# INSTALLATION/OPERATION & TECHNICAL MANUAL

**AJX-44 SERIES** 

**AJX-66 SERIES** 

AJX-44CE AJX-44CS AJX-66CE AJX-66CS AJX-80CE

AJX-66CS

**AJX-80 SERIES** 

AJX-54 SERIES

AJX-54CE AJX-54CS AJX-76 SERIES AJX-76CE AJX-76CS

AJX-90 SERIES

AJX-90CE AJX-90CS

AND ASSOCIATED OPTION PACKAGES INCLUDING:

SIDE LOADER



Jackson WWS INC. P.O. Box 1060 Barbourville, KY. 40906 (606) 523-9795 Fax: (606) 523-9196 www.jacksonwws.com

October 13, 2014 P/N 7610-003-60-98 (Revision J)

### 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 THE DATE OF PURCHASE, BUT IN NO EVENT TO EXCEED (18) EIGHTEEN MONTHS FROM THE 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 furnished with the machine and the 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 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, 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 unauthorized persons, improper installation, if serial number has been removed or altered, or if unit is used for purpose other than it was 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 CARD

The warranty registration card supplied with the machine must be returned to Jackson WWS within 30 days to validate the warranty.

#### REPLACEMENT PARTS WARRANTY

Jackson replacement parts are warranted for a period of 90 days from the date of installation or 180 days from the date of shipment from the factory, which ever 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 the replacement of 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-Commercial) grade detergents, incorrect water temperature or pressure, or hard water conditions.



CALL 1-888-800-5672 TO REGISTER THIS PRODUCT! FAILURE TO DO SO WILL VOID THE WARRANTY!

LLAME AL 1-888-800-5672 PARA REGISTRAR ESTE PRODUCTO! AL NO HACERLO LA GARANTIA SERA ANULADA!

S.V.P. APPELER 1-888-800-5672 POUR ENREGISTRER CE PRODUIT, LA GARANTIE SERA ANNULEE POUR TOUT PRODUIT NON- ENREGISTREE

REVISION	REVISION DATE	MADE BY	APPLICABLE ECN	DETAILS
A	01-19-2009	JC	Process	Initial release of manual.
В	01-30-2009	JC	Process	Added 15kW heater option and adjusted amperage ratings.
С	10-06-2009	RC	N/A	Added curtain installation diagram.
D	10-09-2009	ARL	8044	Changed the part from a weldment (05700-021-67-50) to a cast- ing (09515-003-58-12).
E	12-01-2009	ARL	091125-1404-CW	Changed a dimension on page 30, the dimension between the mounting holes was indicated as 2.00", but should have been 2.88".
F	10-29-2010	RLC	101029-1336- CW	Updated Print for mounting Table Limit Switch
G	05-09-2012	RLC	QOF 386	Added chart for cut lengths on 66,76,80 & 90 L-R drain plumb- ing.
н	03-19-2013	RLC	QOF NDB-219	Updated manufacturer information
J	10-13-2014	KAP	N/A	Updated Manufacturer logo and Information



### AJX-44CE

AJX = AJX series of rack conveyors

44 = 44" wide machine 54 = 54" wide machine 66 = 66" wide machine 76 = 76" wide machine 80 = 80" wide machine 90 = 90" wide machine

CE = Electrically heated CS = Steam heated

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 available from 8:00 a.m. to 5:00 p.m. (EST), Monday through Friday. 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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**OPERATING CHARACTERISTICS** 

### **RACKS PER HOUR:**

AJX-44, 66, 80, 54, 76, 90 (High Temp) AJX-44, 66, 80, 54, 76, 90 (Low Temp)	225 209	STEAM COIL TANK HEAT (TS MODELS ONLY):	
DISHES OR GLASSES PER HOUR:			10.00
AJX-44, 66, 80, 54, 76, 90 (High Temp) AJX-44, 66, 80, 54, 76, 90 (Low Temp)	5625 5225	STEAM INLET PRESSURE (PSIG) STEAM CONNECTION NPT CONSUMPTION @ 15 PSIG (lbs/hr):	10-20 3/4" 60
PREWASH TANK CAPACITY (GALLONS):		MOTOR ELECTRICAL CHARACTERISTICS:	
AJX-66, 76 AJX-80, 90 WASH TANK CAPACITY (GALLONS):	17.25 17.25	DRIVE MOTOR HP WASH MOTOR HP PREWASH MOTOR HP: AJX-66CE/CS & AJX-76CE/CS MODELS	1/4 2 1
AJX-44, 66, 80, 54, 76, 90	20.4	AJX-80CE/CS & AJX-90CE/CS MODELS	2
PREWASH PUMP CAPACITY (GPM):	20.1	NOTE: Always refer to the machine data plate for electrical and water requirements. The material p	orovided
AJX-66, 76 AJX-80, 90	120 270	on this page is for reference only and may be su change without notice.	bject to
WASH PUMP CAPACITY			
GALLONS PER MINUTE (ALL MODELS):	270		
VENTING REQUIREMENTS (CFM)(100% CAP.):			
INPUT END OUTPUT END TOTAL	200 400 600		
CONVEYOR SPEED (FPM):			
AJX-44, 66, 80, 54, 76, 90 (High Temp) AJX-44, 66, 80, 54, 76, 90 (Low Temp)	6.2 5.75		
GALLONS PER RACK:			
AJX-44, 66, 80, 54, 76, 90 (High Temp) AJX-44, 66, 80, 54, 76, 90 (Low Temp)	.69 .79		
WATER TEMPERATURES:			
AJX-44, 66, 80, 54, 76, 90 MODELS:			
PREWASH (RECOMMENDED)(AJX-66,76,80,90) 11 WASH (MINIMUM) RINSE (MINIMUM)	0-140°F 160°F 180°F		
FLOW PRESSURE (PSI)	15		
FLOWRATE (GPM):			
AJX-44, 66, 80, 54, 76, 90 (High Temp) AJX-44, 66, 80, 54, 76, 90 (Low Temp)	2.57 2.74		

### ELECTRICAL REQUIREMENTS

NOTE: Typical Electrical Circuit is based upon (1) 125% of the full amperage load of the machine and (2) typical fixed-trip circuit breaker sizes as listed in the NEC 2002 Edition. Local codes may require more stringent protection than what is displayed here. Always verify with your electrical service contractor that your circuit protection is adequate and meets all applicable national and local codes. These numbers are provided in this manual simply for reference and may change without notice at any given time.

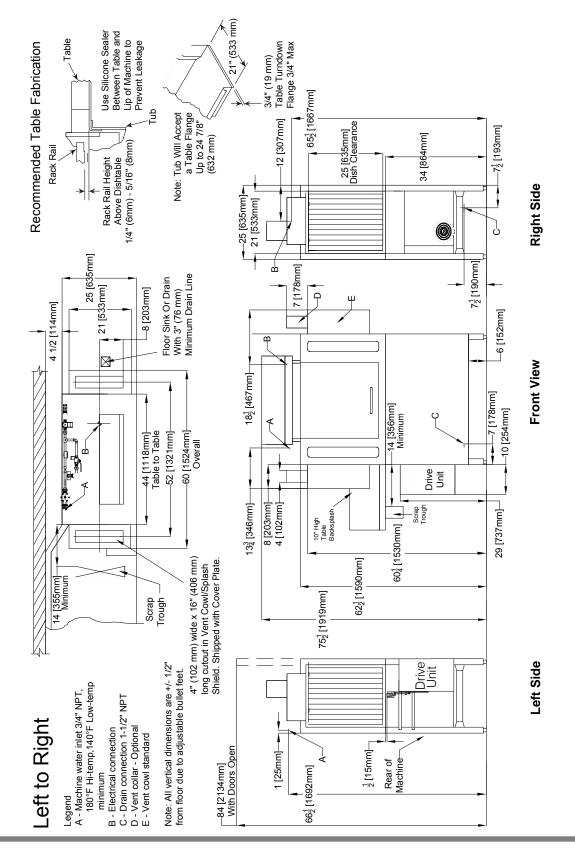
				RINSE HEATER		W Wash Heater	With 15k Tank H	
MODEL	VOLTS	<u>PH</u>	HZ	RATINGS	AMPS	CIRCUIT	AMPS	CIRCUIT
AJX-44CE	208	1	60	N/A	96.8 A	125 AMP	82.4 A	125 AMP
AJX-44CE	230	1	60	N/A	88.6 A	125 AMP	75.5 A	100 AMP
AJX-44CE	208	3	60	N/A	56.7 A	80 AMP	48.4 A	60 AMP
AJX-44CE	230	3	60	N/A	51.9 A	70 AMP	44.4 A	60 AMP
AJX-44CE	460	3	60	N/A	26.0 A	35 AMP	22.3 A	30 AMP
AJA-440L	400	5	00	N/A	20.0 A			
AJX-44CS	208	1	60	N/A	10.3 A	15 AMP	10.3 A	15 AMP
AJX-44CS	230	1	60	N/A	10.3 A	15 AMP	10.3 A	15 AMP
AJX-44CS	208	3	60	N/A	6.7 A	15 AMP	6.7 A	15 AMP
AJX-44CS	230	3	60	N/A	6.7 A	15 AMP	6.7 A	15 AMP
AJX-44CS	460	3	60	N/A	3.4 A	15 AMP	3.4 A	15 AMP
AJX-66CE	208	1	60	N/A	102.8 A	150 AMP	88.4 A	125 AMP
AJX-66CE	208	1		N/A N/A	94.6 A	125 AMP	81.5 A	125 AMP
	230	3	60	N/A N/A	60.1 A	80 AMP	51.8 A	70 AMP
AJX-66CE AJX-66CE	208	3	60 60	N/A N/A	55.3 A	70 AMP	47.8 A	60 AMP
AJX-66CE	230 460	3	60 60	N/A N/A	27.7 A	35 AMP	24.0 A	30 AMP
AJX-00CE	400	3	60	N/A	21.1 A	35 AIMP	24.0 A	JO AMI
AJX-66CS	208	1	60	N/A	16.3 A	25 AMP	16.3 A	25 AMP
AJX-66CS	230	1	60	N/A	16.3 A	25 AMP	16.37 A	25 AMP
AJX-66CS	208	3	60	N/A	10.1 A	15 AMP	10.1 A	15 AMP
AJX-66CS	230	3	60	N/A	10.1 A	15 AMP	10.1 A	15 AMP
AJX-66CS	460	3	60	N/A	5.1 A	15 AMP	5.1 A	15 AMP
AJX-80CE	208	1	60	N/A	105.3 A	150 AMP	90.9 A	125 AMP
AJX-80CE	230	1	60	N/A	97.1 A	125 AMP	84.0 A	125 AMP
AJX-80CE	208	3	60	N/A	62.3 A	80 AMP	54.0 A	70 AMP
AJX-80CE	230	3	60	N/A	57.5 A	80 AMP	50.0 A	70 AMP
AJX-80CE	460	3	60	N/A	28.8 A	40 AMP	25.0 A	30 AMP
AUX-000L	400	0	00	11/7	20.0 A	-0 AWI		
AJX-80CS	208	1	60	N/A	18.8 A	25 AMP	18.8 A	25 AMP
AJX-80CS	230	1	60	N/A	18.8 A	25 AMP	18.8 A	25 AMP
AJX-80CS	208	3	60	N/A	12.3 A	20 AMP	12.3 A	20 AMP
AJX-80CS	230	3	60	N/A	12.3 A	20 AMP	12.3 A	20 AMP
AJX-80CS	460	3	60	N/A	6.2 A	15 AMP	6.2 A	15 AMP

### ELECTRICAL REQUIREMENTS (CONTINUED)

			RINSE HEATER		8kW Wash Heater	With 15k Tank I	
MODEL	VOLTS	<u>PH</u> HZ	RATINGS	AMPS	CIRCUIT	AMPS	<u>CIRCUIT</u>
AJX-54CE	208		60 N/A	96.8 A	125 AMP	82.4 A	125 AMP
AJX-54CE	230	1 6	60 N/A	88.6 A	125 AMP	75.5 A	100 AMP
AJX-54CE	208	36	60 N/A	56.7 A	80 AMP	48.4 A	60 AMP
AJX-54CE	230	36	60 N/A	51.9 A	70 AMP	44.4 A	60 AMP
AJX-54CE	460	3 6	60 N/A	26.0 A	35 AMP	22.3 A	30 AMP
AJX-54CS	208	1 6	60 N/A	10.3 A	15 AMP	10.3 A	15 AMP
AJX-54CS	230		0 N/A	10.3 A	15 AMP	10.3 A	15 AMP
AJX-54CS	208		0 N/A	6.7 A	15 AMP	6.7 A	15 AMP
AJX-54CS	230		0 N/A	6.7 A	15 AMP	6.7 A	15 AMP
AJX-54CS	460		60 N/A	3.4 A	15 AMP	3.4 A	15 AMP
AJX-76CE	208	1 6	60 N/A	102.8 A	150 AMP	88.4 A	125 AMP
AJX-76CE	230		0 N/A	94.6 A	125 AMP	81.5 A	125 AMP
AJX-76CE	208		50 N/A	60.1 A	80 AMP	51.8 A	70 AMP
AJX-76CE	230		50 N/A	55.3 A	70 AMP	47.8 A	60 AMP
AJX-76CE	460		50 N/A	27.7 A	35 AMP	24.0 A	30 AMP
AJX-76CS	208	1 6	0 N/A	16.3 A	25 AMP	16.3 A	25 AMP
AJX-76CS	230		50 N/A	16.3 A	25 AMP	16.37 A	25 AMP
AJX-76CS	208	3 6	50 N/A	10.1 A	15 AMP	10.1 A	15 AMP
AJX-76CS	230		50 N/A	10.1 A	15 AMP	10.1 A	15 AMP
AJX-76CS	460	3 6	60 N/A	5.1 A	15 AMP	5.1 A	15 AMP
AJX-90CE	208	1 6	60 N/A	105.3 A	150 AMP	90.9 A	125 AMP
AJX-90CE	208		50 N/A	97.1 A	125 AMP	84.0 A	125 AMP
AJX-90CE	208		60 N/A	62.3 A	80 AMP	54.0 A	70 AMP
AJX-90CE	200		60 N/A	57.5 A	80 AMP	50.0 A	70 AMP
AJX-90CE	460		60 N/A	28.8 A	40 AMP	25.0 A	30 AMP
NORCOOL	400	0 0		20.077	+07.00		
AJX-90CS	208	1 6	60 N/A	18.8 A	25 AMP	18.8 A	25 AMP
AJX-90CS	230		60 N/A	18.8 A	25 AMP	18.8 A	25 AMP
AJX-90CS	208	3 6	60 N/A	12.3 A	20 AMP	12.3 A	20 AMP
AJX-90CS	230	3 6	60 N/A	12.3 A	20 AMP	12.3 A	20 AMP
AJX-90CS	460		50 N/A	6.2 A	15 AMP	6.2 A	15 AMP

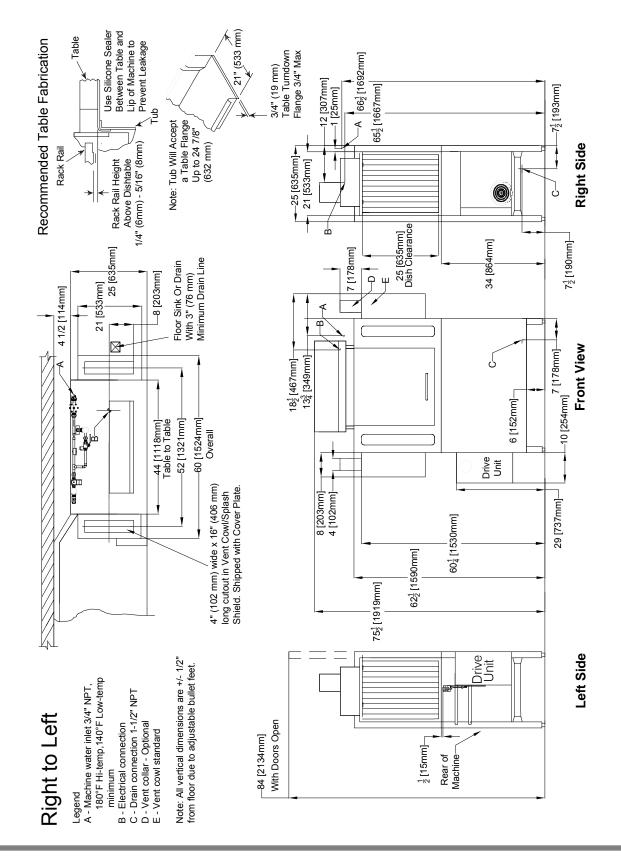
AJ-44T Series Technical Manual 7610-003-07-21 Issued: 03-21-2006 Revised: 01-30-2009

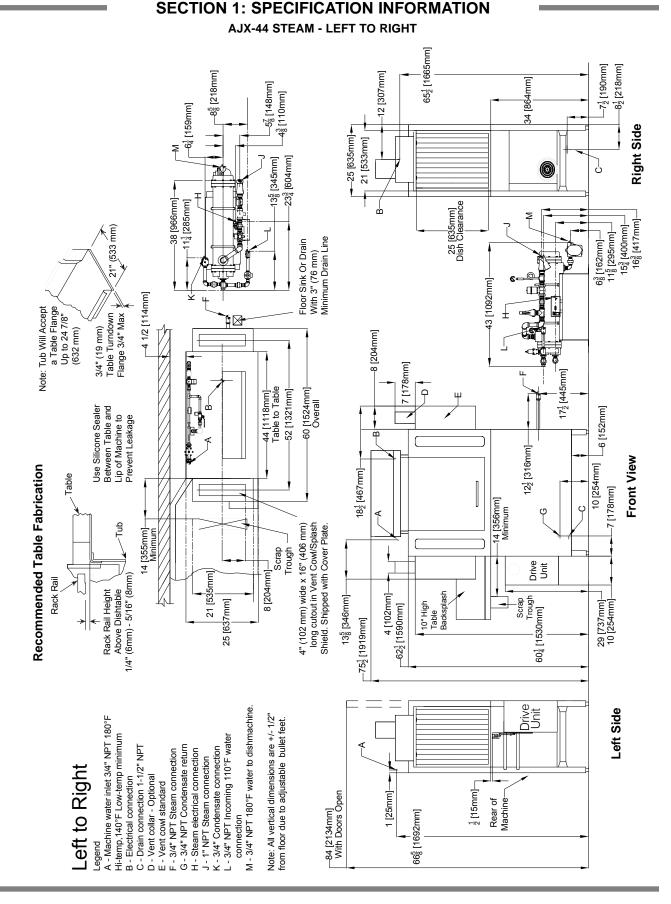
AJX-44 ELECTRIC - LEFT TO RIGHT



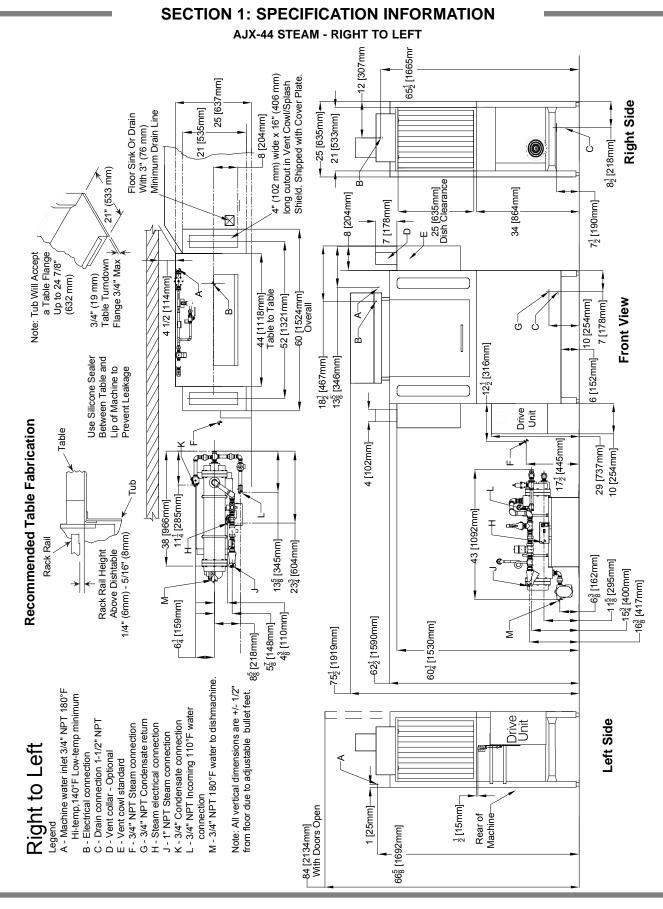
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AJX-44 ELECTRIC - RIGHT TO LEFT

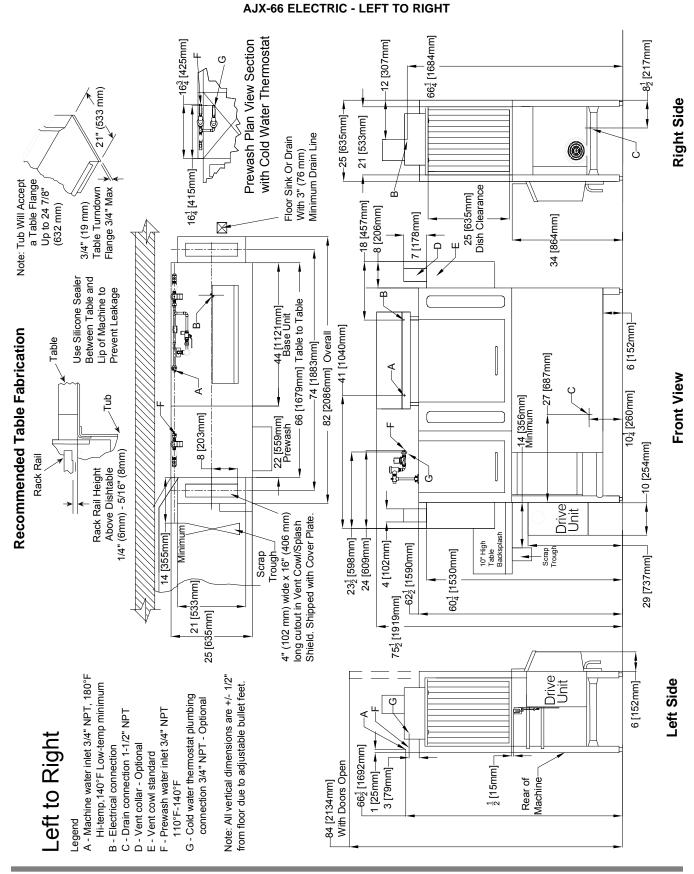




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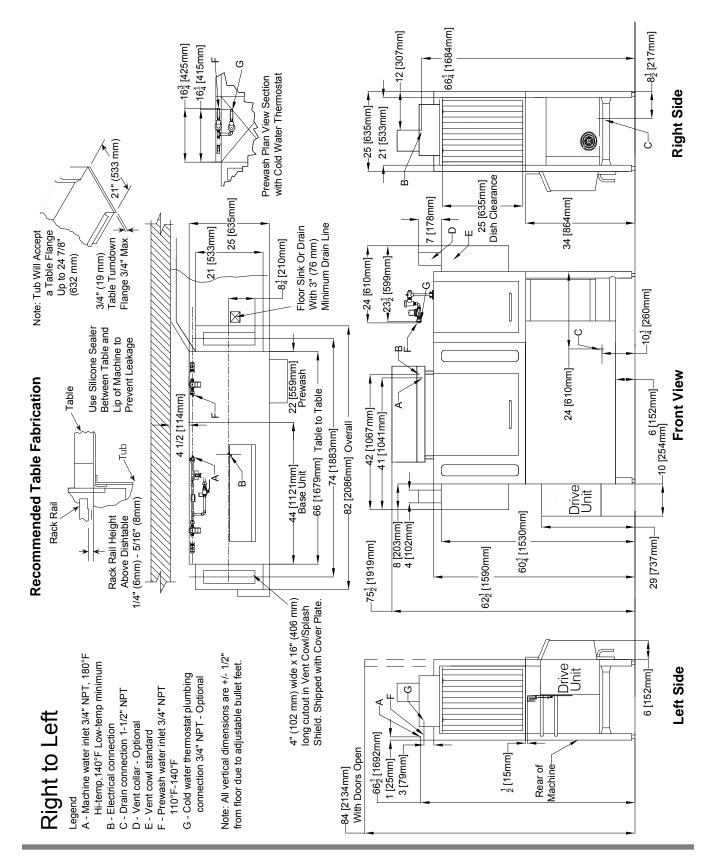
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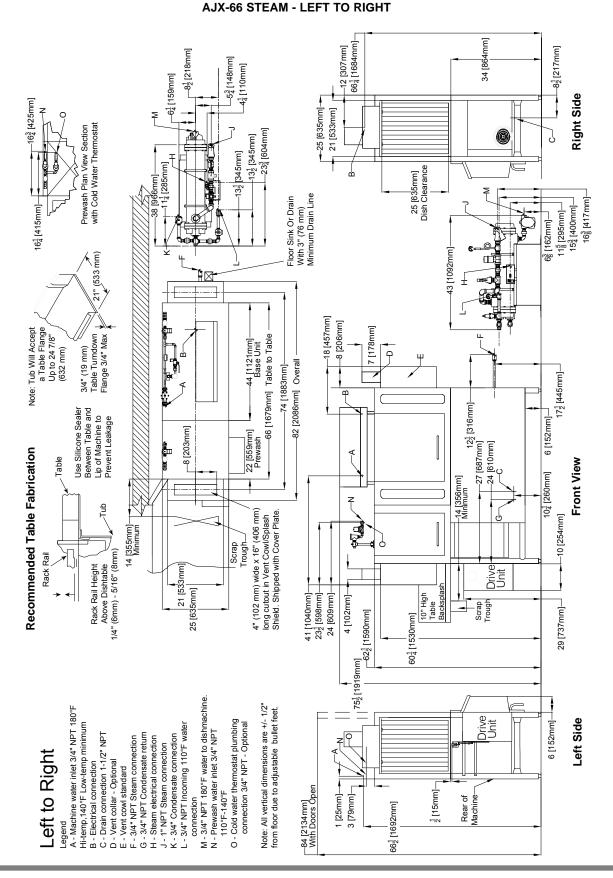
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### SECTION 1: SPECIFICATION INFORMATION

