# **TECHNICAL MANUAL**

**ELECTRICALLY HEATED MODELS:** 

CREW 44

CREW 66 ENERGY STAR

STEAM HEATED MODELS:

CREW 44S CREW 66S



#### MANUFACTURERS WARRANTY

#### ONE YEAR LIMITED PARTS & 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 applicable factory instruction manual furnished with the machine and failure is reported to the 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 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, pressure regulators, 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 authorized persons, improper installation, if serial number has been removed or altered, or if unit is used for 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 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 days from date of installation or 180 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 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 THE 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 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 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 Letter	Revision Date	Made By	Applicable ECNs	Details
Α	07-27-10	CW/JC	N/A	Initial release of manual.
В	02-25-11	JC	8183 8186 8187 8177	Transformer change for 208V units. Drain handle operation & alignment change. Door splash shield addition. Rinse paddle switch operation. Initial release of 66" units, 44" Steam units & 66" Steam units.
С	06-30-11	JC	N/A	Initial release of 23" & 30" unhooded side loaders.
D	03-28-13	JC	N/A	Changed Jackson logo.
E	08-12-13	BG	8271	Added door magnet cover.
F	01-31-14	МНН		Added Blower/Dryer option. Updated control box. Updated schematics.
G	10-27-14	KAP	QOF-386	Added new Vent Shield P/N 05700-004-18-73 on pg. 54
Н	03-02-15	KAP	N/A	Updated P/N for item #10 on pg. 55.
J	03-10-15	KAP	N/A	Updated P/N for item #4 on pg. 71
K	04-17-15	KAP	N/A	Updated Rinse Assembly Drawing on pg. 41
L	05-26-15	KAP	N/A	Combined PLC 1 & 2 under part # 06401-004-13-59



CREW 44 CREW 66

Chemical sanitizing rack conveyer machine

CREW 44S CREW 66S

Steam cleaning rack conveyer machine

Model:	
Serial No.:	
Installation Date:	
Service Rep. Name:	
Phone Number:	

Jackson WWS, INC provides 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 that our staff can refer you, if necessary, to the proper page. Technical support is not available on holidays. Contact technical support toll free at 1-888-800-5672. Please remember that technical support is available for service personnel only.

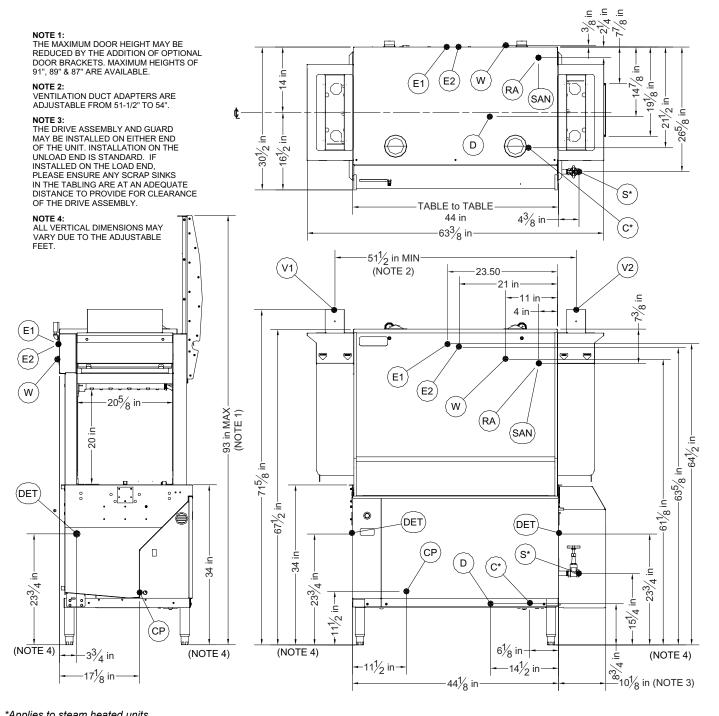
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## MACHINE DIMENSIONS, 44"

#### 44" LEFT TO RIGHT



<sup>\*</sup>Applies to steam heated units

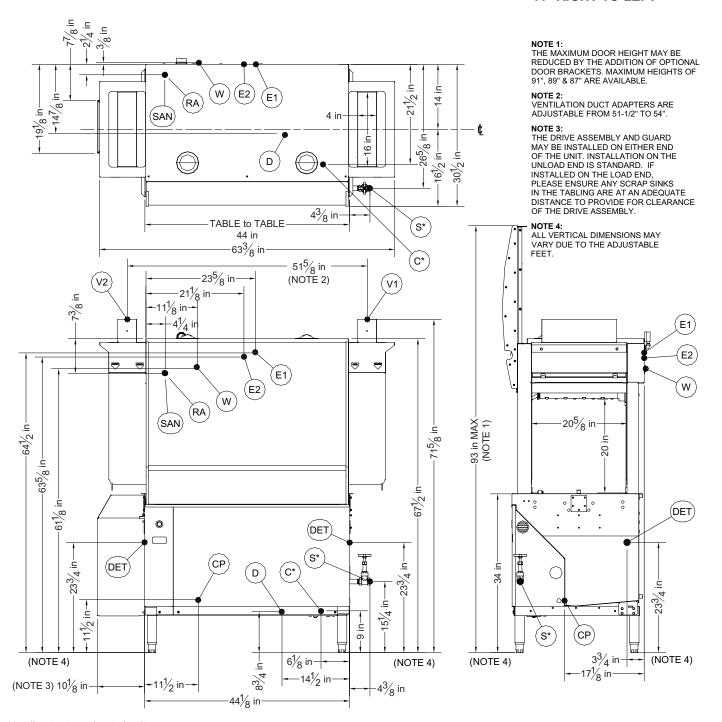
<sup>\*\*</sup> Chemical sanitizing units only

E1	MAIN ELECTRICAL CONNECTION (1.375" DIA HOLE)
E2	BOOSTER HEATER ELECT. CONNECTION (1.375" DIA)
W	MAIN INLET WATER CONNECTION (1/2 NPT-F)
D	DRAIN CONNECTION (1-1/2" NPT-F)
DET	DETERGENT BULKHEAD ACCESS (.875" DIA HOLE)
SAN**	SANITIZER INLET TO RINSE (1/8" NPT-F)

RA	RINSE AID CONNECTION TO RINSE (1/8" NPT-F)
СР	CONDUCTIVITY PROBE ACCESS (.875" DIA HOLE)
S*	STEAM TO WASH TUB HEATING COIL (3/4" NPT-F)
C*	CONDENSATE RETURN (3/4" NPT-F)
VI	VENTILATION DUCT CONN. (LOAD END) 4" x 16" ID
V2	VENTILATION DUCT CONN. (UNLOAD END) 4" x 16" ID

1

#### 44" RIGHT TO LEFT



<sup>\*</sup>Applies to steam heated units

<sup>\*\*</sup> Chemical sanitizing units only

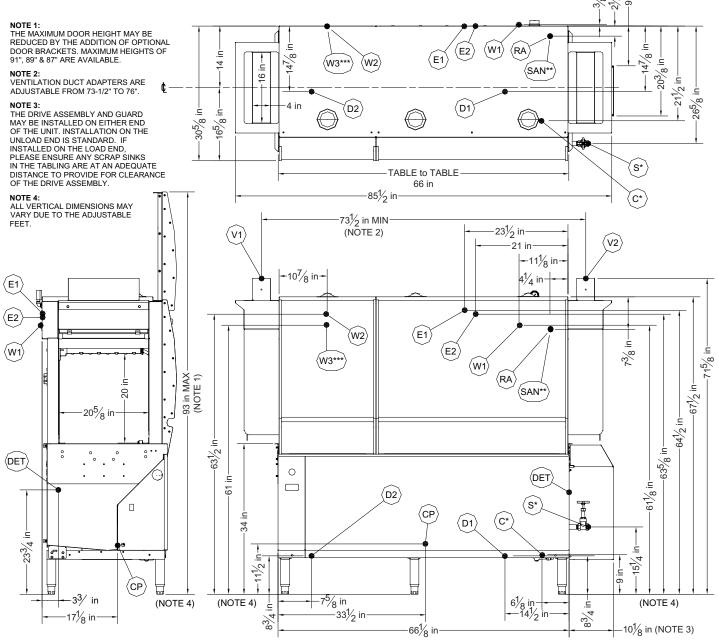
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RA	RINSE AID CONNECTION TO RINSE (1/8" NPT-F)
СР	CONDUCTIVITY PROBE ACCESS (.875" DIA HOLE)
S*	STEAM TO WASH TUB HEATING COIL (3/4" NPT-F)
C*	CONDENSATE RETURN (3/4" NPT-F)
VI	VENTILATION DUCT CONN. (LOAD END) 4" x 16" ID
V2	VENTILATION DUCT CONN. (UNLOAD END) 4" x 16" ID

## SPECIFICATIONS -

## MACHINE DIMENSIONS, 66"

#### **66" LEFT TO RIGHT**

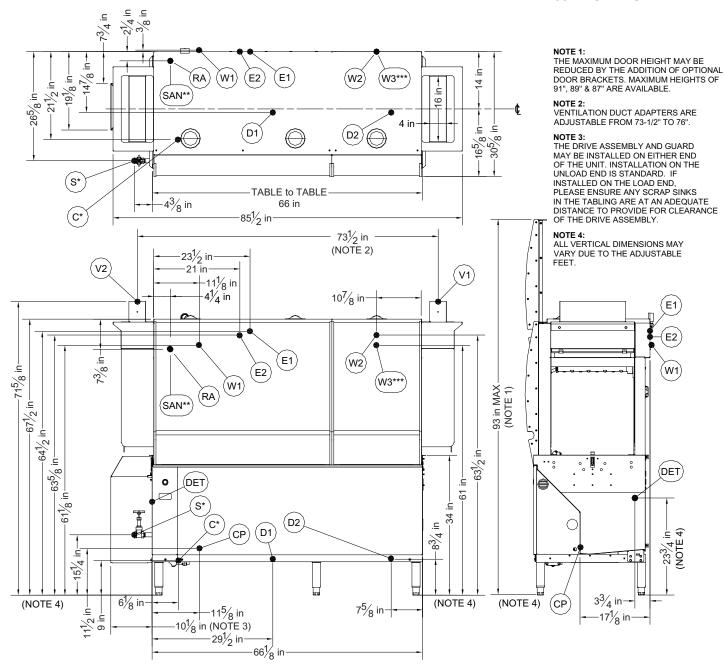


- \*Applies to steam heated units
- \*\* Chemical sanitizing units only
- \*\*\* Pre-wash cold water thermostat option only

E1	MAIN ELECTRICAL CONNECTION (1.375" DIA HOLE)
E2	BOOSTER HEATER ELECT. CONNECTION (1.375" DIA)
W1	MAIN INLET WATER CONNECTION (1/2 NPT-F)
W2	PRE-WASH INLET WATER CONN. (1/2 NPT-F)
W3***	PRE-WASH COLD WATER CONN. (1/2 NPT-F)
D1	DRAIN CONNECTION, WASH (1-1/2" NPT-F)
D2	DRAIN CONNECTION, PRE-WASH (1-1/2" NPT-F)
DET	DETERGENT BULKHEAD ACCESS (.875" DIA HOLE)

SAN**	SANITIZER INLET TO RINSE (1/8" NPT-F)
RA	RINSE AID CONNECTION TO RINSE (1/8" NPT-F)
СР	CONDUCTIVITY PROBE ACCESS (.875" DIA HOLE)
S*	STEAM TO WASH TUB HEATING COIL (3/4" NPT-F)
C*	CONDENSATE RETURN (3/4" NPT-F)
VI	VENTILATION DUCT CONN. (LOAD END) 4" x 16" ID
V2	VENTILATION DUCT CONN. (UNLOAD END) 4" x 16" ID

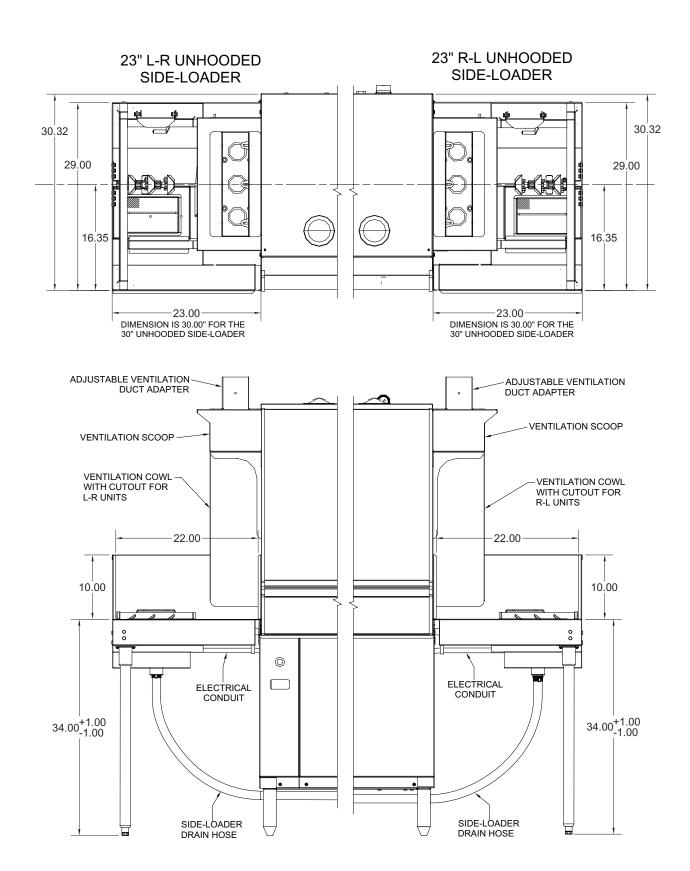
#### 66" RIGHT TO LEFT



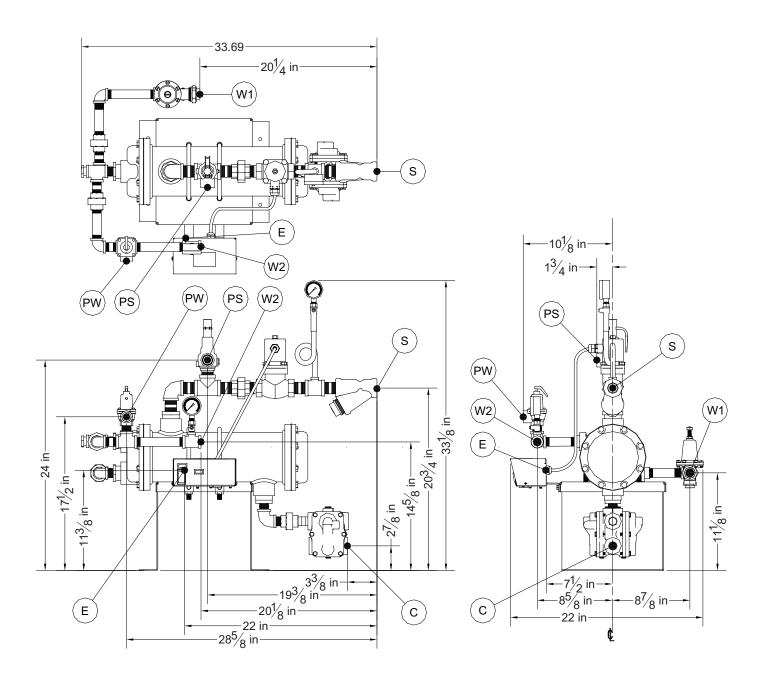
- \*Applies to steam heated units
- \*\* Chemical sanitizing units only
- \*\*\* Pre-wash cold water thermostat option only

E1	MAIN ELECTRICAL CONNECTION (1.375" DIA HOLE)
E2	BOOSTER HEATER ELECT. CONNECTION (1.375" DIA)
W1	MAIN INLET WATER CONNECTION (1/2 NPT-F)
W2	PRE-WASH INLET WATER CONN. (1/2 NPT-F)
W3***	PRE-WASH COLD WATER CONN. (1/2 NPT-F)
D1	DRAIN CONNECTION, WASH (1-1/2" NPT-F)
D2	DRAIN CONNECTION, PRE-WASH (1-1/2" NPT-F)
DET	DETERGENT BULKHEAD ACCESS (.875" DIA HOLE)

SAN**	SANITIZER INLET TO RINSE (1/8" NPT-F)
RA	RINSE AID CONNECTION TO RINSE (1/8" NPT-F)
СР	CONDUCTIVITY PROBE ACCESS (.875" DIA HOLE)
S*	STEAM TO WASH TUB HEATING COIL (3/4" NPT-F)
C*	CONDENSATE RETURN (3/4" NPT-F)
VI	VENTILATION DUCT CONN. (LOAD END) 4" x 16" ID
V2	VENTILATION DUCT CONN. (UNLOAD END) 4" x 16" ID



# STEAM BOOSTER HEATER DIMENSIONS

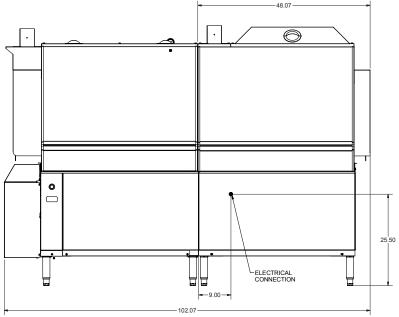


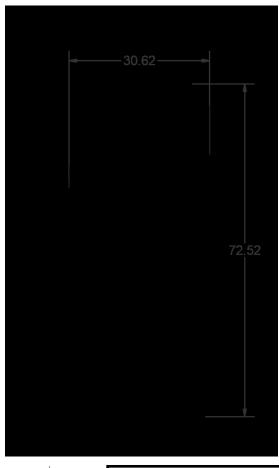
E	MAIN ELECTRICAL CONNECTION (7/8" DIA HOLE)
W1	MAIN INLET WATER CONNECTION (3/4" NPT-F)
W2	WATER OUTLET CONNECTION (3/4" NPT-F)
PW	WATER PRESSURE RELIEF OUTLET (3/4" NPT-F)

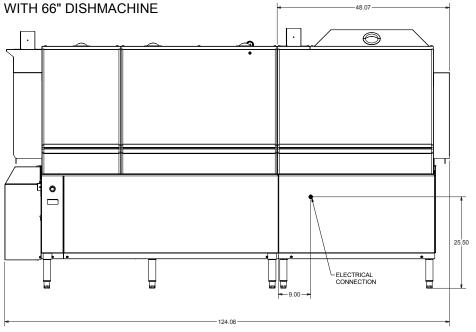
PS	STEAM PRESSURE RELIEF OUTLET (1" NPT-F)					
S	STEAM SUPPLY TO BOOSTER (1" NPT-F)					
С	STEAM CONDENSATE CONNECTION (3/4" NPT-F)					

# **BLOWER/DRYER OPTION: MACHINE DIMENSIONS**

#### WITH 44" DISHMACHINE







Machine Dimensions:								
Height	72.5"							
Width	48"							
Depth	30.625"							
Wall Clearance:	5'							
Height	19.75"							
Width	21"							
Shipping Weight:	750lbs.							
Shipping Size:								
Length	77"							
Depth	41"							
Height	89"							

Model Designation:	44"	66"	44" STEAM	66" STEAM
Operating Capacity:				
Racks per Hour	218	218	218	218
Dishes per Hour	3488	3488	3488	3488
Glasses per Hour	7848	7848	7848	7848
Tank Capacity (Gallons):				
Wash Tank	35.6	35.6	35.6	35.6
Pre-Wash Tank	N/A	15.8	N/A	15.8
Electrical Loads (as applicable):				
Wash Motor HP	3.0	3.0	3.0	3.0
Drive Motor HP	0.25	0.25	0.25	0.25
Pre-Wash Motor HP	N/A	2.0	N/A	2.0
Wash Heater kW	15 or 18	18	N/A	N/A

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.

# SPECIFICATIONS \_\_\_\_

**OPERATING PARAMETERS** 

Model Designation:	44"	66"	44" STEAM	66" STEAM
HOT WATER SANITIZING				
Water Temperatures (Fahrenheit):				
Pre-Wash Temperature (recommended)	N/A	110-140	N/A	110-140
Minimum Wash Temperature	160	160	160	160
Incoming Rinse Temperature	180	180	180	180
Incoming Water Temperature				
12kW Booster	140	140	N/A	N/A
18kW Booster	110	110	N/A	N/A
No Booster	180	180	180	180
CHEMICAL SANITIZING				
Water Temperatures (Fahrenheit):				
Pre-Wash Temperature (recommended)	N/A	110-140	N/A	110-140
Minimum Wash Temperature	120	120	120	120
Minimum Rinse Temperature	120	120	120	120
Incoming Water Temperature				
12kW Booster	80	80	N/A	N/A
18kW Booster	50	50	N/A	N/A
No Booster	120	120	120	120
Other Water Requirements:				
Water Flow Pressure (PSIG)	15	12	15	15
Flow Rate Minimum (GPM)	1.27	1.18	1.27	1.18
Water Line Size (NPT)	1/2"	1/2"	1/2"	1/2"
Drain Line Size (NPT)	1-1/2"	1-1/2"	1-1/2"	1-1/2"
Steam Requirements:				
Steam Line for Wash Tank (NPT)	N/A	N/A	3/4"	3/4"
Steam Flow Pressure (PSIG)	N/A	N/A	10-20	10-20
Consumption @ 15 PSIG (lbm/hr)	N/A	N/A	60	60

#### ELECTRICAL REQUIREMENTS

All electrical ratings provided in this manual are for reference only. Always refer to the machine data plate to get the exact electrical information for this machine. <u>All electrical work performed on machines should be done in accordance with applicable local, state, territorial and national codes</u>. Work should only be performed by qualified electricians and authorized service agents. A list of authorized Service Agencies is located in the back of this manual.

