine must be 2" NPT and must not be reduced. There must also be an air-gap between the machine drain line and the floor sink or drain. If a grease trap is required by code, it should have a flow capacity of 5 GPM.

PLUMBING CHECK After installing the incoming fill line and drain line, slowly turn on the water supply to the machine. Check for any leaks and repair as required. All leaks must be repaired before operating the machine.

# **INSTRUCTIONS**

### ELECTRICAL POWER **CONNECTIONS**



Disconnect electrical power at the breaker or disconnect switch and tag-out in accordance with procedures and codes.



Electrical and grounding connections must comply with the applicable portions of the National Electrical Code ANSI/NFPA 70 (latest edition) and/or other electrical codes.

Disconnect electrical power supplies and place a tag at the disconnect switch to indicate that you are working on the circuit.

Refer to the data plate for machine operating requirements, machine voltage, total amperage load, and serial number.

The main power terminal blocks (for the dishmachine and for the rinse booster heater, if applicable) are located at the top of the machine. You will have to remove the top cover to access these connections. Route incoming power lines within conduit that will connect via fittings to the pre-punched holes in the back of the Control Box. Install power and ground wires to lugs as indicated by the appropriate decals in the control box. Use copper conductors only. Use of an anti-oxidation agent is permissible on the power connections. Tighten all connections.

Verify the incoming voltage matches the voltage indicated on the decal next to the incoming power pre-punched hole.

**NOTICE** NOTE: It is recommended that "DE-OX" or similar anti-oxidation agent be used on all power connections.

**VENTILATION** The dishmachine should be located with an adequate exhaust hood or ventilation system with provisions for venting. This is essential to permit efficient removal of the condensation exhaust. Ensure that the exhaust system complies with applicable codes and standards.

> Note: Any damage that is caused by steam and/or moisture due to improper ventilation is NOT covered under the warranty.

Dishmachine ventilation requirements: 200 CFM

The exhaust system must be sized to handle this volume for the dishmachine to operate properly.

**THERMOSTATS** The thermostats on this dishmachine have been set at the factory. They should only be adjusted by an authorized service agent.

# INSTRUCTIONS

### INSTALLATION

### VOLTAGE CHECK <sup>1.</sup>



- . Ensure that the power switch is in the OFF position and apply power to the dishmachine.
- 2. Check the incoming power at the terminal block and ensure it corresponds to the voltage listed on the data plate. If not, contact a qualified service agency to examine the problem.

**CAUTION:** Do not run the dishmachine if the voltage is too high or too low (refer to applicable electrical codes).

- 3. Shut off the service breaker and mark it as being for the dishmachine.
- 4. Advise all proper personnel of any problems and of the location of the service breaker. Replace the control box cover and tighten down the screws.

### PREPARING CHEMICAL FEEDER PUMPS FOR OPERATION



CAUTION! Chlorine-based sanitizers can be detrimental to this machine if the chemical solution is too strong. See a chemical professional to ensure the dispenser is set-up correctly.

These dishmachines are supplied with detergent, rinse-aid, and sanitizer chemical feeder pumps.

Locate the open ends of the chemical tubes with the tube stiffeners and place each one in the appropriate container.

- A. Red Tubing = Detergent B. Blue Tubing = Rinse-Aid
- C. White Tubing = Sanitizer

### **PRIMING CHEMICAL** C **FEEDER PUMPS**

Chemical feeder pumps need priming when the machine is first installed or if the chemical lines have been removed and air is allowed to enter.



CAUTION! Water must be in the sump and wash tank before chemicals are dispensed.

- 1. Verify that the proper chemical tube stiffener inlet is in the proper container.
- 2. Use the toggle switches on the front of the control box to prime each pump. There are three switches mounted by the peristaltic pumps. One will prime the detergent, the second will prime the rinse-aid, and the third will prime the sanitizer.
- 3. To prime the pumps, hold the switch in the momentary position until the chemical can be observed entering the sump.

### PRIMING CHEMICAL 4. FEEDER PUMPS



WARNING: Some of the chemicals used in dishwashing might cause chemical burns if they come in contact with skin. Wear protective gear when handling these chemicals. If any contact with skin occurs, immediately follow the treatment instructions provided with the chemicals. Detergent is dispensed as required by the timer during the wash cycle. The amount of detergent might need to be increased or decreased depending on water quality and type of detergent.









**INSTRUCTIONS** 

6. Sanitizer is dispensed into the final rinse. The amount of sanitizer might need to be adjusted depending on the concentration and type of sanitizer used.