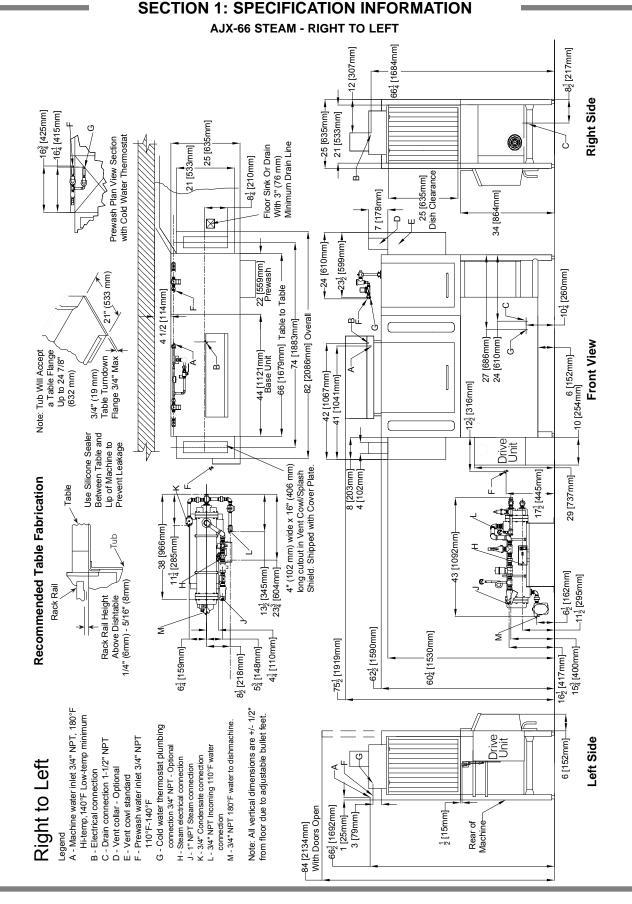
AJX-66 ELECTRIC - RIGHT TO LEFT



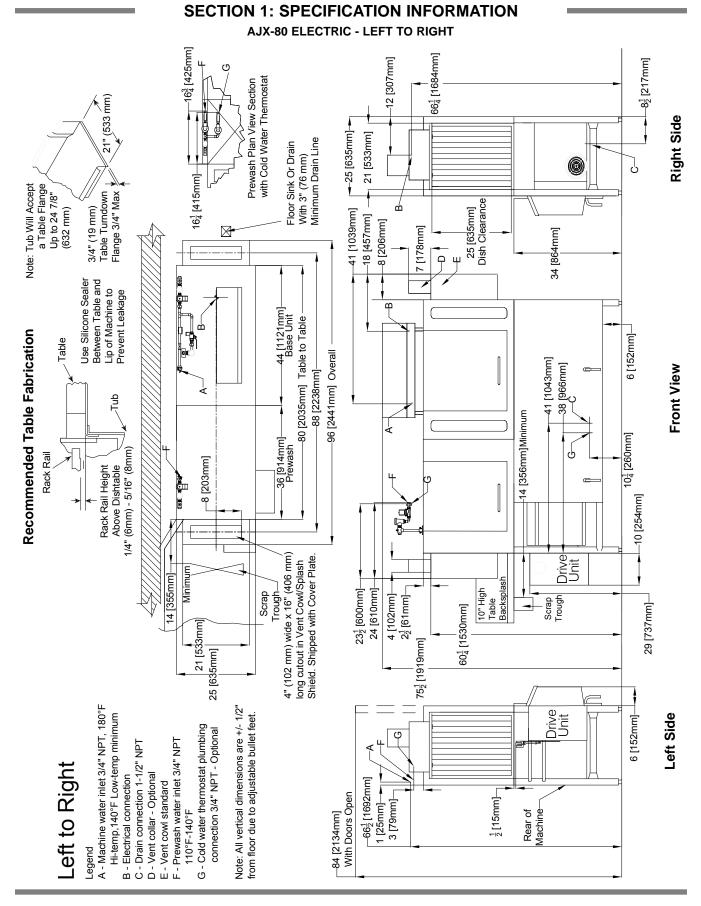
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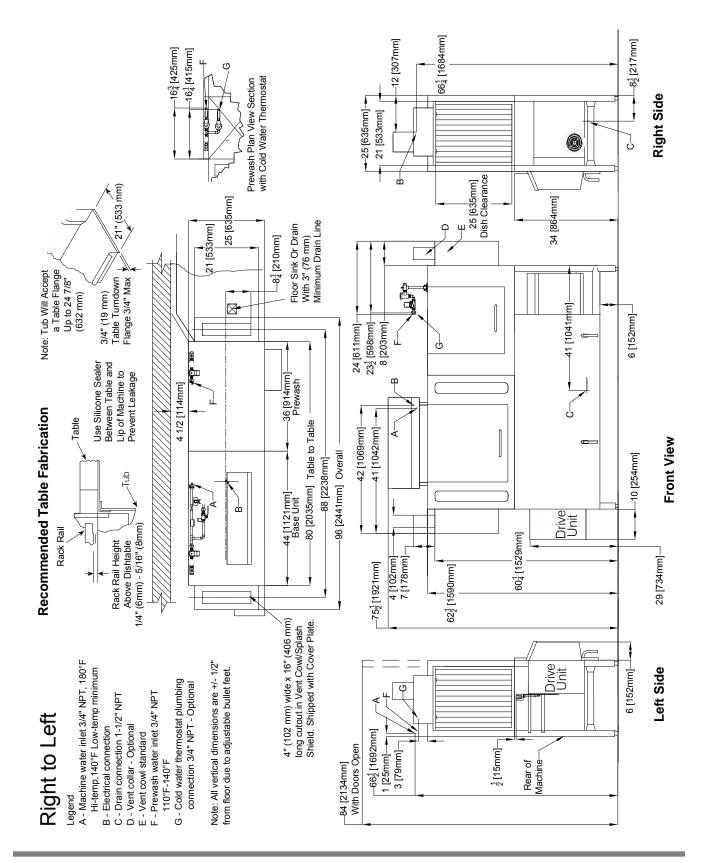


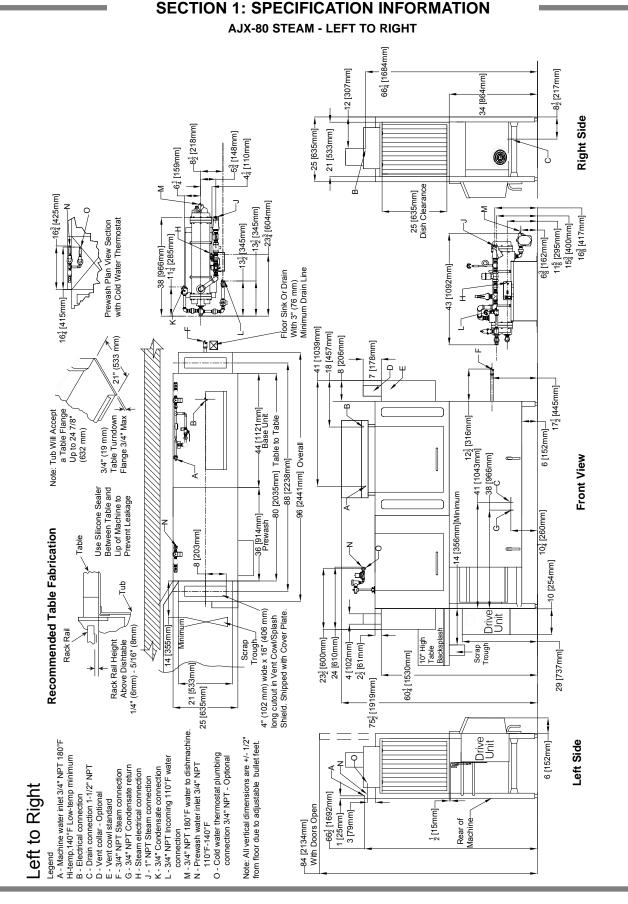
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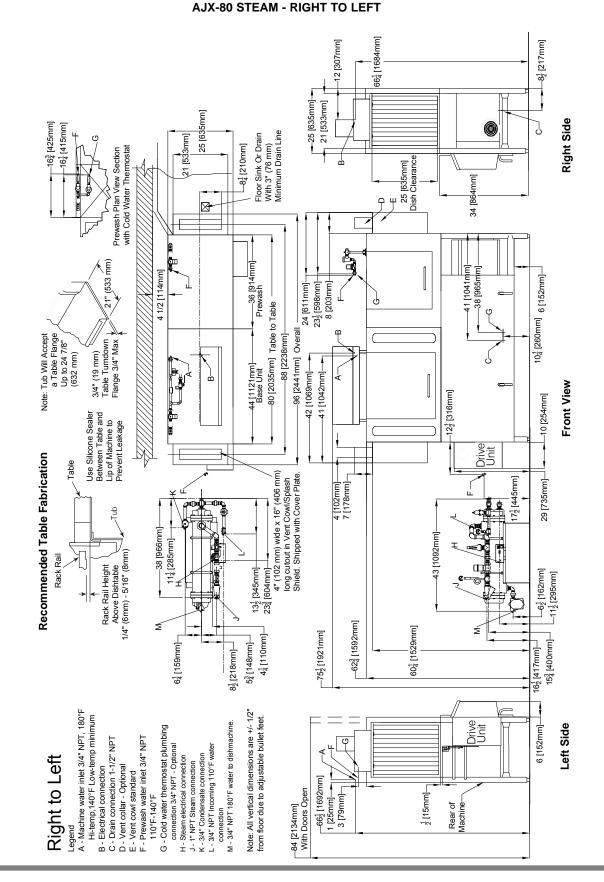
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AJX-80 ELECTRIC - RIGHT TO LEFT

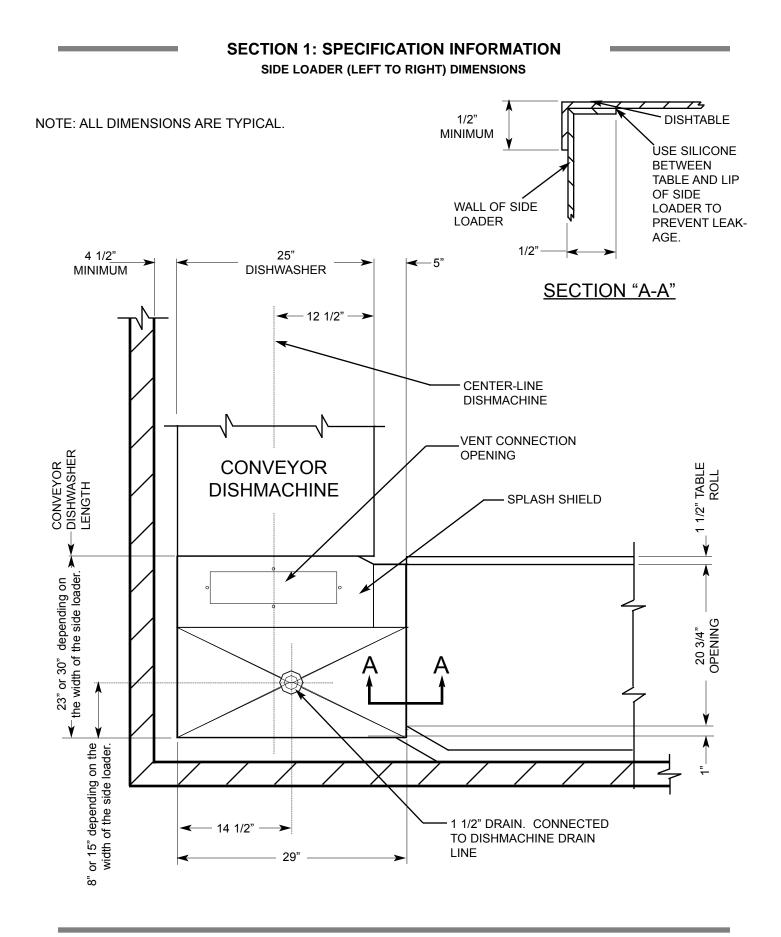




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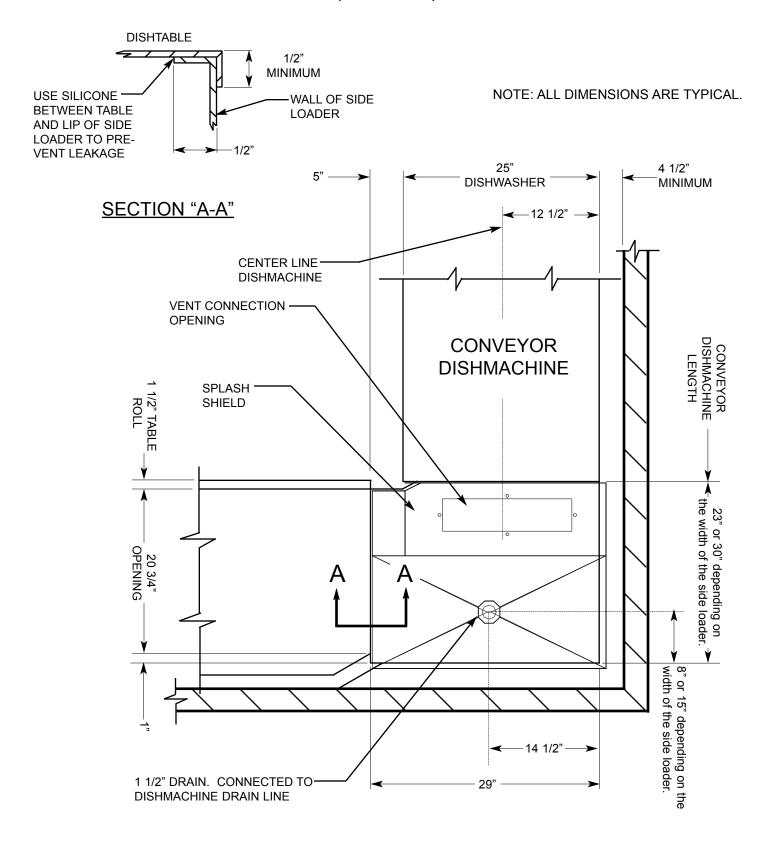


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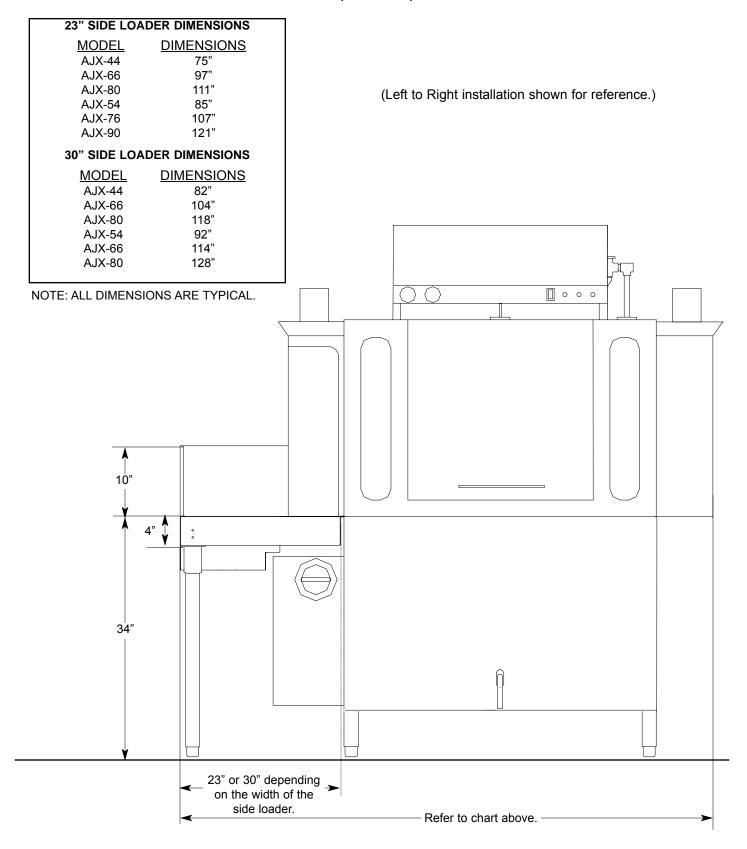


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SIDE LOADER (RIGHT TO LEFT) DIMENSIONS



SIDE LOADER (INSTALLED) DIMENSIONS



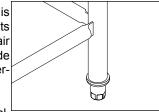
INSTALLATION INSTRUCTIONS

### NOTE: THE INSTRUCTIONS PROVIDED HEREIN, UNLESS OTHERWISE SPECIFIED ARE FOR THE DISHMA-CHINES ONLY. THERE ARE SEPARATE DIRECTIONS FOR THE GAS BOOSTER.

**VISUAL INSPECTION:** Before installing the unit, check the container and machine for damage. A damaged container is an indicator that there may be some damage to the machine. If there is damage to both the container and machine, do not throw away the container. 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 may result in damage to the unit while in transit. If such a situation occurs, do not return the unit to Jackson; instead, contact the carrier and ask them to send a representative to the site to inspect the damage to the unit and to complete an inspection report. You must contact the carrier within 48 hours of receiving the machine. Also, contact the dealer through which you purchased the unit.

**UNPACKING THE DISHMACHINE:** The machine should be unboxed and removed from shipping pallet prior to being installed. Open the front door and remove all of the packing materials. Once unpacked, ensure that there are no missing parts from the machine. This may not be obvious at first. If it is discovered that an item is missing, contact Jackson immediately.

**LEVEL THE DISHMACHINE:** The dishmachine is designed to operate while being level. This is important to prevent any damage to the machine during operation and to ensure the best results when washing ware. The unit comes with 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 from front to back before making any connections. You will be able to adjust the overall height of the unit by turning the bullet feet from between 75-1/2" to 76-1/2".



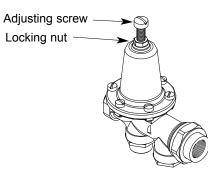
PLUMBING THE DISHMACHINE: All plumbing connections must comply with all applicable local,

state, and national plumbing codes. The plumber is responsible for ensuring that the incoming water line is thoroughly flushed prior to connecting it to any component of the dishmachine. It is necessary to remove all foreign debris from the water line that may 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.

Water hardness should be a maximum of 6 grains per gallon. Harder water should be treated prior to using the machine. Iron in the water supply can cause staining. A filter designed to remove iron from the supply water is highly recommended for supplies in excess of 0.1 ppm (parts per million).

**CONNECTING THE DRAIN LINE:** The drain for the models covered in this manual are gravity discharge drains. All piping from the machine to the drain Adjusting screw 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 30 gallons per minute.

**WATER SUPPLY CONNECTION:** Ensure that you have read the section entitled "PLUMBING THE DISHMACHINE" above before proceeding. The supply water temperature must meet the minimum requirements listed on the machine data plate. Install the water supply line (1/2" pipe size minimum) to the dishmachine line strainer. 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 for service. The water supply line is to be capable of 15 to 20 PSI "flow" pressure at the recommended temperature indicated on the data plate.



Incoming Plumbing Connection

If the water level is too low or too high, check the incoming water pressure. It should be  $20 \pm 5$  PSI. Too high of pressure results in too much water; too low of pressure results in too little water. To adust the regulator, loosen the nut at the top, this will allow you to screw or unscrew the adjustment. With a screwdriver, turn the adjuster clockwise to increase pressure or counter clockwise to decrease it.

Do not confuse static pressure with flow pressure. Static pressure is the line pressure in a "no flow" condition (all valves and services are closed). Flow pressure is the pressure in the fill line when the fill valve is opened during the cycle.

It is also recommended that a shock absorber (not supplied) be installed in the incoming water line. This prevents line hammer (hydraulic shock), induced by the solenoid valve as it operates, from causing damage to the equipment.

### INSTALLATION INSTRUCTIONS (CONTINUED)

**STEAM LINE CONNECTIONS:** Some machines covered in this manual are designed to use low pressure steam as a source of heat for wash tank water. The machines come with lines by which outside source steam needs to be connected. Connect all incoming steam lines in accordance with the steam booster manufacturer's instructions. Ensure that all applicable codes and regulations are adhered to. See machine data plate for information concerning steam flow pressure.

**PLUMBING CHECK:** Slowly turn on the water supply to the machine after the incoming fill line and the drain line have been installed. Check for any leaks and repair as required. All leaks must be repaired prior to placing the machine in operation.

**ELECTRICAL POWER CONNECTION:** 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 supply and place a tag at the disconnect switch to indicate that you are working on the circuit.

The dishmachine data plate is located on the right side and to the front of the machine. Refer to the data plate for machine operating requirements, machine voltage, total amperage load and serial number.

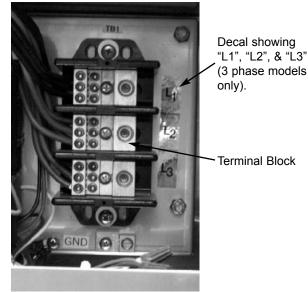
To install the incoming power lines, open the control box. Install conduit into the pre-punched holes in the back of the control box. Route power wires and connect to power block and grounding lug. Install the service wires (L1, L2, and L3 (3 phase only))

to the appropriate terminals as they are marked on the terminal block. Install the grounding wire into the lug provided. Tighten the connections. It is recommended that "DE-OX" or another similar anti-oxidation agent be used on all power connections.

**VOLTAGE CHECK:** Ensure that the power switch is in the OFF position and apply power to the dishmachine. 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. Do not run the dishmachine if the voltage is too high or too low. Shut off the service breaker and mark it as being for the dishmachine. 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.

**VENTILATION OF DISHMACHINE:** The dishmachine should be located with provisions for venting into an adequate exhaust hood or ventilation system. This is essential to permit efficient removal of the condensation exhaust. Ensure that the exhaust system is acceptable in accordance with all applicable codes and standards.

## NOTE: Any damage that is caused by steam or moisture due to improper ventilation is NOT covered under the warranty.



Incoming Power Connection

This units covered in this manual have the following exhaust requirements:

Load End:	200 CFM
Unload End:	400 CFM

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

**ELECTRIC HEAT:** The thermostats for the machines covered in this manual are factory set. They should not be adjusted except by an authorized service agent.