Note that all electrical wiring used in the dishmachine must be rated, at a minimum, for 100C (212F). Furthermore, use copper conductors only.

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

If the machine is equipped with the optional rinse heater, note the rinse heater has its own electrical connection and therefore requires a separate service. Amperage loads for motors and heaters are called out on the machine data plate for the installation/service technician.

The electrical configurations of the machines are as follows:

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

- 208 volt, 60 Hz, single phase
- 230 volt, 60 Hz, single phase
- 208 volt, 60Hz, three phase
- 230 volt, 60 Hz, three phase
- 460 volt, 60 Hz, three phase

#### **Available Wash Tank Heaters:**

- 15kW (standard for CREW 44)
- 18kW (optional for CREW 44, standard for CREW 66)

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

- None (standard)
- 12kW (40F rise in temperature)
- 18kW (70F rise in temperature)

# SPECIFICATIONS \_\_\_\_\_

# **ELECTRICAL REQUIREMENTS**

## 44" with 15kW Wash Heater

Volts	Phase	Freq	Wash Motor Amps	Drive Motor Amps	Wash Heater Amps	FLA	MCA	МОР
208	1	60	10.0	1.8	72.1	83.9	86.4	96.4
230	1	60	10.0	1.8	*59.9	71.7	74.2	84.2
240	1	60	10.0	1.8	62.5	74.3	76.8	86.8
208	3	60	8.6	1.1	41.6	51.3	53.5	62.1
230	3	60	8.4	1.1	*34.6	44.1	46.2	54.6
240	3	60	8.4	1.1	36.1	45.6	47.7	56.1
460	3	60	4.2	0.6	**17.3	22.1	23.2	27.4
480	3	60	4.2	0.6	18.1	22.9	24.0	28.2

#### 44" with 18kW Wash Heater

Volts	Phase	Freq	Wash Motor Amps	Drive Motor Amps	Wash Heater Amps	FLA	MCA	МОР
208	1	60	10.0	1.8	86.5	98.3	100.8	110.8
230	1	60	10.0	1.8	*71.9	83.7	86.2	96.2
240	1	60	10.0	1.8	75.0	86.8	89.3	99.3
208	3	60	8.6	1.1	50.0	59.7	61.9	70.5
230	3	60	8.4	1.1	*41.5	51.0	53.1	61.5
240	3	60	8.4	1.1	43.4	52.9	55.0	63.4
460	3	60	4.2	0.6	**20.8	25.6	26.7	30.9
480	3	60	4.2	0.6	21.7	26.5	27.6	31.8

#### 44" Steam

Volts	Phase	Freq	Wash Motor Amps	Drive Motor Amps	FLA	MCA	МОР
208	1	60	10.0	1.8	11.8	14.3	24.3
230	1	60	10.0	1.8	11.8	14.3	24.3
208	3	60	8.6	1.1	9.7	11.9	20.5
230	3	60	8.4	1.1	9.5	11.6	20.0
460	3	60	4.2	0.6	4.8	5.9	10.1

<sup>\*</sup> Denotes 240 volt heating elements that have been down-rated when 230 volts is applied.

<sup>\*\*</sup> Denotes 480 volt heating elements that have been down-rated when 460 volts is applied.

#### 66" with 18kW Wash Heater

Volts	Phase	Freq	Pre-Wash Motor Amps	Wash Motor Amps	Drive Motor Amps	Wash Heater Amps	FLA	MCA	МОР
208	1	60	10.2	10.0	1.8	86.5	108.5	111.1	121.3
230	1	60	9.4	10.0	1.8	*71.9	93.1	95.6	105.6
240	1	60	9.4	10.0	1.8	75.0	96.2	98.7	108.7
208	3	60	6.8	8.6	1.1	50.0	66.5	68.7	77.3
230	3	60	6.4	8.4	1.1	*41.5	57.47	59.5	67.9
240	3	60	6.4	8.4	1.1	43.4	59.3	61.4	69.8
460	3	60	3.2	4.2	0.6	**20.8	28.8	29.9	34.1
480	3	60	3.2	4.2	0.6	21.7	29.7	30.8	35.0

#### 66" Steam

Volts	Phase	Freq	Pre-Wash Motor Amps	Wash Motor Amps	Drive Motor Amps	FLA	MCA	МОР
208	1	60	10.2	10.0	1.8	22.0	24.6	34.8
230	1	60	9.4	10.0	1.8	21.2	23.7	33.7
208	3	60	6.8	8.6	1.1	16.5	18.7	27.3
230	3	60	6.4	8.4	1.1	15.9	18.0	26.4
460	3	60	3.2	4.2	0.6	8.0	9.1	13.3

<sup>\*</sup> Denotes 240 volt heating elements that have been down-rated when 230 volts is applied.

#### 40°F Rise - 12kW Booster

Volts	Phase	Freq	Rinse Heater Amps	FLA
208	1	60	57.7	57.7
230	1	60	47.9	47.9
208	3	60	33.3	33.3
230	3	60	27.7	27.7
460	3	60	13.8	13.8

Note: On the 208 volt machines, the rinse heater is actually rated at 17.2kW.

#### **Blower/Dryer**

VOLTS	PHASE	FREQ	AMPS
208	3	60	32.2
230	3	60	22.9
460	3	60	13.4

#### 40°F Rise - 12kW Booster

Volts	Phase	Freq	Rinse Heater Amps	FLA
208	1	60	82.7	82.7
230	1	60	71.9	71.9
208	3	60	47.7	47.7
230	3	60	41.5	41.5
460	3	60	20.7	20.7

<sup>\*\*</sup> Denotes 480 volt heating elements that have been down-rated when 460 volts is applied.

#### INSTALLATION -

#### **INSTRUCTIONS**

VISUAL INSPECTION: Before installing the unit, check the container and the machine for damage. A damaged container may be an indication there is possible damage to the product. If there is any type of damage to both the container and the unit, DO NOT THROW AWAY THE CONTAINER. The dishmachine has been previously inspected at the factory and is expected to arrive in new, undamaged condition. However, rough handling by carriers or others may result in damage to the unit while it is in transit. If such a situation occurs, 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. Request that an inspection report be completed. Contact the carrier within 48 hours of receiving the machine in order to report possible freight damage and the dealer from whom the unit was purchased.

<u>UNPACKING THE MACHINE</u>: The machine should be unboxed and removed from the pallet prior to installing. Remove the wooden lift beams and their associated brackets after the unit has been positioned. Open the front door and remove all of the materials from the inside. Once unpacked, verify there are no missing parts. If a part is missing, contact the manufacturer immediately.

**LEVEL THE DISHMACHINE**: The dishmachine is designed to operate while level. This is important to prevent any damage to the machine during operation and to ensure the best results possible. The unit comes equipped with adjustable bullet feet, which can be turned using a pair of pliers. Verify the unit is level from front to back and side to side prior to making any electrical or plumbing connections.

<u>PLUMBING THE MACHINE</u>: All plumbing connections must be made to adhere to local, state, territorial and national codes. The installing plumber is responsible for ensuring the incoming water lines are flushed of debris prior to connecting to the machine. Note that chips and materials from cutting processes can become lodged in the solenoid valves and prevent them from opening or closing. Any valves that are found to be fouled or defective because of foreign matter left in the water line, and any subsequent water damage, are not the responsibility of the manufacturer.

Water hardness should be a maximum of 6 grains per gallon. Hard water should be treated prior to being used by the machine. Iron in the water line can cause staining. A filter designed to remove iron from the water supply is highly recommended for supplies in excess of 0.1 ppm.

This dishmachine comes with a Water Pressure Regulating Valve. The unit utilizes a flow pressure of 15 PSI for the incoming water line. Do not confuse static pressure with flow pressure. Static pressure occurs when there is no flow and the valves are closed. Flow pressure occurs when water is running into the machine. The WPRV should be adjusted to the proper flow pressure at a minimum.

The water supply line shall be 1/2" NPT minimum and must be able to provide water at the minimum temperature indicated on the machine data plate.

It is recommended that a shut-off valve be installed to allow isolating the dishmachine from the water system in the event that maintenance or other activities are required. Also, it is suggested that a shock absorber (**not supplied** with dishmachine) 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 DRAIN LINE**: The drain for the unit is a gravity discharge drain. All piping to the machine drain must be a minimum 1-1/2" NPT AND SHALL 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 gallons. 44" units have one drain connection point, 66" units have two.

**STEAM LINE CONNECTIONS:** Some machines covered in this manual are designed to use low pressure steam as a source of heat for the wash tank. Those machines come with lines by which an outside source of steam (i.e. steam booster) is connected. Connect all steam lines from the booster to the machine in accordance with the booster manufacturer's instructions. Ensure that all applicable codes and regulations are adhered to. See the machine data plate for information related to steam flow requirements.

**ELECTRICAL POWER CONNECTIONS**: All electrical connections are to be made in accordance with applicable portions of local, state, territorial and national codes.

# <u>DISCONNECT ELECTRICAL POWER SUPPLIES AND TAG OUT IN ACCORDANCE WITH APPROPRIATE PROCEDURES</u> AND CODES AT THE DISCONNECT SWITCH TO INDICATE THE CIRCUIT IS BEING SERVICED.

This manual provides reference information regarding electrical requirements and loads, but that information may change without notice. Always refer to the machine data plate for voltage requirements, machine voltage, total amperage load and serial number. If a data plate has been damaged and cannot be read, contact the manufacturer.

The main power terminal blocks (for the dishmachine and for the rinse booster heater, if applicable) are located at the top of the machine. 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.

Please note the dishmachine has a separate power connection from the rinse booster heater and the circuit protection requirements are different for each. Refer to the machine data plate for information on minimum circuit protection.

<u>DISHMACHINE VENTILATION</u>: The dishmachine should be located into an adequate exhaust hood or ventilation system with provisions for venting. This is essential to permit efficient removal of the condensation exhaust. Ensure the exhaust system is acceptable in accordance 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.

The dishmachine has the following ventilation requirements:

Load End: 200 CFMUnload End: 200 CFM

The exhaust system must be sized to handle this volume for the dishmachine to operate in the manner it was designed.

# INSTALLATION .

#### **INSTRUCTIONS**

**THERMOSTATS**: The thermostats on this unit have been set at the factory for the wash tank and should only be adjusted by an authorized service agent.

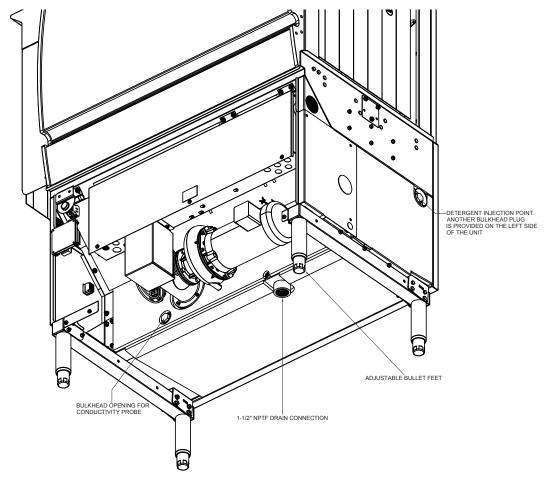
<u>CHEMICAL FEEDER EQUIPMENT</u>: This dishmachine DOES NOT COME WITH AN INTEGRAL CHEMICAL SUPPLY/ FEEDER SYSTEM. Connect the unit to a third party chemical dispenser that meets the requirements of NSF Standard 29 for the machine to operate correctly.

Contact a chemical supplier about connecting a dispenser to the dishmachine. Chemical dispensers must be set for the type and concentration of chemicals being used.

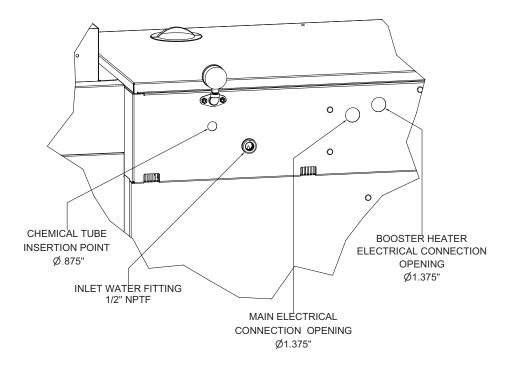
Detergent usage and water hardness are two factors that contribute greatly to how efficiently the dishmachine will operate. Using the proper amount of detergent can be a source of substantial savings. A qualified water treatment specialist can explain what is needed to gain the maximum efficiency from detergent.

The dishmachine can operate in either hot water sanitizing mode or chemical sanitizing mode. The mode of the machine is marked above the machine's data plate.

If the unit is operated in chemical sanitizing mode, ensure an appropriate chlorine-based sanitizer is used in the final rinse line.

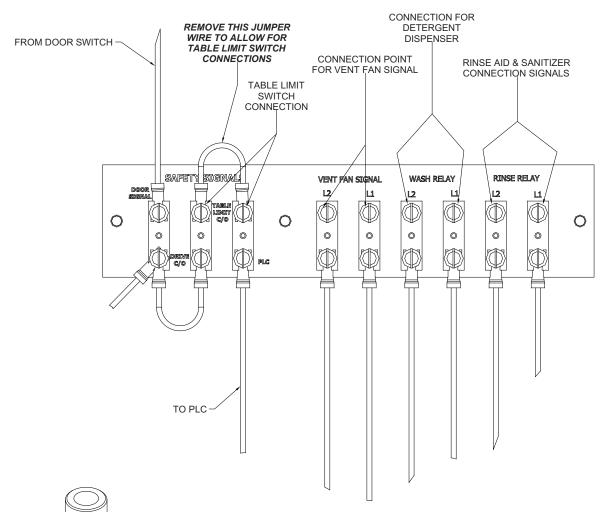


SHOWN FROM REAR OF **LEFT TO RIGHT** UNIT. RIGHT TO LEFT UNIT IS MIRRORED



# ELECTRICAL CONNECTION POINTS FOR TABLE LIMIT SWITCH, VENTILATION FAN SIGNAL & CHEMICAL DISPENSING SYSTEMS

SIGNAL BOARD IS LOCATED IN THE MAIN CONTROL BOX BEHIND THE LOWER DRESS PANEL



CHEMICAL DISPENSER TUBE CONNECTION POINTS TO RINSE INJECTOR

P: PRESSURE SWITCH (1/4" NPT)

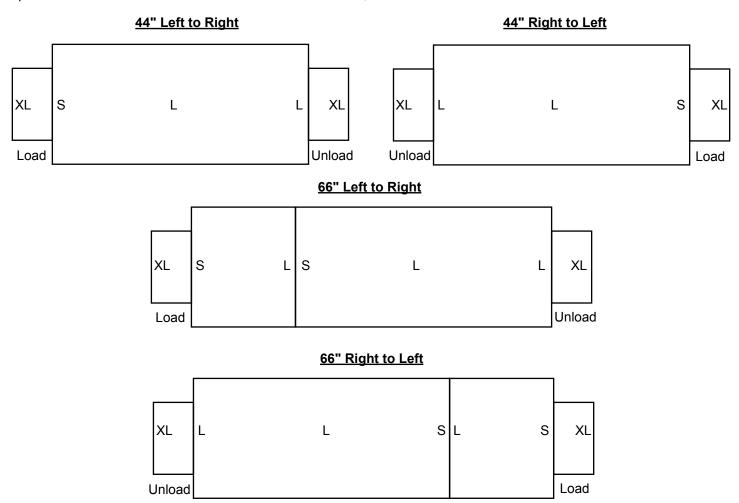
S: SANITIZER (1/8" NPT)

R: RINSE AID (1/8" NPT)

P

The unit will have decals marking the locations for the placement of curtains inside the machine, starting at the load end and ending at the unload end. The illustrations below indicate the size of the curtain to be placed on the curtain hooks provided. If any curtain components are missing, these must be obtained and installed in order for the unit to work correctly. Curtains are used to control air currents inside the unit and assist in maintaining the heat necessary to keep energy costs down.

**<u>DETERMINING CONVEYER DIRECTION</u>**: The dishmachine will be configured for either Left to Right or Right to Left operation. Direction is from the Load End to the Unload End, as shown below.



**IMPORTANCE OF PROPER CURTAIN PLACEMENT:** The curtains inside the dishmachine must be installed properly for the machine to operate correctly. Note the approximate locations for each type of curtain in the above illustrations. **S=Short, L=Long & XL=Extra Long.** See the chart below for actual curtain lengths and part numbers. Note the XL Curtain and Curtain Rod difference for the Load End when a side-loader option is present.

Legend Length		Part #
S	S 12" 08415-131-73	
L 19"		08415-002-14-41
XL 24.25"		08415-002-47-37
Curtain Rod 20.50"		05700-003-77-52

Side-Loader Option	Length	Part #
XL (Load End Only)	24.25""	08415-003-84-88
Curtain Rod (Load End Only)		05700-003-84-57

#### INSTALLATION ———

#### OPERATING INSTRUCTIONS

**PREPARATION:** Before proceeding with the start-up of the unit, verify the following:

- The drain stopper is installed.
- The strainers are installed.
- The pawl bar is installed and secure.
- The actuator switches move with relative freedom and do not bind.
- The curtains are installed correctly.

**POWER UP:** To place the unit in standby, press the START button on the front of the machine.

- The unit will automatically determine if there is proper water level in the wash tank. If not, the unit will begin to fill until the appropriate level is reached.
- If the wash tank temperature is not at the minimum level for the mode of operation, the wash heater will energize.

  Refer to the machine data plate for a better understanding of the minimum temperatures needed to operate the unit correctly. It may take several minutes for the wash tank to heat up, depending on the initial temperature of the water.
- If the machine is equipped with a rinse booster option, the booster will turn on when the unit turns on.
- If the machine is heated with a steam booster, the steam booster must be turned on in accordance with the manufacturer's instructions.
- Do not attempt to start the unit until:
  - 1. The unit stops filling. 2. The unit has reached the appropriate wash tank temperature.

**FIRST RACK**: The first rack of ware that is placed into the unit will typically reduce the temperature of the wash tank, and the first rack may need to run through the unit again. This process may be necessary any time the unit has not been operated for an extended period of time, although this is dependent on the type of ware being used, 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.

<u>WARE PREPARATION</u>: Proper preparation of ware is essential for the smooth, efficient operation of this dishmachine. Any ware placed inside the machine should have all solid food waste and scraps removed. It is recommended that ware also be sprayed down prior to entry into the dishmachine.

Place cups and glasses upside down in racks so they do not 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.

**WASHING A RACK OF WARE:** This dishmachine is designed to wash ware that is placed in a rack. Materials should not be placed inside the unit unless they are properly secured into a dish rack.

To start the cycle, gently push the rack into the unit on the load end. Once the wash actuator has moved sufficiently, the unit will automatically begin to convey the dish rack through the unit. The entire cycle is automatic.

<u>OPERATIONAL INSPECTIONS</u>: It is recommended that operators periodically review the following items while the machine is operating. All of these items are important to operating the machine in an efficient manner.

- Review wash and rinse temperatures and compare to the minimums required by the data plate. Low temperatures
  can be an indication of a faulty thermostat, a thermostat that needs adjustment or some other condition that needs
  to be addressed.
- Verify the pan strainers are not becoming clogged. Keeping these free of soil and debris allows for much better flow of water through the machine and prevents any sort of redeposit issues.
- Water pressure: The dishmachine is designed to run at a minimum of 15 PSIG; if it is any lower there will not be enough rinse water to properly remove detergent from the ware.
- Wash and rinse arm nozzles should be free of debris. Open nozzles are essential to the operation of the dishmachine.

**SHUTDOWN:** To shut the unit down, press the START button on the front of the machine. To drain the machine, open the front door and pull up on the drain release inside the unit. If the machine is equipped with a steam booster, shut it down in accordance with its manufacturer's instructions.

**CLEANING**: It is recommended that the unit be cleaned at least once every 24 hours or at the end of the day. Cleaning assists in maintaining the efficient operation of the unit by removing soil and debris that might otherwise become trapped in nozzles or deposited onto ware.

- Curtains should be removed and scrubbed with mild detergent and a brush and allowed to air dry.
- Strainers should be removed and debris scooped out. Do not hit strainers to remove debris; this can cause them to warp and not seat correctly. Rinsing the strainer under water should remove the rest of any debris trapped in the part.
- Wash arms can be removed using a 7/16" driver, however the dishmachine is designed so that the wash arms are self-cleaning. Operators have the ability to flush the arms by removing the plastic end caps and running a rack through the unit. This should only be done as a cleaning function with an empty rack and a tub that is filled with water.
- The internal chamber can be cleaned with a mild detergent and dishrag. The strainers and the pawl bar should be removed to provide as much room as possible.
- The outside of the unit should be cleaned with a standard countertop or general cleaner. Do not attempt to clean inside any compartments, boxes or chambers that are secured with a cover. These normally contain live electrical components.
- DO NOT CLEAN THE UNIT WITH ANY TYPE OF METALLIC SCRUBBING SPONGE.