7. Please refer to the next page for instructions on adjusting the chemical feeder pumps on the CAM timer.

# **OPERATION**

CAM 1 is a cut CAM with a single notch that serves as the cycle control.

CAM 2 is the reset CAM.

CAM 3 is a cut CAM that provides the wash cycle timing.

**CAM TIMER** The CAM timer is a 1-minute, 30-second, 8-CAM timer that controls the operation of the dishmachine. The following is a description of the setpoints for each CAM and the function of each switch.

> FUNCTION: When the machine is in the operation mode the notch is in the home position. The machine will remain idle until the door is opened, then CAM 1 moves to the start position and holds until the door is closed. The closing of the door will start the next cycle. The CAM will rotate a complete cycle and return to the home position and hold.

> FUNCTION: The wash CAM works off the normally-open contacts of CAM 3. This requires the microswitch be held closed by the CAM. It will close and energize the wash pump two seconds after the cycle switch is activated. The pump will operate through the wash cycle (40 seconds) then shut down for the dwell period (20 seconds). As the CAM rotates, it energizes the pump for the rinse cycle (25 seconds). When CAM 1 reaches its home position it will de-energize CAM 3, shutting down the wash pump.

NOTE: The last 5 CAMS are adjustable. The following instructions will require that the timer position have the CAMs to the front and the motor to the left.

CAM 4 is an adjustable CAM that controls the drain valve.

FUNCTION: The drain solenoid works off the normally-closed contacts of CAM 4. When the cycle is initiated, the microswitch will be held open until it is allowed to drop into the notch of the CAM. This energizes the drain solenoid which then drains the machine. After a 12-second delay, the CAM reverses the microswitch, de-energizing the drain solenoid. This CAM might require adjusting due to varying water pressure. The drain solenoid must remain open long enough to remove whatever water the fill valve solenoid allows in the machine. This could vary due to the water supply line pressure.

SETTINGS: The right side of CAM 4 must be set to pick up the microswitch just before the wash/rinse cycle CAM switch drops. It will hold the drain solenoid open to drain all the water in the tank from the unit during the dwell period. Any adjustment made to the drain should be made to the left side of CAM 4. The CAM must be moved back into the wash time until all of the water is drained from the machine.

CAM 5 is an adjustable CAM that controls the fill valve and the amount of water used.

FUNCTION: The fill valve CAM works off the normally-closed contacts of CAM 5. This requires the microswitch to be held open by the CAM and allowed to drop into the notch to operate the fill valve. This energizes the fill solenoid which opens to start filling the machine with fresh water. After a 10-second delay, the CAM reverses the microswitch, de-energizing the fill solenoid. The fill CAM might require adjustment due to varying water pressure. The fill solenoid must remain open a sufficient length of time to fill the machine to the correct level.

SETTINGS: The right side of CAM 5 must be set to allow the microswitch to drop 2 seconds before the drain solenoid is de-energized to ensure the detergent residue is flushed from the unit. It will hold the fill solenoid open until the CAM switch arm is raised. At that time the fill solenoid is de-energized, shutting off the incoming water. The tub will be filled to the correct level. Any adjustment made to the timing of the fill solenoid should be made with the left side of CAM 5. To increase the water level, open the notch of the CAM; to decrease, the notch should be closed.

# **INSTRUCTIONS**

# INSTRUCTIONS

CAM TIMER OPERATION	(Continued from previous page.)
CAM 6 is an adjustable CAM that controls the sanitizer pump.	FUNCTION: The sanitizer pump CAM works off the normally-closed contacts of CAM 6. This requires the microswitch to be held open by the CAM and allowed to drop into the notch to operate the pump. The time that the sanitizer pump will remain energized must be determined in the field to suit water conditions and the chemical used.
	SETTINGS: The left side of CAM 6 must be set to allow the microswitch to drop in past the starting point of the fill CAM and after the drain solenoid has closed. The adjustment for sanitizer volume must be made with the right side of the CAM. To increase the volume, open the notch of the CAM. To decrease, the notch should be closed slightly in increments until the correct level is reached.
CAM 7 is an adjustable CAM that controls the detergent pump.	FUNCTION: The detergent pump CAM works off the normally-closed contacts of CAM 7. This requires the microswitch to be held open by the CAM and allowed to drop into the notch to operate the pump. The time that the detergent pump will remain energized must be determined in the field to suit water conditions and the chemical used.
	SETTINGS: The left side of CAM 7 must be set to drop in past the starting point of the wash pump CAM. The adjustment for detergent volume must be made with the right side of the CAM. To increase the volume, open the notch of the CAM. To decrease, the notch should be closed slightly in increments until the correct level is reached.
CAM 8 is an adjustable CAM that controls the rinse-aid pump.	FUNCTION: The rinse-aid pump CAM works off the normally-closed contacts of CAM 8. This requires the microswitch to be held open by the CAM and allowed to drop into the notch to operate the pump. The time that the rinse-aid pump will remain energized must be determined in the field to suit water conditions and the chemical used.
	SETTINGS: The left side of CAM 8 must be set to drop in past the starting point of the fill CAM after the drain solenoid has closed. The adjustment for rinse-aid volume must be made with the right side of the CAM. To increase the volume, open the notch of the CAM. To decrease, the notch should be closed slightly in increments until the correct level is reached.