**CHEMICAL FEEDER EQUIPMENT:** Detergent may be introduced into the unit through the removal of the bulkhead plug in the rear of the tub and replacing it with the third party detergent injection fitting. Remove the bulkhead plug in the side of the tub to

**INSTALLATION INSTRUCTIONS (CONTINUED)** 

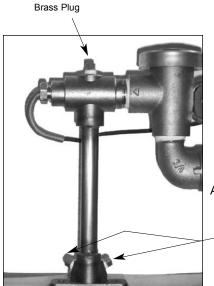
install the detergent concentration probe.

For more information concerning detergent concerns, please refer to the page entitled "Detergent Control".

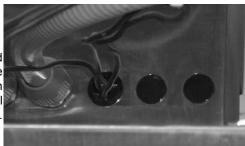


Detergent Connection Point (Machine rear view)

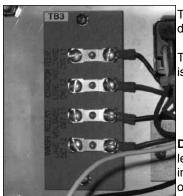
The 1/8" brass plugs on the incoming plumbing rinse injector may be removed to install sanitizer and rinse aid injection fittings.



All wires for the chemical injectors should be routed through one of the extra openings in Brass Plugs the back of the control box.



Back of Control Box



Terminals in the control box marked "CVS" provide a constant voltage signal whenever the drive motor is operating.

Terminals in the control box marked "DET" provide a voltage signal whenever the wash motor is operating.

**DELIMING OPERATIONS:** In order to maintain the dishmachine at its optimum performance level, it will be required to remove lime and corrosion deposits on a frequent basis. A deliming solution should be available from your detergent supplier. Read and follow all instructions on the label of the deliming solution.

Aid Connection Points

### **DELIMING OPERATIONS**

To proceed with the deliming operation, fill the dishmachine and add the correct amount of deliming solution as recommended by the deliming solution manufacturer. The water capacity of the various tanks of the dishmachine can be verified on the specification sheet(s) of this manual.

Perform the following operations to delime the dishmachine:

- 1. Turn the NORMAL/DELIME switch on the back of the control box to the DELIME position.
- 2. Disconnect or turn off all chemical feeder pumps.
- 3. Close all doors (after adding the deliming solution).
- 4. Run the machine for the recommended period of time.
- 5. Turn the unit off and open the doors.

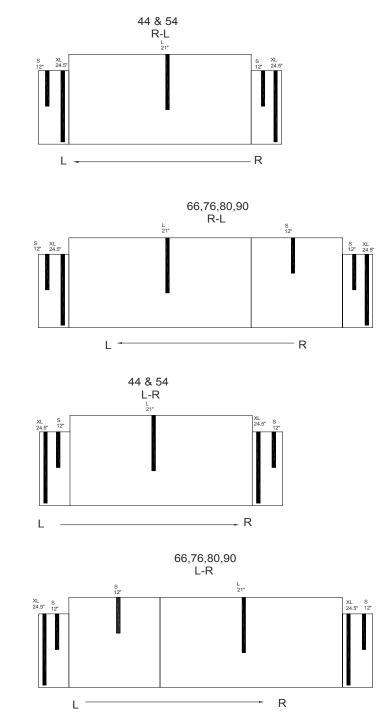
6. Wait five minutes, then inspect the inside of the machine. If the machine is not delimed, run another time cycle as per the deliming solution's instructions.

- 7. When clean, drain and re-fill the machine.
- 8. Run in MANUAL for 10 minutes to remove residual deliming solution.
- 9. Drain and re-fill the machine.

This equipment is not recommend 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.

### CURTAIN INSTALLATION DIAGRAMS

Please refer to the chart for placement of the curtains.



### <u>NOTE</u>

When machine is a Low Hood, replace "XL" curtains with "L" curtains.

### PART NUMBERS

"XL"	08415-002-47-37
"L"	08415-131-73-45
"S"	08415-131-73-44
Curtain Rod	05700-021-73-43



### SIDE LOADER INSTALLATION & OPERATION INSTRUCTIONS

This accessory assists in the delivery of a full dish rack from the break down (scrapping) table to the dishmachine. It will convert the direction of travel 90°. Since the Side Loader is shipped mounted on the conveyor dishwasher there is no additional installation required for this option. As it is operated mechanically by the dishwasher it does not require any plumbing or electrical connections.

This Side Loader does not require or add any additional electrical or mechanical devices to the unit which could create operational or maintenance problems. As designed the drive mechanism is powered by the conveyor drive motor on the dishmachine. An extension on the pawl bar provides the drive to push the racks into the unit.

**PREPARATION:** Before proceeding with the start-up of the unit, verify that the Side Loader pan strainer is installed.

**WARE PREPARATION:** Proper preparation of ware will help ensure good results and less re-washes. If not done properly, ware may not come out clean and the efficiency of the dishmachine will be reduced. It is important to remember that a dishmachine is not a garbage disposal and that simply throwing unscraped dishes into the machine simply defeats the purpose altogether of washing the ware. Scraps should be removed from ware prior to being loaded into a rack. Pre-rinsing and pre-soaking are good ideas, especially for silverware and casserole dishes. Place cups and glasses upside down in racks so that they do not hold water during the cycle. The dishmachine is meant not only to clean, but to sanitize as well, to destroy all of the bacteria that could be harmful to human beings. In order to do this, ware must be properly prepared prior to being placed in the machine.

**WASHING A RACK OF WARE:** Once a rack is fully loaded it should be positioned against the front of the dish table. The rack should then be moved into the Side Loader until it activates the actuator switch. Once the the machine is started, it should pull the rack through the machine and push it out the unload end. Once a rack has started through, you may put another rack in.

**OPERATIONAL INSPECTION:** Based upon usage, the pan strainer may 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 does become 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 work load.

**SHUTDOWN AND CLEANING:** At the end of the workday, remove the pan strainer and clean as required. Wipe out the inside of the Side Loader and then reinsert the strainer.

DISHMACHINE OPERATING INSTRUCTIONS

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

- 1. Close door(s) on dishmachine.
- 2. Close the drain valve(s).

**POWER UP (ELECTRICALLY-HEATED MODELS):** To energize the unit, turn on the power at the service breaker. The voltage should have been previously verified as being correct. If not, the voltage will have to be verified.

**POWER UP (STEAM-HEATED MODELS):** To energize the unit, turn on the power at the service breaker. The voltage should have been previously verified as being correct. If not, the voltage will have to be verified. Ensure that the steam service is connected and that steam is flowing to the machine. Without steam, the water will not reach the required minimum temperatures that the machine is designed to operate at.

**FILLING THE WASH TUB:** Ensure that the delime switch is in the NORMAL position, and place the power switch into the ON position. The machine should fill automatically and shut off when the appropriate level is reached (just below the pan strainer). The wash tub must be completely filled before operating the wash pump to prevent damage to the component. Once the wash tub is filled, the unit is ready for operation.

### Machines equipped with prewash sections should not be run without water in those sections. This can cause damage to components.

**WARE PREPARATION:** Proper preparation of ware will help ensure good results and less re-washes. If not done properly, ware may not come out clean and the efficiency of the dishmachine will be reduced. It is important to remember that a dishmachine

is not a garbage disposal and that simply throwing unscraped dishes into the machine simply defeats the purpose altogether of washing the ware. Scraps should be removed from ware prior to being loaded into a rack. Pre-rinsing and presoaking are good ideas, especially for silverware and casserole dishes. Place cups and glasses upside down in racks so that they do not hold water during the cycle. The dishmachine is meant not only to clean, but to sanitize as well, to destroy all of the bacteria that could be harmful to human beings. In order to do this, ware must be properly prepared prior to being placed in the machine.

**DAILY MACHINE PREPARATION:** Refer to the section entitled "PREPARATION" at the top of this page and follow the instructions there. Afterwards, check that all of the chemical levels are correct and/or that there is plenty of detergent available for the expected workload.

**WASHING A RACK OF WARE:** To wash a rack, simply slide a rack of soiled ware into the load end of the machine. Once the the machine is started, it should pull the rack through the machine and push it out the unload end. Once a rack has started through, you may put another rack in.

**OPERATIONAL INSPECTION:** Based upon usage, the pan strainers may become clogged with soil and debris as the workday progresses. Operators should regularly inspect the pan strainers to ensure they have not become clogged. If the strainers do, they will reduce the washing capability of the machine. Instruct operators to clean out the pan strainers at regular intervals or as required by work load.

NOTE: On units equipped with prewash sections (AJX-66, AJX-76, AJX-80 & AJX-90), operators should also take the time to inspect the prewash section strainers and clean them as required by workload.

**SHUTDOWN AND CLEANING (ELECTRICALLY-HEATED MODELS):** At the end of the workday, place the power switch in the OFF position and open the door(s). Open the drain valves and allow the machine to drain completely. Remove the pawl bar assembly (clean as required). Remove the pan strainers and, if equipped, the prewash strainers, run off sheets and scrap bas-

### DISHMACHINE OPERATION INSTRUCTIONS (CONTINUED)

ket strainer. Remove the wash and, if equipped, the prewash arms and verify that the nozzles and arms are free from obstructions. Flush the arms with fresh water. Remove the pump suction strainers and clean out as required. Remove the rinse tray assembly and clean. Remove the curtains and scrub with a mild detergent and warm water. Wipe out the inside of the unit and then reassemble with the components previously removed.

**SHUTDOWN AND CLEANING (STEAM-HEATED MODELS):** At the end of the workday, place the power switch in the OFF position, secure the flow of steam to the machine and open the door(s). Open the drain valves and allow the machine to drain completely. Remove the pawl bar assembly (clean as required). Remove the pan strainers and, if equipped, the prewash strainers, run off sheets and scrap basket strainer. Remove the wash and, if equipped, the prewash arms and verify that the nozzles and arms are free from obstructions. Flush the arms with fresh water. Remove the pump suction strainers and clean out as required. Remove the rinse tray assembly and clean. Remove the curtains and scrub with a mild detergent and warm water. Wipe out the inside of the unit and then reassemble with the components previously removed.

### DETERGENT CONTROL

Detergent usage and water hardness are two factors that contribute greatly to how efficiently your dishmachine will operate. Using detergent in the proper amount can become, in time, a source of substantial savings. A qualified water treatment specialist can tell you what is needed for maximum efficiency from your detergent, but you should still know some basics so you'll understand what they are talking about.

First, you must understand that hard water greatly effects the performance of the dishmachine. Water hardness is the amount of dissolved calcium and magnesium in the water supply. The more dissolved solids in the water, the greater the water hardness. Hard water works against detergent, thereby causing the amount of detergent required for washing to increase. As you use more detergent, your costs for operating the dishmachine will increase and the results will decrease. The solids in hard water also may build-up as a scale on wash and rinse heaters, decreasing their ability to heat water. Water temperature is important in removing soil and sanitizing dishes. If the water cannot get hot enough, your results may not be satisfactory. This is why Jackson recommends that if you have installed the machine in an area with hard water, that you also install some type of water treatment equipment to help remove the dissolved solids from the water before it gets to the dishmachine.

Second, hard water may have you adding drying agents to your operating cycle to prevent spotting, when the real problem is deposited solids on your ware. As the water evaporates off of the ware, the solids will be left behind to form the spotting and no amount of drying agent will prevent this. Again, using treated water will undoubtedly reduce the occurrences of this problem.

Third, treated water may not be suitable for use in other areas of your operation. For instance, coffee made with soft water may have an acid or bitter flavor. It may only be feasible to install a small treatment unit for the water going into the dishmachine itself. Discuss this option with your qualified water treatment specialist.

Even after the water hardness problems have been solved, there still must be proper training of dishmachine operators in how much detergent is to be used per cycle. Talk with your water treatment specialist and detergent vendor and come up with a complete training program for operators. Using too much detergent has as detrimental effects as using too little. The proper amount of detergent must be used for job. It is important to remember that certain menu items may require extra detergent by their nature and personnel need to be made aware of this. Experience in using the dishmachine under a variety of conditions, along with good training in the operation of the machine, can go a long way in ensuring your dishmachine operates as efficiently as possible.

Certain dishmachine models require that chemicals be provided for proper operation and sanitization. Some models even require the installation of third-party chemical feeders to introduce those chemicals to the machine. Jackson does not recommend or endorse any brand name of chemicals or chemical dispensing equipment. Contact your local chemical distributor for questions concerning these subjects.

Some dishmachines come equipped with integral solid detergent dispensers. These dispensers are designed to accommodate detergents in a certain sized container. If you have such a unit, remember to explain this to your chemical distributor upon first contacting them.

As explained before, water temperature is an important factor in ensuring that your dishmachine functions properly. The data plate located on each unit details what the minimum temperatures must be for either the incoming water supply, the wash tank and the rinse tank, depending on what model of dishmachine you have installed. These temperatures may also be followed by temperatures that Jackson recommends to ensure the highest performance from you dishmachine. However, if the minimum requirements are not met, the chances are your dishes will not be clean or sanitized. Remember, a dish can look clean, but it may not be sanitized. Instruct your dishmachine operators to observe the required temperatures and to report when they fall below the minimum allowed. A loss of temperature can indicate a much larger problem such as a failed heater or it could also indicate that the hot water heater for your operation is not up to capacity and a larger one may need to be installed.

There are several factors to consider when installing your dishmachine to ensure that you get the best possible results from it and that it operates at peak efficiency for many years. Discuss your concerns with your local chemical distributor and water treatment specialist before there is a problem.

#### SECTION 2: INSTALLATION/OPERATION INSTRUCTIONS = STRIKER PLATE LIMIT SWITCH INSTALLATION INSTRUCTIONS

#### Installation Instructions:

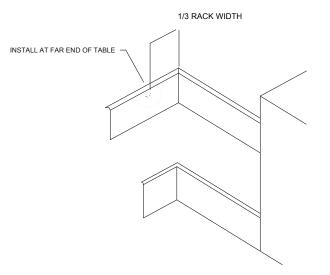
1. Wiring: The switch is wired common and normally open because of the hinge design. By interrupting the line in series with the door switches, the dishmachine ceases to operate. Refer to the machine schematic for details on how to wire the switch.

2. Parts of the table switch are mounted in the dishtable, at the end of the table and under the table. See the drawing(s) for the relationship of the switch to the table.

3. Move the limit switch as far down on the two slots as possible and see that the limit switch is straight on the base plate. This might require adjustment of the nut on the connector for the limit switch.

4. Then adjust the inside and the outside connector nuts for the connector box so that it lines up even with the limit switch and the base plate.

5. Tighten down the nuts for the seal so that they are tight.



6. If you have any difficulty you might have to adjust the connectors to the seal, screwing in or screwing out until the installation is straight on the table and the limit switch is actuated correctly by the rack.

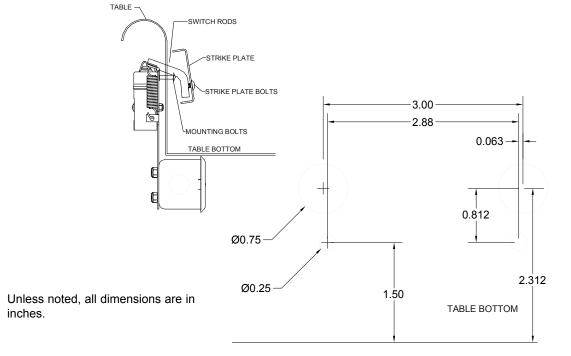


TABLE LIMIT SWITCH THROUGH ROD HOLES

# SECTION 3: PREVENTATIVE MAINTENANCE

#### SECTION 3: PREVENTATIVE MAINTENANCE PREVENTATIVE MAINTENANCE

The dishmachines covered in this manual are designed to operate with a minimum of interaction with the operator. However, this does not mean that some items will not wear out in time. Jackson highly recommends that any maintenance and repairs not specifically discussed in this manual should be performed by QUALIFIED SERVICE PERSONNEL ONLY. Performing maintenance on your dishmachine may void your warranty if it is still in effect, so if you have a question or concern, do not hesitate to contact Jackson.

There are many things that operators can do to prevent catastrophic damage to the dishmachine. One of the major causes of component failure has to do with prescrapping procedures. A dishmachine is not a garbage disposal; any large pieces of material that are put into the machine shall remain in the machine until they are either broken up (after spreading out on your ware!) or physically removed. Strainers are installed to help catch debris, but they do no good if they are clogged. Have operators regularly inspect the pan strainers to ensure (1) that they are free of soil and debris and (2) they are laying flat in the tub.

When cleaning out strainers, do NOT beat them on waste cans. The strainers are made of metal and can be forgiving; but once severe damage is done, it is next to impossible for the strainer to work in the way it was designed to. Wipe out strainers with a rag and rinse under a faucet if necessary. For stubborn debris, a toothpick should be able to dislodge any obstructions from the perforations. Always ensure that strainers are placed back in the machine before operation and that they lay flat in the tub.

You may wish to also refer to the page entitled "Detergent Control" in order to learn more about how your water hardness will effect the performance of your machine. Hard water makes dishmachines work harder and decreases efficiency.

Again, it is important to remind operators that trying to perform corrective maintenance on the dishmachine could lead to larger problems or even cause harm to the operator. If a problem is discovered; secure the dishmachine using proper shut down procedures as listed in this manual and contact Jackson.

Some problems, however, may having nothing to do with the machine itself and no amount of preventative maintenance is going to help. A common problem has to do with temperatures being too low. Verify that the water temperatures coming to your dishmachine match the requirements listed on the machine data plate. There can be a variety of reasons why your water temperature could be too low and you should discuss it with Jackson to determine what can be done.

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.
- 2. Ensure that all strainers are in place before operating the machine.
- 3. Ensure that all wash and/or rinse arms are secure in the machine before operating.
- 4. Ensure that drains are closed/sealed before operating.
- 5. Remove as much soil from dishes by hand 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 to machine have been verified as being at the correct concentrations.
- 9. Clean out the machine at the end of every workday as per the instructions in the manual.
- 10. Always contact Jackson whenever a serious problem arises.
- 11. Follow all safety procedures, whether listed in this manual or put forth by local, state or national codes/regulations.

### **SECTION 3: PREVENTATIVE MAINTENANCE**

#### LUBRICATION CHART FOR DRIVE GEAR

## Note: The maintenance procedures detailed here are manufacturer's instructions for the WINSMITH brand of gear reducer that is installed on the rack conveyors covered in this manual.

Ambient Temperature Final Stage Worm Speed <sup>1</sup> ISO Viscosity Grade AGMA Lubricant No.	-30 - 15°F up to 2000 FPM 220 5S	16 - 50°F up to 2000 FPM 460 #7 Compounded	51 - 95°F up to 450 FPM 680 #8 Compounded	51 - 95°F above 450 FPM 460 #7 Compounded	96 - 131°F up to 450 FPM 680 8S	96 - 131°F above 450 FPM 460 7S
Mobil	SHC 630	600W Super Cylinder	Extra Hecla Super	600W Super Cylinder	SHC 636	SHC 634
American Lubricants	SHC-90W	AGMA #7 Gear Oil	AGMA #8 Gear Oil	AGMA #7 Gear Oil	N/A	N/A
Castrol	Tribol 800/220	Tribol 1105-7C	Tribol 1105-8C	Tribol 1105-7C	Tribol 800/680	Tribol 800/460
Chevron	Tegra 220	Cylinder Oil W460	Cylinder Oil W680	Cylinder Oil W460	Tegra 680	Tegra 460
Conoco	Syncon R & O 220	Inca Oil 460	Inca Oil 680	Inca Oil 460	N/A	Syncon R & O 460
Exxon (Esso)	Teresstic SHP220	Spartan EP 460	Spartan EP 680	Spartan EP 460	Teresstic SHP 680	Teresstic SHP 460
Fiske Brothers	SPO-MG	SPO-277	SPO-288	SPO-277	N/A	N/A
Shell	Omala RL 220	Valvata J 460	Valvata J 680	Valvata J 460	Omala RL 680	Omala RL 460
Техасо	Pinnacle 220	Vanguard 460	Vanguard 680	Vanguard 460	Pinnacle 680	Pinnacle 460

(1) The sliding velocity in feet per minute (FPM) for standard ratios is determined by multiplying the speed of the worm in RPM by the factor from the table below. For selecting proper lubricant, use the speed of the worm in the final stage (input RPM divided by the first stage ratio).

## **SECTION 3: PREVENTATIVE MAINTENANCE**

#### DRIVE MOTOR GEAR REDUCER PREVENTATIVE MAINTENANCE

Note: The maintenance procedures detailed here are manufacturer's instructions for the WINSMITH brand of gear reducer that is installed on the rack conveyors covered in this manual.

#### Lubrication & Maintenance:

**Factory filling** - WINSMITH speed reducers are oil filled at the factory to the proper level for the standard mounting position that you will find it in on the unit. The oil level should be checked and adjusted (if necessary) prior to operation, using the oil level plug provided and while the unit is oriented in its operating position.

**Ambient temperature** - If the operating ambient temperature is other than 51 - 95°F, then refer to the lubrication chart and refill the unit with the correct grade based on actual ambient temperature and operating speed. See "Oil changing" below for additional information.

**Oil changing** - When changing the oil for any reason, it should be remembered that oils of various types may not be compatible. Therefore, when changing to a different oil, it is recommended that the housing be completely drained and thoroughly flushed with a light flushing oil prior to refilling with the appropriate lubricant. The oil level should be rechecked after a short period of operation and adjusted, if necessary. When changing double reduction models, each housing should be drained and filled independently, even though there may be a common level.

**Initial oil change**: The new oil in a speed reducer should be changed at the end of 250 hours of operation. This is equivalent to 30 days of operation for 8 hours per day; 15 days of operation for 16 hours per day, or 10 days of operation for 24 hours per day.

**Subsequent oil changes**: Under normal conditions, after the initial oil change, the oil should be changed after every 2500 hours of operation, or every 6 months, whichever occurs first. Under severe conditions (rapid temperature changes, moist, dirty or corrosive environment) it may be necessary to change oil at intervals of one to three months. Periodic examination of oil samples taken from the unit will help establish the appropriate interval.

Synthetic oils: Synthetic lubricants can be advantageous over mineral oils in that they generally are more stable, have a much longer life, and operate over a wider temperature range. These oils are appropriate for any application but are especially useful when units are subjected to low start-up temperatures or high operating temperatures. However, continuous operation above 225°F may cause damage to seals or other components. It is recommended that the initial oil be changed or filtered after the first 1500 hours of operation to remove metal particles that accumulate during break-in. Subsequent oil changes should be made after 5000 hours operation if units are operating in a clean environment. This can be extended to 10,000 hours if using new reformulated Mobil SHC lubricants (orange in color) and the lubricant remains free of contamination over this period. See comments under "Subsequent oil changes" for discussion of severe ambient conditions.

Long term storage or infrequent operation: If a speed reducer is to stand idle for an extended period of time, either prior to installation or during use, it is recommended that the unit be filled completely with oil to protect interior parts from rust and corrosion due to internal condensation. Be sure to drain the oil to the proper level before placing the speed reducer in service.

**Grease fittings**: Some units are equipped with grease fittings to lubricate bearings not adequately lubricated by the oil splash. These fittings must be lubricated every 3 - 6 months depending on operating conditions. bearing greases must be compatible with the type of gear lubricant being used (i.e. mineral, synthetic, food grade, etc.). For mineral oils, use a high quality lithium base NLGOI #2 bearing greases. For synthetic oils, use a synthetic bearing grease such as Mobil Synthetic Universal grease, Mobilith SHC 100 or a suitable equivalent. For food grade lubricants, use Chevron FM grease, NGLI 2, or equivalent.

Low input speeds (under 1600 RPM): When input speeds are less than 1600 RPM, grease fittings will be required to lubricate any bearings not partially covered by the normal oil level.

**Oil temperature**: Speed reducers in normal operation can generate temperatures up to 200°F depending on the type of reducer and the severity of the application 9loading, duration of service, ambient temperatures). Excessive oil temperatures may be the result of several factors including overloading, overfilling, underfilling or inadequate cooling.

Nominal Ratio												
Size	5	7.5	10	15	20	25	30	40	50	60	80	100
920	0.347	0.263	0.225	0.216	0.202	0.191	0.215	0.200	0.188	0.182	0.164	0.161

Lubricant selections are provided by the lubricant manufacturer based on AGMA recommended viscosity grades. Viscosity grades are based on Lubrication Standard ANSI/AGMA 9005-D94.