#### INSTALLATION ——

#### **DELIME INSTRUCTIONS**

To proceed with the delime operation, fill the dishmachine with the correct amount of delime solution as recommended by the manufacturer of the chemicals. The tank capacities of the machine can be found in the Specifications section of this manual.

After the chemicals are added, perform the following steps:

- 1. Flip the NORMAL/DELIME switch to DELIME.
- 2. Disconnect or turn off chemical feeder pumps.
- 3. Close all doors.
- 4. Press the START button and run the machine for the length of time required by the chemical solution manufacturer.
- 5. Press the START button to shut the unit off.
- 6. Open the door and step away for 5 minutes.
- 7. Inspect the inside of the unit to determine if expectations have been met. If not, try running the delime solution through the unit for more time.
- 8. Once clean, drain the machine completely.
- 9. Close the door.
- 10. Refill the unit.
- 11. Press the START button and run the unit in Manual for 10 minutes.
- 12. Press the START button to turn off the unit.
- 13. Open the front door.
- 14. Drain the unit.
- 15. Flip the NORMAL/DELIME switch to NORMAL.
- 16. The machine is ready to use.

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.

PLC TROUBLESHOOTING: Green LED lights are illuminated on the PLC when in operation. The POWER, OK & RUN lights indicate that 24VDC power is available to the PLC and that is functioning properly. If the RUN light is out, first check that the RUN toggle switch located behind the snap cover panel of the PLC is in the RUN position. If the switch is in the RUN position, it is possible that the operational program of the PLC is corrupted or lost. Temporary power surges may have occurred. Secure all power to the machine, wait for 30 seconds and restore power. Verify that the green light is illuminated to the 24VDC power supply immediately to the left of the PLC. If

the RUN light is still off, replace the PLC.

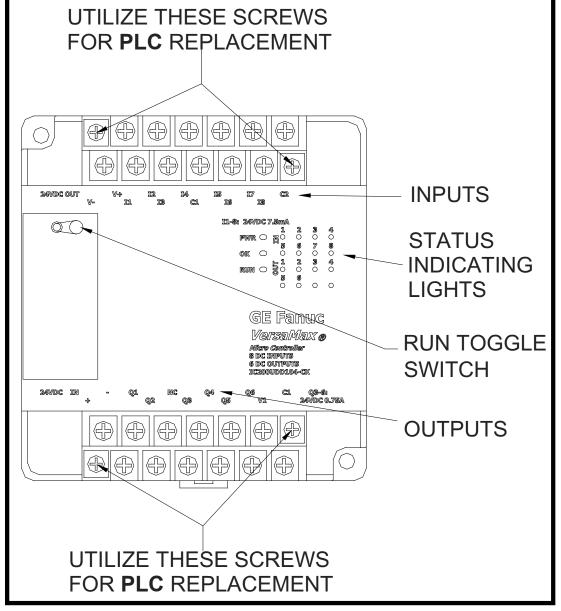
Refer to the illustration below for the designation of each LED. PLC1 is used for the 44" Electric & Steam units. An expansion PLC (PLC2) is used in conjunction with PLC1 for 66" Electric & Steam units. Inputs correspond to the connections behind the top flip-up panel of the PLC and are marked I1 through I8. Outputs correspond to the connections behind the bottom flip-up panel of the PLC and are marked Q1 thru Q8.

Note: All outputs are fused. Q1 & Q2 outputs for both PLC's utilize 1.0 Amp fuses and Q3-Q8 outputs utilize 0.75 Amp

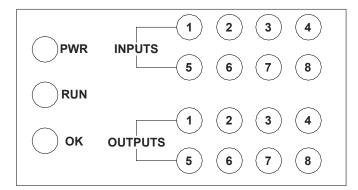
the LED lights on the front of each PLC will show the input from and the outputs to various components as illustrated here. LED's that

fuses. When illuminated,

various components as illustrated here. LED's that illuminate on PLC2 that are marked "NOT USED" have no bearing on the operation of the current warewashers.



PLC1
LIGHT CONFIGURATION



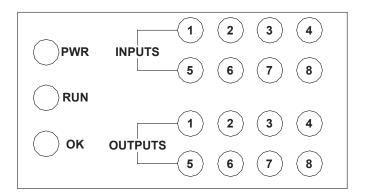
#### **INPUTS:**

- 1. On/Off Switch
- 2. Door Switch Safety Interlocks
- 3. Rack Inlet Switch
- 4. Final Rinse Switch
- 5. Lower Wash Float Switch
- 6. Upper Wash Float Switch
- 7. Manual/Delime Switch
- 8. Side-Loader Switch (on with no rack present)

#### **OUTPUTS:**

- 1. Rinse Solenoid/Rinse Signal Relay
- 2. Wash Tank Fill Solenoid
- 3. Drive Motor Contactor
- 4. Wash Motor Contactor
- 5. Wash Heater Contactor or Steam Heat Relay
- 6. Ventilation Fan Relay
- 7. N/A
- 8. N/A

# PLC2 LIGHT CONFIGURATION

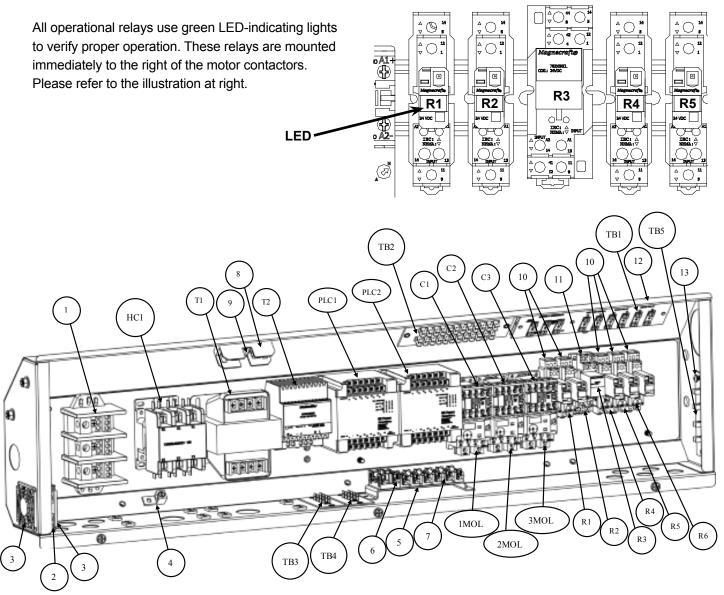


#### **INPUTS:**

- 1. Lower Pre-Wash Float Switch (66 Units Only)
- 2. Upper Pre-Wash Float Switch (66 Units Only)
- 3. N/A
- 4. N/A
- 5. N/A
- 6. N/A
- 7. N/A
- 8. N/A

#### **OUTPUTS:**

- 1. Pre-Wash Tank Fill Solenoid (66 Units Only)
- 2. Pre-Wash Motor Contactor (66 Units Only)
- 3. N/A
- 4. N/A
- 5. N/A
- 6. N/A
- 7. N/A
- 8. N/A



The illustration above depicts the components of a 66" electrically heated unit with the booster heater option. Component quantities and part numbers may vary for different units. Please refer to the notes within the parts list on the next page to verify that the required part number is correct.

ITEM	QTY	DESCRIPTION	PART NUMBER
PLC1	1	PLC, 24VDC (Programmed for 44" Units) (Programmed for 44" Units with Blower/Dryer)	05945-003-92-50 05945-004-10-84
T1	1	Transformer 208 to 120VAC (208V Units) Transformer 230/460 to 120VAC	05950-011-75-59 05950-011-68-35
T2	1	Power Supply 24VDC	05950-003-76-32
PLC 1 & 2	1	(Programmed for 66" Units)	06401-004-13-59
PLC 1 & 2	1	(Programmed for 66" Units with Blower/Dryer)	06401-004-13-61

# CONTROL BOX COMPONENTS

ITEM	QTY	DESCRIPTION	PART NUMBER
HC1	1	Contactor, 24VDC, 3 Pole (Used on 3-Phase Units) Contactor, 24VDC, 4 Pole (Used on 1-Phase Units)	05945-003-75-02 05945-003-73-22
C1	1	Contactor, Drive Motor	05945-003-75-22
C2	1	Contactor, Wash Pump	05945-003-75-22
C3	1	Contactor, Pre-Wash Motor (66" Units Only)	05945-003-75-22
R1	1	Relay, Vent Fan	05945-003-76-34
R2	1	Relay, Rinse Signal	05945-003-76-34
R3	1	Relay, Temperature Board	05945-003-79-57
R4	1	Relay, Booster Heater (Optional)	05945-003-76-34
R5	1	Relay, Wash Tank Steam (Steam Units Only)	05945-003-76-34
R6	1	Relay, Photo Cell Table Limit (Optional)	05945-003-76-34
1MOL	1	Overload, Drive Motor (Used on 3-Phase Units)	See Overload Page
2MOL	1	Overload, Wash Motor (Used on 3-Phase Units)	See Overload Page
3MOL	1	Overload, Pre-Wash Motor (Used on 3-Phase 66" Units)	See Overload Page
TB1	1	Terminal Board, Signal	05940-003-77-43
TB2	1	Terminal Board, DC	05940-003-77-65
TB3	1	Terminal Board, L1	05940-021-94-85
TB4	1	Terminal Board, L2	05940-021-94-85
TB5	1	Terminal Board, Blower	05940-021-70-74
1	1	Terminal Block 3 Pole	05940-011-48-27
2	1	Fan, 24VDC	05999-002-47-12
3	2	Fan Finger Guard	05999-003-12-92
4	1	Ground Lug	05940-200-76-00
5	1	Bracket, Fuse Strip	05700-002-42-03
6	1	Fuse Holder	05920-401-03-14
7	1	Fuse Holder, 6 Slot	05920-002-42-13
8	1	Holder, Bussman Fuse	05920-011-72-89
9	1	Fuse, 1.0 Amp (208V & 230V Units) Fuse, 0.5 Amp (460V Units)	05920-002-67-23 05920-011-72-88
10	5	Relay Socket, 20A, 300V (Used for R1, R2, R4, R5 & R6)	05945-003-76-33
11	1	Relay Socket, 16A, 300V (Used for R3)	05945-003-79-58
12	1	Control Box Weldment (44" Units) Control Box Weldment (66" Units)	05700-003-82-04
13	2	Screw, 10-32 x 1/2" Phillips Pan Head w/Washer	05305-002-32-37

**WASH MOTORS**: Overloads are specified for 3-phase units only.

For GE brand MT03\* series overloads, the process for setting is as follows:

- Determine the Full Load Amps for the wash motor.
- Set the overload at the closest setting without going over for the FLA of the motor.
- The overload already compensates for the FLA and will have a set point that is 125% of the FLA. (Example: Wash motor is rated at 10.0 FLA on the data plate. The replacement MT03\* overload will be set at 10.0. It will trip at 12.5 Amps.)

WASH MOTOR VOLTAGE	PART NUMBER	GE PART NUMBER
208	05945-003-76-29	MT03N
230	05945-003-76-29	MT03N
460	05945-003-76-27	MT03L

Blue selector switch should be set to H for manual reset.

**DRIVE MOTORS**: Overloads are specified for 3-phase units only.

For GE brand MT03\* series overloads, the process for setting is as follows:

- Determine the Full Load Amps for the drive motor.
- Set the overload at the closest setting without going over for the FLA of the motor.
- The overload already compensates for the FLA and will have a set point that is 125% of the FLA. (Example: Drive motor is rated at 1.0 FLA on the data plate. The replacement MT03\* overload will be set at 1.0. It will trip at 1.25 Amps.)

DRIVE MOTOR VOLTAGE	PART NUMBER	GE PART NUMBER
208	05945-003-76-23	MT03F
230	05945-003-76-23	MT03F
460	05945-003-76-21	MT03D

Blue selector switch should be set to H for manual reset.

PRE-WASH MOTORS: Overloads are specified for 3-phase units only.

For GE brand MT03\* series overloads, the process for setting is as follows:

- Determine the Full Load Amps for the pre-wash motor.
- Set the overload at the closest setting without going over for the FLA of the motor.
- The overload already compensates for the FLA and will have a set point that is 125% of the FLA. (Example: Pre-wash motor is rated at 6.0 FLA on the data plate. The replacement MT03\* overload will be set at 6.0. It will trip at 7.5 Amps.)

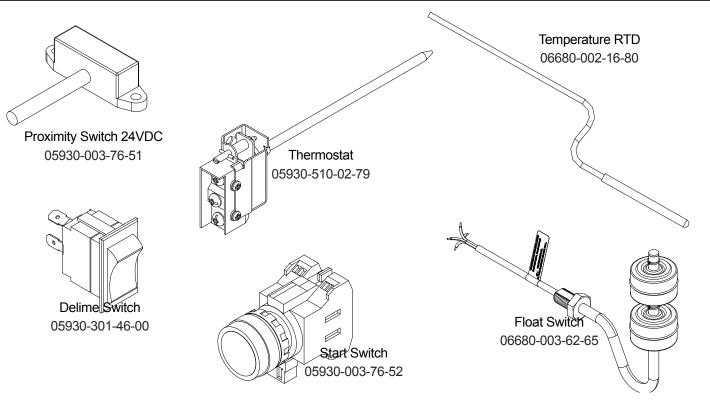
PRE-WASH MOTOR VOLTAGE	PART NUMBER	GE PART NUMBER
208	05945-003-76-28	MT03M
230	05945-003-76-28	MT03M
460	05945-003-76-26	MT03K

Blue selector switch should be set to H for manual reset.

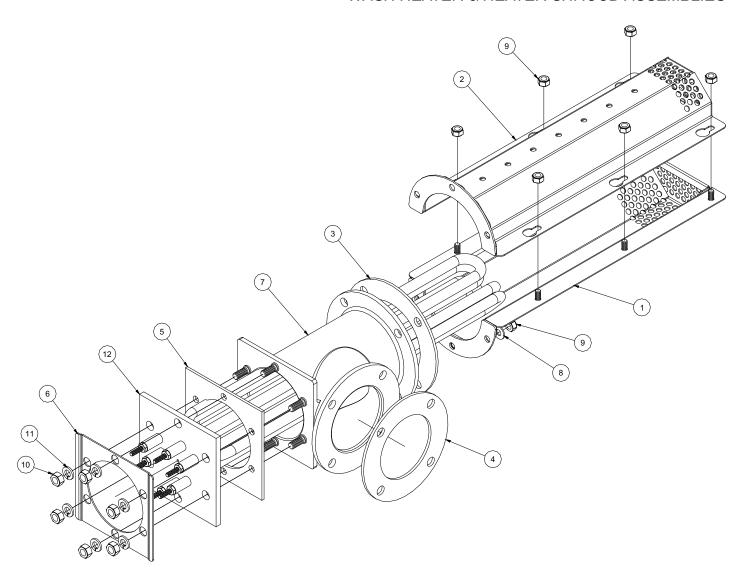
NOTE: Connections should be tightened to 7 in.-lbs.

# MISCELLANEOUS ELECTRICAL COMPONENTS

DESCRIPTION	PART NUMBER
Fitting, 1", 90 Degree Hub (2 per 44" Units; 1 per 66" Units)	05975-003-77-44
Fitting, 1" Straight Hub (1 per 66" Units)	05975-003-88-01
Fitting, 3/4" STR QT	05975-003-77-46
Fitting, 3/4" 90 Degree QT	05975-003-77-45
Fitting, 1/2" NPT 90 Degree	05975-003-35-32
Fitting, 1/2" NPT STR	05975-003-33-27
Fitting, .231 x .394	05975-011-49-03
Clamp, 1" Conduit	05975-003-77-88
Clamp, 3/4" Conduit	05975-003-77-89
Plug, 2.5" Hole, Louvered	05975-003-77-39
Plug	05975-011-47-81
Plug	05975-002-29-94
Plug	05340-044-46-79
Plug	05975-011-59-49
Bushing	05975-003-10-46
Grommet, 1.250 OD x 1.000 ID	05975-111-58-01
Grommet, 7/8" Split	05975-200-40-00



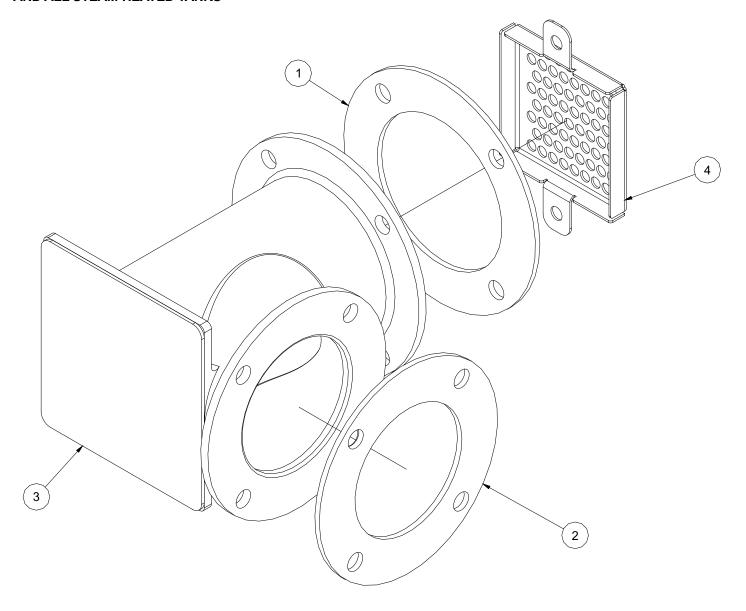
# WASH HEATER & HEATER SHROUD ASSEMBLIES



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Heater Shroud Weldment Lower	05700-003-74-21
2	1	Heater Shroud Weldment Upper	05700-003-74-24
3	1	Gasket, Suction Casting	05330-003-75-89
4	1	Gasket, Pump Suction	05330-003-75-87
5	1	Gasket, Heater	05330-200-02-70
6	1	Heater Box Rails	05700-003-74-72
7	1	Wash Pump Suction Weldment	05700-003-77-63
8	2	Washer, S/S	05311-174-01-00
9	9	Locknut, 1/4"-20 Hex w/Nylon Insert	05310-374-01-00
10	6	Nut, Hex 5/16"-18 S/S	05310-275-01-00
11	6	Lockwasher, 5/16" Split S/S	05310-275-01-00
12	1	Wash Heating Element, 15kW/18kW	See Heater Chart

# PUMP SUCTION ASSEMBLY

# USED ON ALL PRE-WASH TANKS AND ALL STEAM-HEATED TANKS



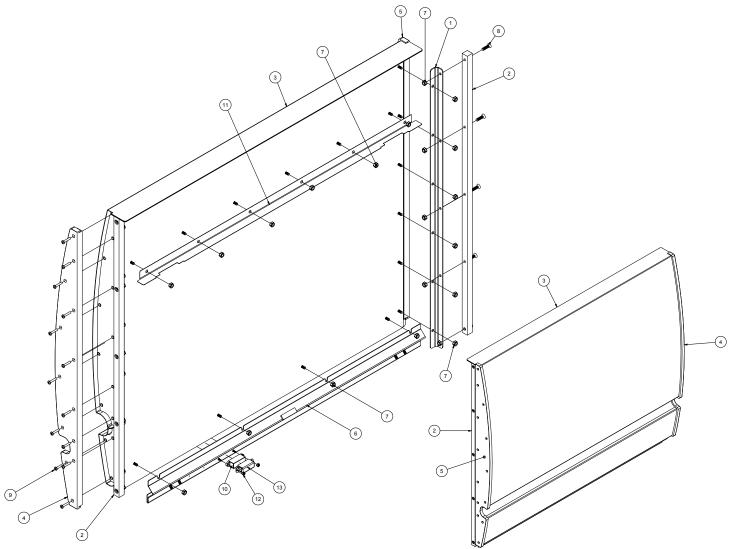
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Gasket, Suction Casting	05330-003-75-89
2	1	Gasket, Pump Suction	05330-003-75-87
3	1	Pre-Wash Pump Suction Weldment	05700-003-82-27
4	1	Strainer, Pre-Wash Pump	05700-003-81-28

VOLTAGE	PHASE	KW	PART NUMBER	CONTACTOR
208	1	15	04540-121-68-45	05945-003-73-22
230	1	15	04540-121-68-46	05945-003-73-22
208	3	15	04540-121-68-45	05945-003-75-02
230	3	15	04540-121-68-46	05945-003-75-02
460	3	15	04540-121-68-47	05940-003-75-02
208	1	18	04540-121-79-30	05945-003-73-22
230	1	18	04540-121-79-31	05945-003-73-22
208	3	18	04540-121-79-30	05945-003-75-02
230	3	18	04540-121-79-31	05945-003-75-02
460	3	18	04540-121-79-32	05945-003-75-02

**SERVICE NOTES:** When replacing wash heaters it is highly recommended to change the gasket also. Once installed, gaskets become compressed and are subject to extreme temperature changes. Replacing the gasket with the heater may prevent future leaks.