# XL-E FALSE PANEL INSTRUCTIONS



#### Insert this side first



Bottom of side panel

- 1. Remove the rack assembly from the dishmachine.
- 2. The false panel will mount inside of the dishmachine.
- 3. Position the panel in the dishmachine on the side to be closed.
- 4. Hold the panel against the side of the dishmachine and push upward.
- 5. The panel will clip in at the top, inside of the unit.
- 6. The holes in the false panel will line up with the rack assembly holes.
- 7. Reinstall the screws for the rack assembly which will secure
- 8. the false panel to the unit.
- 9. Reassemble the rack track in an "L" shape for a corner operation.

# XL HH FALSE PANEL INSTRUCTIONS



# **OPERATING INSTRUCTIONS**

### **PREPARATION** Before operating the unit, verify the following:

1. The sump strainer and pan strainer are in place and clean.



2. The drain stopper is installed.



3. The wash/rinse arms are installed and secure.



**POWER UP** To place the unit in standby, flip the "OFF/ON/FILL" switch to the ON position.

# WASH TUB

FILLING THE For the initial fill, close the door and depress and hold the "OFF/ON/FILL" switch in the FILL position for approximately 8-10 seconds. Open the door and verify that the water level is correct. Water must be between the two lines on the drain stopper. After this, the water level is controlled by the timer that has been preset at the factory. Verify that the drain stopper is preventing the wash tub water from pouring out excessively. There might be some slight leakage from the drain hole. Verify that there are no other leaks on the unit before proceeding any further. The wash tub must be completely filled before operating the wash pump to prevent damage to components. Once the wash tub is filled, the unit is ready for operation.

## **OPERATING INSTRUCTIONS**

<b>FIRST RACK</b>	The first rack of ware that you place into the unit can have the effect of quickly
_	reducing the temperature of the wash tank. This is because you are introducing
	cold materials into the dishmachine and the unit has to circulate water to activate
	the heating cycle. You might have to run the first rack through the unit again. Any
	time the unit has not been operated for an extended period of time this is possible,
	but unlikely. This is usually dependent on the type of ware you are using, its
	temperature, and the ambient temperature of the kitchen area. To ensure proper
	operation, always observe the temperatures of the wash and rinse when first
	starting the unit.

#### WARE Proper preparation of ware is essential for the smooth, efficient operation of your dishmachine. If done properly, you can expect to have fewer re-washes and use PREPARATION substantially less detergent. Any ware placed inside the machine should have all solid food waste and scraps removed. It is recommended that ware also be sprayed down before being placed in the dishmachine.

Place cups and glasses upside-down in racks so they don't hold water during the cycle. Presoak flatware in warm water to assist in removing food. Load plates and saucers in the same direction, with the food surface facing the unload end of the machine.

# **RACK OF WARE**

**WASHING A** To wash a rack, open the door completely (avoid hot water dripping from the doors) and slide the rack into the unit. Close the doors and the unit will start automatically. Once the cycle is completed, open the door (again careful of the dripping hot water) and remove the rack of clean ware. Replace with a rack of soiled ware and close the doors. The process then repeats itself.

# INSPECTION

**OPERATIONAL** Based upon usage, the pan strainer might become clogged with soil and debris as the workday progresses. Operators should regularly inspect the pan strainer to ensure it has not become clogged. If the strainer becomes clogged, it will reduce the washing capability of the machine. Instruct operators to clean out the pan strainer at regular intervals or as required by workload.

# **OPERATING INSTRUCTIONS**

### SHUTDOWN AND CLEANING

**SHUTDOWN** 1. Turn machine off by flipping the "OFF/ON/FILL" switch to the "OFF" position.

2. Open the door.



3. Remove the drain stopper and allow tub to drain (WARNING: Wash tank water will be hot).



4. Remove the sump strainer and pan strainer.



5. Use a hand-scraper to scrape foodsoil into a trash basket.



- 6. Rinse with pre-rinse hose and replace.
- 7. Unscrew the wash/rinse arms from their manifolds.