# SECTION 4: TROUBLESHOOTING SECTION

## SECTION 4: TROUBLESHOOTING

#### COMMON PROBLEMS



**WARNING:** Inspection, testing and repair of electrical equipment should be performed only by qualified service personnel. Certain procedures in this section require electrical tests or measurements while power is applied to the machine. **Exercise extreme caution at all times.** If test points are not easily accessible, disconnect power, attach test equipment and reapply power to test. When replacing electrical parts, disconnect power at source circuit breaker

#### Problem: Nothing on dishmachine operates. The power switch is ON and the power indicator light is OFF.

1. Machine is not wired correctly to incoming power source. Have an electrician verify wiring.

2. Machine circuit breaker is tripped. Reset the circuit breaker. If it trips again, contact an electrician to verify the machine amp draw.

3. Service breaker is tripped. Reset the service breaker. If it trips again, contact an electrician to verify the machine amp draw.

#### Problem: Machine will not fill. The power switch is ON and the power indicator light is ON.

1. No water supply to machine. Verify that water lines have been connected to the machine.

- 2. Dishmachine doors are not closed. Close doors completely.
- 3. Incoming water solenoid valve damaged/faulty. Verify that the valve is operating. If not, replace.
- 4. Tank floats faulty. Verify the wiring of the floats. Verify that no debris is jamming the floats. Replace if necessary.

#### Problem: Machine fills, but fill is weak.

- 1. Low incoming water pressure. Verify that incoming water pressure during fill is 15 PSI.
- 2. Incoming water solenoid is clogged. Verify that debris is not entrapped in valve. If so, remove debris.

#### Problem: Low wash tank temperature.

1. Low incoming water temperature. Verify that the incoming water temperature matches what is indicated on the machine data plate.

2. Heater not energizing. Verify that the wash tank heater is operating. If not, replace.

3. Low incoming voltage. Have an electrician verify that the power coming to the machine is the same as indicated on the data plate.

#### Problem: Low wash arm pressure, poor spray pattern.

- 1. Clogged wash arm nozzles. Verify that nozzles are not clogged with debris. If so, remove debris.
- 2. Clogged wash tank or wash pump strainers. Clean out strainers if necessary.
- 3. Worn wash pump impeller. Verify status of impeller, replace if necessary.

#### Problem: Low prewash arm pressure, poor spray pattern.

- 1. Clogged prewash arm nozzles. Verify that nozzles are not clogged with debris. If so, remove debris.
- 2. Clogged prewash tank or prewash pump strainers. Clean out strainers if necessary.
- 3. Worn prewash pump impeller. Verify status of impeller, replace if necessary.

#### Problem: Inadequate rinse.

- 1. Low incoming water pressure. Verify that incoming water pressure during fill is 15 PSI.
- 2. Incoming water solenoid is clogged. Verify that debris is not entrapped in valve. If so, remove debris.

#### Problem: Pawl bar moves with no load, but does not move when loaded.

1. Clutch on drive assembly is out of adjustment. Adjust as required.

### **SECTION 4: TROUBLESHOOTING**

#### **COMMON PROBLEMS**

#### Problem: Pawl bar does not move.

1. Failed or broken overload spring. Replace spring if necessary.

2. No power to the drive motor/failed drive motor. Verify power and wiring connections to the motor. If necessary, replace the motor.

3. Pawl bar not properly installed. Verify that the pawl bar is installed correctly.

#### Problem: Racks go through the machine, but results are poor.

1. Verify that detergent is being dispensed into the machine at the appropriate quantities for the water volume. If not, get detergent to appropriate level and review results of washing ware.

2. Clogged strainers/scrap basket. Clean out strainers and scrap basket and replace.

3. Ware not being properly prescrapped. Review paragraph entitled "Ware Preparation" in Operating Instructions.

4. Wash or rinse arms missing end plugs or caps. Verify and replace as required.

5. Low tank heat.

6. Inadequate rinse.

7. Incorrect voltage coming to the machine. Verify that the voltage matches that on the machine data plate.

8. Wash pump cavitation due to low water level. Verify that the drains are shut and that the water level is correct.

#### Problem: Spotting of silverware, glasses and dishes.

1. Incorrect final rinse temperature. Verify that the rinse water temperature matches that which is listed on the machine data plate.

2. Clogged wash and/or rinse nozzles and arms. Remove the arms and verify that they and their nozzles are from debris.

3. Excessively hard water. Install a water softener to reduce hardness.

4. Loss of water pressure due to clogged/obstructed wash pump. Turn the power off to the machine at the source. Drain the wash tank of water and verify that the pump intake is free from debris.

5. Improper scrapping procedures. Review the paragraph entitled "Ware Preparation" in Operating Instructions.

6. incorrect detergent/chemical concentrations. Verify that the detergent/chemical concentrations are correct for the associated water volume.

#### TORQUE SETTINGS

ITEMS

When replacing components either in the control box or the heater box area, the manufacturer has suggestions on how much to torque the screws and nuts used in securing items to the machine. Refer to the table below for the torque specifications:

**TORQUE SPEC** 

Relays	16 In/lbs
Heater Contactor	35 In/lbs
Heater Nuts	16 In/lbs
Terminal Block	50 In/lbs

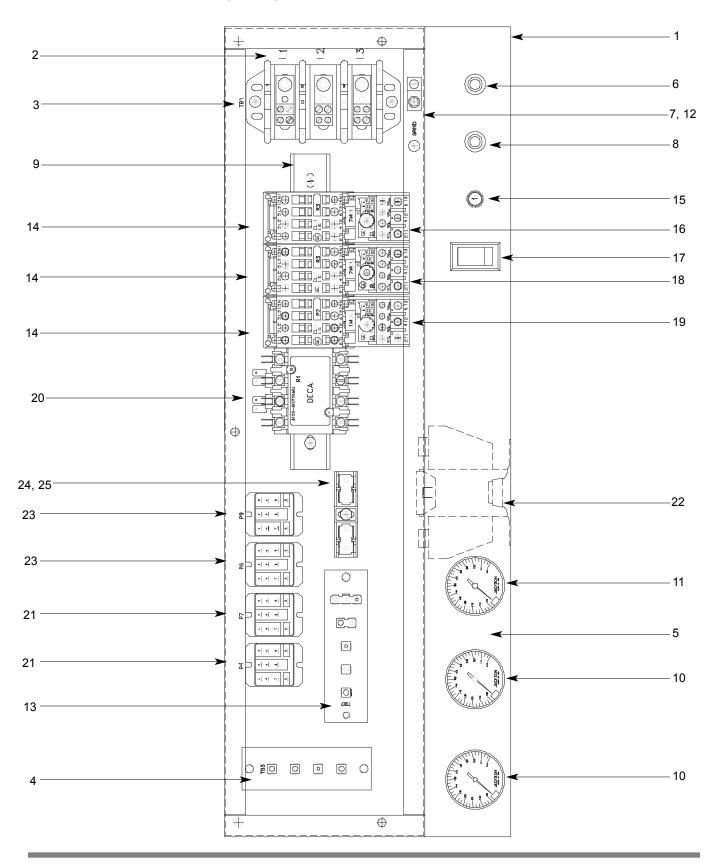
SECTION 5: PARTS SECTION AJX-44 & AJX-54 CONTROL BOX ASSEMBLY

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## AJX-44 & AJX-54 CONTROL BOX ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Electrical Box Weldment	05700-041-88-43
2	1	Terminal Block, 3 Pole	05940-011-48-27
3	1	Rinse Thermometer, 96" Lead	06685-111-68-49
	1	Rinse Decal, 180°F	09905-002-97-62
4	6	Star Washer, External Tooth, 10-24	05311-273-02-00
5	6	Screw, 10-32 x 3/4" Long Phillips Trusshead	05305-011-62-17
6	1	Decal, Gauge	09905-021-72-29
7	1	Wash, Thermometer, 48" Lead	06685-111-68-48
	1	Wash Decal, 160°F	09905-003-00-69
8	1	Wire Lug, 2 AWG to 14 AWG	05940-200-76-00
9	1	Decal, Ground	09905-011-86-86
10	2	Screw, 10-32 x 1/2" Long Phillips Trusshead	05305-011-39-36
11	1	Decal, L1-L2-L3	09905-101-12-66
12	1	Light, Amber	05945-111-44-44
13	1	Light, Red	05945-111-44-45
14	1	Din Rail	05700-021-72-75
15	1	Circuit Breaker (208-230 Volt, 60 Hz Models Only)	05925-011-68-34
16	1	Switch, ON/FILL - OFF/DRAIN	05930-301-46-00
17	2	Motor Contactor	05945-111-68-38
18	1	Heater Contactor	05700-002-24-70
19	1	Overload	See Page 48
20	1	Overload	See Page 48
21	1	Control Relay	05945-111-35-19
21	2	Control Relay	05945-111-72-51
22	10	Screw, 6-32 x 3/8" Long Round Phillipshead	05305-002-25-91
23	1	Fuse (460 Volt, (all 60 Hz) Models Only)	05920-011-72-88
24	1	Fuse Holder for (23) Above	05920-011-72-89
25	1	Transformer 208-220-230-460 Volt Models	05950-011-68-35
26	4	Locknut, 10-24 with Nylon Insert	05310-373-01-00
27	1	Terminal Board	05940-002-78-97
28	1	Terminal Board	05940-021-89-41
MISCE	LLANEO	US PARTS NOT SHOWN:	
Gromm	et, 1/2" C	DD x 3/8" ID	05325-011-46-73
Bushing	g, Heyco	SB100	05975-210-09-00
Plug, H	leyco 270	00 G-875	05975-011-47-81
Control	Box Cov	/er	05700-031-66-88
Control	Box Cov	ver Hinge Weldment	05700-021-68-57
Cotter I	Pin		05315-011-68-56
MANUA	AL/DELIN	IE Switch (located on rear of control box)	05930-301-22-18
MANUA	AL/DELIN	IE Switch Decal (located on rear of control box)	09905-011-74-61
Copper	Conduct	tors Only Decal	09905-011-47-35
Decal,	Operatior	n	09905-002-82-33
Decal,	High Lim	it Light Warning	09905-002-49-48
	Box Leg		05700-011-71-47
•		unting Plate (located inside the control box)	05700-031-67-03
Condui	t Bracket		05700-021-70-88

SECTION 5: PARTS SECTION AJX-66, AJX-76, AJX-80 & AJX-90 CONTROL BOX ASSEMBLY



AJX-44 & AJX-54 Series Technical Manual 7610-003-60-98 Issued: 01-19-2009 Revised: 01-30-2009

## AJX-66, AJX-76, AJX-80 & AJX-90 CONTROL BOX ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Electrical Box Weldment	05700-041-88-50
2	1	Decal, L1-L2-L3	09905-101-12-66
3	1	Terminal Block	05940-011-48-27
4	1	Terminal Board	05940-021-89-41
5	1	Decal, Gauge	09905-021-72-30
6	1	Light, Amber	05945-111-44-44
7	1	Wire Lug, 2 AWG to 14 AWG	05940-200-76-00
8	1	Light, Red	05945-111-44-45
9	1	Din Rail	05700-021-72-75
10	2	Thermometer, 96" Lead	06685-111-68-49
		Rinse Decal, 180°F	09905-002-97-62
11	1	Thermometer, 48" Lead	06685-111-68-48
	1	Wash Decal, 160°F	09905-003-00-69
12	1	Decal, Ground	09905-011-86-86
13	1	Terminal Board	05940-002-78-97
14	3	Motor Contactor	05945-111-68-38
15	1	Circuit Breaker (208-230 Volt, 60 Hz Models Only)	05925-011-68-34
16	1	Overload	See Page 48
17	1	Switch, ON/FILL & OFF/DRAIN	05930-301-46-00
18	1	Overload	See Page 48
19	1	Overload	See Page 48
20	1	Heater Contactor (for non-steam units)	05945-002-24-70
21	2	Relay	05945-111-72-51
22	1	Transformer (208/220/230/460 Models Only)	05950-011-68-35
23	2	Control Relay	05945-111-35-19
24	1	Fuse Holder (460 Volt Models Only)	05920-011-72-89
25	1	Fuse (460 Volt Models Only)	05920-011-72-88

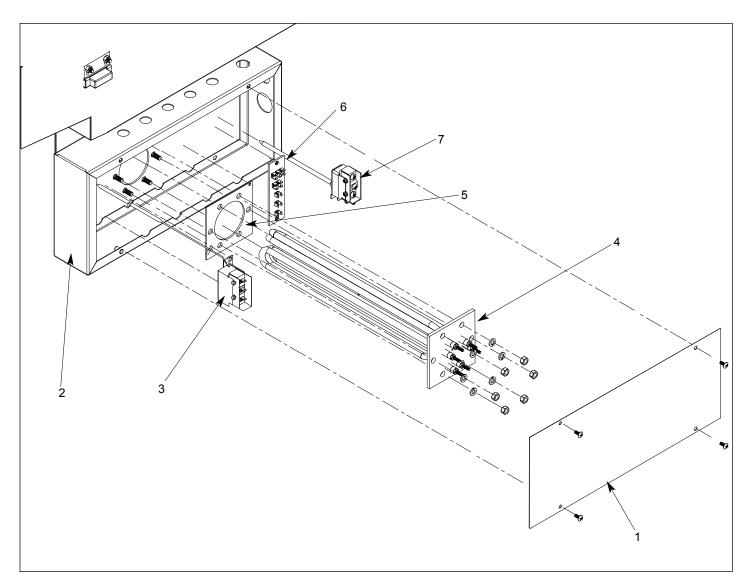
#### MISCELLANEOUS PARTS NOT SHOWN:

Manual/Delime Switch	05930-301-22-18
Manual/Delime Switch Decal	09905-011-74-61
Decal, Operation	09905-002-82-33
Decal, High Limit Warning Light	09905-002-49-48
Control Box Cover	05700-031-66-88
Control Box Leg	05700-011-71-47
Conduit Bracket	05700-021-70-88

### MOTOR OVERLOAD CHART

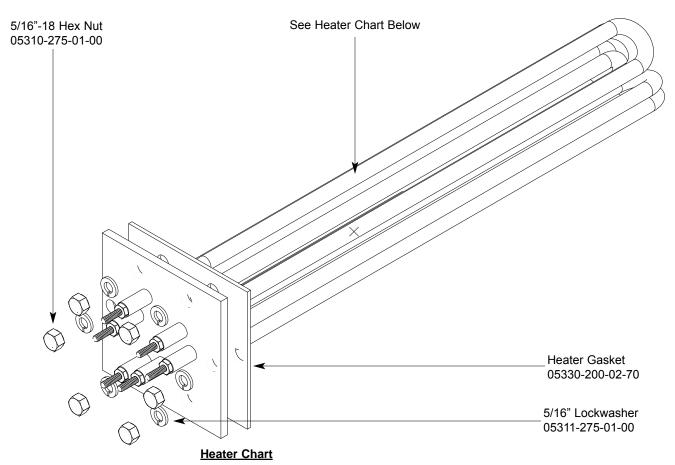
<u>Model</u>	<u>Volts</u>	<u>Hz</u>	Phase	Drive Motor	Prewash Motor	Wash Motor
AJX-44, 54	208 220 230 380 415 440	50 50 50 50 50 50	3 3 3 3 3 3	05945-011-84-59 05945-011-84-59 05945-011-84-59 05945-002-71-09 05945-111-69-12 05945-111-69-12	N/A N/A N/A N/A N/A	05945-111-68-40 05945-111-68-40 05945-111-68-40 05945-111-68-40 05945-111-81-33 05945-111-81-33
	208	60	1	N/A	N/A	N/A
	230	60	1	N/A	N/A	N/A
	200 208 230 380 460 600	60 60 60 60 60 60	3 3 3 3 3 3 3	05945-002-66-00 05945-111-68-39 05945-111-68-39 05945-111-69-12 05945-111-68-39 05945-111-69-12	N/A N/A N/A N/A N/A	05945-002-65-99 05945-111-68-40 05945-111-68-40 05945-111-81-33 05945-111-68-40 05945-111-81-33
AJX-66, 76	200 208 220 230 380 415 440	50 50 50 50 50 50 50	3 3 3 3 3 3 3 3 3	05945-011-84-59 05945-011-84-59 05945-011-84-59 05945-011-84-59 05945-002-71-09 05945-111-69-12 05945-111-69-12	05945-002-65-98 05945-002-24-70 05945-002-24-70 05945-002-24-70 05945-002-24-70 05945-002-24-70 05945-002-24-70	05945-111-68-40 05945-111-68-40 05945-111-68-40 05945-111-68-40 05945-111-68-40 05945-111-81-33 05945-111-81-33
	208	60	1	N/A	N/A	N/A
	230	60	1	N/A	N/A	N/A
	200	60	3	05945-002-66-00	05945-002-66-02	05945-002-65-99
	208	60	3	05945-111-68-39	05945-111-68-41	05945-111-68-40
	230	60	3	05945-111-68-39	05945-111-68-41	05945-111-68-40
	380	60	3	05945-111-69-12	05945-002-24-70	05945-111-81-33
	460	60	3	05945-111-68-39	05945-111-68-41	05945-111-68-40
	600	60	3	05945-111-69-12	05945-111-81-33	05945-111-81-33
AJX-80, 90	200 208 220 230 380 415 440	50 50 50 50 50 50 50	3 3 3 3 3 3 3 3	05945-011-84-59 05945-011-84-59 05945-011-84-59 05945-011-84-59 05945-002-71-09 05945-111-69-12 05945-111-69-12	05945-111-68-40 05945-111-68-40 05945-111-68-40 05945-111-68-40 05945-111-68-40 05945-111-81-33 05945-111-81-33	05945-111-68-40 05945-111-68-40 05945-111-68-40 05945-111-68-40 05945-111-68-40 05945-111-81-33 05945-111-81-33
	208	60	1	N/A	N/A	N/A
	230	60	1	N/A	N/A	N/A
	200	60	3	05945-002-66-00	05945-002-65-99	05945-002-65-99
	208	60	3	05945-111-68-39	05945-111-68-40	05945-111-68-40
	230	60	3	05945-111-68-39	05945-111-68-40	05945-111-68-40
	380	60	3	05945-111-69-12	05945-111-81-33	05945-111-81-33
	460	60	3	05945-111-68-39	05945-111-68-40	05945-111-68-40
	600	60	3	05945-111-69-12	05945-111-81-33	05945-111-81-33

HEATER BOX ASSEMBLY



ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Heater Box Cover	05700-002-02-04
2	1	Heater Box Weldment	05700-002-98-38
3	1	Thermostat, High Limit	05930-011-49-43
	1	Fitting, 1/4", Imperial Brass	05310-924-02-05
4	1	See Next Page	N/A
5	1	Gasket	05330-200-02-70
6	1	Terminal Board	05940-002-78-97
7	1	Kit, Wash Regulating Thermostat (CE Series)	06401-003-18-20
7	1	Kit, Wash Regulating Thermostat (CS Series)	06401-003-18-21

HEATER BOX ASSEMBLY (CONTINUED)



<u>Model</u>	<u>Volts</u>	<u>Phase</u>	<u>KW</u>	Part Number
All High Hood*	208 230 208 230 460	1 1 3 3 3	18 18 18 18 18	04540-121-79-30 04540-121-79-31 04540-121-79-30 04540-121-79-31 04540-121-79-32
<u>Model</u>	<u>Volts</u>	<u>Phase</u>	<u>KW</u>	Part Number

\* - Steam models do not use electric heaters in the wash tank or power rinse tank.

**SERVICE NOTE:** When replacing the tub heaters, it is HIGHLY recommended that you also change out the gasket as well. Once installed, gaskets become compressed and are subjected to extreme temperature changes. Replacing the gasket with a new one when replacing the heater may prevent future leaks.

**SERVICE NOTE:** The nuts used to secure the heater to the tub should be torqued 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 ensure that they are torqued to 16 in-lbs.

#### HEATER BOX ASSEMBLY (CONTINUED)

The wash tank heater system is electrically connected in the circuit so that they are dependent upon the dishwasher being properly filled with and maintaining a safe water level, two thermostats (mounted in the heater box behind the dress panel), float switch (mounted in the wash tank), and the heater relay (mounted in control box) with the heater being activated by the thermostats.

Once the dishwasher has been filled to the correct level, the heater should operate automatically. Should the tank heat be too high, too low or no indication of temperatures at all, the following checkout should be made.

#### Note: The following checkout should be made by either a qualified service person or electrician.

#### A- Checkout of the heater system

1- If the temperature is too high, adjust thermostat using instructions in the section entitled "Thermostats".

- 2- If temperature is too low, adjust thermostat as above, then:
  - a Turn off power to machine by placing customer's circuit breaker in the "OFF" position. Turn off machine circuit breaker located on right side of control box.
    - b Remove cover from control box on top of dishwasher.
    - c Make sure water temperature is below 140°F.(preferably about 130°F.).
    - d Turn on both circuit breakers. Observe heater relay (R1) while the power switch is turned "ON" and "OFF". If relay contacts move in and out, the heater relay is operating correctly: if not proceed to "C".

#### B- If heater relay (R1) closes:

1 - Check power supply at incoming terminal board L1, L2 & L3. It should be the same voltage as indicated on the machine data plate.

2 - Check power at connections on heater relay (R1). The voltage should agree with the voltage on the machine data plate. If not, check wires for breaks or bad connections.

3 - Check power at terminals of heater which should agree with the data plate. If not check wires for breaks or bad connections.

4 - Temperatures should rise as explained in "C-1", and amperage may be checked according to those instructions. Replace any defective elements.

#### C - If heater relay (R1) does not close.

1 - There is an insulated movable insulated movable bar on relay across the top. With an insulated probe, depress this bar and observe the thermometer: the temperature should rise noticeably in a minute or two. If it moves slowly, it would indicate that the element is faulty. If it moves constantly higher at a good rate, elements should be good.



## Note: A check with an amp probe at heater relay (R1) terminals should be made to verify the amp draw on each leg. This should be appropriate for the voltage and phase indicated on the data plate.

#### HEATER PROTECTION & AUTOMATIC FILL (FOR UNITS EQUIPPED WITH AUTOMATIC FILL)

This control is activated when the power switch is turned "ON". The primary function is to automatically energize the wash tank heat circuit. It will also cutoff the wash tank heat circuit should the water be accidently drained from the machine with the power switch still "ON". The power switch should always be turned-off before draining the unit.

This water level control consists of two (2) floats that operate when the power switch is turned on and works in conjunction with the thermostats and heater relays.

When the power switch is turned "ON" water starts to enter the dishmachine. When it reaches the proper level the normally open contacts in the water level float switch close activating the heating circuit for tank heat.

If the water level below the correct level while power is still on, the float switch will sense the lack of water and de-activate the heater.

#### HEATER BOX ASSEMBLY (CONTINUED)FRAME ASSEMBLY/DRESS PANELS

#### THERMOSTATS

The thermostat range is from 140°F to 240°F with a maximum bulb exposure temperature of 300°F.

#### Calibration:

**Wash Thermostat:** Set Point: 165°F (Adjustable range) **Hi-LImit Thermostat:** Fixed set point: 210°F (Non-adjustable)

The hi-limit thermostat is used to protect the heater element in the event of a run away regulating thermostat or a dry fire situation. It is set for 210°F +0°F or -10°F with a fixed set point. **This part is not adjustable**.

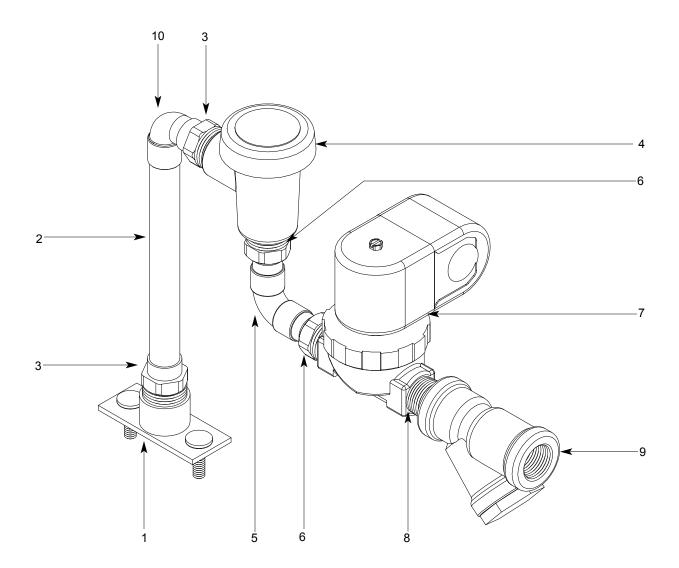
The wash tank regulating thermostat will maintain the correct wash water temperature to meet NSF requirements. These specify that the wash be no lower than 140°F on chemical sanitizing models and no lower than 160°F on hot water sanitizing machines.