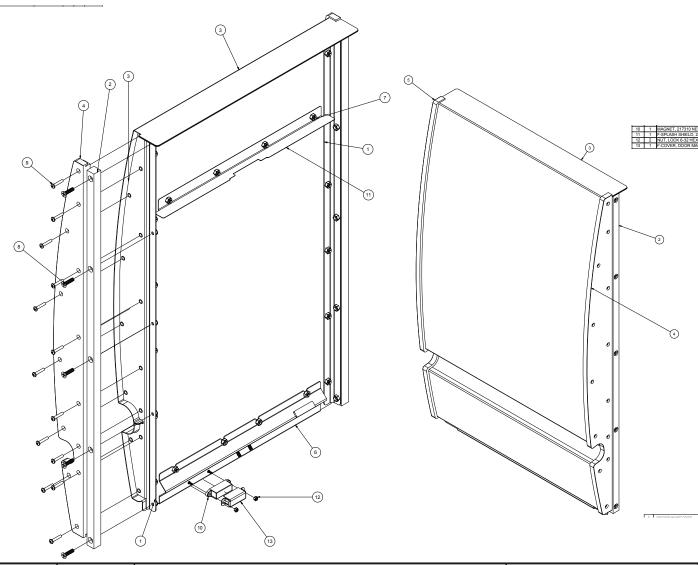
The nuts used to secure the heater to the casting should be torque to 16 in.-lbs. After tightening, the unit should be allowed to heat up and operate normally for approximately 30 minutes. Secure power to the machine and check the nuts once more to verify they are torque to 16 in.-lbs.

# DOOR ASSEMBLY, 44"



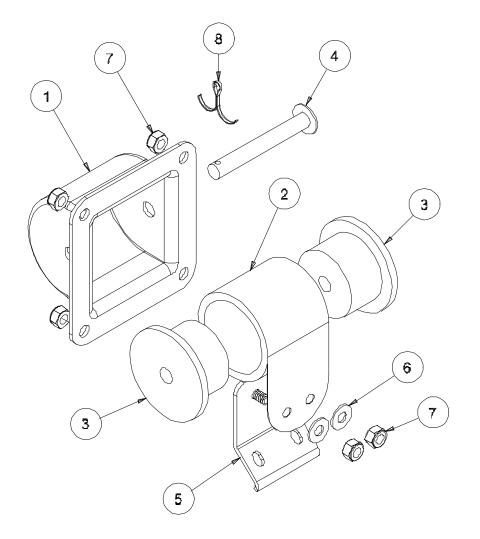
ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	Bracket, Door Guide	05700-003-72-32
2	2	Door Guide	09330-003-73-94
3	1	Door Weldment, 44"	05700-003-76-87
4	1	End Piece, Door Right Side	09330-003-73-83
5	1	End Piece, Door Left Side	09330-003-73-84
6	1	Door Stop & Support Weldment	05700-003-72-51
7	32	Locknut, 1/4-20 Hex w/Nylon Insert	05310-374-01-00
8	10	Screw, 1/4-20 x 1"	05305-011-81-58
9	26	Screw, 10-32 x 1"	05305-002-19-42
10	1	Magnet	05930-002-88-42
11	1	Splash Shield, 44" Door	05700-003-81-86
12	2	Locknut, 6-32 Hex w/Nylon Insert	05310-373-03-00
13	1	Cover, Door Magnet	05700-004-07-38

### PRE-WASH DOOR ASSEMBLY, 22"



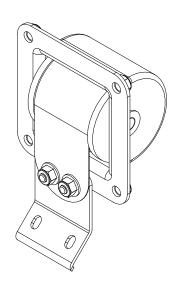
ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	Bracket, Door Guide	05700-003-72-32
2	2	Door Guide	09330-003-73-94
3	1	Door Weldment, 22" Pre-Wash	05700-003-80-32
4	1	End Piece, Door Right Side	09330-003-73-83
5	1	End Piece, Door Left Side	09330-003-73-84
6	1	Door Stop & Support Weldment L-R	05700-003-82-50
7	30	Locknut, 1/4-20 Hex w/Nylon Insert	05310-374-01-00
8	10	Screw, 1/4-20 x 1"	05305-011-81-58
9	26	Screw, 10-32 x 1"	05305-002-19-42
10	1	Magnet	05930-002-88-42
11	1	Splash Shield, 22" Pre-Wash Door	05700-003-82-46
12	2	Locknut, 6-32 Hex w/Nylon Insert	05310-373-03-00
13	1	Cover, Door Magnet	05700-004-07-38

### DOOR SPRING ASSEMBLY

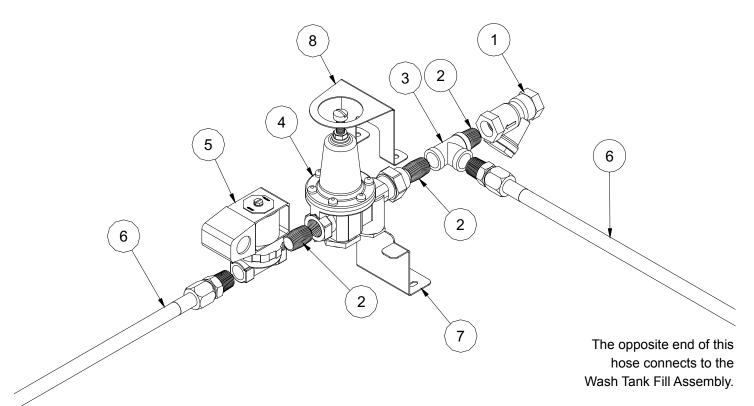


# DOOR SPRING ASSEMBLY 05700-003-77-49

44" Wash doors use 2 assemblies 22" Pre-Wash doors use 1 assembly



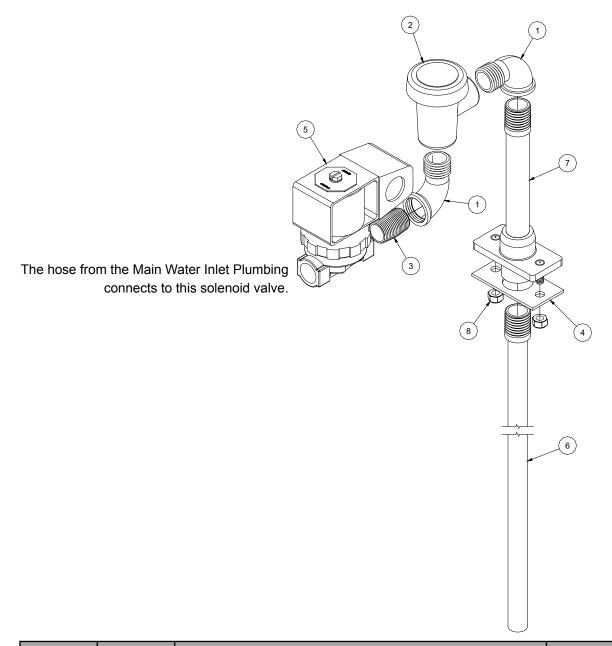
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Casting, Door Spring Mount	09515-003-73-78
2	1	Spring, Door	05315-002-67-29
3	2	Spindle, Door Spring	05700-002-67-28
4	1	Pin, Door Spring	05700-002-83-55
5	1	Door Spring Bracket Weldment	05700-003-74-10
6	2	Washer, 1/4" S/S	05311-174-01-00
7	6	Locknut, 1/4"-20 Hex w/Nylon Insert	05310-374-01-00
8	1	Cotter Pin, 3/32" x 3/4"	05315-207-01-00



The opposite end of this hose connects to the Final Rinse Assembly. For units with the Booster Heater Option, this hose connects to the Booster Heater Inlet.

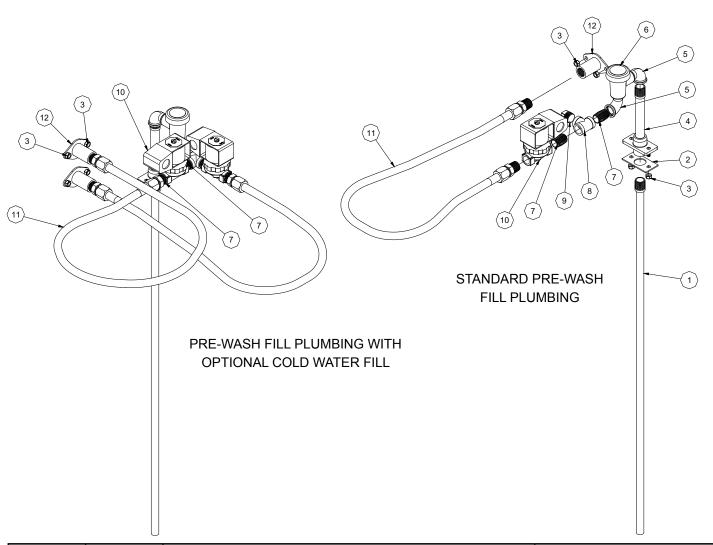
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Strainer, Inlet, 1/2"	04730-217-01-10
2	3	Nipple, 1/2" Close, Brass	04730-207-15-00
3	1	Tee, Brass, 1/2" x 1/2" x 1/2"	04730-211-27-00
4	1	Regulator, 1/2"	04820-100-04-07
5	1	Valve, 1/2" NPT Brass, 24VDC Coil	04810-003-75-16
6	2	Hose, 1/2" x 42" S/S Braided w/PTFE, Male Swivel	04720-003-76-09
7	1	Bracket, Inlet Plumbing Support	05700-003-74-42
8	1	Bracket, Upper Inlet Plumbing Support	05700-003-74-86

### WASH TANK FILL ASSEMBLY



ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	Elbow, 90 Degree, 1/2" Brass	04730-206-08-00
2	1	Vacuum Breaker, 1/2" Vacuum Breaker Repair Kit	04820-003-06-13 06401-003-06-23
3	1	Nipple, 1/2" Close, Brass	04730-207-15-00
4	1	Gasket, Rinse Manifold	05330-003-75-91
5	1	Valve, 1/2" NPT Brass, 24VDC Coil	04810-003-75-16
6	1	Tube Weldment, Tank Fill	05700-003-76-81
7	1	Tank Fill Injector Weldment	05700-003-76-84
8	2	Locknut, 1/4"-20 Hex w/Nylon Insert	05310-374-01-00

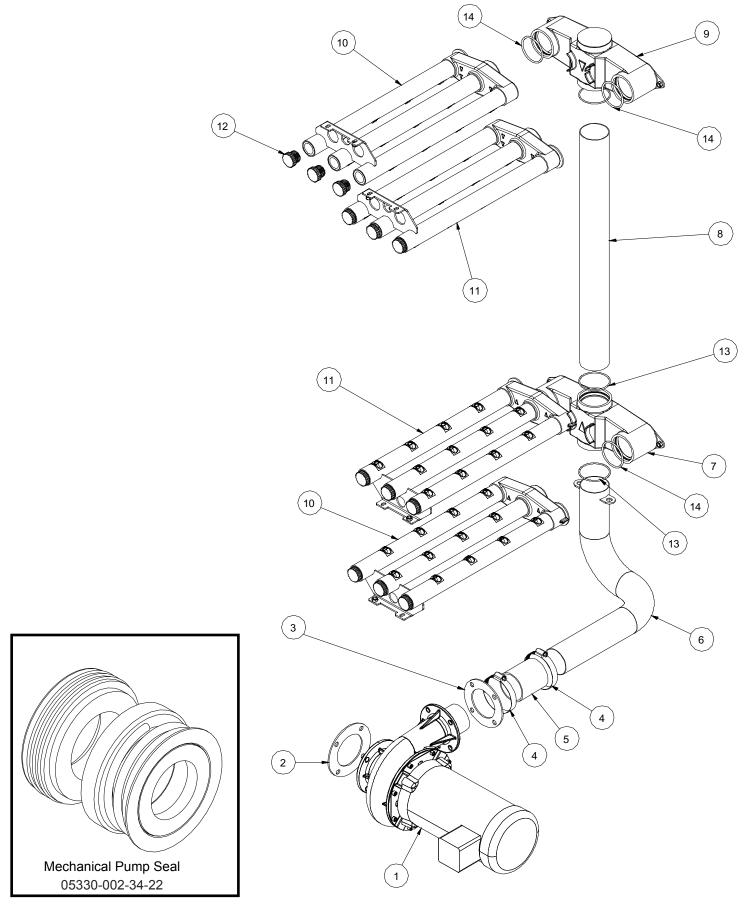
### PRE-WASH TANK FILL ASSEMBLIES



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Tube Weldment, Tank Fill	05700-003-76-81
2	1	Gasket, Rinse Manifold	05330-003-75-91
3	4 (6)*	Locknut, 1/4"-20 Hex w/Nylon Insert	05310-374-01-00
4	1	Tank Fill Injector Weldment	05700-003-76-84
5	2	Elbow, 90 Degree, 1/2" Brass	04730-206-08-00
6	1	Vacuum Breaker, 1/2" Vacuum Breaker Repair Kit	04820-003-06-13 06401-003-06-23
7	2 (3)*	Nipple, 1/2" Close, Brass	04730-207-15-00
8	1	Tee, 1/2" x 1/2" x 1/2" NPT Brass	04730-211-27-00
9	1 (0)*	Plug, 1/2" NPT Brass (Removed for Cold Water Fill Option)	04730-209-03-00
10	1 (2)*	Valve, 1/2" NPT Brass, 24VDC Coil	04810-003-75-16
11	1 (2)*	Hose, 1/2" x 42" S/S Braided w/PTFE, Male Swivel	04720-003-76-09
12	1 (2)*	Water Inlet Fitting	05700-003-81-98

<sup>\*</sup>Denotes changed quantities when Cold Water Pre-Wash Fill option is added.

### WASH MANIFOLD & ARM ASSEMBLY

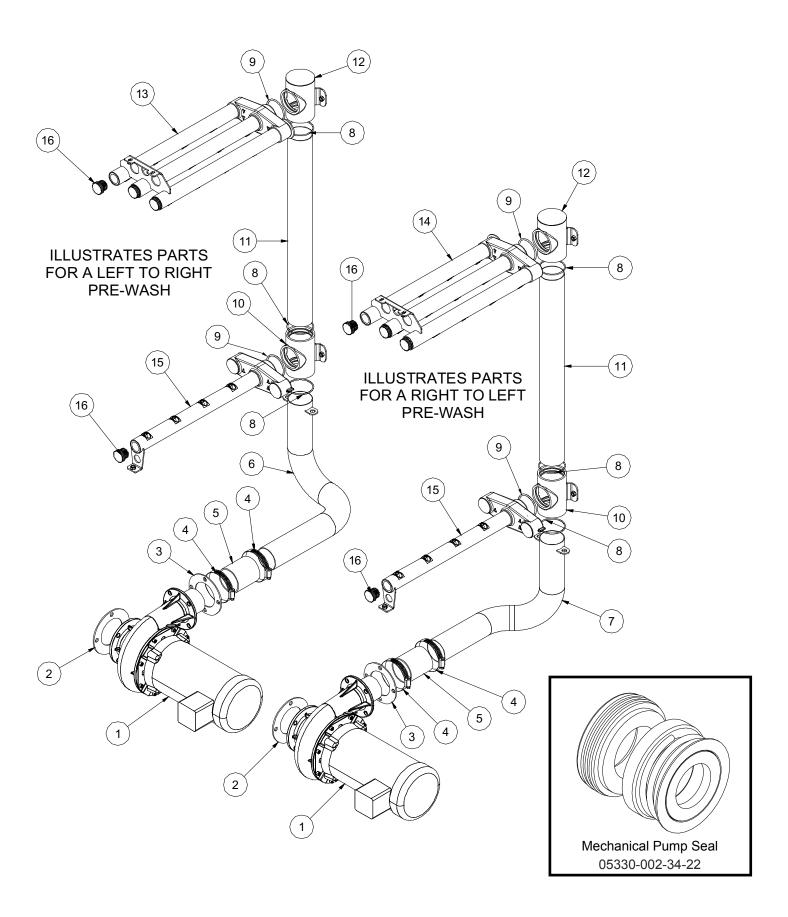


### WASH MANIFOLD & ARM ASSEMBLY

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Pump & Motor Assembly	See Table Below
2	1	Gasket, Pump Suction	05330-003-75-87
3	1	Gasket, Pump Discharge	05330-003-75-88
4	2	Hose Clamp, Range 2-9/16" to 3-1/2"	04730-003-15-40
5	1	Hose, Wash Pump Discharge	05700-003-77-62
6	1	(L-R Machines) Lower Manifold (R-L Machines) Lower Manifold	05700-003-74-29 05700-003-74-28
7	1	Casting, Wash Manifold	09515-003-71-50
8	1	Tube, Manifold Riser	05700-003-72-37
9	1	Wash Manifold Weldment, Upper	05700-003-73-66
10	2	Wash Arm Weldment, Right	05700-003-75-80
11	2	Wash Arm Weldment, Left	05700-003-75-79
12	12	Cap, Threaded	04730-603-12-00
13	3	O-Ring, Silicone, .103 Dia., 2-1/2" x 2-11/16" OD	05330-003-73-71
14	4	O-Ring, Silicone, .139 Dia., 2-1/4" ID x 2-1/2" OD	05330-003-73-72

PUMP & MOTOR ASSEMBLY	PART NUMBER
Wash Pump, 3HP, 208V, 60Hz, 3-Phase	06105-003-76-11
Wash Pump, 3HP, 230V, 60Hz, 3-Phase	06105-003-76-11
Wash Pump, 3HP, 460V, 60Hz, 3-Phase	06105-003-76-11
Wash Pump, 3HP, 460V, 60Hz, 1-Phase	06105-003-76-13
Wash Pump, 3HP, 230V, 60Hz, 1-Phase	06105-003-76-13

### PRE-WASH MANIFOLD & ARM ASSEMBLIES

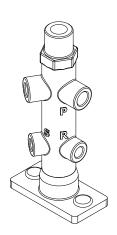


### PRE-WASH MANIFOLD & ARM ASSEMBLIES

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Pump & Motor Assembly	See Table Below
2	1	Gasket, Pump Suction	05330-003-75-87
3	1	Gasket, Pump Discharge	05330-003-75-88
4	2	Hose Clamp, Range 2-9/16" to 3-1/2"	04730-003-15-40
5	1	Hose, Wash Pump Discharge	05700-003-77-62
6	1	Lower Manifold (L-R Units)	05700-003-81-54
7	1	Lower Manifold (R-L Units)	05700-003-81-79
8	3	O-Ring, Silicone, .103 Dia., 2-1/2" x 2-11/16" OD	05330-003-73-71
9	2	O-Ring, Silicone, .139 Dia., 2-1/4" ID x 2-1/2" OD	05330-003-73-72
10	1	Casting, Pre-Wash Manifold	09515-003-77-22
11	1	Tube, Manifold Riser	05700-003-81-53
12	1	Wash Manifold Weldment, Upper	05700-003-81-76
13	1	Wash Arm Weldment, Left	05700-003-75-79
14	1	Wash Arm Weldment, Right	05700-003-75-80
15	1	Pre-Wash Arm Weldment, Lower	05700-003-80-96
16	4	Cap, Threaded	04730-603-12-00

PUMP & MOTOR ASSEMBLY	PART NUMBER
Pre-Wash Pump, 2HP, 208V, 60Hz, 3-Phase	06105-003-76-12
Pre-Wash Pump, 2HP, 230V, 60Hz, 3-Phase	06105-003-76-12
Pre-Wash Pump, 2HP, 460V, 60Hz, 3-Phase	06105-003-76-12
Pre-Wash Pump, 2HP, 460V, 60Hz, 1-Phase	06105-003-76-14
Pre-Wash Pump, 2HP, 230V, 60Hz, 1-Phase	06105-003-76-14

### RINSE ASSEMBLY



RINSE INJECTOR CONNECTIONS

P: PRESSURE SWITCH

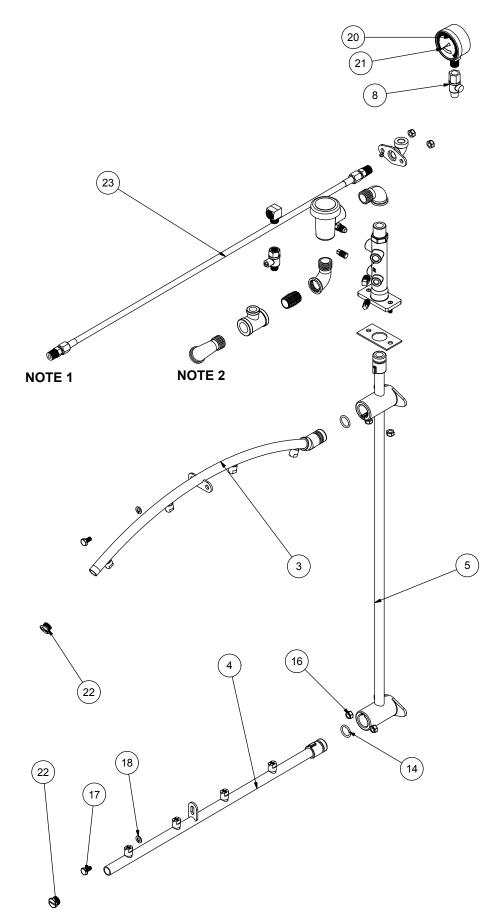
S: SANITIZER R: RINSE AID

#### NOTE 1:

This hose connects to part #16 at one end and to part #20 at the opposite end.