# **OPERATING INSTRUCTIONS**

### SHUTDOWN 8. AND CLEANING

Verify the nozzles and arms are free from obstruction. If clogged, remove endcaps, clean nozzles with a brush, and flush with fresh water.



9. Replace end-caps and ensure they have been tightened.



- 10. Spray or wipe out interior of machine.
- 11. Replace wash/rinse arms.



12. Ensure sump strainer and scrap screen are clean and securely in place.



13. Use stainless steel polish to clean and protect the outside of the dishmachine.

# **DELIMING INSTRUCTIONS**

**DELIMING** 1. Flip the "OFF/ON/FILL" switch to the "ON" position.



- Close door and hold the "OFF/ON/FILL" switch in the "FILL " position for approximately 8-10 seconds.
- 3. Water must be between two lines on drain stopper.



- 4. Add deliming solution per chemical supplier's instructions.
- 5. Close the door.
- 6. Flip the NORMAL/DELIME switch on the back of the control box to DELIME.



- 7. Run machine the period of time recommended by chemical supplier.
- 8. Wait five minutes, then inspect the inside of the machine. If the machine is not delimed, run again.
- 9. Flip the NORMAL/DELIME switch to NORMAL.
- 10. Run two cycles to remove residual deliming solution.
- 11. Drain and re-fill the machine.

This equipment is not recommended for use with deionized water or other aggressive fluids.



Use of deionized water or other aggressive fluids will result in corrosion and failure of materials and components.

Use of deionized water or other aggressive fluids will void the manufacturer's warranty.

### MAINTENANCE

# PREVENTATIVE MAINTENANCE

# MAINTENANCE

**PREVENTATIVE** The manufacturer highly recommends that any maintenance and repairs not specifically discussed in this manual be performed only by QUALIFIED SERVICE PERSONNEL. Performing maintenance on your dishmachine may void your warranty, lead to larger problems, or even cause harm to the operator. So if you have a question or concern, do not hesitate to contact a QUALIFIED SERVICE AGENCY.

> By following the operating and cleaning instructions in this manual, you should get the most efficient results from your machine. As a reminder, here are some steps to take to ensure that you are using the dishmachine the way it was designed to work:



- 1. Ensure that the water temperatures match those listed on the machine data plate. There can be a variety of reasons why your water temperature could be too low.
- 2. Ensure that all strainers are clean and secruely in place before operating the machine. When cleaning out strainers, do NOT beat them on waste cans. Wipe out strainers with a rag and rinse under a faucet if necessary. Use a toothpick to dislodge any stubborn debris.
- 3. Ensure that all wash/rinse arms are secure in the machine before operating.
- 4. Ensure that the drain stopper is in position before operating.
- 5. Remove as much soil from ware as possible before loading into racks.
- 6. Do not overfill racks.
- 7. Ensure that glasses are placed upside-down in the rack.
- 8. Ensure that all chemicals being injected into machine have been verified as being at the correct concentrations.
- 9. Clean out the machine at the end of every workday per the Shutdown and Cleaning section of this manual.
- 10. Follow all safety procedures, whether listed in this manual or put forth by local, state, or national codes/regulations.

# TROUBLESHOOTING

# COMMON PROBLEMS

PROBLEM	POSSIBLE CAUSE	REMEDY
Dishmachine will not run, no voltage at wash relay terminals L1 and T1	1. Service disconnect switch off or faulty.	1. Turn disconnect on.
	2. Branch circuit breaker tripped/fuse blown.	2. Reset or replace.
	3. Loose or broken connection to dishmachine.	3. Tighten or replace connections.
Machine will not run in "ON" position or in Delime mode.	1. Door switch is defective.	<ol> <li>With door open, check for voltage between ORANGE/WHITE door switch and neutral. If 120 V, replace the door switch.</li> </ol>
	2. Faulty OFF/ON/FILL switch.	2. With switch ON, check voltage between BLACK and WHITE/BLACK wires to switch. Replace the switch if 120 V.
	3. Faulty NORMAL/DELIME switch.	3. In the NORMAL position, check the voltage between WHITE/BLACK and WHITE/RED wires to switch. If 120 V, replace the switch.
Machine fills continuously even with no power	Water inlet solenoid valve allowing water into machine.	1. Check water pressure during fill, pressure must be 15 PSI.
		2. Repair or replace water inlet solenoid valve.
Dishmachine runs	1. Machine is in Delime mode.	1. Flip NORMAL/DELIME switch to NORMAL mode.
wash cycle.	2. Possible issue with CAM timer.	2. Contact the manufacturer.
Dishmachine will not	1. Faulty drain ball.	1. Replace drain ball.
	2. Obstructed drain hole.	2. Clear obstruction from drain.
	3. Drain linkage is binding.	3. Repair damaged drain mechanism parts.
Dishmachine will not fill,	1. Y-strainer clogged.	1. Clean strainer screen.
	2. Incoming water to unit is turned off.	2. Turn on water to the machine.
	3. Faulty OFF/ON/FILL switch.	3. Depress switch, measure between BLACK and WHITE/GREEN wires. If 120 V, replace switch.
	4. Faulty solenoid coil.	4. If coil has voltage but no continuity, replace solenoid.