Bullet Feet (4 per model) - order using part number 05340-011-71-74.

#### FRONT DRESS PANELS

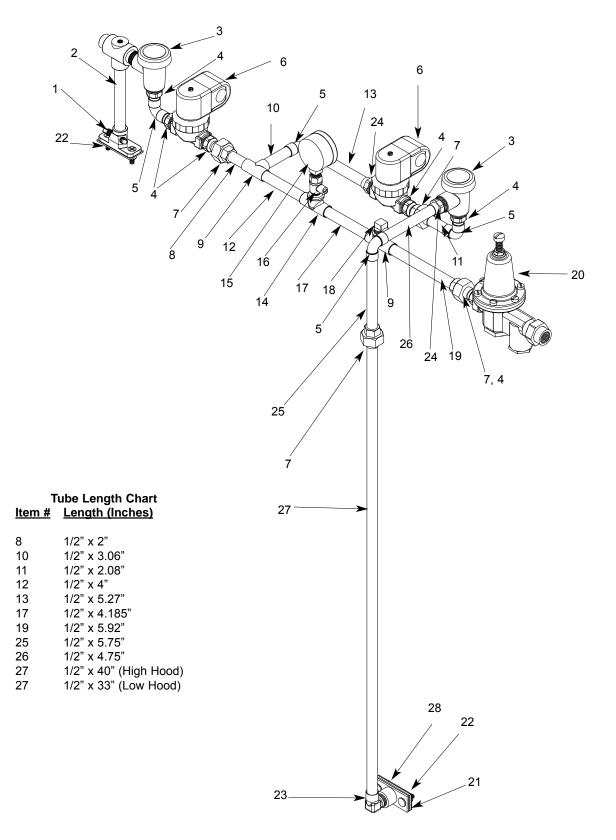
Model	Left to Right Part Number	Right to Left Part Number
AJX-44	05700-002-52-77	05700-002-52-77
AJX-66	05700-002-51-22	05700-002-57-84
AJX-80		
AJX-54	05700-002-63-12	05700-002-63-12
AJX-76		
AJX-90		

## SECTION 5: PARTS SECTION PREWASH INCOMING PLUMBING ASSEMBLY



ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Fill Line Injector Weldment	05700-002-04-71
	1	Gasket	05330-111-42-81
2	1	Tube, Copper, 1/2" x 5.645" Long	05700-002-04-90
3	2	Adapter, Male	04730-401-03-01
4	1	Vacuum Breaker	04820-003-06-13
5	1	Elbow, 607, 1/2" CTOC	04730-406-01-01
6	2	Adapter, 1/2" FTG x Male	04730-011-59-53
7	1	Valve, Solenoid, 1/2" NPT, 110 Volt	04810-100-12-18
8	1	Nipple, 1/2", Close, Brass	04730-207-15-00
9	1	Y-Strainer, 1/2" NPT	04730-217-01-10
10	1	Elbow, 1/2" S. CU to Ftg.	04730-406-31-01

INCOMING RINSE PLUMBING ASSEMBLY

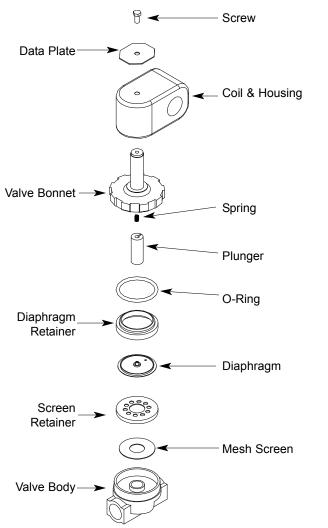


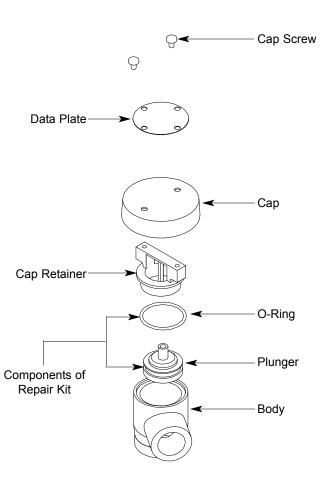
AJX-44 & AJX-54 Series Technical Manual 7610-003-60-98 Issued: 01-19-2009 Revised: 01-30-2009

## SECTION 5: PARTS SECTION INCOMING RINSE PLUMBING ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	2	Plug, 1/8" NPT, Brass	04730-209-07-37
2	1	Rinse Injector Weldment	05700-002-03-42
	1	Gasket	05330-111-42-81
3	2	Vacuum Breaker, 1/2" NPT	04820-003-06-13
4	6	Adapter, 1/2" Fitting x Male	04730-011-59-53
5	3	Elbow, 607, 1/2" Copper to Copper	04730-406-01-01
6	2	Valve, Solenoid, 1/2" NPT, 110 Volt	04810-100-12-18
7	4	Union, 1/2", Copper to Copper	04730-412-05-01
8	1	Tube, Copper	See Chart
9	1	Tee, Copper, 1/2"	04730-411-01-01
10	1	Tube, Copper	See Chart
11	1	Tube, Copper	See Chart
12	1	Tube, Copper	See Chart
13	1	Tube, Copper	See Chart
14	2	Tee, 1/2" x 1/2" x 1/4"	04730-411-25-01
15	1	Gauge, Pressure, 0-100 PSI	06685-111-88-34
	1	Decal, 15-25 PSI	09905-002-97-74
16	1	Test Cock, Valve, Ball, 1/4" NPT	04810-011-72-67
17	1	Tube, Copper	See Chart
18	1	Plug, 1/4" NPT, Brass	04730-209-01-00
19	1	Tube, Copper	See Chart
20	1	Regulator, Watts, 1/2" (Not used on GP units)	04820-100-04-07
20	1	Elbow, 90°, 1/2" Street Brass (GP units only)	04730-206-08-00
21	1	Plate, Rinse Plumbing	05700-011-82-86
22	2	Gasket	05330-111-42-81
23	1	Elbow, 90° 1/2" Copper to MSPS	04730-406-32-01
24	2	Adapter, Male	04730-401-03-01
25	1	Tube, Copper	See Chart
26	1	Tube, Copper	See Chart
27	1	Tube, Copper	See Chart
28	1	Plate, Deflector	05700-002-62-49

**RINSE SOLENOID VALVE & VACUUM BREAKER REPAIR PARTS KITS** 





## SPECIAL PARTS

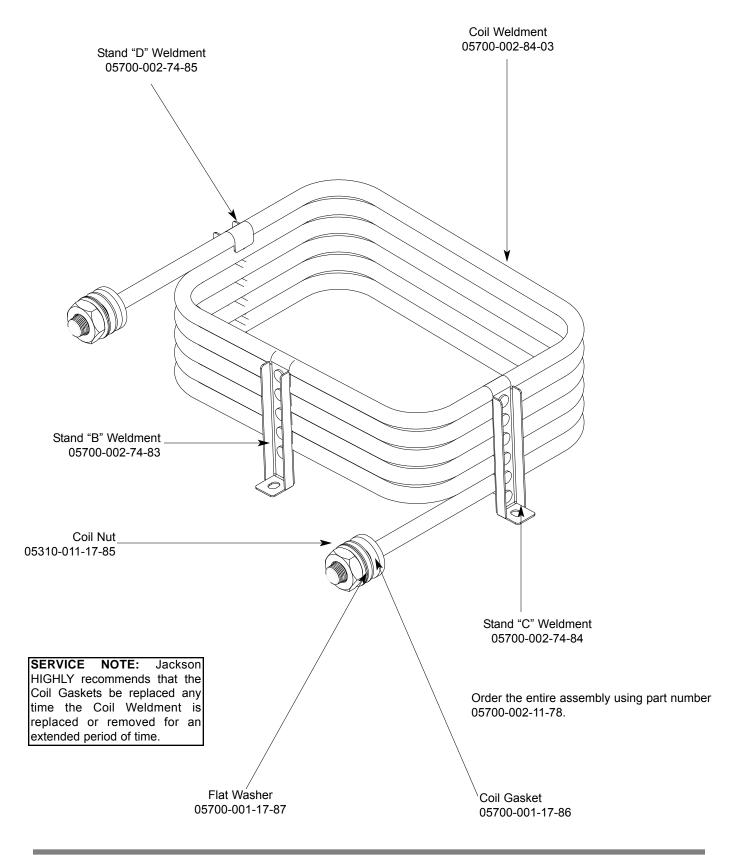
Solenoid Valve Plunger Kit Includes plunger and spring Part number 06401-003-07-40 Solenoid Valve Diaphragm Kit Includes diaphragm and o-ring Part number 06401-003-07-41 (1/2" NPT) Solenoid Valve 110 Volt Coil and Housing Kit Part number 06401-003-07-43 Complete Solenoid Valve Part number 04810-100-12-18 (1/2", 110 Volt)

## SPECIAL PARTS

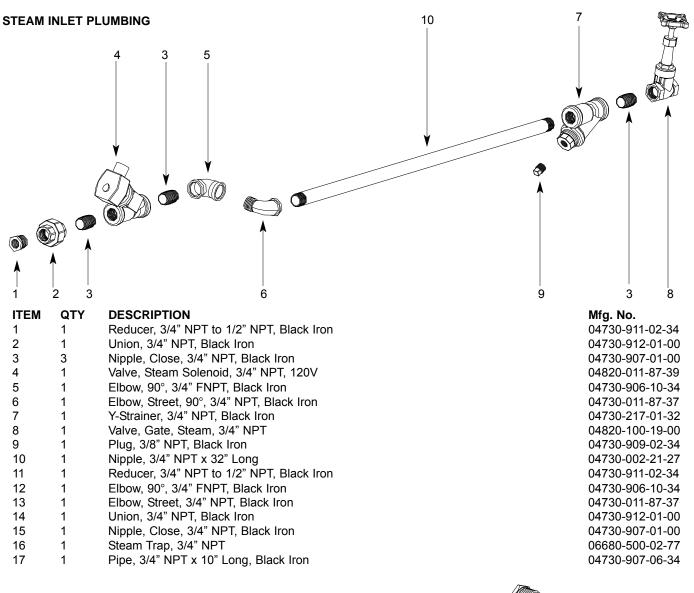
Vacuum breaker repair kit: For 1/2" NPT order 06401-003-06-23

Complete Vacuum Breaker Assembly Part number 04820-003-06-13 (1/2")

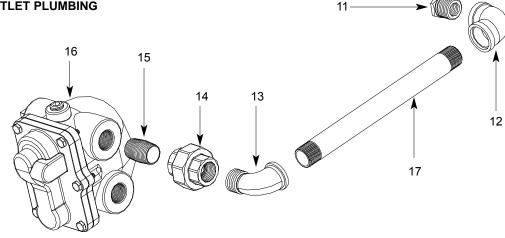
STEAM UNIT WASH TANK COIL ASSEMBLY



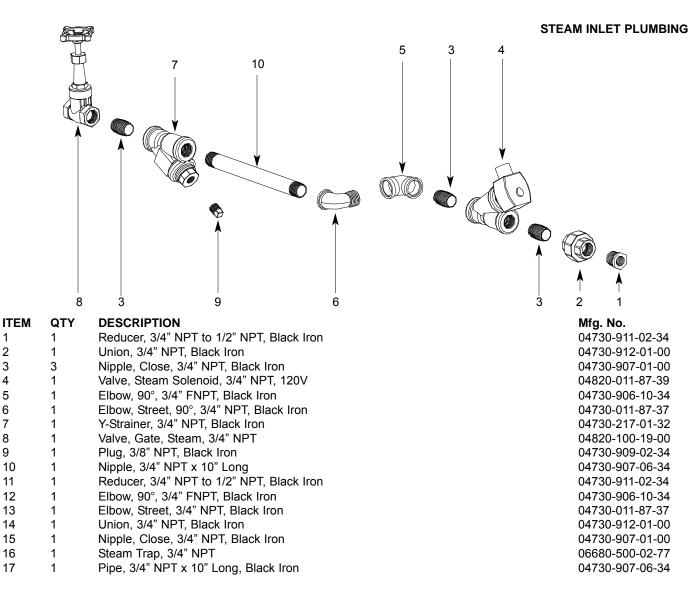
**STEAM PLUMBING (LEFT TO RIGHT)** 



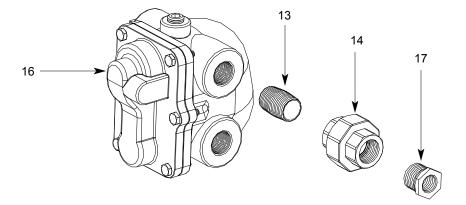




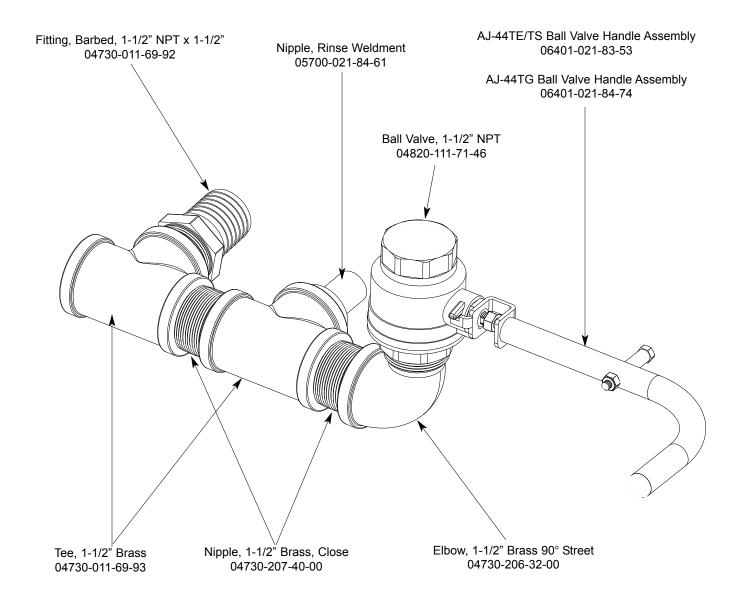
**STEAM PLUMBING (RIGHT TO LEFT)** 



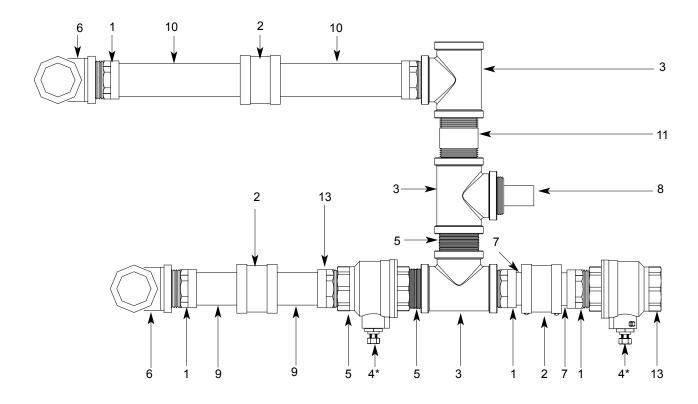
#### STEAM OUTLET PLUMBING



#### SECTION 5: PARTS SECTION AJX-44 & AJX-54 SERIES DRAIN PLUMBING ASSEMBLIES



AJX-66, AJX-76, AJX-80 & AJX-90 (LEFT TO RIGHT) DRAIN PLUMBING ASSEMBLY

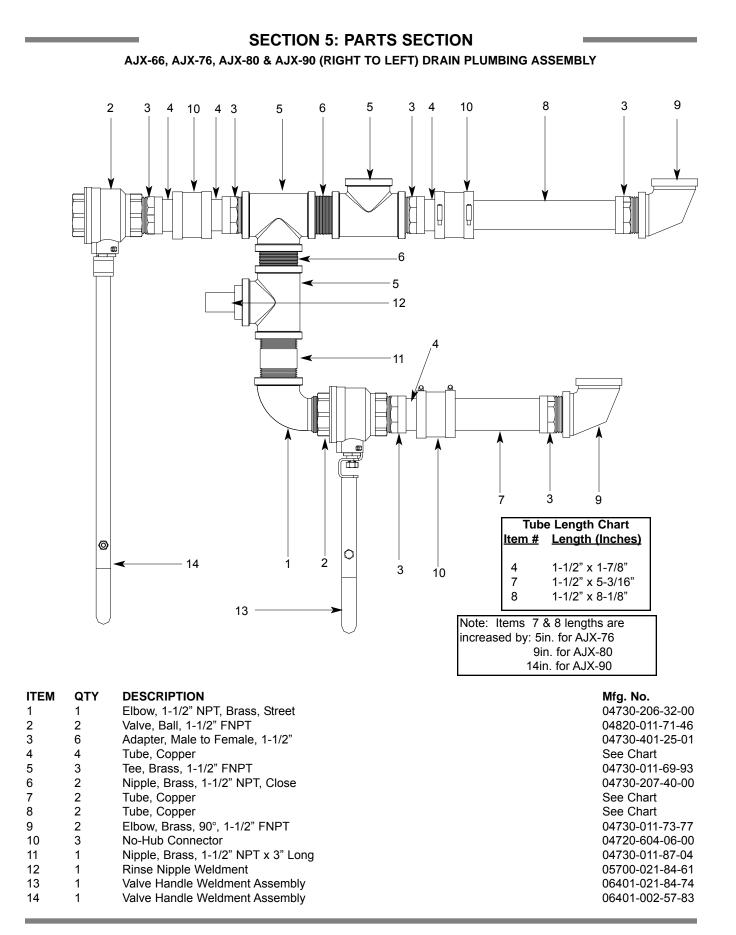


ITEM	QTY	DESCRIPTION	Mfg. No.
1	6	Adapter, Male to Female, 1-1/2"	04730-401-25-01
2	3	No-Hub Connector	04720-604-06-00
3	3	Tee, Brass, 1-1/2" FNPT	04730-011-69-93
4	2	Ball Valve, 1-1/2" FNPT	04820-011-71-46
*	2	Valve Handle Weldment Assembly (Not Shown)	06401-021-84-74
5	2	Nipple, Brass, Close, 1-1/2" NPT	04730-207-40-00
6	2	Elbow, Brass, 90°, 1-1/2" FNPT	04730-011-73-77
7	2	Tube, Copper, 1-1/2" x 1-3/4" Long	See Chart
8	1	Rinse Nipple Weldment	05700-021-84-61
9	2	Tube, Copper, 1-1/2" x 3-1/2" Long	See Chart
10	2	Tube, Copper, 1-1/2" x 7-1/2" Long	See Chart
11	1	Nipple, Brass, 1-1/2" NPT x 3" Long	04730-011-87-04

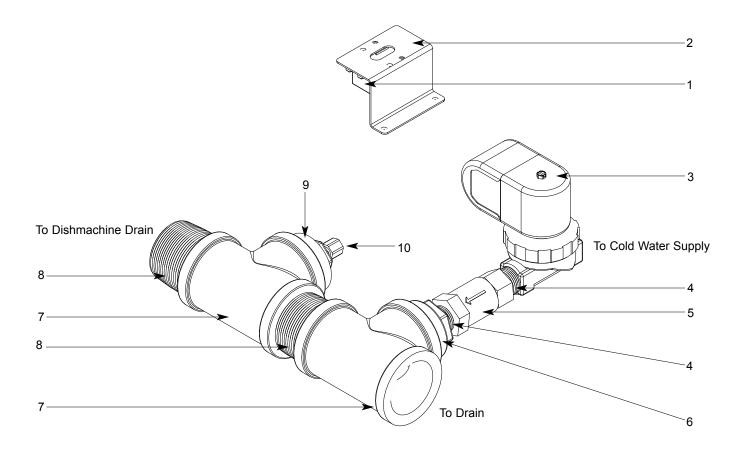
**Service Note:** Copper tubing should be purchased locally and cut to length (lengths for items 7,9 and 10 provided in Chart Below).

Machine Size	#7	#9	#10	
66	1 3/4	3 1/2	7 1/2	
76	1 3/4	6 1/2	10 1/4	
80	1 3/4	10 1/4	14	
90	1 3/4	11 1/2	15 1/4	

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DRAIN QUENCH SYSTEM

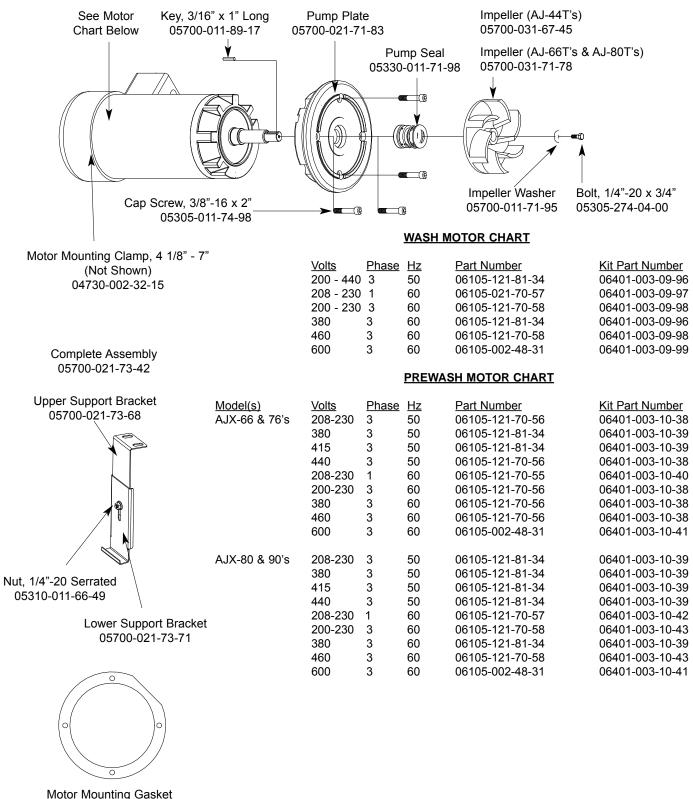


From the existing drain, attach the two additional Tees (Item 7) using the 1-1/2" NPT Close Nipples (Item 8). Tighten the Reducers (Items 6 & 9) into the Tees as shown above. Attach the Modified Compression Fitting (Item 10) into the 1-1/2" to 1/4" Reducer (Item 9). Position the bulb of the thermostat (Item 1) so that it rests approximately 1/4" from the bottom of the Tee (Item 7). Tighten the Modified Compression Fitting (Item 10) as required.

Mount the Thermostat (Item 1) to the tub using the Thermostat Bracket (Item 2) and set it for  $120^{\circ}F - 140^{\circ}F$ . Install the Solenoid Valve (Item 3) to the second Tee (Item 7) and then attach to the incoming cold water line. Use pipe dope or thread tape as required to prevent any leaks.