#### NOTE 2:

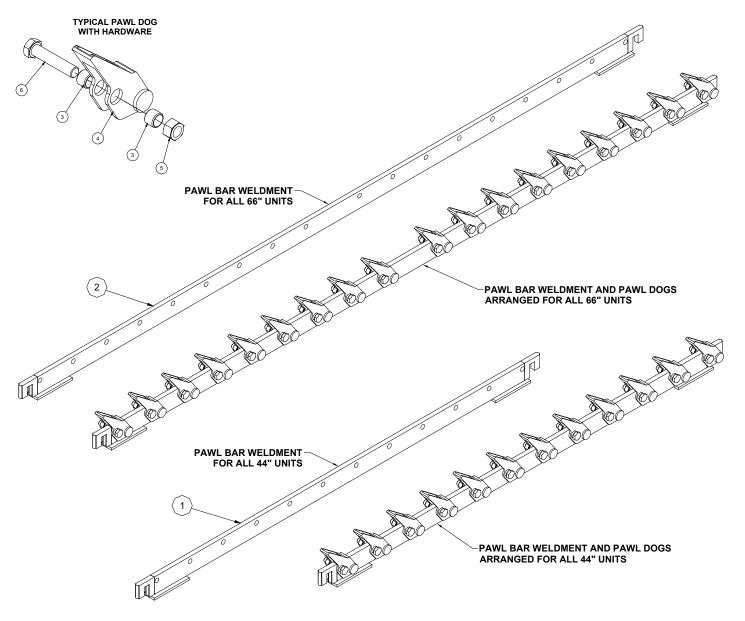
A hose from the Main Water Inlet Assembly connects to this elbow. For units with the Booster Heater option, the hose will connect to the booster heater outlet.



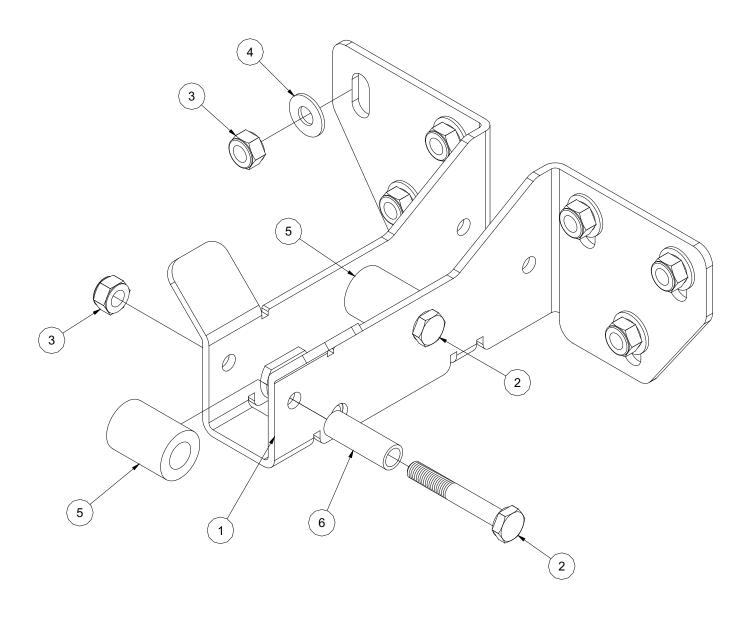
### RINSE ASSEMBLY

ITEM	QTY	DESCRIPTION	PART NUMBER
1	3	Elbow, 90 Deg., 1/2" Brass	04730-206-08-00
2	1	Vacuum Breaker, 1/2"	04820-003-06-13
3	1	Upper Rinse Arm	05700-003-76-02
4	1	Lower Rinse Arm	05700-003-76-04
5	1	Rinse Manifold	05700-003-76-79
6	1	Rinse Injector (L-R Units) (R-L Units)	05700-003-76-82 05700-003-76-83
7	1	Nipple, 1/2" Close Brass	04730-207-15-00
8	1	Valve, Ball Test Cock, 1/4" Bronze	04810-011-72-67
9	1	Tee, 1/2" FNPT x 1/2" FNPT x 1/4" FNPT	04730-002-22-56
10	2	Plug, 1/8" NPT Brass	04730-209-07-37
11	1	Gasket, Rinse Manifold	05330-003-75-91
12	1	Fitting, Imperial Brass	05310-924-02-05
13	1	Plug, 1/4"	04730-209-01-00
14	3	O-Ring, Silicon, .103 Dia., 11/16" x 7/8" OD	05330-003-77-82
15	1	Elbow, Brass, 90 Deg., 1/4" NPTM x 1/4" NPTF	04730-003-77-83
16	6	Locknut, 1/4-20 Hex w/Nylon Insert	05310-374-01-00
17	2	Bolt, 1/4-20 x 1/2" Long	05305-274-02-00
18	2	Lockwasher, Spring, 1/4"	05311-274-01-00
19	1	Elbow Weldment, Temp Gauge	05700-003-77-12
20	1	Gauge, 0-100# Pressure	06685-111-88-34
21	1	Decal 15-25 PSI	09905-002-97-74
22	2	End Plug	05700-011-35-92
23	1	Hose, 1/4 x 30 S/S Braided w/PTFE, Male Swivel	04720-003-76-10

### PAWL BAR ASSEMBLIES

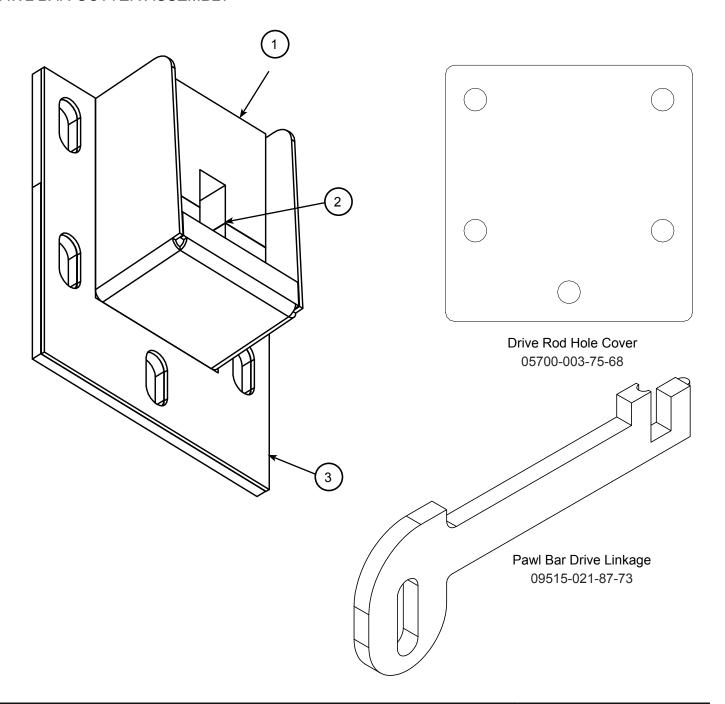


ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Pawl Bar Weldment, 44" Units	05700-031-72-77
2	1	Pawl Bar Weldment, 66" Units	05700-003-89-34
3	24 (44") 36 (66")	Spacer, Pawl Bar Dog	05700-011-71-45
4	12 (44") 18 (66")	Pawl Bar Dog Casting	09515-021-69-00
5	12 (44") 18 (66")	Locknut, 3/8-16 w/Nylon Insert	05310-011-72-55
6	12 (44") 18 (66")	Bolt, 3/8-16 x 1-3/4" Long	05306-011-36-94

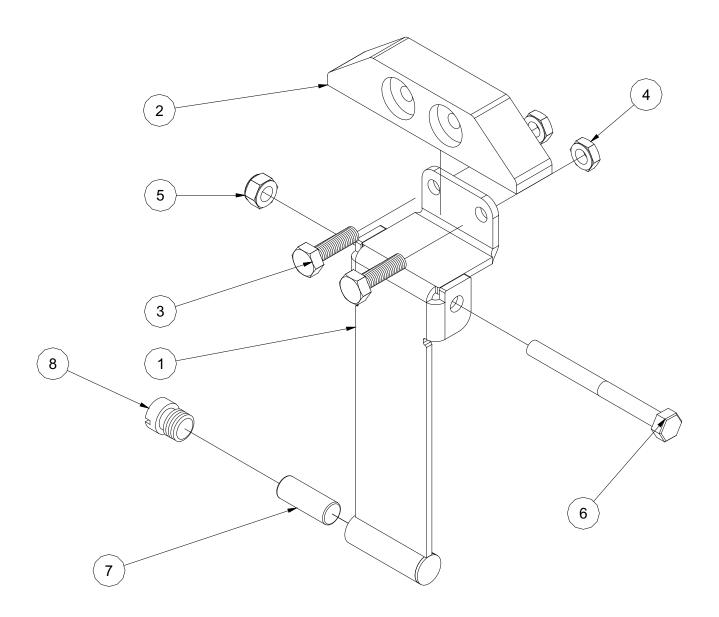


ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Pawl Bar Bracket Weldment	05700-003-74-39
2	2	Screw, 1/4-20 x 1-3/4" Hex Head	05305-274-10-00
3	8	Locknut, 1/4-20 Hex w/Nylon Insert	05310-374-01-00
4	6	Washer, S/S	05311-174-01-00
5	2	Roller, Bracket Rod	05700-011-68-16
6	2	Shaft, Roller, 3/8" x 1.13"	05700-011-68-14
		Pawl Bar Roller Replacement Kit (comes with # 2, 3, 5 &6)	06401-003-11-80

### PAWL BAR GUTTER ASSEMBLY

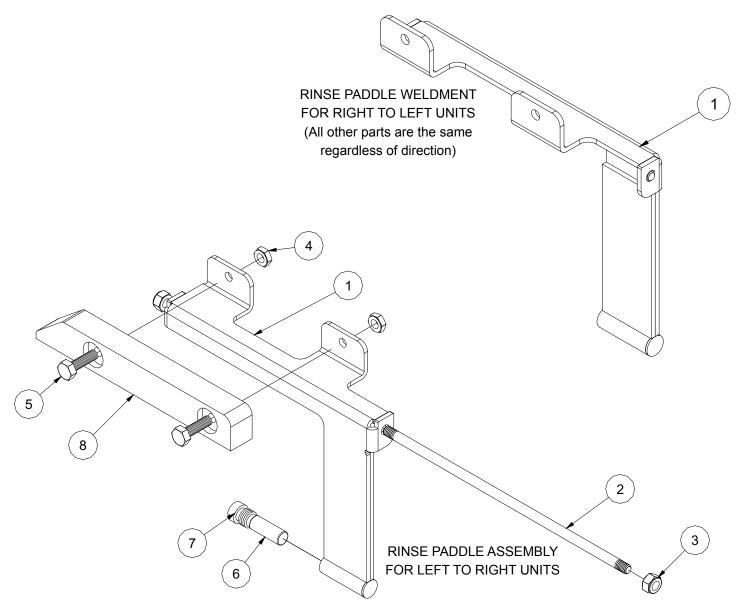


ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Top Guide Block	05700-011-69-49
2	1	Bottom Guide Block	05700-011-69-50
3	1	Pawl Bar Gutter Weldment	05700-021-66-86
4	1	Drive Gutter Gasket (not shown)	05330-011-68-55
	1	Gutter Weldment Replacement Kit (w/Hardware)	06401-003-09-95
	1	Guide Block Replacement Kit	06401-003-10-15

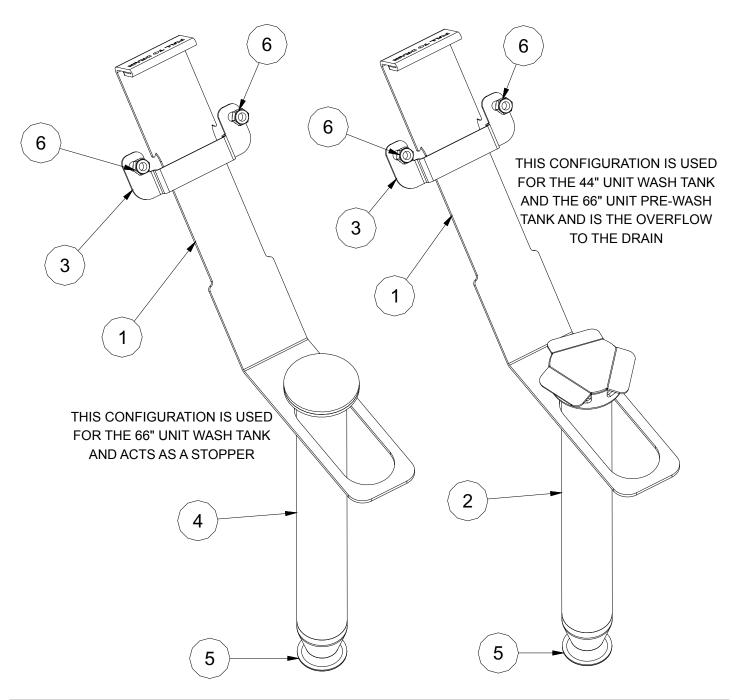


ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Rack Paddle Weldment	05700-003-76-71
2	1	Bumper, Rack Paddle	09330-003-74-82
3	2	Screw, 1/4-20 x 7/8" S/S	05305-274-05-00
4	2	Locknut, 1/4-20 Low Profile w/Nylon Insert	05310-374-02-00
5	1	Locknut, 1/4-20 Hex w/Nylon Insert	05310-374-01-00
6	1	Screw, 1/4-20 x 2-3/4" Hex Head	05305-003-31-63
7	1	Magnet	05930-003-31-63
8	1	Wash/Rinse End Cap	05700-011-60-92
	1	Rack Paddle Assembly	05700-003-76-74

### RINSE PADDLE ASSEMBLY

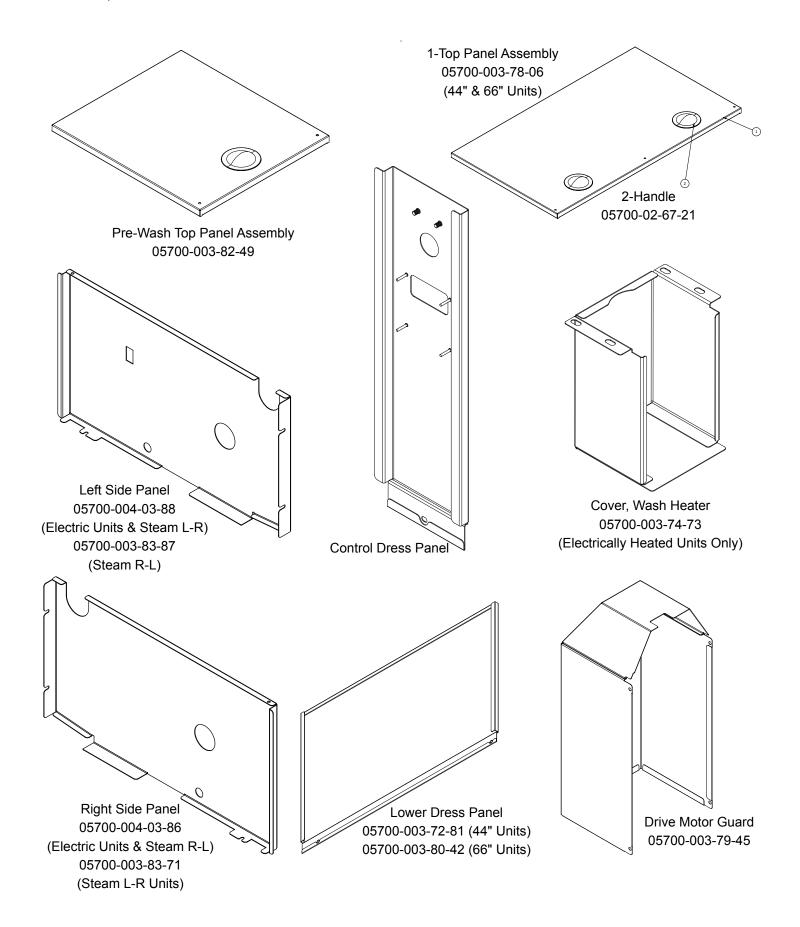


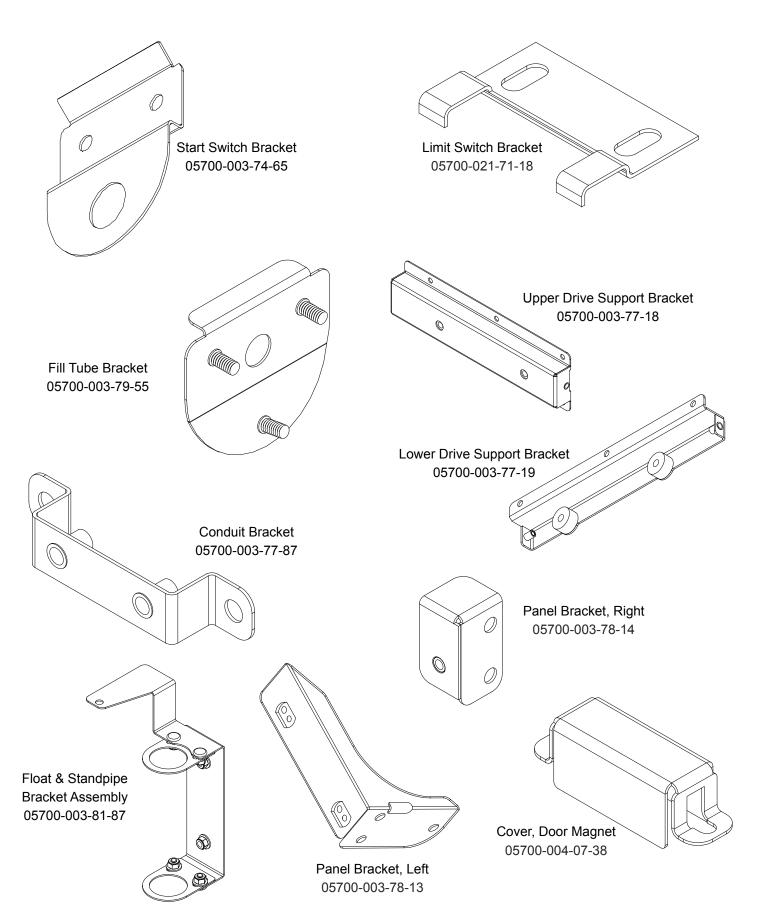
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Rinse Paddle Weldment (Left to Right) (Right to Left)	05700-003-81-91 05700-003-81-96
2	1	Stud, 1/4-20 x 8.50" Long, S/S, Double Ended Thread	05306-003-76-31
3	2	Locknut, 1/4-20 Hex w/Nylon Insert	05310-374-01-00
4	2	Locknut, 1/4-20 Low Profile w/Nylon Insert	05310-374-02-00
5	4	Screw, 1/2-20 x 7/8" Hex Head, S/S	05305-274-05-00
6	4	Magnet	05930-003-31-63
7	1	End Cap	05700-011-60-92
8	1	Bumper, Rinse Paddle	09330-003-81-04
	1	Rinse Paddle Assembly (Left to Right) (Right to Left)	05700-003-81-92 05700-003-81-95



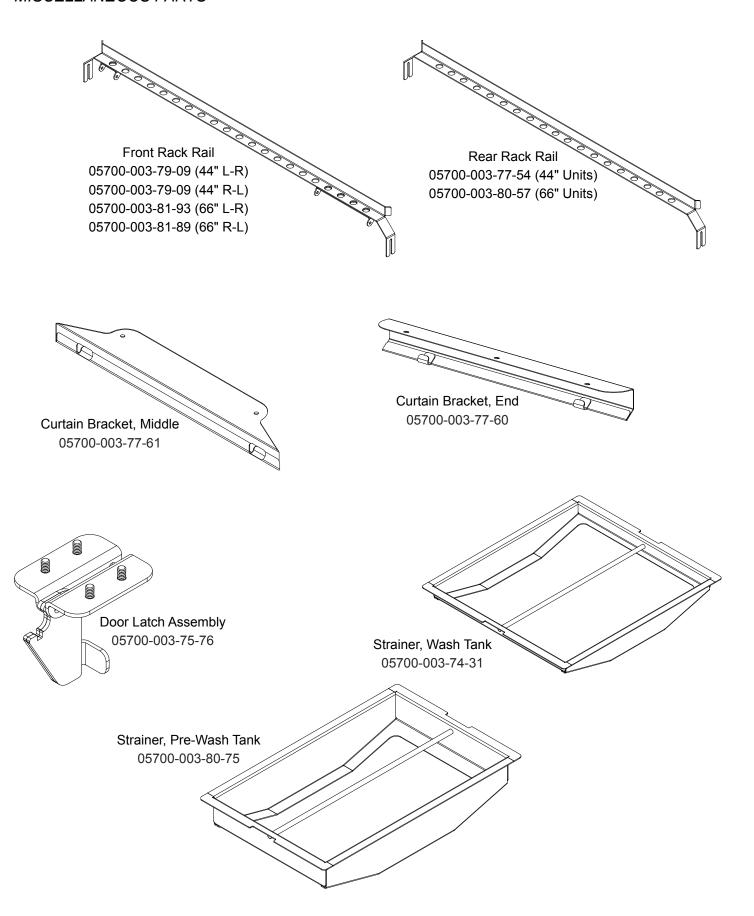
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Drain Handle	05700-003-83-66
2	1	Drain Standpipe (Overflow)	05700-003-75-55
3	2	Drain Handle Bracket	05700-003-83-67
4	2	Drain Standpipe	05700-003-82-76
5	1	O-Ring	05330-400-05-00
6	2	Locknut, 1/4-20 Hex w/Nylon Insert	05310-374-01-00