# TROUBLESHOOTING

# COMMON PROBLEMS

PROBLEM	POSSIBLE CAUSE	REMEDY
Dishmachine fills slowly and/ or the rinse is weak.	1. Clogged or obstructed rinse arms.	1. Remove and clean the rinse arms.
	2. Low incoming water pressure.	2. Adjust the water pressure regulator to ensure that there is 15 PSI water flow pressure.
	3. Y-strainer is clogged.	3. Clean out the Y-strainer.
Doors will not close completely.	1. Improper spring tension.	<ol> <li>Adjust spring tension as required by loosening (not removing) spring bolt nuts and adjusting the tension. Tighten nuts when done.</li> </ol>
	2. Obstruction in door channel.	2. Remove the obstruction.
Water leaks at wash pump.	1. Wash pump seal is defective.	1. Replace wash pump seal.
	2. Petcock or pump drain leaking.	2. Close shut or tighten.
Ware is not coming clean.	1. Machine temperatures are not up to the minimum requirements.	1. Verify that incoming water temperature meets requirements listed on the machine data plate.
	2. No detergent/too much detergent.	2. Adjust detergent concentration as required for the amount of water held by the machine. (It is recommended the chemical supplier be contacted before making any changes.)

# XL-E CONTROL BOX



# XL-E CONTROL BOX

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Control Box Top	05700-003-81-49
2	1	Decal, Warning–Disconnect Power	09905-004-08-16
3	1	Upper Decal, XL-E	09905-004-00-07
4	2	Chemical Feeder Pump Assembly, 36 RPM	05700-003-78-74
5	1	Chemical Feeder Pump Assembly, 14 RPM	05700-003-31-86
7	18	Lock Nut, 10-24 SS Hex w/Nylon Insert	05310-373-01-00
8	1	Decal, Copper Conductors	09905-011-47-35
9	3	Light, Red	05945-504-07-18
10	1	Light, Green	05954-504-08-18
11	3	Switch, Prime	05930-011-49-54
12	6	Screw, 6-32 x 3/8" w/Washer	05305-002-25-91
13	6	P Clamp	05975-002-61-42
14	11	Lock Nut, 6-32 Hex w/Nylon Insert	05310-373-03-00
15	1	Gauge, Thermometer	06685-004-31-45
16	1	Cycle Counter, 115 V	05990-111-35-38
17	2	Screw, 4-40 x 1/4" Phillips Pan Head w/Washer	05305-002-32-38
18	1	Switch, Power	05930-111-38-79
19	1	Timer	05945-004-11-78
20	1	Lug, Ground	05940-200-76-00
21	1	Decal, Power Connection	09905-011-47-64
22	1	Terminal Block	05940-500-09-61
23	1	Terminal Board	05940-021-94-85
24	1	Contactor, 115 V, 30 A	05945-002-74-20
25	1	Bushing, Heyco Split	05975-200-40-00
26	2	Fitting, 1/2", 45-degree, Plastic	05975-011-45-23
27	1	Fitting, 1/2", Plastic	05975-011-45-13
28	1	Switch, Delime	05930-301-21-18
	1	Relay, Pole 115 V	05945-111-35-19
29	1	Relay, Pole 230 V	05945-111-47-51
	1	Lock, Control Box (Not Shown)	05340-102-01-00