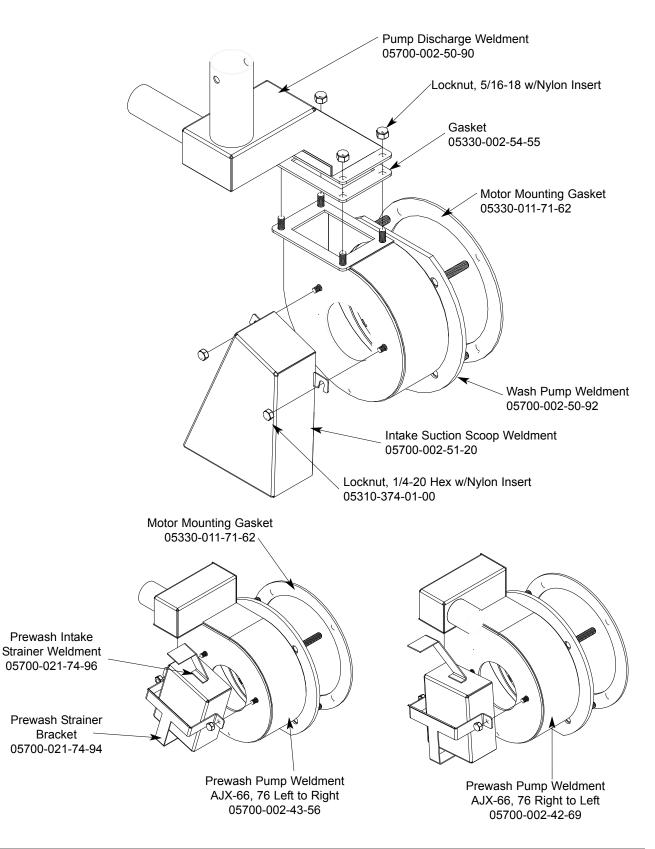
ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Thermostat	05930-121-67-72
2	1	Thermostat Bracket	05700-011-81-64
3	1	Solenoid Valve	04810-100-09-18
4	2	Nipple, Close, 1/2" NPT, Brass	04730-207-15-00
5	1	Valve, Check, 1/2"	04820-002-55-77
6	1	Reducer, 1-1/2" to 1/2"	04730-002-55-75
7	2	Tee, 1-1/2" x 1-1/2" x 1-1/2"	04730-011-69-93
8	2	Nipple, 1-1/2", Close, Brass	04730-207-40-00
9	1	Reducer, 1-1/2" to 1/4"	04730-002-55-76
10	1	Modified Compression Fitting	05700-001-16-52
	1	Complete Kit	06401-002-44-07

#### MOTOR ASSEMBLIES



05330-011-71-62

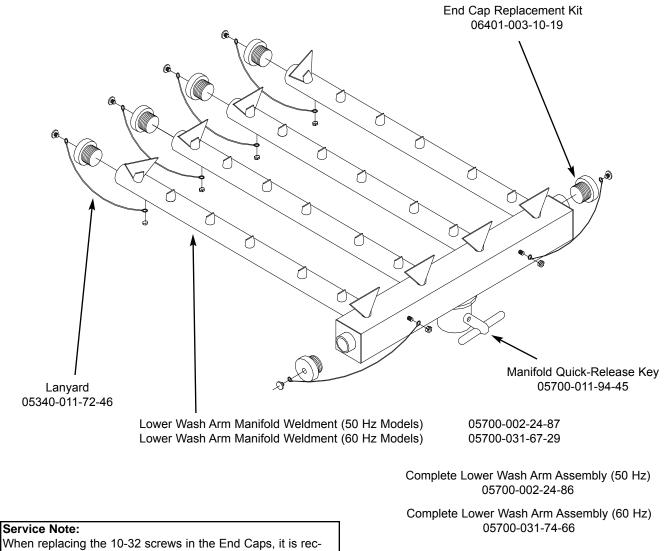
PREWASH & WASH PUMP WELDMENTS



## SECTION 5: PARTS SECTION LOWER WASH ARM ASSEMBLY

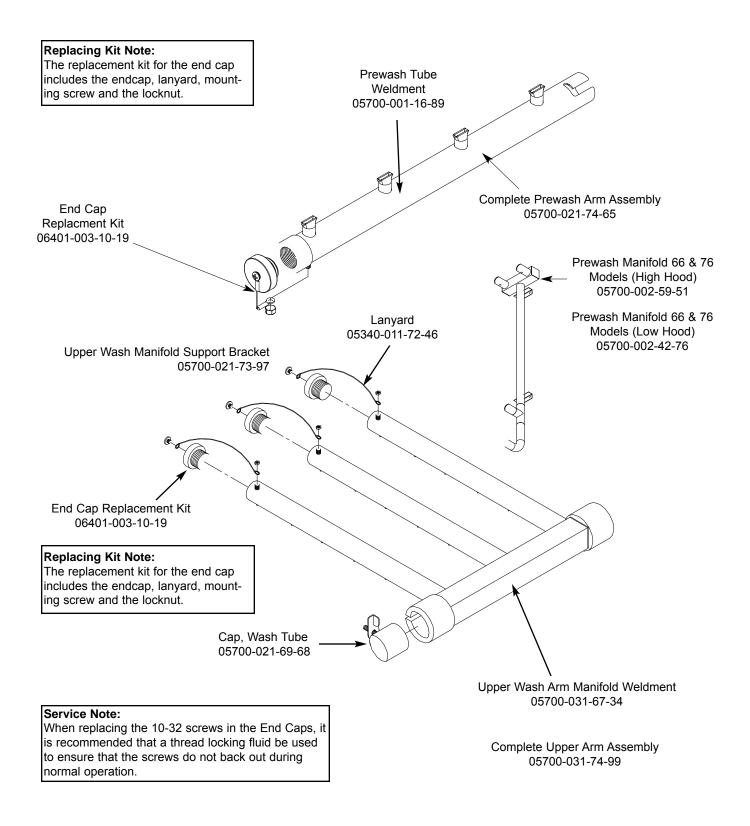
#### Replacement Kit Note:

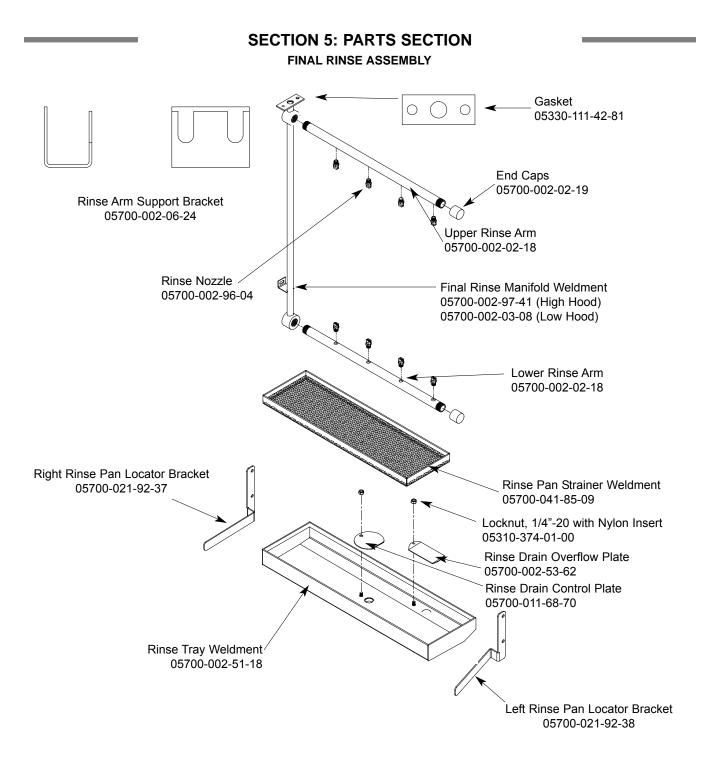
The replacement kit for the end cap includes the endcap, lanyard, mounting screws in the End Caps, it is recommended that a thread locking fluid be used to ensure that the screws do not back out during normal operation.ng screw and the locknut.



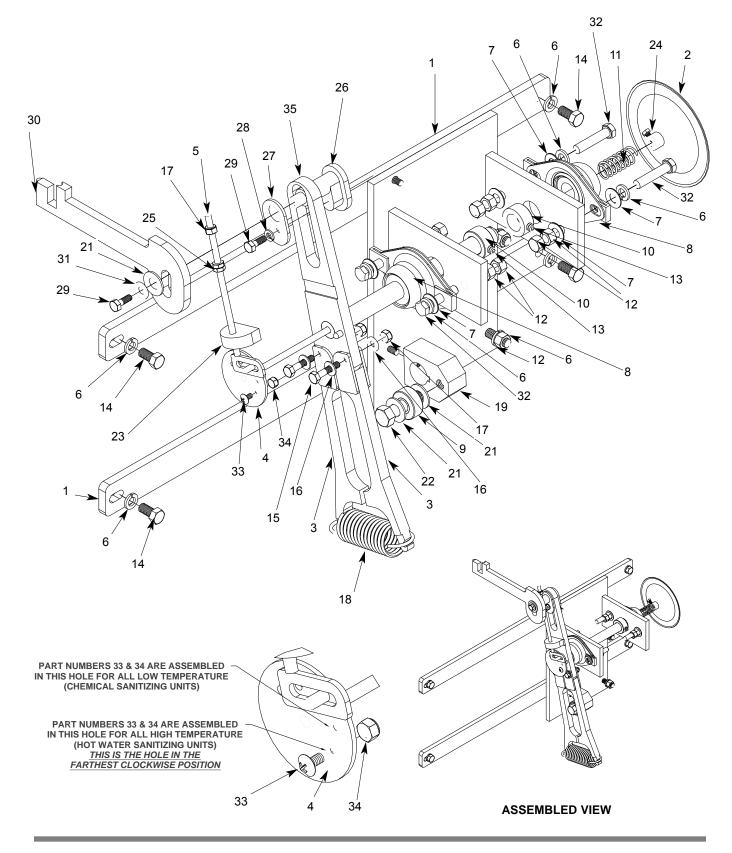
ommended that a thread locking fluid be used to ensure that the screws do not back out during normal operation.

#### PREWASH ARM/UPPER WASH ARM ASSEMBLY





SECTION 5: PARTS SECTION DRIVE ASSEMBLY



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#### DRIVE ASSEMBLY

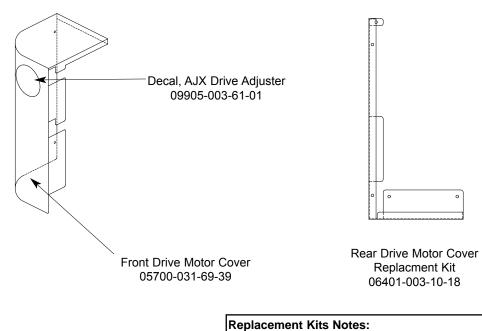
ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Mounting Bracket Drive Motor, Weldment	05700-031-73-56
2	1	Adjuster, Handle Weldment	05700-021-72-28
3	2	W-Coupling & Expansion Legs Weld	09515-003-58-12
4	1	W-Adjuster, Crank Assembly	05700-021-96-95
5	1	W-Adjuster, Scotch Yoke Weldment	05700-021-69-76
6	12	3/8 Lockwasher	05311-276-01-00
7	8	Washer 3/8" Flat S/S	05311-176-01-00
8	2	Block, Pillow	03120-021-71-87
9	1	Bearing, Roller WC88013	17181
10	2	Collar, Shaft Conveyor Drive	05700-011-89-18
11	1	Spring, Adjuster	05315-011-71-90
12	12	Nut, Hex 3/8-16 S/S	05310-276-01-00
13	2	Screw, 5/16-18 X 1/4 Set	05305-002-98-39
14	4	3/8-16 X 3/4" Long	05306-011-71-60
15	2	Bolt, 1/4-20 X 1/4 Hex HD	05305-274-22-00
16	4	Washer, S/S 1/4-20 I.D.	05311-174-01-00
17	3	Locknut, 1/4-20 Hex W/Nylon Insert	05310-374-01-00
18	1	Spring, Drive	05315-011-83-51
19	1	Hub, Drive	05700-011-67-97
20	1	Screw, Set 1/4-20 X 1/2 Long	05305-011-71-51
21	3	Washer, 1/2 Flat S/S	05311-011-71-93
22	1	Bolt, 1/2-13 X 1 3/4	05305-011-71-94
23	1	Plate, Drive Rod	05700-021-67-42
24	1	Bolt, 10-32 X .375 Hex Head	05306-011-62-45
25	2	Nut, Hex 1/4-20	05310-274-01-00
26	1	F-Socket, Drive	05700-021-67-39
27	1	F-Plate, Spacer	16758
28	1	Lockwasher, Spring 1/4	05311-274-01-00
29	2	Bolt, Hex Head 1/4-20 X 3/4	05305-274-04-00
30	1	Casting, Pawl Bar Drive Linkage	09515-021-87-73
31	1	Washer, 5/16-18 S/S	05311-175-01-00
32	4	Bolt, 3/8-16 X 1 3/4" LG	05306-011-36-94
33	1	Screw, 10-24 X 3/8 Phillips, HD (Truss)	05305-173-03-00
34	1	Locknut, 10-24 S/S Hex W/Nylon Ins	05310-373-01-00
35	1	W/Drive, Plate & Rod Weldment	05700-021-67-44
*	1	Complete Drive Assembly	05700-003-69-90

**DRIVE ASSEMBLY (CONTINUED)** 

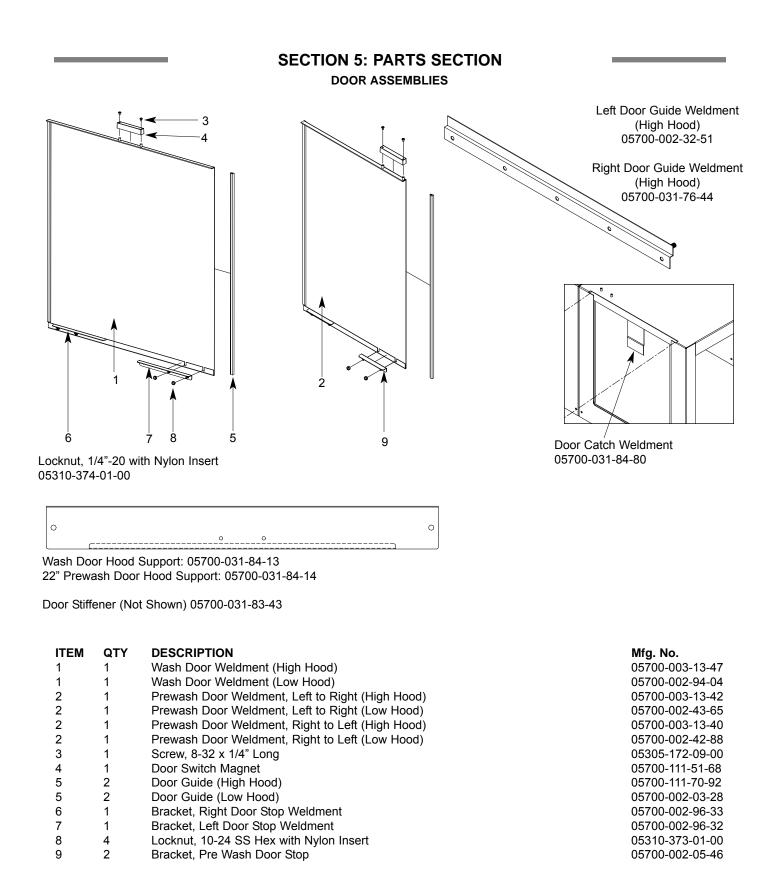
#### QTY DESCRIPTION

- Drive Motor (50 Hz Models) 1 Drive Motor (208-230 Volt, 60 Hz, Single Phase) 1 Drive Motor (208-230 Volt, 60 Hz, Three Phase Models) Drive Motor (460 Volt, 60 Hz, Three Phase Models)
  - Drive Motor (600 Volt, 60 Hz, Three Phase Models)
- 1 Gear Drive

Mfg. No. 06401-003-08-41 06401-003-08-42 06401-003-08-40 06401-003-08-43 06401-002-48-32 06105-011-71-88

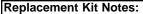


The replacement kits for the drive motor covers come with the weldments and the mounting hardware.

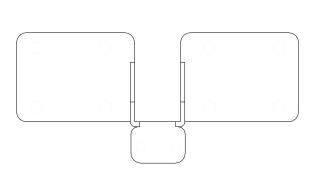


## PAWL BAR ROLLER BRACKET

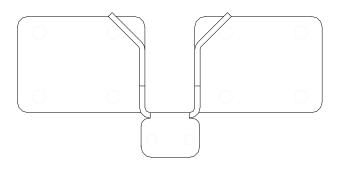
Pawl Bar Roller Replacement Kit 06401-003-11-80

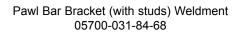


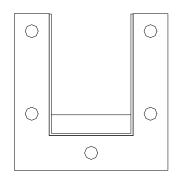
The replacement kit for the pawl bar roller comes with the roller, roller shaft, hardware and locknut as shown.



Pawl Bar Bracket (without tabs) Weldment 05700-031-92-36







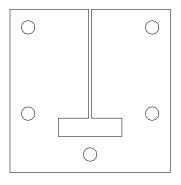
Pawl Bar Gutter Weldment Replacement Kit 06401-003-09-95



Top Guide Block

**Service Note:** It is highly recommended that when changing out one guide block, that the other be changed out as well, along with the gasket.

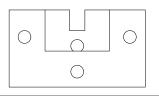
Replacement Kits Notes: The pawl bar gutter weldment replacement kit contains the weldment, a gasket and the mounting hardware. The guide block kit contains both blocks and a gasket.



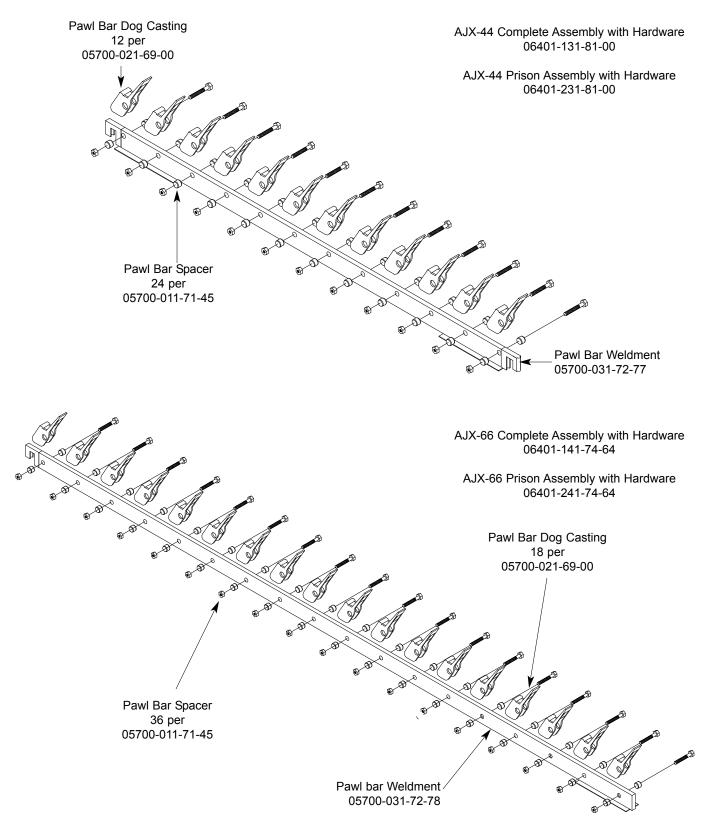
Guide Block Replacment Kit 06401-003-10-15

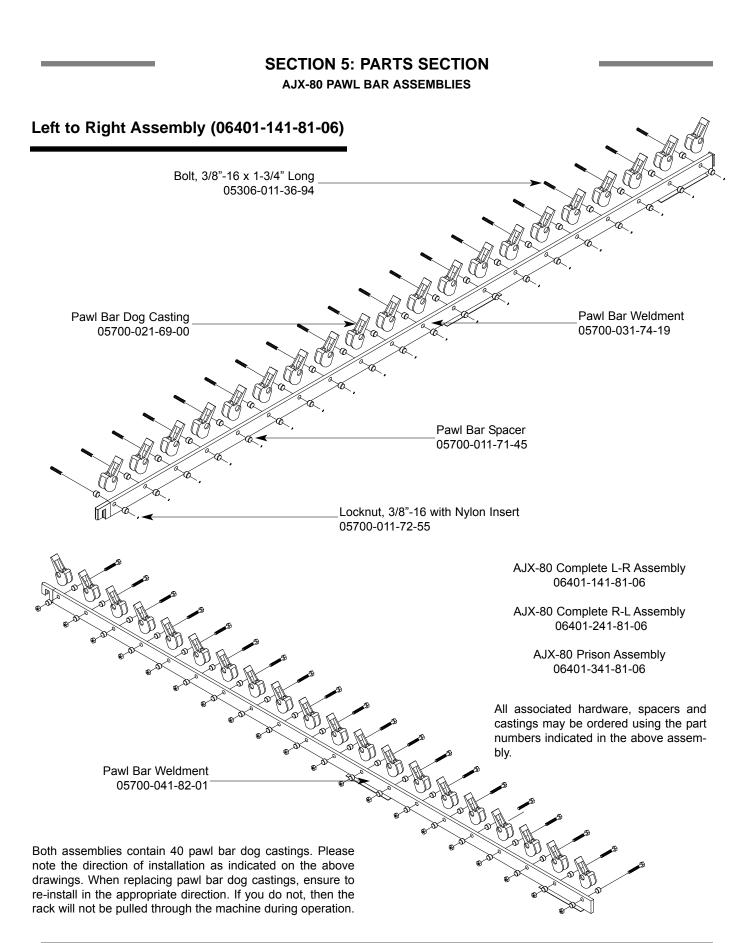
Bottom Guide Block

Pawl Bar Gutter Gasket 05330-011-68-55

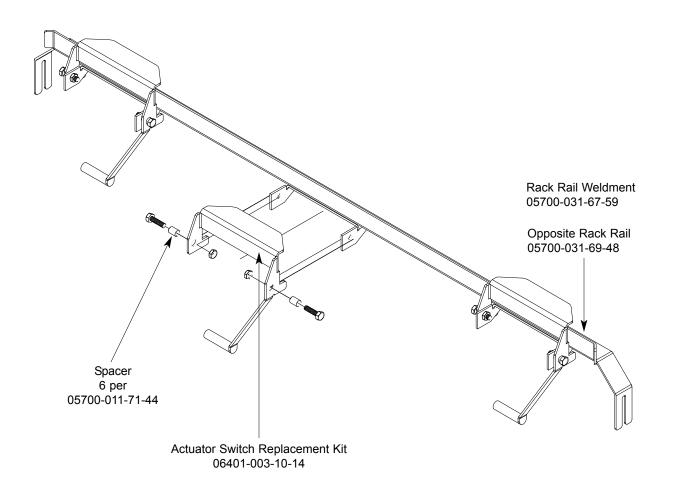


## AJX-44 & AJX-66 PAWL BAR ASSEMBLIES





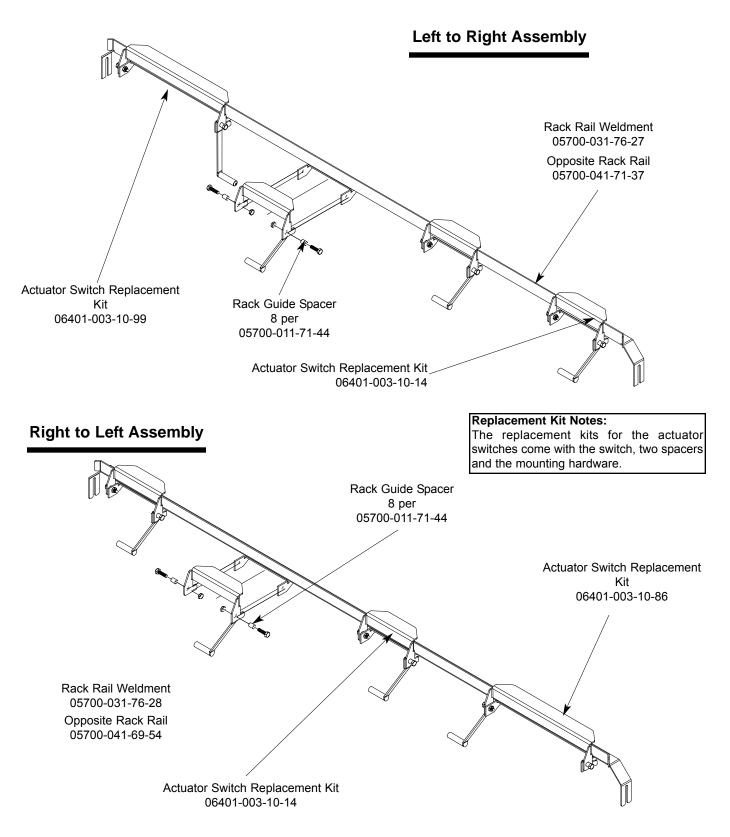
AJX-44 RACK RAIL ASSEMBLY



# Replacement Kit Note:

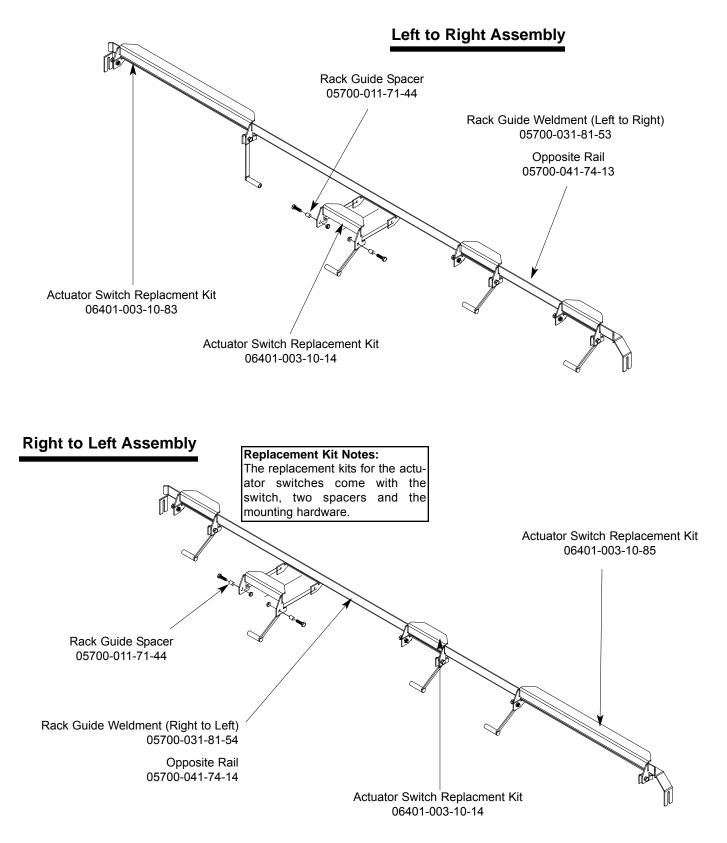
The replacement kit for the actuator switch comes with the switch, two spacers and the mounting hardware.