### COVERS, GUARDS & PANELS

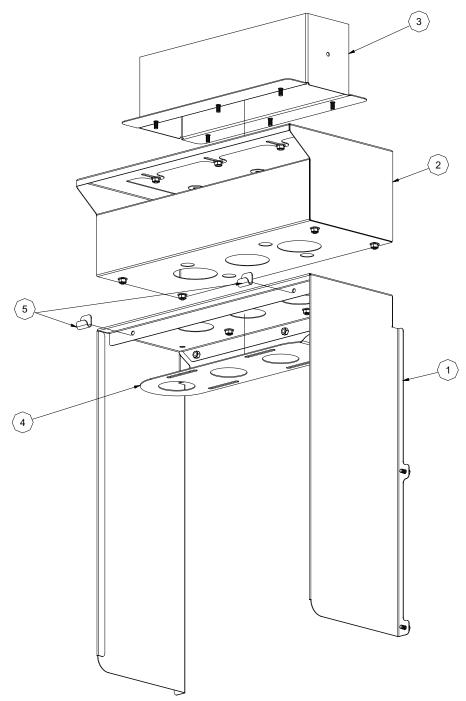




### MISCELLANEOUS PARTS

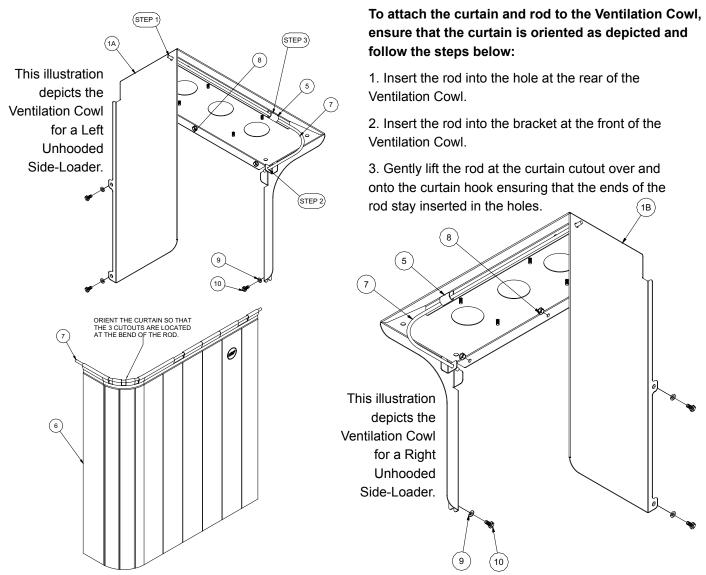


### **VENTILATION COWL PARTS**

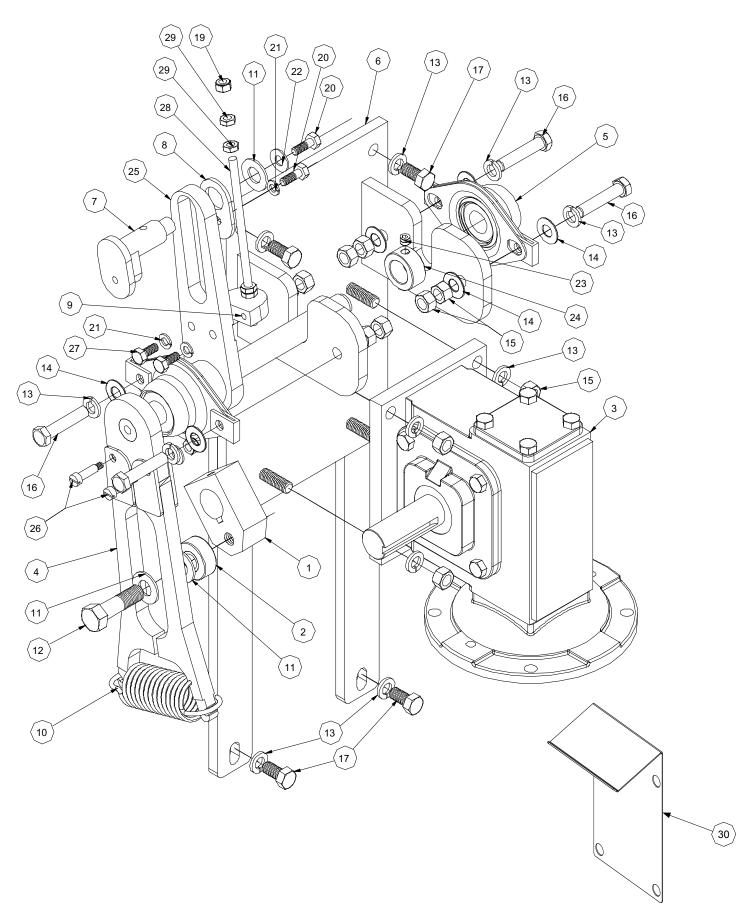


ITEM	QTY	DESCRIPTION	PART NUMBER
	2	Ventilation Cowl	05700-003-77-50
1	1	Ventilation Cowl, Left Side (for Door Accent Panel option)	05700-003-75-77
	1	Ventilation Cowl, Right Side (for Door Accent Panel option)	05700-003-75-78
2	2	Ventilation Scoop	05700-003-75-74
3	2	Ventilation Duct Adapter	05700-003-75-73
4	2	Damper, Ventilation Scoop	05700-003-74-76
5	4	Curtain Hook	05700-003-17-98

#### VENTILATION COWL FOR UNHOODED SIDE-LOADER OPTION

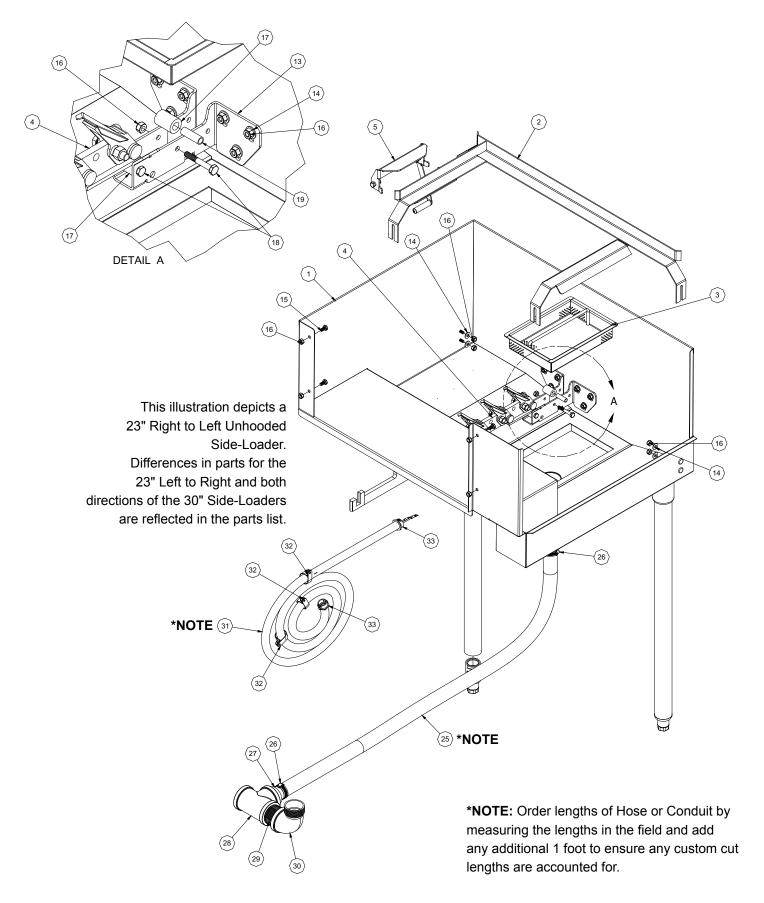


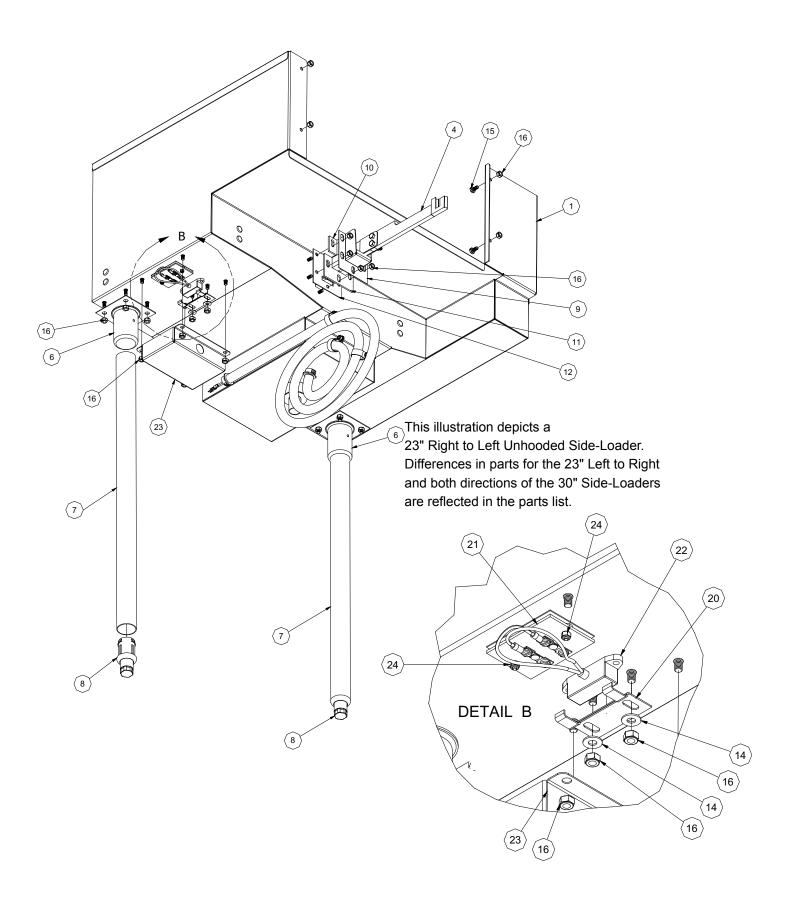
ITEM	QTY	DESCRIPTION	PART NUMBER
1A	1	Ventilation Cowl w/Cutout for Left Side Loader	05700-003-84-67
1B	1	Ventilation Cowl w/Cutout for Right Side Loader	05700-003-84-66
2	1	Ventilation Scoop (not shown)	05700-003-75-74
3	1	Ventilation Duct Adapter (not shown)	05700-003-75-73
4	1	Damper, Ventilation Scoop (not shown)	05700-003-74-76
5	2	Curtain Hook	05700-003-86-10
6	1	Curtain, XL for Side-Loader	08415-003-84-88
7	1	Curtain Rod	05700-003-84-57
8	3	Locknut, 1/4-20 Hex w/Nylon Insert	05310-374-01-00
9	3	Lockwasher, 1/4" Spring	05311-274-01-00
10	3	Bolt, 1/4-20 x 1/2" Long	05305-274-02-00



### DRIVE ASSEMBLY

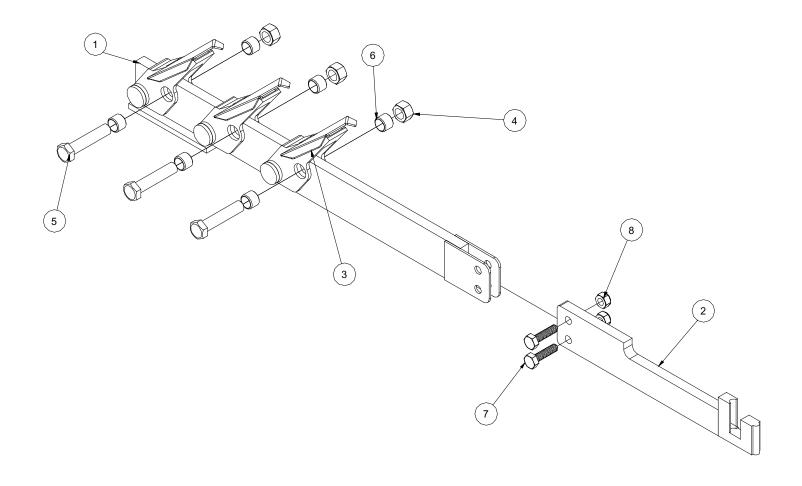
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Hub, Drive	05700-011-67-97
2	1	Bearing, Roller	03120-011-71-81
3	1	Gear, 50/1 Drive Motor	06105-011-71-88
4	2	Coupling & Expansion Legs Weldment	05700-021-67-50
5	1	Block, Pillow	03120-021-71-87
6	1	Drive Support Weldment	05700-003-75-61
7	1	Socket, Drive	05700-021-67-39
8	1	Plate, Spacer	05700-011-67-58
9	1	Plate, Drive Rod	05700-021-67-42
10	1	Spring, Drive	05315-011-83-51
11	3	Washer, 1/2" Flat S/S	05311-011-71-93
12	1	Bolt, 1/2-13 x 1-3/4"	05305-011-71-94
13	12	3/8" Lockwasher	05311-276-01-00
14	8	Washer, 3/8" Flat S/S	05311-176-01-00
15	12	Nut, Hex 3/8-16 S/S	05310-276-01-00
16	4	Bolt, 3/8-16 x 1-3/4" Long	05306-011-36-94
17	4	3/8-16 x 1-3/4" Long	05306-011-71-60
18	2	Washer, S/S 1/4-20 (not shown)	05311-174-01-00
19	4	Locknut, 1/4-20 Hex w/Nylon Insert	05310-374-01-00
20	2	Bolt, Hex Head, 1/4-20 x 3/4"	05305-274-04-00
21	3	Lockwasher, Spring 1/4"	05311-274-01-00
22	1	Washer, 5/16-18 S/S	05311-175-01-00
23	1	Set Screw, 5/16-18 x 1/4"	05305-002-98-39
24	1	Collar, Shaft Conveyer Drive	05700-011-89-18
25	1	Drive Lever Weldment	05700-003-78-03
26	2	Screw, 10-32 x .75 Shoulder .25	05305-011-86-65
27	2	Screw, 1/4-20 x 5/8" S/S Hex Head	05305-274-24-00
28	1	Stud, 1/4-20 x 5.75" All Thread	05307-003-79-67
29	4	Nut, Hex 1/4-20	05310-274-01-00
30	1	Shield, Vent	05700-004-18-73





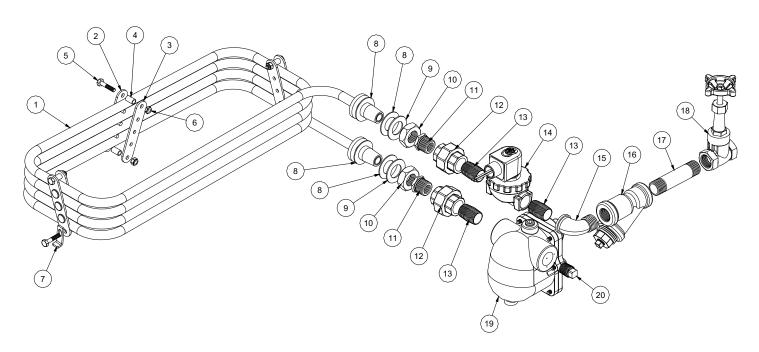
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Tub Weldment, 23" Side-Loader L-R Tub Weldment, 23" Side-Loader R-L Tub Weldment, 30" Side-Loader L-R Tub Weldment, 30" Side-Loader R-L	05700-003-84-59 05700-003-84-58 05700-003-88-39
2	1	Rack Support L-R	05700-003-90-00
3	1	Strainer	05700-021-85-10
4	1	Pawl Bar Drive Linkage (see side-loader drive linkage page)	05700-003-84-78
5	1	Actuator Switch Assembly	06401-003-89-96
6	2	Leg Socket	05700-002-56-14
7	2	Support Leg	05700-021-87-59
8	2	Foot, Adjustable	05340-108-01-03
9	1	Gutter, Pawl Bar	05700-021-66-86
10	1	Guide Block Top-Slotted	05700-011-69-49
11	1	Guide Block Bottom-Slotted	05700-011-69-50
12	1	Gasket, Drive Gutter	05330-011-68-55
13	1	Bracket, Loader Pawl Bar Support	05700-003-87-39
14	16	Washer, 1/4" S/S	05311-174-01-00
15	4	Bolt, 1/4-20 x 1/2" Long	05305-274-02-00
16	39	Locknut, 1/4-20 Hex w/Nylon Insert	05310-374-01-00
17	2	Roller	05700-011-68-16
18	2	Screw, 1/4-20 x 1-3/4" Long Hex Head	05305-274-10-00
19	2	Roller Shaft	05700-011-68-14
20	1	Bracket, Limit Switch	05700-021-71-18
21	1	Terminal Board	05940-011-84-41
22	1	Switch Assembly, Side-Loader, 24VDC	05700-003-87-43
23	1	Cover, Side-Loader Switch	05700-003-87-41
24	2	Locknut, 6-32 Hex w/Nylon Insert	05310-373-03-00
25	*NOTE	Drain Hose, Polybraid 1" (*SEE NOTE ON PG. 55)	*04720-011-69-16
26	2	Hose Clamp (Range: 13/16" to 1-1/2")	04730-719-06-09
27	1	Drain Fitting Weldment	05700-021-84-61
28	1	Tee, 1-1/2" Brass	04730-011-69-93
29	1	Nipple, 1-1/2" Close Brass	04730-207-40-00
30	1	Elbow, 90 Deg Street, Brass 1-1/2"	04730-206-32-00
31	*NOTE	Conduit, 1/2" Flex 2 (*SEE NOTE ON PG. 55)	*05975-003-33-36
32	3	Clamp, 1" Nylon	04730-002-41-88
33	2	Fitting, 1/2" Straight Twist/Snap	05975-003-33-27
_			

### SIDE-LOADER DRIVE LINKAGE



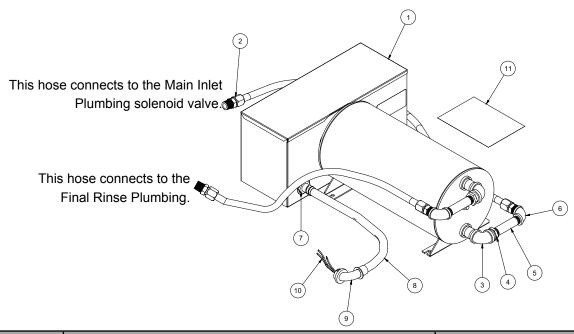
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Pawl Bar, Side-Loader	05700-021-86-88
2	1	Drive Linkage, Side-Loader	05700-001-99-16
3	3	Pawl Dog w/Wing	05700-021-86-79
4	3	Locknut, 3/8-16 w/Nylon Insert	05310-011-72-55
5	3	Bolt, 3/8-16 x 1-3/4" Long Hex Head	05306-011-36-94
6	6	Spacer, Pawl Bar Dog	05700-011-71-45
7	3	Screw, 1/4-20 x 1" Long Hex Head	05305-274-27-00
8	3	Locknut, 1/4-20 Hex w/Nylon Insert	05310-374-01-00

### STEAM HEATING COIL ASSEMBLY



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Steam Coil Weldment	05700-003-83-70
2	3	Steam Coil Spacer Weldment	05700-003-83-33
3	3	Plate, Steam Coil Spacer	05700-003-83-32
4	6	Sleeve, 1/4" x 5/8" Long	05700-003-83-35
5	6	Bolt, 1/4-20 x 1-1/4 Hex Head	05305-274-22-00
6	6	Locknut, 1/4-20 Low Profile w/Nylon Insert	05310-374-02-00
7	1	Bracket, Steam Coil Adjustment	05700-003-83-79
8	4	Gasket, Steam Coil	05700-001-17-86
9	2	Washer, Steam Coil Adapter	05700-001-17-87
10	2	Nut, Steam Coil Adapter	05310-011-17-85
11	2	Reducer, 3/4" x 1/2" Black Iron	04730-911-02-34
12	2	Union, 3/4" Black Iron	04730-912-01-00
13	3	Nipple, Close 3/4" Black Iron	04730-907-01-00
14	1	Valve, 3/4" Steam 110V Coil	04820-011-87-39
15	1	Elbow, 3/4" Street, Black Iron	04730-011-87-37
16	1	Y-Strainer, 3/4" Steam	04730-217-01-32
17	1	Nipple, 3/4" x 4" Long, Black Iron	04730-907-02-34
18	1	Valve, Gate 3/4" Steam	04820-100-19-00
19	1	Trap, Steam 3/4"	06680-500-02-77
20	1	Plug, 3/4" Square Head, Black Iron	04730-002-86-59