# XL HH CONTROL BOX

ITEM	QTY	DESCRIPTION	PART NUMBER
		High Hood Control Box Complete Assembly	05700-004-25-41
1	1	Control Box Weldment	05700-003-81-49
2	3	Light, Red	05945-504-07-18
3	1	Light, Green	05945-504-08-18
4	1	Switch, Carling	05930-301-21-18
F	1	Counter, 115 V	05990-111-35-38
5	1	Counter, 230 V	05990-111-47-42
6	2	Screw, 4-40 x 1/4" Phillips Pan Head w/Washer	05305-002-32-38
7	1	Peri-pump, 14 RPM	05700-003-25-03
8	1	Block, Altech Terminal	05940-500-09-61
	1	Contactor, 115 V	05945-109-05-69
9	1	Contactor, 230 V	05945-002-74-20
10	1	Terminal Board	05940-021-94-85
11	1	Lug, Panduit Ground	05940-200-76-00
12	1	Spacer, Terminal Block	05700-011-40-05
13	18	Nut, Lock 10-24 SS Hex w/Nylon Insert	05310-373-01-00
14	11	Nut, Lock 6-32 Hex w/Nylon Insert	05310-373-03-00
15	1	Fitting, T&B 1/2" Plastic	05975-011-45-13
16	2	Fitting, T&B 1/2" 45-degree Plastic	05975-011-45-23
17	1	Decal, Copper Conductors	09905-011-47-35
18	1	Decal, Delime/Normal	09905-011-34-96
19	1	Grommet, 7/8" Split Helco	05975-200-40-00
20	1	Grommet, 1/2" OD x 0.38" ID	05325-011-46-73
21	1	Decal, Power Connection	09905-011-47-64
22	2	Peri-pump, 36 RPM	05700-003-25-02
23	1	Switch, Carling	05930-111-38-79
24	1	Lock, Control Box	05340-102-01-00
25	2	Switch, Pressure	06685-003-36-13
26	3	Switch, Prime	05930-011-49-54
27	1	Decal, Lower Control	09905-004-00-06
28	1	Bracket, Timer Mounting	05700-004-08-77
	1	Relay, Pole 115 V	05945-111-35-19
29	1	Relay, Pole 230 V	05945-111-47-51
30	1	Upper Decal	09905-004-30-01
31	2	Bracket, Pressure Switch	05700-004-08-99

# XL HH CONTROL BOX

ITEM	QTY	DESCRIPTION	PART NUMBER
32	1	Decal, Wash/Rinse	09905-002-82-46
33	6	P Clamp 1/4" ID	05975-002-61-42
34	1	Thermometer	06685-111-68-49
35	1	Timer	05945-004-11-78
36	1	Decal, Timer Cam Operation	09905-004-37-27
37	6	Screw, 6-32 x 3/8" SEMS w/Ext Wash	05305-002-25-91
38	1	Plug, 2643 1/3" Heyco Hole	04730-011-60-22
39	1	Label, Disconnect Power Warning	09905-004-08-16
40	1	Tag, Power Warning 115 V	09905-011-46-87

# CHEMICAL FEEDER PUMP COMPONENTS



Roller, Black 04320-111-65-27

# CHEMICAL FEEDER PUMP COMPONENTS

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Rear Housing	04320-111-37-09
2	1	Motor, 14 RPM 115 V Rinse-aid Feeder Pump	04320-111-35-13
		Motor, 14 RPM 240 V, Rinse-aid Feeder Pump	04320-111-47-46
	1	Motor, 36 RPM 115 V, Detergent/Sanitizer Feeder Pump	04320-111-35-14
		Motor, 36 RPM 240 V, Detergent/Sanitizer Feeder Pump	04320-111-47-47
3	2	Screw, 8-32 x 1/2" Phillips Flat Head	05305-011-37-06
4	1	Tube, 3/16" x 8" Clear Tygoprene	05700-003-22-89
5	1	Roller, White	04320-002-82-28
6	4	Screw, 6-32 x 3/4" Phillips Pan Head	05305-011-37-05
7	1	Front Housing	04320-111-37-08
8	4	Screw, 8-32 x 3/8" Flat Head	05305-011-37-07

# XL-E HOOD ASSEMBLY



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Control Box Assembly, 115 V	05700-004-01-65
	1	Control Box Assembly, 230 V	05700-004-16-66
2	1	Hood, Weldment	05700-004-08-68
3	10	Lock Nut, 1/4-20 w/Nylon Insert	05310-374-01-00
4	2	Hood Support	05700-002-78-99
5	6	Bolt, 1/4-20 x 1/2"	05305-274-02-00
6	12	Washer, SS 1/4"	05311-174-01-00
7	2	Bracket, Cantilever Support	09515-003-15-64
8	6	Wear Button	05700-011-88-01
9	1	Bracket, Plumbing Support	05700-003-24-25
10	1	Strainer, Inlet 1/2"	04730-217-01-10
11	2	Nipple, 1/2" x 2" (Brass)	04730-207-19-00
10	1	Solenoid Valve, 1/2", 115 V	04810-003-71-55
12	1	Solenoid Valve, 1/2", 230 V	04810-003-71-56
13	1	Elbow, 1/2" Street (Brass)	04730-206-08-00
14	1	Air-gap Weldment	05700-002-81-70
15	1	Gasket, Air-gap	05330-002-14-48
16	1	Reed Switch	05930-002-36-80
17	4	Spacer, Sleeve Hood	05700-003-55-15