AJX-66 RACK RAIL ASSEMBLIES

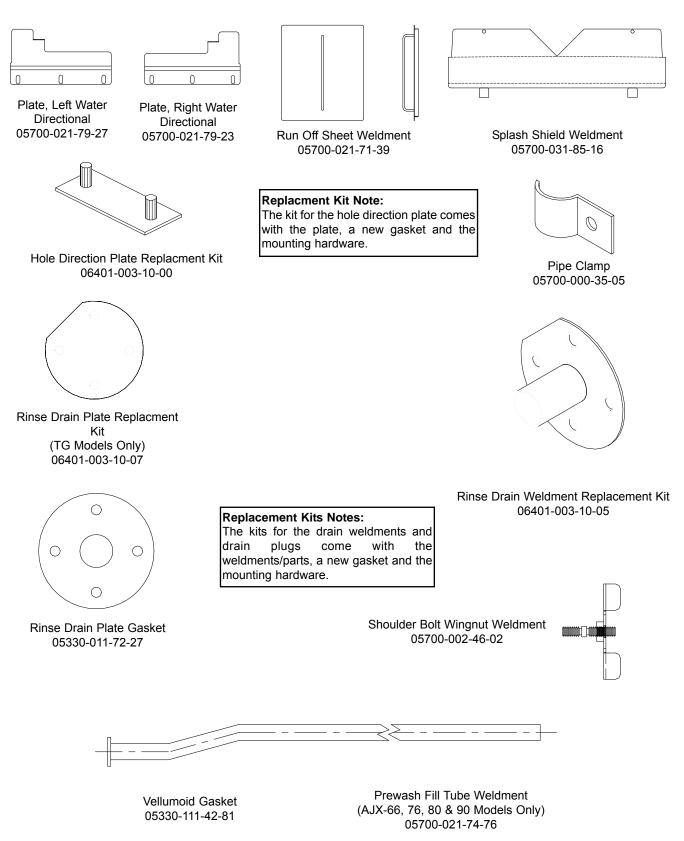


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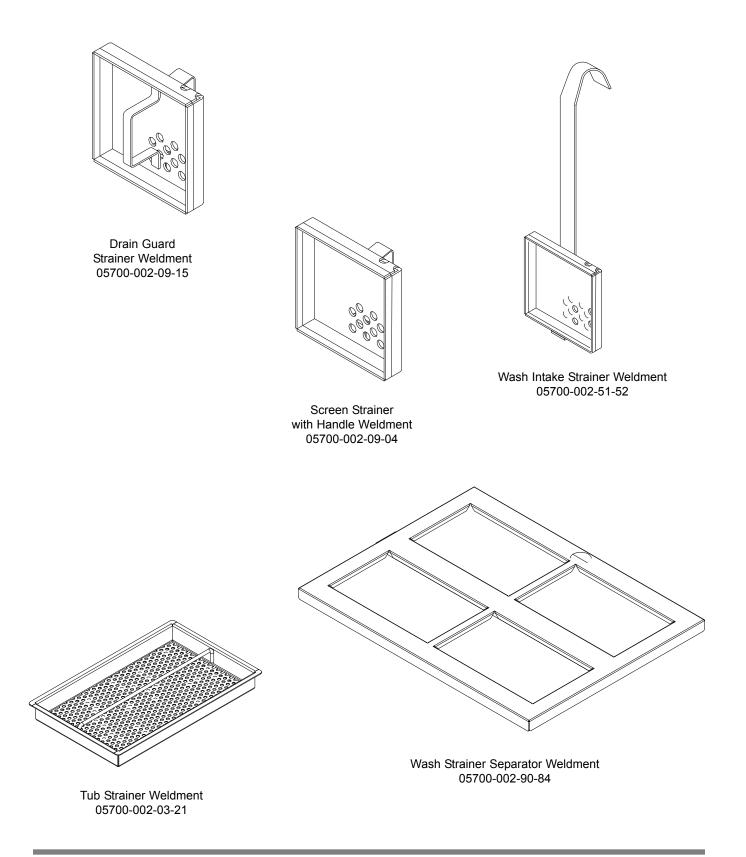
AJX-80 RACK RAIL ASSEMBLIES



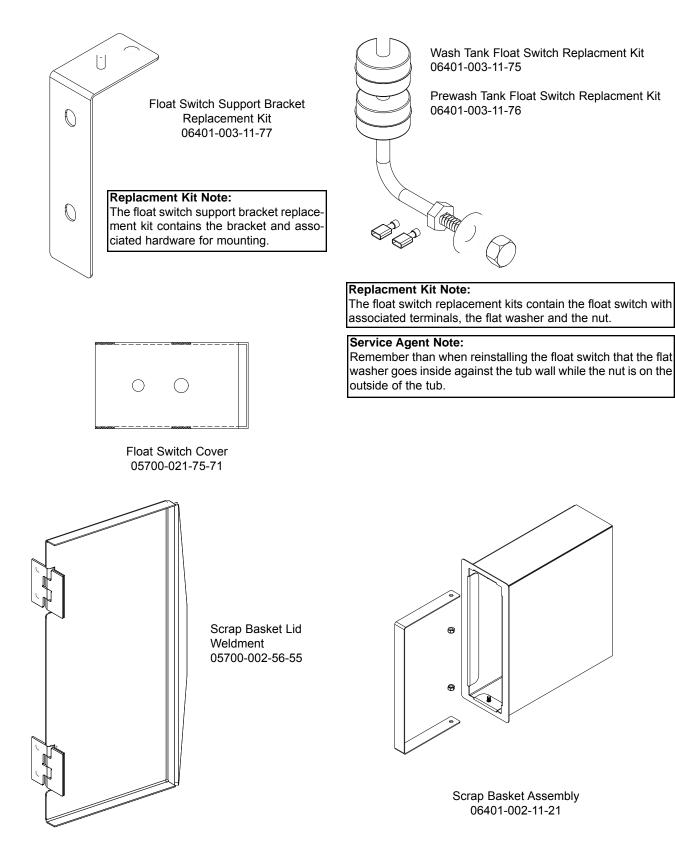
# SECTION 5: PARTS SECTION MISCELLANEOUS PARTS AND WELDMENTS



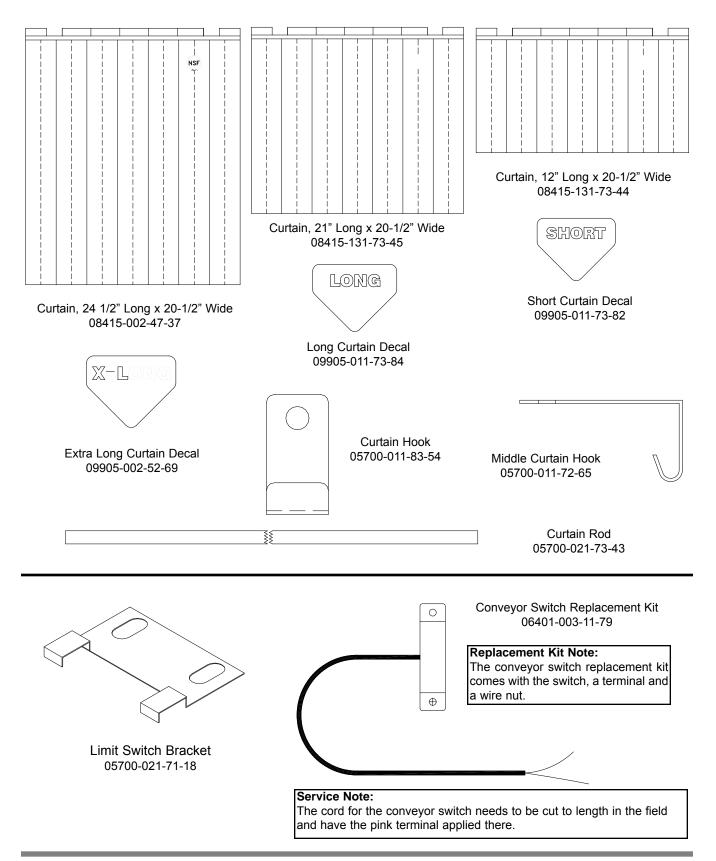
# SECTION 5: PARTS SECTION STRAINERS

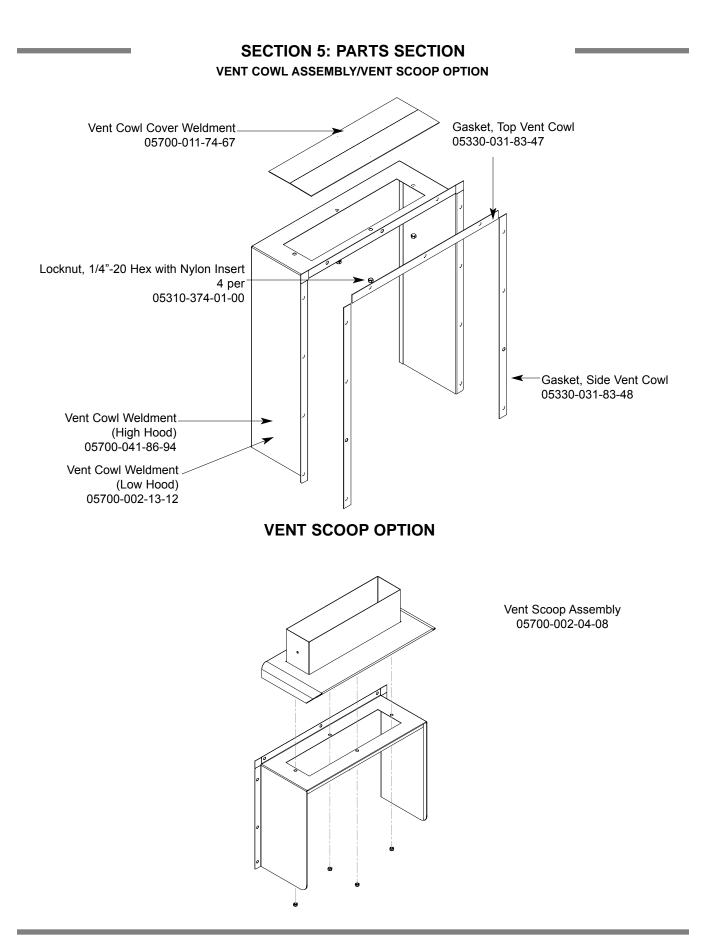


# SECTION 5: PARTS SECTION FLOAT SWITCH COMPONENTS/SCRAP BASKETS



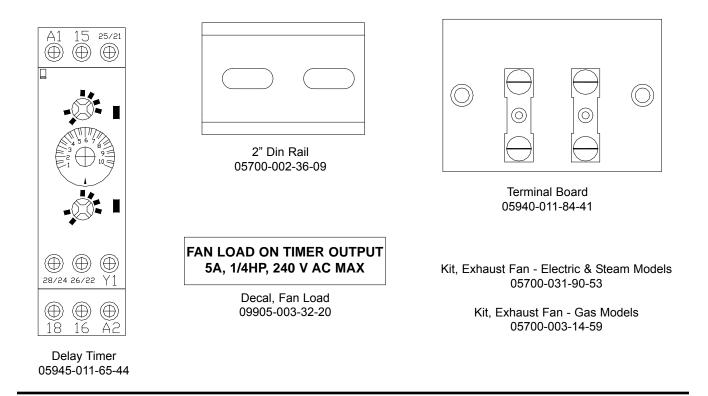
CURTAINS/TUB MAGNETS

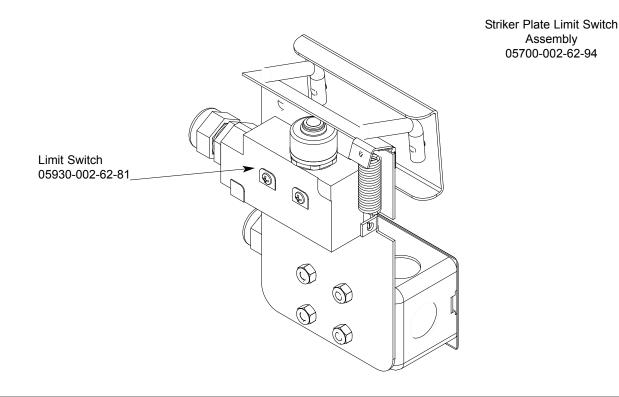




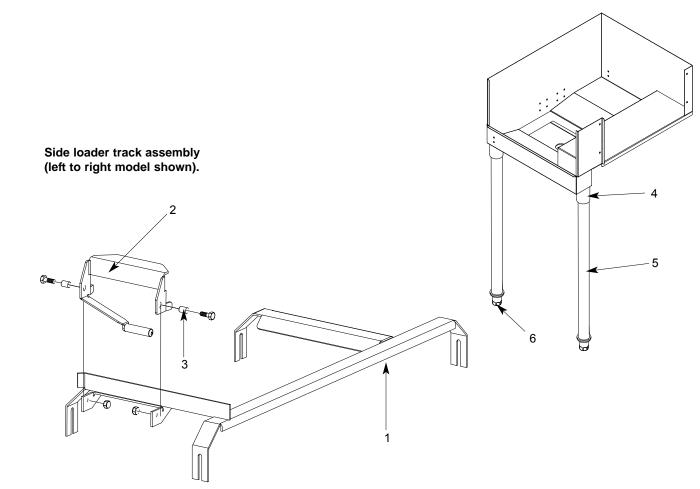
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SECTION 5: PARTS SECTION EXHAUST FAN CONTROL/TABLE LIMIT SWITCH OPTIONS





# SECTION 5: PARTS SECTION SIDE LOADER TRACK ASSEMBLY/LEG REPLACEMENTS



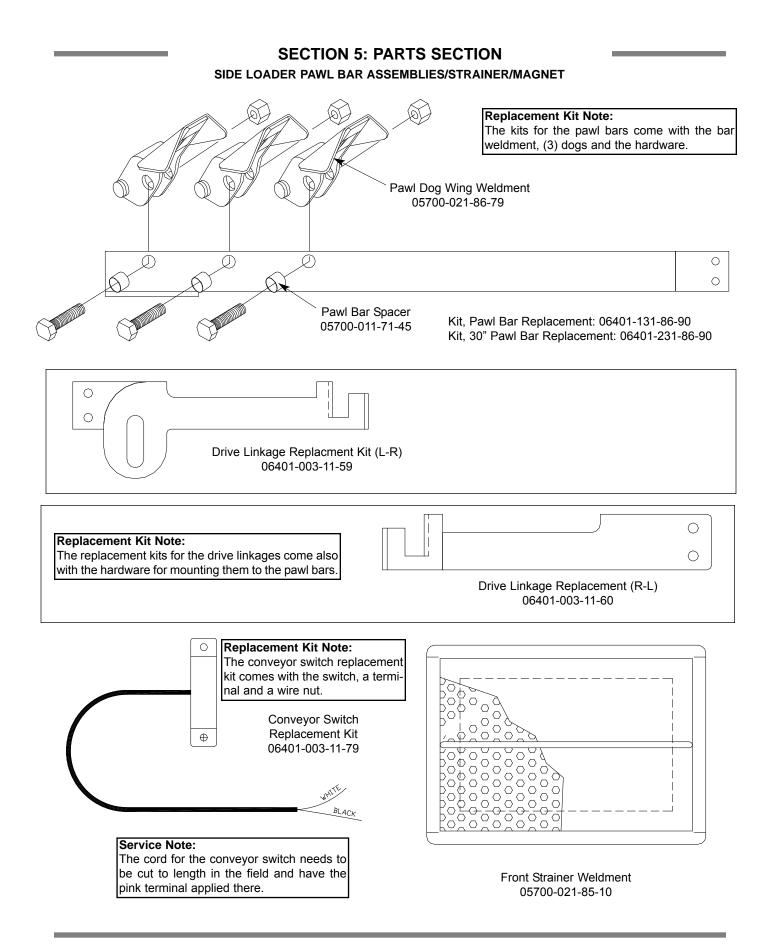
ITEM	QTY	DESCRIPTION
1	1	Track Weldment (Left to Right) 24"
	1	Track Weldment (Right to Left) 24"
	1	Track Weldment (Left to Right) 30"
	1	Track Weldment (Right to Left) 30"
2	1	Actuator Switch Replacement Kit
3	2	Spacer
4	1	Leg Socket Replacement Kit
5	1	Leg Support Replacement Kit
6	1	Bullet Foot

## Replacement Kits Notes:

The actuator switch replacement kit comes with the actuator weldment, mounting hardware and (2) spacers.

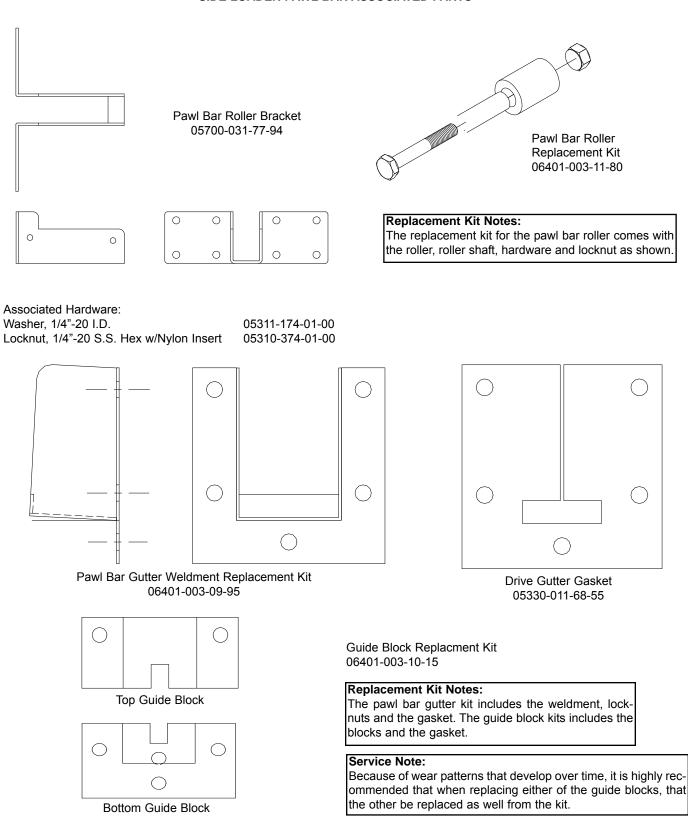
The leg socket replacement kit has the leg socket, mounting hardware and set screw.

The leg support replacement kit has the leg and the bullet foot included. Mfg. No. 05700-031-78-98 05700-031-95-20 05700-003-04-57 05700-003-04-58 06401-003-10-64 05700-011-71-44 06401-003-09-79 06401-003-09-80 05340-108-01-03

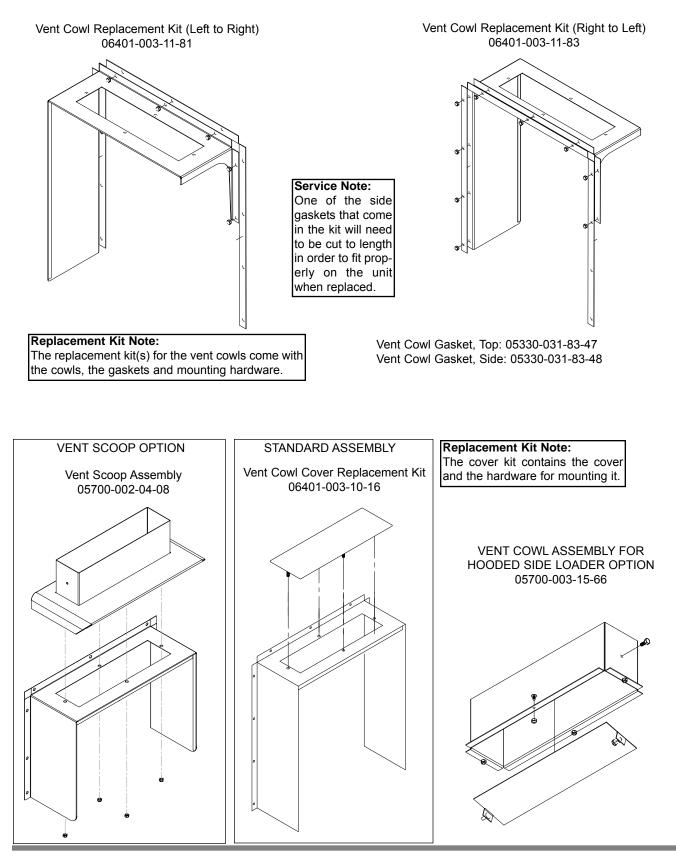


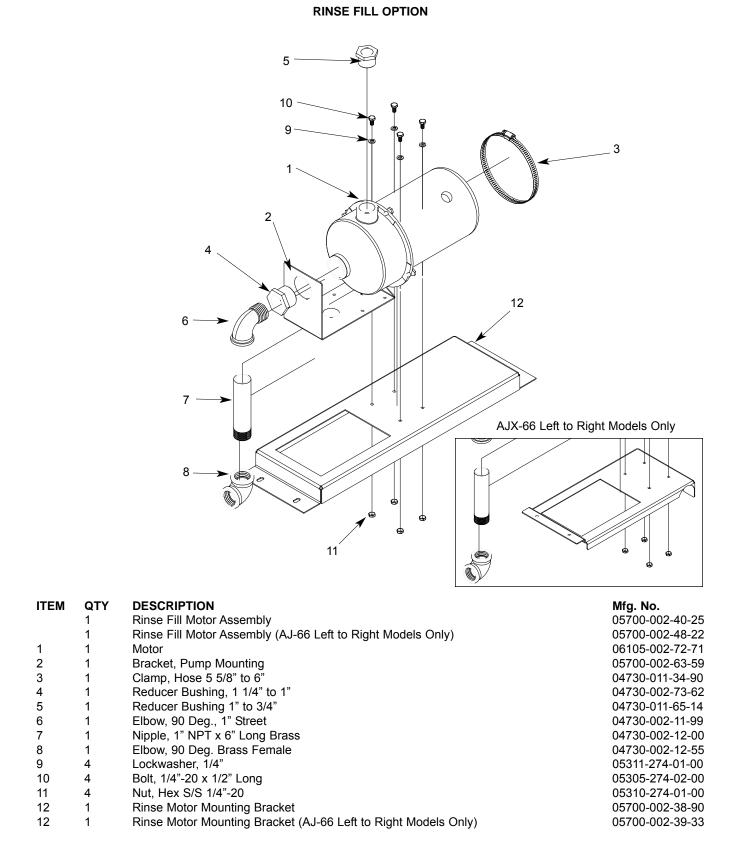
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## SECTION 5: PARTS SECTION SIDE LOADER PAWL BAR ASSOCIATED PARTS