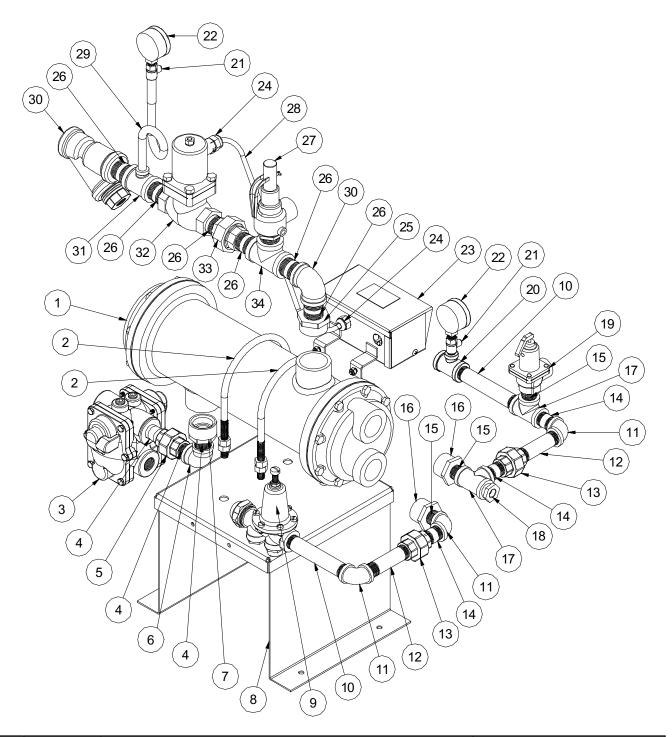
# BOOSTER HEATER OPTION (ELECTRIC)



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Booster Heater	See Chart Below
2	2	Hose, 1/2" x 42" S/S Braided	04720-003-76-09
3	2	Elbow, 3/4" 90 Deg. Brass	04730-206-13-00
4	2	Bushing, 3/4" x 1/2" Hex Brass	04730-002-56-27
5	2	Nipple, 1/2" x 4" Long Brass	04730-207-04-00
6	2	Elbow, 1/2" 90 Deg. Brass	04730-011-42-96
7	1	Fitting, 3/4" Straight QT Snap	05975-003-77-46
8	1	Conduit, 1/2" x 24" Long	05700-003-79-40
9	1	Fitting, 3/4" 90 Deg. QT Snap	05975-003-77-45
10	3	Wire, 10AWG, Fiberglass, 3'	06145-003-13-97
11	1	Schematic (Refer to Booster Heater Schematic Pages)	

BOOSTER HEATER	PART NUMBER
12 kW (40 degree F Rise) 208V, 3-Phase	04540-003-76-58
12 kW (40 degree F Rise) 240V, 3-Phase	04540-003-76-60
12 kW (40 degree F Rise) 480V, 3-Phase	04540-003-76-62
12 kW (40 degree F Rise) 208V, 1-Phase	04540-003-76-57
12 kW (40 degree F Rise) 240V, 1-phase	04540-003-76-59
17.3 kW (70 degree F Rise) 208V, 3-Phase	04540-003-76-64
18 kW (70 degree F Rise) 240V, 3-Phase	04540-003-76-66
18 kW (70 degree F Rise) 480V, 3-Phase	04540-003-76-68
18 kW (70 degree F Rise) 208V, 1-Phase	04540-003-76-63
18 kW (70 degree F Rise) 240V, 1-Phase	04540-003-76-64

# BOOSTER HEATER OPTION (STEAM)

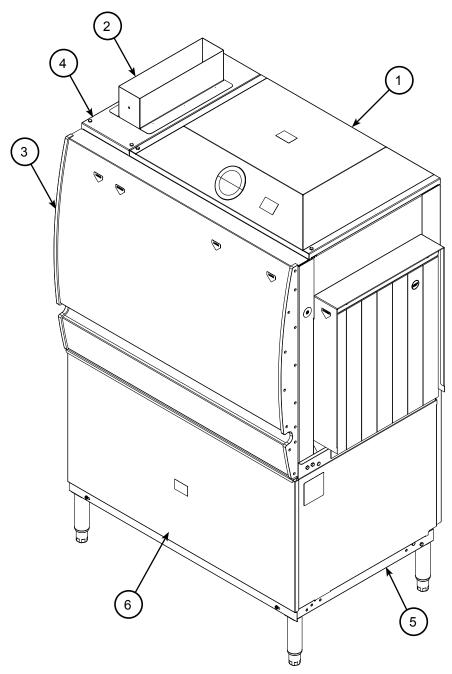


ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Steam Booster Heater, ST-T120	04420-002-43-94
2	2	U-Bolt, 1/2-13 Thread, Zinc Coated	05306-002-89-27
3	1	Steam Trap, 3/4"	06680-500-02-77
4	3	Nipple, Close 3/4" Black Iron	04730-907-01-00
5	1	Union, 3/4" Black Iron	04730-912-01-00

### STEAM BOOSTER HEATER OPTION

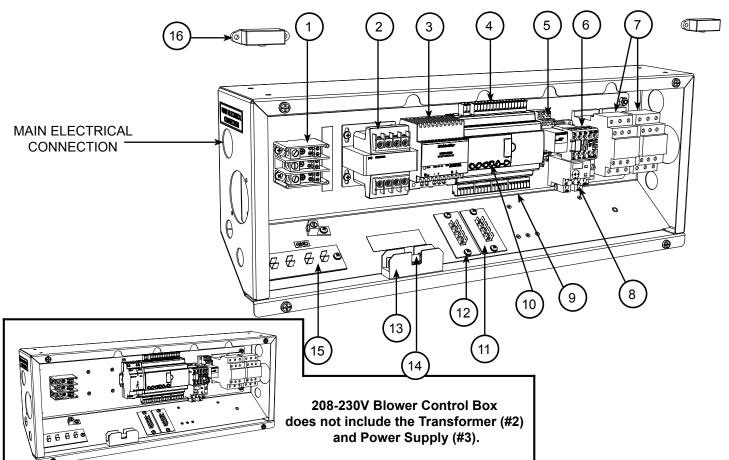
ITEM	QTY	DESCRIPTION	PART NUMBER
6	1	Elbow, 90 Deg. 3/4" Black Iron	04730-906-10-34
7	1	Reducer, 1-1/2" x 3/4" Black Iron	04730-002-36-81
8	1	Platform, J120 Steam Booster	05700-002-36-72
9	1	Regulating Valve, 3/4"	04820-100-01-06
10	2	Nipple, 3/4" x 6" Long Brass	05700-001-26-74
11	3	Elbow, 90 Deg. 3/4" Brass	04730-206-13-00
12	2	Nipple, 3/4" x 4" Long Brass	04730-207-05-00
13	2	Union, 3/4" Brass	04730-212-02-00
14	3	Nipple, 3/4" x 2" Long Brass	04730-207-46-00
15	3	Nipple, Close, 3/4" x 1-3/8" Brass	04730-207-34-00
16	2	Bushing, Hex, 1-1/4" x 3/4" Reducer	04730-011-88-80
17	2	Tee, Brass, 3/4" x 3/4" x 3/4"	04730-211-01-34
18	1	Adapter, 3/8" x 3/4" Brass	04730-011-89-19
19	1	Valve, Steam Relief, 3/4"	04820-100-07-06
20	1	Tee, Brass, 3/4" x 3/4" x 1/4"	04730-211-04-00
21	2	Valve, Ball Test Cock 1/4" Bronze	04810-011-72-67
22	2	Pressure Gauge, 1/4", 0-100 PSI	06685-111-88-34
23 23A 23B 23C 23D 23F	1	Control, J120 Assembly (Major Components Listed Below) Thermostat, Corkscrew Switch Light, Red Indicating Terminal Block, 2-Pole Ground Lug	05700-002-98-95 06680-500-01-77 05930-011-49-55 05945-111-21-57 05940-500-09-61 05940-200-76-00
24	2	Fitting	05975-011-49-03
25	1	Reducer, 1-1/2" x 1" Black Iron	04730-002-36-79
26	6	Nipple, Close 1" x 2" Black Iron	04730-907-08-34
27	1	Elbow, 1", 90 Deg. Black Iron	04730-906-03-34
28	1	Valve, Safety Relief, 1"	04850-100-01-35
29	1	Siphon Tube, Pigtail 1/4" Black Iron	04730-907-14-34
30	1	Coupling, 1/4" Black Iron	04730-904-01-04
31	1	Tee, 1" x 1" x 1/4", Black Iron	04730-911-01-00
32	1	Y-Strainer, 1" Steam Black Iron	04730-217-02-32
33	1	Union, 3/4" Brass	04730-912-01-00
34	1	Valve, 120V, 1" Bronze Steam	04810-002-92-23
35	1	Union, 1" Black Iron	04730-912-01-34
36	1	Tee, 1" Black Iron	04730-911-01-34

### BLOWER/DRYER OPTION: MACHINE ASSEMBLY

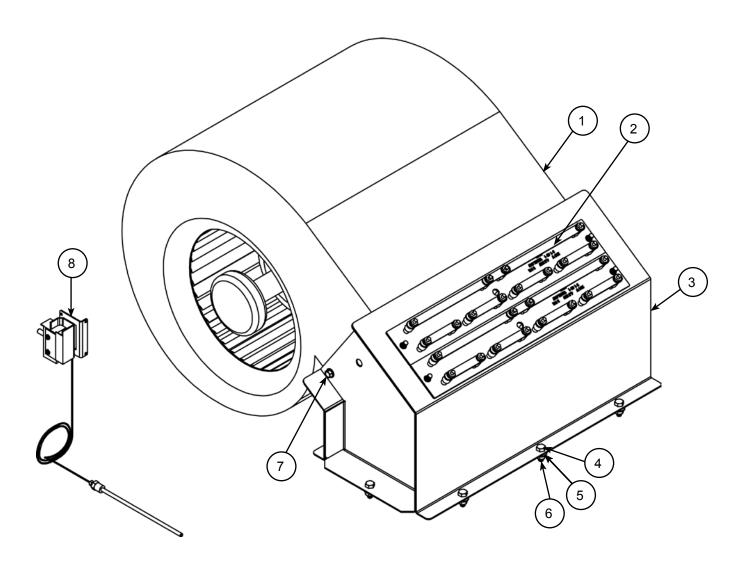


ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Cover, Blower Assembly	05700-004-01-97
2	1	Ventilation Duct Adapter, Weldment	05700-003-75-73
3	1	DOOR ASSEMBLY, BLOWER	05700-004-00-32
4	1	PANEL WELDMENT, EXHAUST TOP	05700-004-00-61
5	1	PANEL, BLOWER TUB SIDE RIGHT	05700-004-03-93
6	1	Panel, Front Dress	05700-004-01-99
	1	Panel, Blower Hood, Back (not shown)	05700-004-04-38
	1	Panel, Blower Tub Rack (not shown)	05700-004-03-91

### BLOWER/DRYER OPTION: CONTROL BOX



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Terminal Block, 115A, 600V	05940-004-08-35
2	1	Transformer, 208/230/460 to 120 (0.05 KVA)	05940-004-09-18
3	1	Power Supply, 120V, 24VDC, 2A	05950-003-76-32
4	1	Terminals	05700-004-05-08
5	1	Relay Socket, 16A, 300V	05945-003-79-58
6	1	Contactor, 24VDC, 460V, 5HP	05945-003-75-22
7	2	Heater Contactor, 600V, 25A, 24VDC Coil	05945-004-10-63
8	1	Overload, Blower Motor, 460V	05945-003-75-17
O .	_   '	Overload, Blower Motor, 208V	05945-111-68-40
9	1	Relay, DPDT 24VDC	05945-003-79-57
10	1	PLC	05945-004-01-05
11	2	Terminal Board	05940-021-94-85
12	19	Screw, 10-32 x 1/2" Phillips Pan Head w/Washer	05305-002-32-37
13	1	Holder	05920-011-72-89
14	1	Fuse, 1/2" Amp	05920-011-72-88
15	1	Terminal Board	05940-021-70-74
16	2	Switch	05930-003-76-51
			-

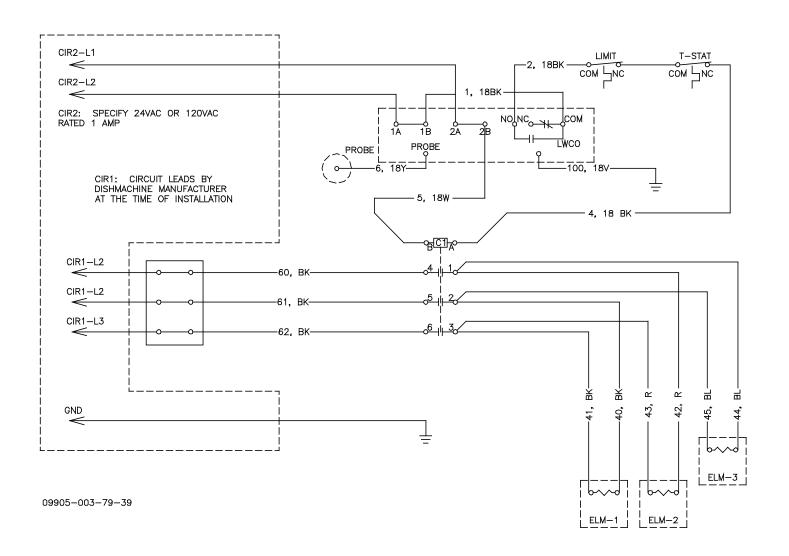


ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Blower, 208-230V, 60Hz Dual Cage	06105-002-72-15
	<u> </u>	Blower, 265-460V, 60Hz Dual Cage	06105-002-88-36
2	2	Heater, 4.5kW, 208V Blower Air	04540-002-74-29
3	1	Blower Heater Box, Weldment	05700-004-00-72
4	8	Bolt, Hex Head 1/4-20 x 3/4"	05305-274-04-00
5	8	Washer, S/S, 1/4-20 I.D.	05311-174-01-00
6	8	Locknut, 1/4-20 Hex w/Nylon Insert	05310-374-01-00
7	4	Screw, Self-Drilling, 1/4-14 x 1	05305-003-93-74
8	1	Thermostat, High Limit, 350 Deg. F	05930-003-92-41

#### BOOSTER HEATER, 3-PHASE

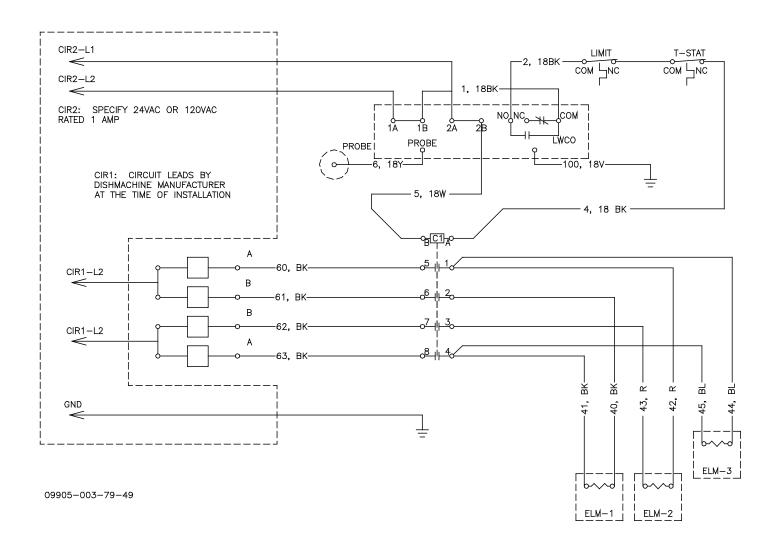
#### USE THIS SCHEMATIC FOR THE FOLLOWING BOOSTER HEATER OPTIONS:

- 208V, 60Hz, 3-Phase, 12 kW, 40° Rise
- 230V, 60Hz, 3-Phase, 12 kW, 40° Rise
- 460V, 60Hz, 3-Phase, 12 kW, 40° Rise
- 208V, 60Hz, 3-Phase, 18 kW, 70° Rise
- 230V, 60Hz, 3-Phase, 18 kW, 70° Rise
- 460V, 60Hz, 3-Phase, 18 kW, 70° Rise



#### USE THIS SCHEMATIC FOR THE FOLLOWING BOOSTER HEATER OPTIONS:

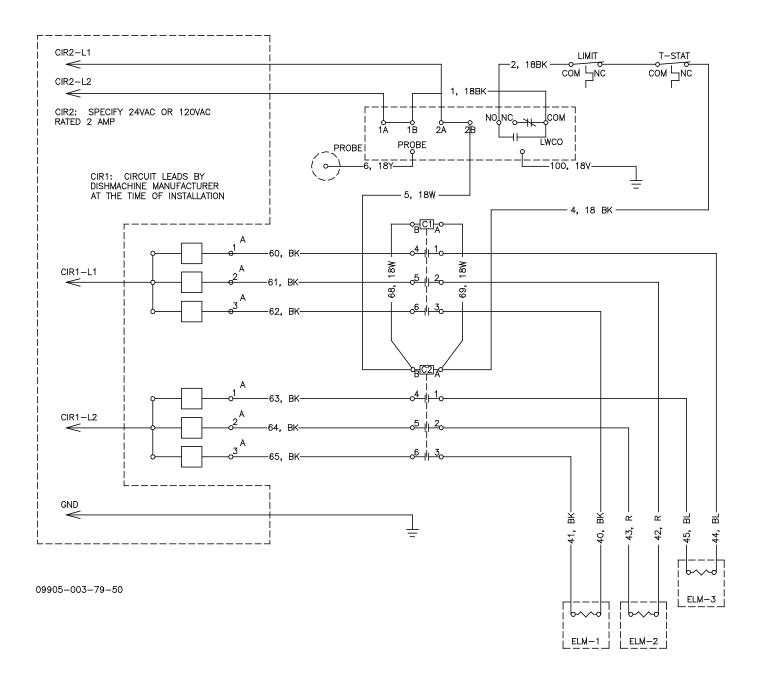
- 208V, 60Hz, 1-Phase, 12 kW, 40° Rise
- 230V, 60Hz, 1-Phase, 12 kW, 40° Rise

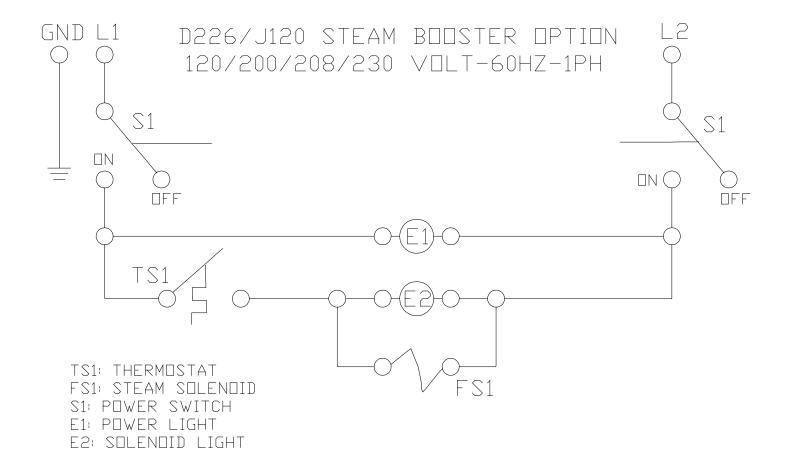


# BOOSTER HEATER, 1-PHASE, 18 kW

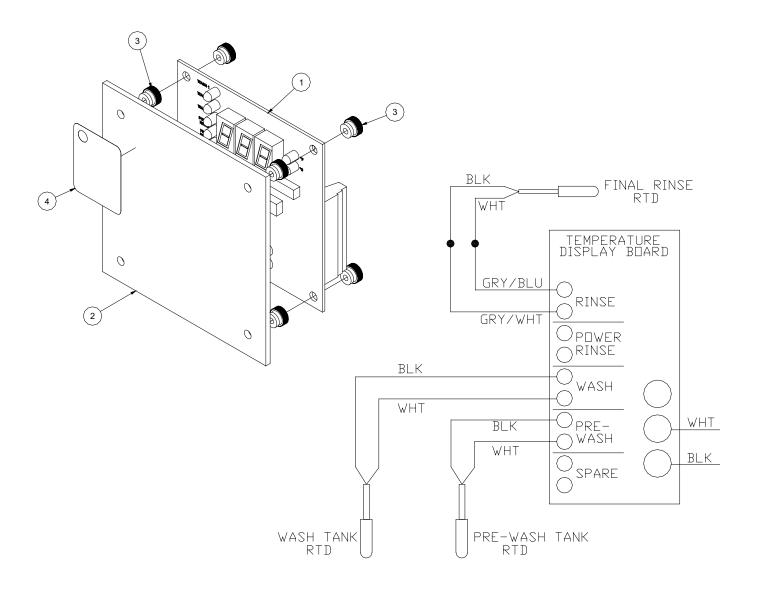
#### USE THIS SCHEMATIC FOR THE FOLLOWING BOOSTER HEATER OPTIONS:

- 208V, 60Hz, 1-Phase, 18 kW, 70° Rise
- 230V, 60Hz, 1-Phase, 18 kW, 70° Rise



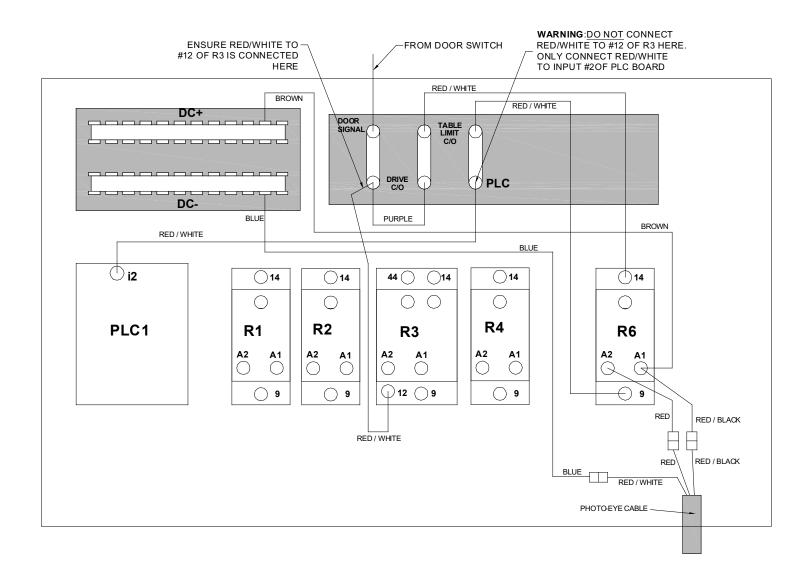


## TEMPERATURE BOARD



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Cyclic Temperature Board	06685-002-74-86
2	1	Gauge Cover, Red	05700-002-75-62
3	8	Nut, Thumb 6-32 Nylon	05310-002-83-12
4	1	Decal, Temperature Display	09905-003-78-29
5	2 (44") 3 (66")	RTD Temperature Probe (not shown)	06680-002-16-80

#### PHOTOCELL TABLE LIMIT SWITCH OPTION



LEGEND

L1 L2 L3 POWER DISTRIBUTION BLOCK GND GROUND H1 WASH HEATER

WASH PUMP MOTOR
CONTROL BOX FAN (24VDC)
DRIVE MOTOR OVERLOAD
WASH PUMP MOTOR OVERLOAD

SIDE-LOADER SVITCH (OPTIONAL)
TRANSFORMER (208-460V TO 120V)
TRANSFORMER (120V TO 24V/DC)

POWER SWITCH DOOR SAFETY SWITCH

RACK INLET SWITCH

DELINE SWITCH

09905-003-75-52

DRIVE MOTOR

WFS FRS

RЗ

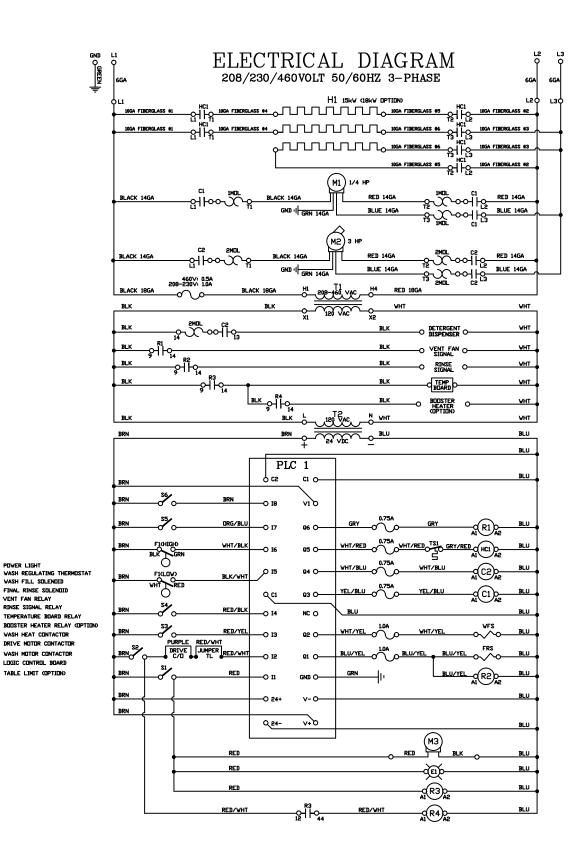
R4

C1

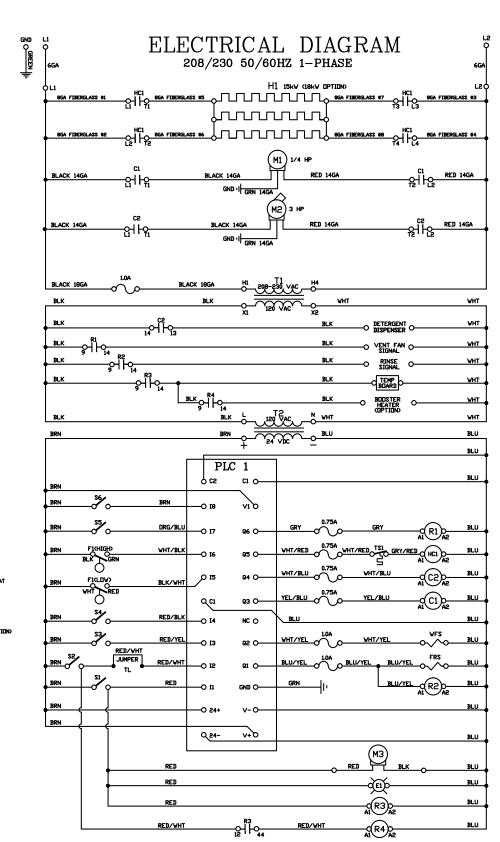
CS

PLC1

44" ELECTRICALLY HEATED (208/230/460 VOLT, 60 HZ, 3-PHASE)



44" ELECTRICALLY HEATED (208/230 VOLT, 60 HZ, 1-PHASE)



LEGEND
L1 L2 POVER DISTRIBUTION BLOCK
GND GROUND WASH HEATER DRIVE MOTOR WASH REGULATING THERMOSTAT VASH FILL SOLENDID FINAL RINSE SOLENDID VENT FAN RELAY FRS VFS DRIVE MUTUR
VASH PUMP MUTUR
CONTROL BOX FAN (24VDC)
POVER SVITCH
DOOR SAFETY SVITCH
RACK INLET SVITCH
FINAL RINSE SVITCH RINSE SIGNAL RELAY TEMPERATURE BOARD RELAY BOOSTER HEATER RELAY (OPTION) VASH HEAT CONTACTOR

DRIVE MOTOR CONTACTOR

VASH MOTOR CONTACTOR PLC1 LOGIC CONTROL BOARD

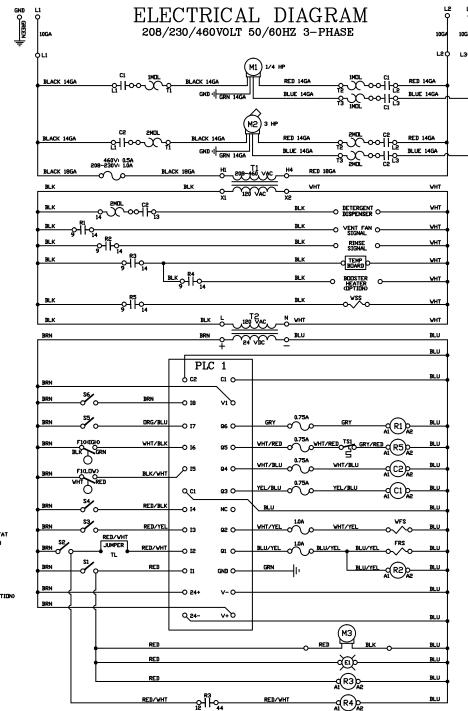
TABLE LIMIT (OPTION)

TRANSFORMER (208-460V TO 120V)
TRANSFORMER (120V TO 24VDC)
POWER LIGHT

DELINE SWITCH SIDE LOADER SWITCH (OPTIONAL)

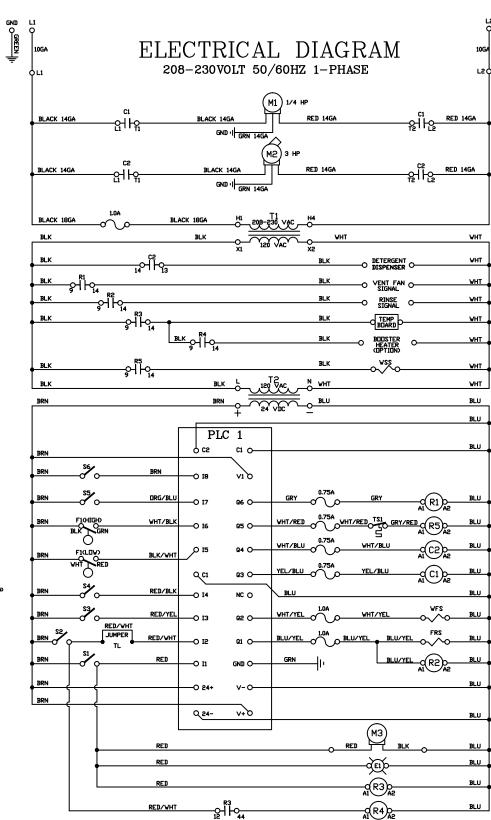
09905-003-79-33

44" STEAM HEATED (208/230/460 VOLT, 60 HZ, 3-PHASE)



LEGEND L2 L3 POWER DISTRIBUTION BLOCK GND GROUND POWER LIGHT WASH REGULATING THERMOSTAT DRIVE MOTOR WASH TANK STEAM SOLENOID WASH FILL SOLENOID WASH PUMP MOTOR
CONTROL BOX FAN (24VDC)
DRIVE MOTOR OVERLOAD FRS R1 FINAL RINSE SOLENOID VENT FAN RELAY VASH PUMP MOTOR DVERLOAD R2 R3 RINSE SIGNAL RELAY POWER SWITCH DOOR SAFETY SWITCH TEMPERATURE BOARD RELAY BOOSTER HEATER RELAY COPTIONS RACK INLET SWITCH FINAL RINSE SWITCH WASH TANK STEAM RELAY DELIME SWITCH SIDE-LOADER SWITCH (OPTIONAL) DRIVE MOTOR CONTACTOR CS WASH MOTOR CONTACTOR TRANSFORMER (208-460V TO 120V)
TRANSFORMER (120V TO 24VDC) LOGIC CONTROL BOARD PLC1 TABLE LIMIT (OPTION) 09905-003-79-52

## 44" STEAM HEATED (208/230 VOLT, 60 HZ, 1-PHASE)



LEGEND LEGENI)

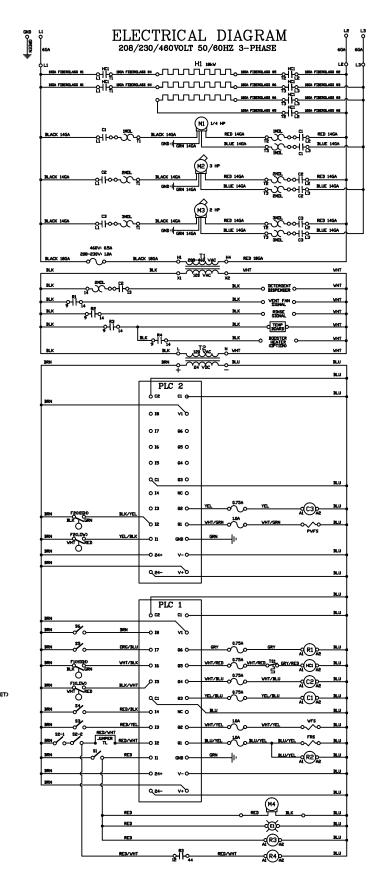
LL 2 POWER DISTRIBUTION BLOCK
GND
GROUND
BL
REVYE MOTOR
GNO CONTROL BOX FAM C44VBC)
SI
POWER SVITCH
SI
ACK BLET SVITCH
SI
RACK BLET SVITCH
SI
ELINE SVITCH
SI
TRANSFORMER C808-460V TO
TE
TRANSFORMER C808-460V TO
TE
TRANSFORMER C808-70 TO 244

TRANSFORMER (120V TO 24VDC) POWER LIGHT

WASH REGULATING THERMOSTAT WASH TANK STEAM SOLENOID WSS WFS FRS WASH FILL SOLENDID FINAL RINSE SOLENDID VENT FAN RELAY
RINSE SIGNAL RELAY
TEMPERATURE BOARD RELAY BODSTER HEATER RELAY COPTIONS WASH TANK STEAM RELAY DRIVE MOTOR CONTACTOR VASH MOTOR CONTACTOR LOGIC CONTROL BOARD PLC1 TABLE LIMIT (OPTION)

09905-003-79-53

66" ELECTRICALLY HEATED (208/230/460 VOLT, 60 HZ, 3-PHASE)



LEGEND LELGEND

L1 L2 L3 POWER DISTRIBUTION BLOCK
GND GROUND

H1 VASH HEATER
H1 BEIVE HOTOR

M2 VASH PUMP NOTOR
M3 PRE-VASH PUMP NOTOR
M4 CONTROL BOX FAN C24VDC)

IMOL DRIVE MOTOR OVERLAD VASH TANK FLOAT PRE-VASH TANK FLOAT POVER LIGHT WASH REGULATING THERMOSTAT PRE-VASH FILL SOLENDID VASH FILL SOLENDID FINAL RINSE SOLENOID VENT FAN RELAY RINSE SIGNAL RELAY WASH PUMP MOTOR OVERLOAD PRE-WASH PUMP MOTOR OVERLOAD TEMPERATURE BOARD RELAY PRE-WASH FURP BUTTER DVEREIAND
POWER SWITCH
DOOR SAFETY SWITCH (PRE-WASH)
RACK INLET SWITCH
FINAL RINSE SWITCH BOOSTER HEATER RELAY (OPTION) WASH HEAT CONTACTOR C1 DRIVE MOTOR CONTACTOR WASH MOTOR CONTACTOR DELIME SVITCH
SIDE LUADER SVITCH (OPTIONAL)
TRANSFORMER (208-460V TO 120V)
TRANSFORMER (120V TO 24VDC) PLC1 LOGIC CONTROL BOARD LOGIC CONTROL BOARD (EXPANSION UNIT) TABLE LIMIT (OPTION)

09905-003-82-16-A

## 66" ELECTRICALLY HEATED (208/230 VOLT, 60 HZ, 1-PHASE)

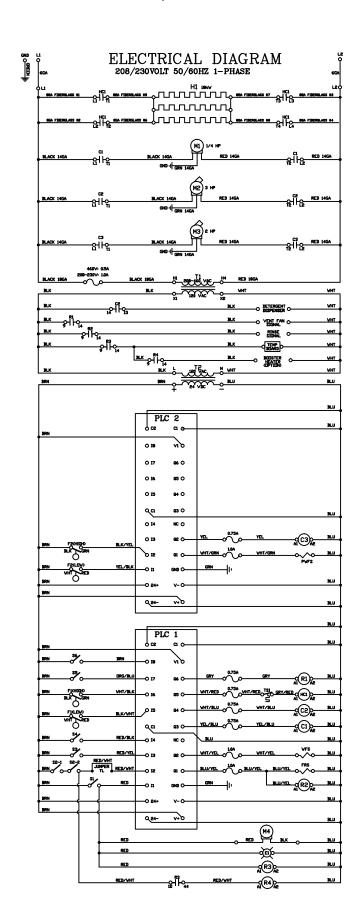
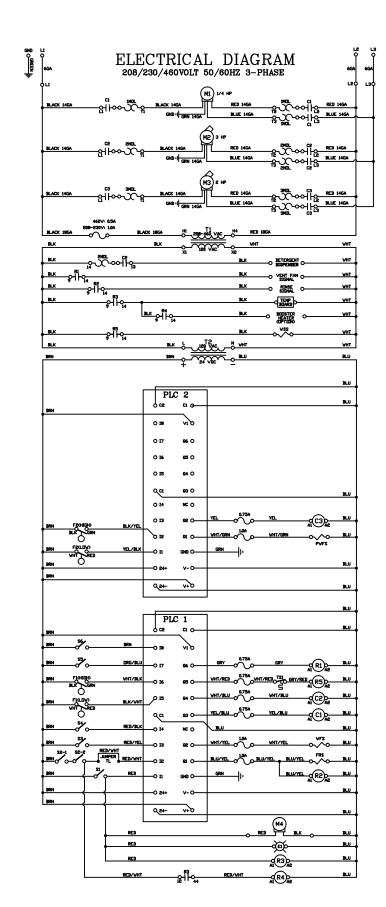


TABLE LIMIT (OPTION)

09905-003-84-01

66" STEAM HEATED (208/230/460 VOLT, 60 HZ, 3-PHASE)



LEGEND

LI LE L3 POWER BISTRIBUTION BLDCK
GRO GROUND

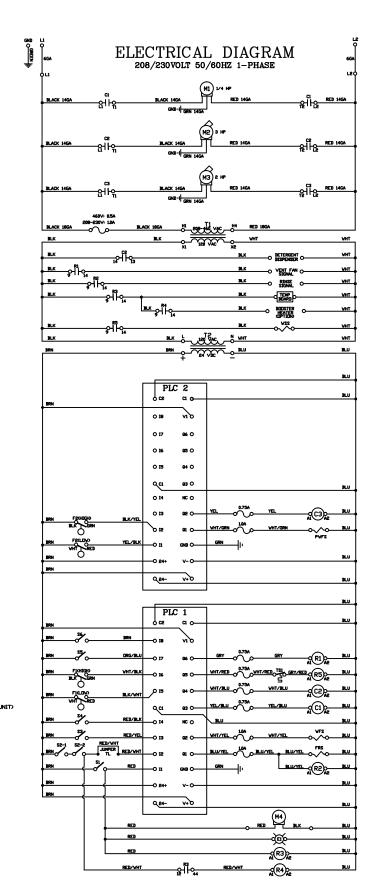
HI DRIVE NOTICE
HS PRE-VASH PAMP NOTICE
HS PRE-VASH PAMP NOTICE
HS PRIVE NOTICE DVERLOAD
HSL BUT FAN NOTICE DVERLOAD
HSL WASH PAMP NOTICE UVERLOAD
SI POWER SYSTCH
S2-1 DOOR SAFETY SYSTCH (VASH)
S2-2 DOOR SAFETY SYSTCH (VASH)
S3-2 ROCK DILET SYSTCH
S4 FINAL RINSE SYSTCH
S5 SIBE-LDABER SYSTCH OPTIONAL)
T1 TRANSFERRER (200-460) YTD LEGV)
T2 TRANSFERRER (200-460) YTD LEGV)
T2 TRANSFERRER (200-460) YTD LEGV)
T3 TRANSFERRER (200-460) YTD LEGV)

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F1 VASH TANK FLDAT
F2 PRE-VASH TANK FLDAT
F1 PROVER LIGHT
TSI VASH REGULATING THERMOSTAT
VASH REGULATING THERMOSTAT
VFS VASH FILL SOLEMOID
VFS VASH FILL SOLEMOID
VFS VASH FILL SOLEMOID
VSS VASH TANK STEAM SOLEMOID
RI VENT FAN RELAY
R2 RINSE SIGNAL RELAY
R3 TEMPERATURE BOARD RELAY
R3 TEMPERATURE BOARD RELAY
R5 VASH TANK STEAM RELAY
C1 DRIVE MOTOR CONTACTOR
C2 VASH MOTOR CONTACTOR
C3 PRE-VASH MOTOR CONTACTOR
PLC1 LOGIC CONTROL BOARD
PLC2 LOGIC CONTROL BOARD
PLC2 LOGIC CONTROL BOARD
PLC2 LOGIC CONTROL BOARD

TABLE LIMIT (OPTION)

## 66" STEAM HEATED (208/230 VOLT, 60 HZ, 1-PHASE)



LEGEND

L1 L2 L3 POVER DISTRIBUTION BLOCK GND GROUND DRIVE MOTOR WASH PUMP MOTOR
PRE-WASH PUMP MOTOR
CONTROL BOX FAN (24VDC) 25-5 25-1 21 POWER SWITCH
DOOR SAFETY SWITCH (WASH)
DOOR SAFETY SWITCH (PRE-WASH) RACK INLET SWITCH FINAL RINSE SWITCH DELINE SVITCH SIDE-LOADER SWITCH (OPTIONAL) TRANSFORMER (208-460V TO 120V)
TRANSFORMER (120V TO 24VDC) DRIVE MOTOR CONTACTOR C1 WASH MOTOR CONTACTOR

PRE-WASH MOTOR CONTACTOR

VASH TANK FLOAT
PRE-VASH TANK FLOAT
POVER LIGHT
VASH REGULATING THERMOSTAT
PRE-VASH FILL SOLENOID
VASH FILL SOLENOID FRS WSS FINAL RINSE SOLENOID
WASH TANK STEAM SOLENOID VENT FAN RELAY RINSE SIGNAL RELAY TEMPERATURE BOARD RELAY BOOSTER HEATER RELAY (OPTION) WASH TANK STEAM RELAY LOGIC CONTROL BOARD PLC2 LOGIC CONTROL BOARD (EXPANSION UNIT) TABLE LIMIT (OPTION)

R5

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