# XL HH HOOD ASSEMBLY



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Control Box Assembly, 115 V	05700-004-25-41
	1	Control Box Assembly, 230 V	05700-004-30-24
2	1	Hood, Weldment	05700-004-24-96
3	10	Lock Nut, 1/4-20 w/Nylon Insert	05310-374-01-00
4	2	Hood Support	05700-004-13-45
5	6	Bolt, 1/4-20 x 1/2"	05305-274-02-00
6	12	Washer, SS 1/4"	05311-174-01-00
7	2	Bracket, Cantilever Support	09515-003-15-64
8	6	Wear Button	05700-011-88-01
9	1	Bracket, Plumbing Support	05700-003-24-25
10	1	Strainer, Inlet 1/2"	04730-217-01-10
11	2	Nipple, 1/2" x 2" (Brass)	04730-207-19-00
12	1	Solenoid Valve, 1/2", 120 V	04810-003-71-55
13	1	Elbow, 1/2" Street (Brass)	04730-206-08-00
14	1	Air-gap Weldment	05700-002-81-70
15	1	Gasket, Air-gap	05330-002-14-48
16	1	Reed Switch	05930-002-36-80
17	4	Spacer, Sleeve Hood	05700-003-55-15

# XL-E DOOR ASSEMBLY



# XL-E DOOR ASSEMBLY

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Arm, Cantilever	05700-031-50-67
2	2	Spring Pin, 1/4" Dia. x 1 1/8"	05315-407-06-00
3	2	Yoke Assembly	05700-000-75-77
3a	1	Cotter Pin	05315-207-01-00
3b	1	Yoke	05700-000-75-78
3c	1	Clevis Pin	05315-700-01-00
3d	2	Nylon Washer	05311-369-03-00
3e	1	Bushing	03120-100-03-00
3f	2	Lock Nut, 3/8-16 SS (Not Shown)	05310-256-04-00
4	2	Rod, Spring Universal	05700-003-67-39
5	2	Spring, Cantilever	05340-109-02-00
6	2	Bolt, Hanger Eye 3/8-16	05306-956-05-00
7	2	Washer, 3/8" ID x 7/8" OD	05311-176-02-00
8	4	Nut, Hex 3/8-16 SS	05310-276-01-00
9	2	Cantilever Arm Connector	05700-011-90-99
10	2	Screw, 1/4-20	05305-274-23-00
11	2	Washer, 1/4" ID SS	05311-174-01-00
12	2	Lock Nut, 1/4-20 SS w/Nylon Insert	05310-374-02-00
13	2	Sleeve, Cantilever Arm	05700-000-85-69
14	2	Plug, Cantilever	05340-011-35-00
15	1	Door Magnet	06401-004-07-73
16	2	Lock Nut, 8-32 SS w/Nylon Insert	05310-272-02-00
17	1	Door Assembly, Right Side	05700-004-14-11
18	6	Door Guides	05700-111-33-59
19	10	Bolt, 1/4-20 x 1/2" SS	05305-274-02-00
20	2	Spacer, PB Bolt	05700-000-29-40
21	8	Lock Nut, 1/4-20 w/Nylon Insert	05310-374-01-00
22	2	Bracket, Door Connecting	05700-021-33-39
23	1	Front Door Assembly	05700-002-30-89
24	1	Door Assembly, Left Side	05700-004-14-10