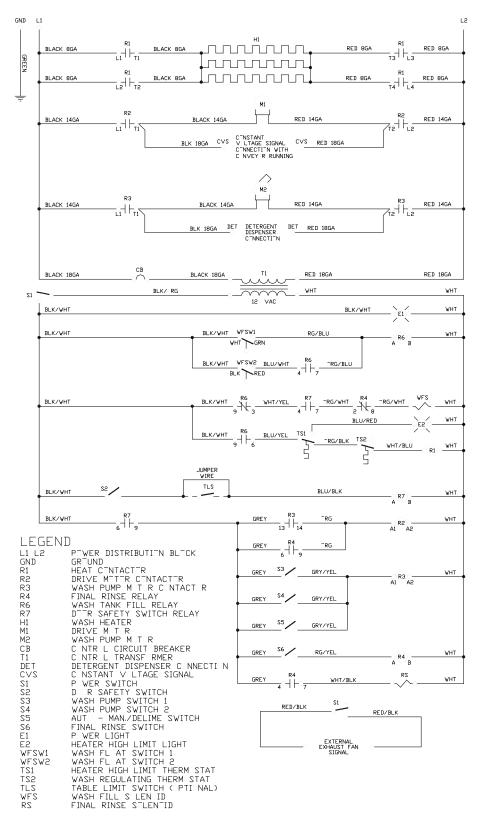


SIDE LOADER VENT COWL OPTION





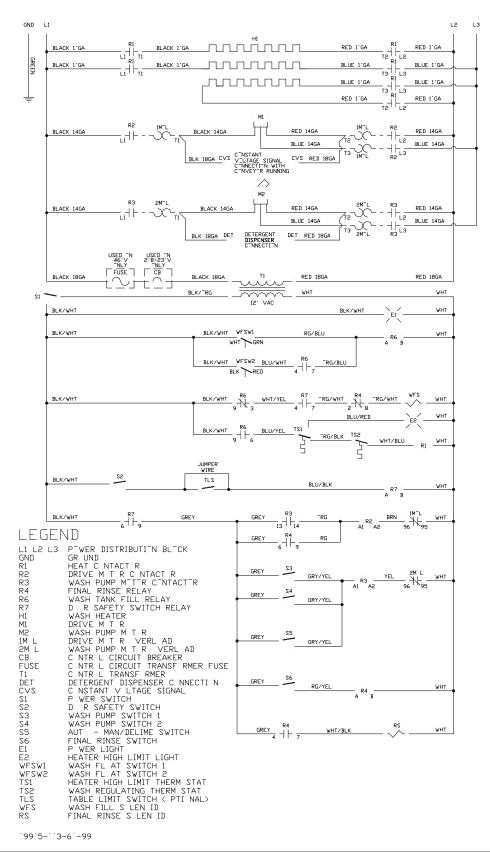
# SECTION 6: ELECTRICAL SCHEMATICS



SECTION 6: ELECTRICAL SCHEMATICS AJX-44CE& AJX-54CE (208-230 VOLT/50-60 HZ/1 PHASE)

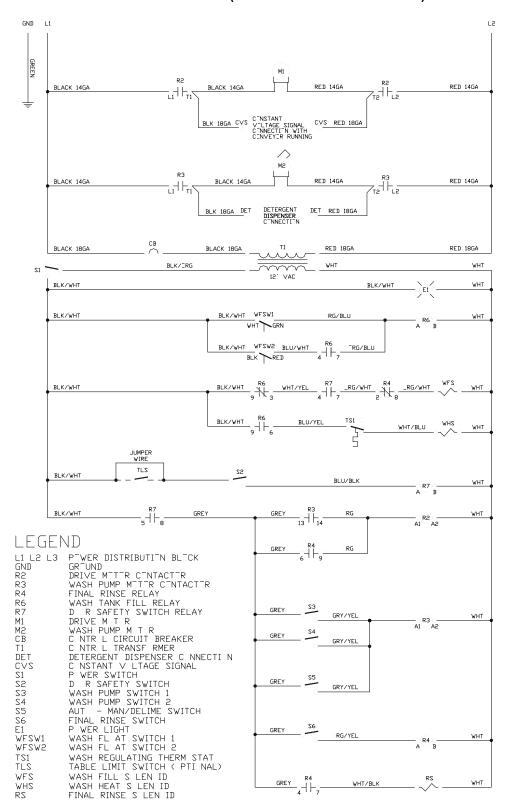
9905-03-65-05

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## SECTION 6: ELECTRICAL SCHEMATICS AJX-44CE & AJX-54CE (208-460 VOLT/50-60 HZ/3 PHASE)

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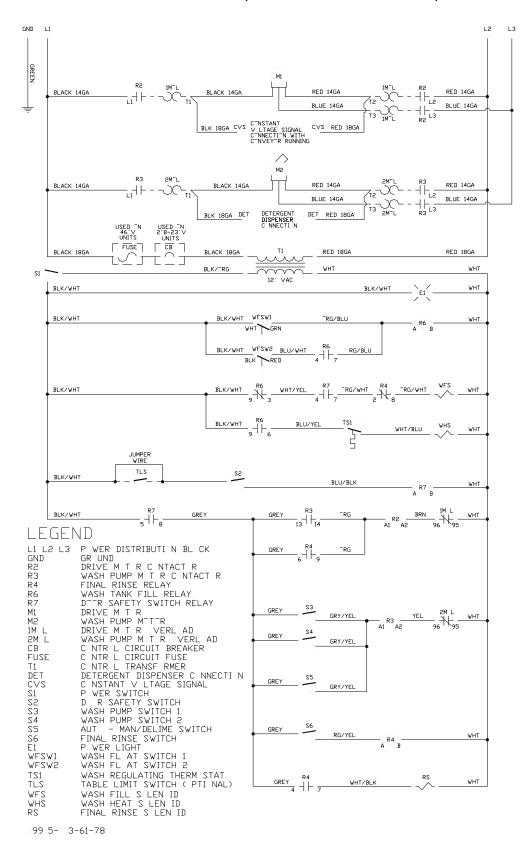


## SECTION 6: ELECTRICAL SCHEMATICS AJX-44CS & AJX-54CS (208-230 VOLT/50-60 HZ/1 PHASE)

09905-003-64-34

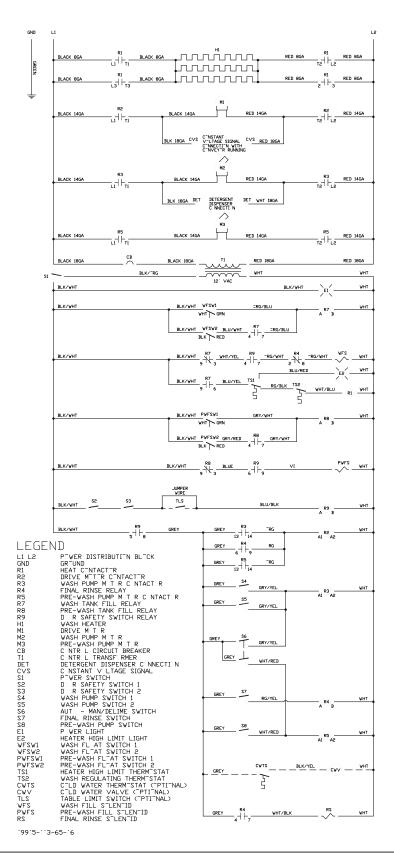
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SECTION 6: ELECTRICAL SCHEMATICS AJX-44CS & AJX-54CS (208-460 VOLT/50-60 HZ/3 PHASE)

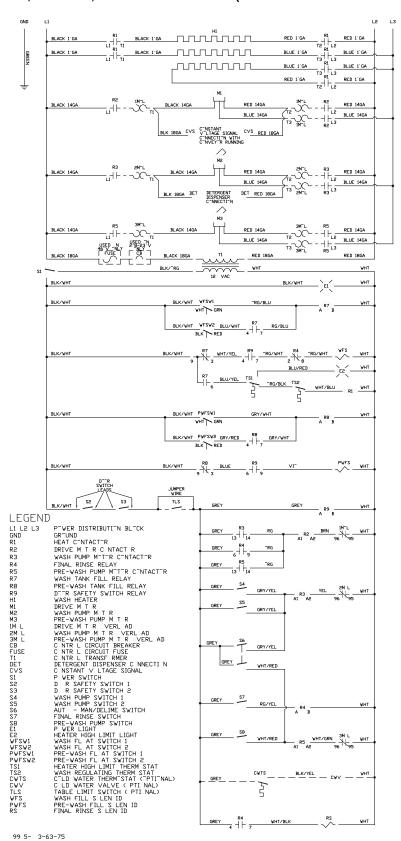


AJX-44 & AJX-54 Series Technical Manual 7610-003-60-98 Issued: 01-19-2009 Revised: 01-30-2009

# AJX-66CE, AJX-76CE, AJX-80CE & AJX-90CE (208-230 VOLT/50-60 HZ/1 PHASE)

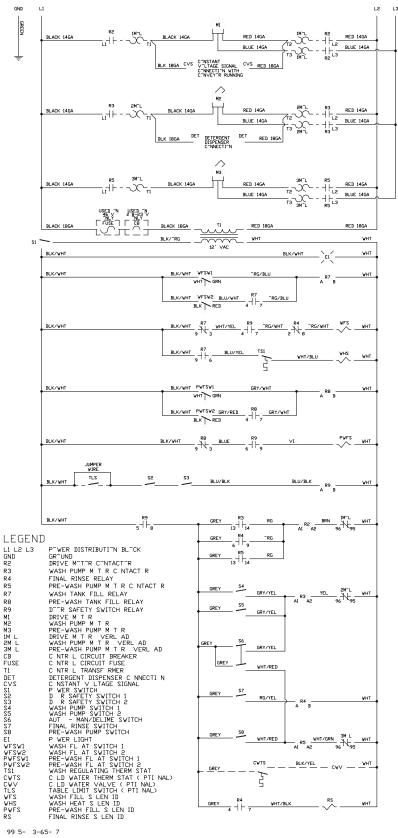


AJX-44 & AJX-54 Series Technical Manual 7610-003-60-98 Issued: 01-19-2009 Revised: 01-30-2009



# AJX-66CE, AJX-76CE, AJX-80CE & AJX-90CE (208-460 VOLT/50-60 HZ/3 PHASE)

AJX-44 & AJX-54 Series Technical Manual 7610-003-60-98 Issued: 01-19-2009 Revised: 01-30-2009

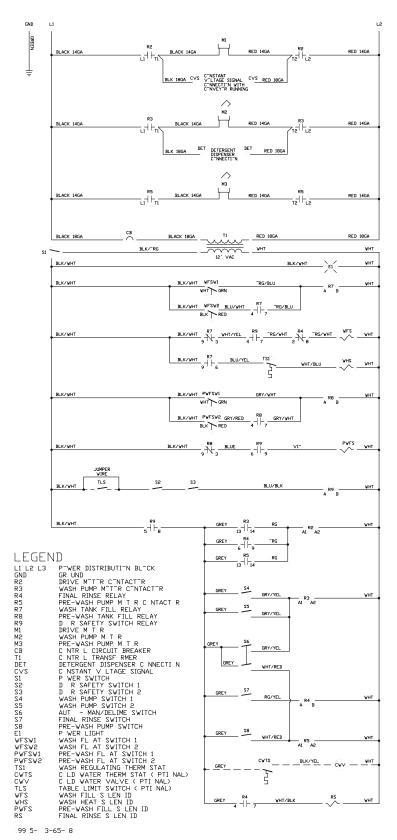


# SECTION 6: ELECTRICAL SCHEMATICS

AJX-66CS, AJX-76CS, AJX-80CS & AJX-90CS (208-460 VOLT/50-60 HZ/3 PHASE)

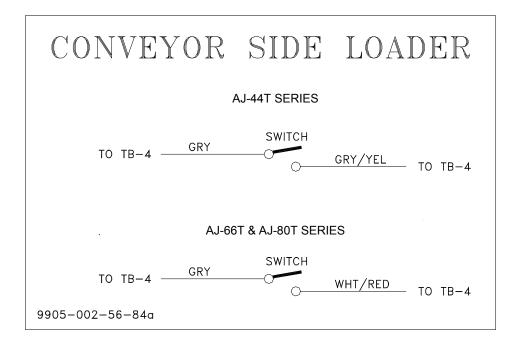
AJX-44 & AJX-54 Series Technical Manual 7610-003-60-98 Issued: 01-19-2009 Revised: 01-30-2009

# AJX-66CS, AJX-76CS, AJX-80CS & AJX-90CS (208-230 VOLT/50-60 HZ/1 PHASE)

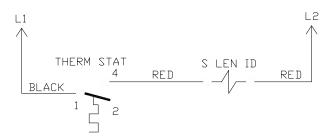


AJX-44 & AJX-54 Series Technical Manual 7610-003-60-98 Issued: 01-19-2009 Revised: 01-30-2009

## SECTION 6: ELECTRICAL SCHEMATICS CONVEYOR SIDE LOADER & DRAIN QUENCH DIAGRAM

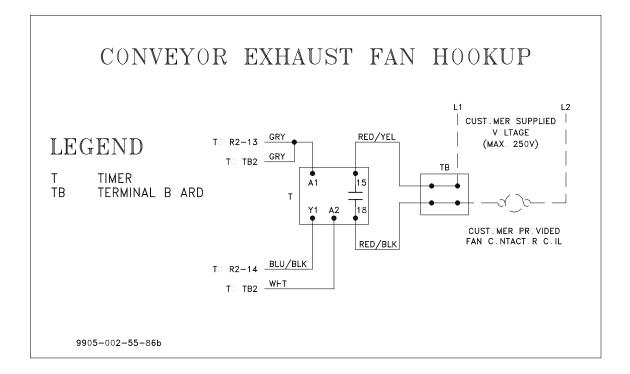


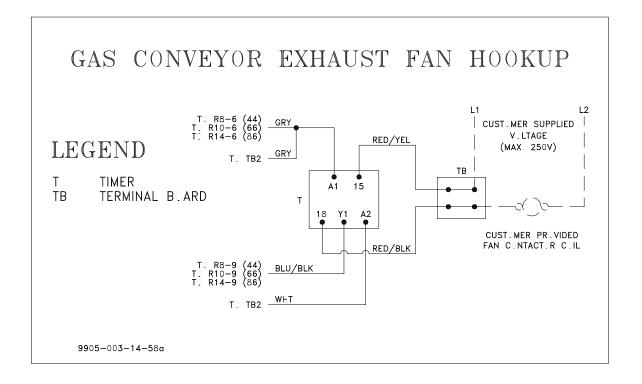
# **DRAIN QUENCH SCHEMATIC**



CINNECT BLACK WIRE TO MOTOR CONTACTOR - L1 WITH PIGGYBACK TERMINAL PROVIDED

SECTION 6: ELECTRICAL SCHEMATICS EXHAUST FAN HOOK-UP SCHEMATIC





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854 LAKESIDE DRIVE MOBILE, AL 36693 (251) 666-7278 800-237-9859 FAX: (251) 661-0223

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#### AUTHORIZED COMMERCIAL FOOD EQMT. SVC

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SANTA ANA, CA (714) 542-1798 800-540-0719 FAX: (714) 542-4787

## GCS SERVICE INC.

S. SAN FRANCISCO, CA (650) 635-0720 800-969-4427 FAX: (650) 871-4019

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SAN DIEGO, CA (858) 549-8411 800-422-7278 FAX: (858) 549-2323

### INDUSTRIAL ELECTRIC SVC.

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## P & D APPLIANCE

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### HAWAII

FOOD EQMT. PARTS & SERVICE CO. 300 PUUHALE RD. HONOLULU, HI 96819 (808) 847-4871 FAX: (808) 842-1560 fepsco@hula.net

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## RON'S SERVICE 703 E 44TH STREET STE 10 GARDEN CITY, ID 83714 (208) 375-4073 FAX: (208) 375-4402

## ILLINOIS

CONES REPAIR SVC. 2408 40TH AVE. MOLINE, IL 61265 (309) 797-5323 800-716-7070 FAX: (309)797-3631 jackb@cones.com

## EICHENAUER SERVICES INC.

130 S OAKLAND ST. DECATUR, IL 62522 (217) 429-4229 800-252-5892 FAX: (217) 429-0226 esi@esiquality.com

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ELMHURST, IL (630) 941-7800 800-942-9689 FAX: (630) 941-6048

## GCS SERVICE INC.

ST. LOUIS, MO (314) 683-7444 800-284-4427 FAX: (314) 638-0135

## GENERAL PARTS, INC.

248 JAMES STREET BENSONVILLE, IL 60106 (630) 595-3300 (800) 880-3604 FAX: (630)595-0006

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GCS SERVICE INC. INDIANAPOLIS, IN (317) 545-9655 800-727-8710 FAX: (317) 549-6286

B622 LA PAS TRAIL INDIANAPOLIS, IN 46268 (317) 290-8060 (800) 410-9794 (317) 290-8085 FAX

#### IOWA GOODWIN TUCKER GROUP

2900 DELAWARE AVENUE DES MOINES, IA 50317 (515) 262-9308 800-372-6066 FAX: (515) 262-2936 parts@goodwintucker.com

#### CONES REPAIR SVC.

1056 27TH AVENUE SW CEDAR RAPIDS, IA 52404 (319) 365-3325 800-747-3326 FAX: (319) 365-0885

## KANSAS

#### GCS SERVICE INC. KANSAS CITY, MO (816) 920-5999 800-229-6477 FAX: (816) 920-7387

## **GENERAL PARTS, INC.**

1101 E. 13TH STREET KANSAS CITY, MO 64106 (816) 421-5400 (800) 279-9967 (816) 421-1270 FAX

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127 DISHMAN LANE BOWLING GREEN, KY 42101 (270) 783-0012 (877) 907-0012 FAX: (270) 783-0058

#### CERTIFIED SERVICE CENTER RAMCO BUSINESS PARK

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## **CERTIFIED SERVICE CENTER**

1051 GOODWIN DRIVE LEXINGTON, KY 40505 (606) 254-8854 800-432-9269 FAX: (606) 231-7781 jatkins@certifiedsc.com

#### GCS SERVICE INC.

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LEXINGTON, KY (606) 255-0746 800-432-9260 FAX: (606) 255-0748

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(504) 734-8864 (800) 499-2351 (504) 733-2559 FAX

#### MAINE

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#### MASSACHUSETTS RESTAU-RANT SUPPLY

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ACE SERVICE CO. 95 HAMPTON AVE. NEEDHAM, MA 02494 (781) 449-4220 800-225-4510 MA & NH FAX: (781) 444-4789 taceservice@aol.com

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899 FERRY STREET EVERETT, MA 02149 (617) 389-1899 (888) 590-1899 (617) 389-1996 FAX

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GCS SERVICE INC. LIVONIA, MI (248) 426-9500 800-772-2936 FAX: (248) 426-7555

## JACKSON SERVICE COMPA-

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GCS SERVICE INC. GRAND RAPIDS, MI (616) 241-0200 800-823-4866

FAX: (616) 241-0541

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(601) 956-7800 800-274-5954 FAX: (601) 956-1200

GCS SERVICE INC. MEMPHIS, TN (901) 366-4587 800-262-9155 FAX: (901) 366-4588

MISSOURI

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#### GCS SERVICE INC.

ST. LOUIS, MO (314) 638-7444 800-284-4427 FAX: (314) 638-0135

## KAEMMERLIN PARTS & SVC.

2728 LOCUST STREET ST. LOUIS, MO 63103 (314) 535-2222 FAX: (314) 535-6205 petek@kps.stl.com

#### GENERAL PARTS, INC.

1101 EAST 13TH STREET KANSAS CITY, MO 64106 (816) 421-5400 (800) 279-9967 (816) 421-1270 FAX

### MONTANA

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#### NEBRASKA

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5454 LOUIE LANE RENO, NV 89511 (775) 852-9696 FAX: (775) 852-5104

GCS SERVICE INC. LAS VEGAS, NV (702) 450-3495 800-500-9060 FAX: (702) 450-3491

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#### GCS SERVICE INC.

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#### GENERAL PARTS, INC.

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## CERTIFIED SERVICE CENTER

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## GCS SERVICE INC.

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## ELECTRICAL APPLIANCE

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## HAGAR RESTAURANT EQMT.

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(814) 456-3732 800-332-3732 FAX: (814) 452-4843 aiserie@aol.com

## ELMER SCHULTZ SVC.

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2249 AUGUSTA RD. GREENVILLE, SC 29605 (864) 235-9616 FAX: (864) 235-9623

## WHALEY FOODSERVICE REPAIRS

I 26&US1 P.O. BOX 4023 WEST COLUMBIA, SC 29170 (803) 791-4420 800-877-2662 FAX: (803) 794-4630 info@whaleyfoodservice.com

#### WHALEY FOODSERVICE REPAIRS

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#### WHALEY FOODSERVICE REPAIRS

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#### WHALEY FOODSERVICE REPAIRS 4740-A FRANCHISE STREET N. CHARLESTON, SC 29418 (843) 760-2110

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### SOUTH DAKOTA

GCS SERVICE INC. MINNEAPOLIS, MN (612) 546-4221 800-345-4221 FAX: (612) 546-4286

## GENERAL PARTS, INC.

10 SOUTH 18TH STREET FARGO, ND 58103 (701) 235-4161 (800) 279-9987 (701) 235-0539 FAX

#### TENNESSEE

GCS SERVICE INC. MEMPHIS, TN (901) 366-4587 800-262-9155 FAX: (901) 366-4588

GCS SERVICE INC. NASHVILLE, TN (615) 244-8050 800-831-7174 FAX: (615) 244-8885

#### TEXAS

# ARMSTRONG REPAIR CEN-

5110 GLENMOUNT DRIVE HOUSTON, TX 77081 (713) 666-7100 800-392-5325 FAX: (713) 661-0520 gm@armstrongrepair.com

## COMMERCIAL KITCHEN

REPAIR CO. 1377 N BRAZOS P.O BOX 831128 SAN ANTONIO, TX 78207 (210) 735-2811 800-292-2120 FAX: (210) 735-7421 brock@commercialkitchen.com

## GCS SERVICE INC.

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#### GCS SERVICE INC.

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## GCS/STOVE PARTS

2120 SOLANA STREET FORT WORTH, TX 76117 (817) 831-0381 800-433-1804 FAX: (817) 834-7754 bud@stoveparts.com

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6182 SOUTH STRATLER AVENUE MURRAY, UT 84107 (801) 263-3221 800-527-2561 FAX: (801) 263-3229 lamonica81@aol.com

## VERMONT

# NORTHERN PARTS & SVC.

4874 S. CATHERINE STREET PLATTSBURGH, NY 12901 (518) 563-3200 800-634-5005 FAX: (800) 782-5424 info@northernparts.com

## GCS SERVICE INC.

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## GCS SERVICE INC.

SILVER SPRING, MD (301) 585-7550(DC) (410) 792-0388(BALT) 800-638-7278 FAX: (301)495-4410

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## GCS SERVICE INC.

SEATTLE, WA (206) 763-0353 800-211-4274 FAX: (206) 763-5943

#### RESTAURANT APPLIANCE SERVICE

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### WEST VIRGINIA

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#### WISCONSIN

## APPLIANCE SERVICE CEN-TER, INC.

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CENTER, INC. 6843 W. BELOIT RD. WEST ALLIS, WI 53219 (414) 543-6460 800-236-6460 FAX: (414) 543-6480 ascmil@execpc.com

#### APPLIANCE SERVICE CENTER

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WISCONSIN TO WYOMING/INTERNATIONAL

## GENERAL PARTS, INC.

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APPLIANCE SERVICE 3000 S. WYANDOT ST. ENGLEWOOD, CO 80110 (303) 781-5548 (800) 624-2117 FAX: (303) 761-5561 johns@hawkinscommercial.com

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March 13, 2007

AJ-44T Series Technical Manual 7610-003-07-21 Issued: 03-21-2006 Revised: N/A