# XL HH DOOR ASSEMBLY



# XL HH DOOR ASSEMBLY

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Door, Front Outer	05700-004-14-21
2	1	Door, Left Outer	05700-004-14-19
3	1	Door, Right Outer	05700-004-14-17
4	2	Bracket, Door Connecting	05700-004-14-23
5	1	Handle, Door Front	05700-004-14-30
6	2	Plug, Cantilever	05340-011-35-00
7	22	Washer, S/S 1/4-20 ID	05311-174-01-00
8	12	Locknut, 1/4-20 Low Profile w/Nylon	05310-374-02-00
9	16	Bolt, 1/4-20 x 1/2 Long	05305-274-02-00
10	1	Door Stop	05700-002-00-84
11	2	Bumper, HH Door	05700-004-14-25
12	10	Nut, Lock 1/4-20 Hex w/Nylon Insert	05310-374-01-00
13	1	Magnet, Door Stop Assembly	05700-002-25-08
14	4	Screw, 1/4-20 x 5/8"	05305-002-20-30
15	2	Connecting Link	05700-021-92-45
16	2	Spacer, PB Bolt	05700-000-29-40
17	2	Cantilever Arm Bracket	05700-003-88-91
18	1	Cantilever Arm	05700-004-14-32
19	2	Sleeve, Cantilever Hang Eye	05700-000-85-69
20	2	Bolt, Cantilever Hang Eye	05306-956-05-00
21	4	Nut, Hex 3/8-16 SS	05310-276-01-00
22	2	Washer, Impeller 3/8"	05311-176-02-00
23	4	Plate, Spring Mutiplier	05700-002-00-88
24	2	Spring Link	05700-002-00-91
25	4	Spring, Catilever Door	05340-111-35-22
26	3	Door Upper	05700-002-01-30
27	2	Yoke Assembly	05700-000-75-77
27a	1	Cotter Pin	05315-207-01-00
27b	1	Yoke	05700-000-75-78
27c	1	Clevis Pin	05315-700-01-00
27d	2	Nylon Washer	05311-369-03-00
27e	1	Bushing	03120-100-03-00
N/A	2	Lock Nut, 3/8-16 SS (Not Shown)	05310-256-04-00
N/A	2	Lower Door Glide (Not Shown)	05700-002-23-64
N/A	2	Upper Door Glide (Not Shown)	05700-002-00-83

# WASH ARM ASSEMBLY



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Bearing Assembly	05700-021-35-97
2	1	O-ring, 117-S70 Silicon	05330-002-60-69
3	2	Wash Arm End-cap	05700-011-35-92
4	1	Wash Arm	05700-003-57-70

# WASH MANIFOLD ASSEMBLY



ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	Bolt, 3/8-16 x 3/8" SS	05306-011-36-95
2	1	Casting, Upper Wash Manifold	05700-031-34-82
3	4	3/8" Lockwasher, SS	05311-276-01-00
4	4	3/8" Hex Nut, SS	05310-276-01-00
5	2	Bolt, 3/8-16 x 1 1/4" SS	05305-276-10-00
6	1	Lower Wash Manifold	05700-003-78-40
7	1	Gasket, Wash Manifold	05700-111-35-03
8	2	3/8" Bevel, Square	05311-011-35-36
9	2	O-ring	05330-111-35-15
10	1	Wash Manifold Tube	05700-003-58-89
10A	1	Wash Manifold Tube High Hood (Not Shown)	05700-004-25-71



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Tub Assembly, XL-E	05700-003-78-39
	1	Tub Assembly, XL HH	05700-004-27-28
2	1	Rack Guide Assembly	05700-031-36-76
3	1	Bulkhead Fitting, 1/2"	04730-011-45-21
4	1	Clamp, Nylon	04730-011-39-01
	1	Lock Nut, 10-24 SS	05310-373-01-00
5	1	Wash Arm Assembly	05700-003-59-35
6	4	Bolt, 1/4-20 x 1/2" SS	05305-274-02-00
	4	Lock Nut, 1/4-20 SS	05310-374-01-00
7	4	Bolt, 1/4-20 x 1 1/8" SS	05305-274-21-00
	4	Lock Nut, 1/4-20 SS	05310-374-01-00
8	1	Lower Wash Manifold	05700-003-78-40



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Pump and Motor Assembly	06105-004-24-80
2	1	Pump Drain Hose	05700-004-08-52
3	2	Clamp, 7/16" to 25/32"	04730-011-36-05
4	1	Clamp, 5 5/8" to 6"	04730-011-34-90
5	1	Sump Weldment	05700-003-78-41
6	1	Sump Gasket	05330-003-78-31
7	9	Lock Nut, 1/4-20 S/S	05310-374-01-00
	1	Drain Solenoid, 115 V (Not Shown)	04810-200-11-00
	1	Drain Solenoid, 230 V (Not Shown)	04810-111-87-74
	1	Drain Link Connector (Not Shown)	05700-002-38-10



# PUMP & MOTOR ASSEMBLY

Complete Pump and Motor Assembly 06105-004-24-80



04730-719-18-00 (2 required)



# MISCELLANEOUS PARTS



SCHEMATICS

## 115 V, 60 HZ, 1-PHASE



### SCHEMATICS

### 208 V, 50/60 HZ, 1-PHASE





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