INSTALLATION/OPERATION & TECHNICAL MANUAL

INSTALLATION MANUAL FOR EXPORT UNITS SERVICE MANUAL FOR DOMESTIC UNITS

ELECTRICALLY HEATED MODELS:

TEMPSTAR HH

TEMPSTAR HH NB

STEAM HEATED MODELS:

TEMPSTAR HH S



Jackson WWS, INC.
P.O. BOX 1060
HWY. 25E
BARBOURVILLE, KY. 40906
PHONE (606) 523-9795
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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,INC 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,INC, within the continental United States, Hawaii and Canada, during the warranty period provided a Jackson WWS,INC authorized service agency, or those having prior authorization from the factory, performs the service. Any repair work by persons other than a Jackson WWS,INC 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,INC.

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.INC.

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,INC limits warranty travel time to (2) two hours and mileage to (100) one hundred miles. Jackson WWS,INC 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,INC 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,INC 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,INC. 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,INC 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
F	06-01-04	MAW	N/A	Chang to new layout
G	01-05-05	MAW	N/A	Corrected amerate ratings, changed to thermostat bracket 05700-011-81-64, changed thermostat 05930-121-71-29 to thermostat kit 06401-140-00-32, updated drawing for false panel installation, and added SDI override instructions
н	01-17-06	MAW	7609	Added universal timer, parts & schematics.
I	07-06-06	MAW	7713,7571, 7493,7553, 7411,7422, 7231	Updated specificaiton & dimension pages. Updated drain quench assembly. Replaced door switch 05930-003-02-20 with 05930-003-05-84. Added false panel kit numbers, door component kits.Replace ball stop components. Replace thermostat 05930-121-71-29 with 05930-510-03-79. Added the wash& rinse thermometer decals.
J	09-14-07	MAW		Obsoletings I/O manual,added warranty and repair centers infor.Listed minimum cycle times. Added Top Mount Control Box:dimensions, hood weldment, control box, and schematics.Corrected the rinse tank cover number, updated the cantilever support bracket and reed switch numbers.
К	10-08-08	ARL	7990	Added hi-limit thermostat set point instructions.
L	01-10-13	RLC	8252	Updated Schematic and control box to reflect rotary switch
М	03-07-13	RLC	QOF NDB-219	Updated Jackson Logo and company name

Jackson

TEMPSTAR HH = Electrically heated, high temp, hot water sanitizing, with booster heater, door-type dishmachine

TEMPSTAR HH NB = Electrically heated, high temp, hot water sanitizing, no rinse booster, door-type dish-machine

TEMPSTAR HH S = Steam heated, high temp, hot water sanitizing, door-type dishmachine

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

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 CAPACITIES

PERFORMANCE/CAPABILITIES	ELECTRICAL REQUIREMENTS		
OPERATING CAPACITY:	WASH MOTOR HP	2.0	
SELECTION (A) RACKS PER HOUR DISHES PER HOUR GLASSES PER HOUR	NOTE: Always refer to the machine data plate for specific electrical and water requirements. The material provided on this page is for reference only and may be subject to change without notice.		
SELECTION (B)	20	WATER REQUIREMENTS	
RACKS PER HOUR DISHES PER HOUR	29 725	TEMPSTAR HH:	
GLASSES PER HOUR SELECTION (C) RACKS PER HOUR	725 20	WASH TEMPERATURE (MINIMUM)(°F) WASH TEMPERATURE (MINIMUM)(°C) RINSE TEMPERATURE (MINIMUM)(°F)	150 66 180
DISHES PER HOUR	500	RINSE TEMPERATURE (MINIMUM)(°C) INLET WATER TEMPERATURE:	83
GLASSES PER HOUR	500	12KW RINSE HEATER (°F) 12KW RINSE HEATER (°C)	140 60
SELECTION (D) RACKS PER HOUR DISHES PER HOUR GLASSES PER HOUR OPERATING CYCLE (SECONDS):	12 300 300	14KW RINSE HEATER (°F) 14KW RINSE HEATER (°C) FLOW PRESSURE (PSI) WATER LINE SIZE (NPT) DRAIN LINE SIZE (NPT)	110 44 20±5 3/4" 1 1/2"
, , ,	5 \	TEMPSTAR HH NB/TEMPSTAR HH S:	
MINIMUM (OTHER CYCLE TIMES ARE AVAILABL WASH TIME RINSE TIME TOTAL CYCLE TIME	- L) 45 15 60	WASH TEMPERATURE (MINIMUM)(°F) WASH TEMPERATURE (MINIMUM)(°C) RINSE TEMPERATURE (MINIMUM)(°F) RINSE TEMPERATURE (MINIMUM)(°C)	150 66 180 83
TANK CAPACITY RINSE TANK (GALLONS) RINSE TANK (LITERS) WASH TANK (GALLONS) WASH TANK (LITERS)	3.0 11.4 8.0 30.3	INLET WATER TEMPERATURE (°F) INLET WATER TEMPERATURE (°C) FLOW PRESSURE (PSI) WATER LINE SIZE (NPT) DRAIN LINE SIZE (NPT)	180 83 20±5 3/4" 1 1/2"
		STEAM REQUIREMENTS	
		COIL SIZE STEAM FLOW PRESSURE (P.S.I.) CONSUMPTION @ 15 P.S.I. (LBS/HR)	3/4" 10-20 45

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.

TEMPSTAR HH:

			RINSE HEATER	TOTAL E	TYPICAL ELECTRICAL
VOLTS	<u>PH</u>	HZ	RATINGS	AMPS	CIRCUIT
415	3	60	12KW	28 A	35 AMP
415	3	60	14KW	30 A	40 AMP
208	1	60	12KW@240V	75 A	100 AMP
208	1	60	14KW@240V	82 A	110 AMP
230	1	60	12KW@240V	81 A	110 AMP
230	1	60	14KW@240V	90 A	125 AMP
208	3	60	12KW@240V	48 A	60 AMP
208	3	60	14KW@240V	52 A	70 AMP
230	3	60	12KW@240V	52 A	70 AMP
230	3	60	14KW@240V	57 A	80 AMP
460	3	60	12KW@480V	24 A	30 AMP
460	3	60	14KW@480V	26 A	35 AMP

TEMPSTAR HH NB:

		RINSE		TYPICAL
		HEATER	TOTAL E	ELECTRICAL
<u>PH</u>	<u>HZ</u>	<u>RATINGS</u>	<u>AMPS</u>	CIRCUIT
1	60	N/A	31 A	35 AMP
1	60	N/A	33 A	35 AMP
3	60	N/A	23 A	25 AMP
3	60	N/A	24 A	35 AMP
3	60	N/A	10 A	15 AMP
	1 1 3 3	1 60 1 60 3 60 3 60	PH HZ RATINGS 1 60 N/A 1 60 N/A 3 60 N/A 3 60 N/A	PH HZ RATINGS AMPS 1 60 N/A 31 A 1 60 N/A 33 A 3 60 N/A 23 A 3 60 N/A 24 A

TEMPSTAR HH S:

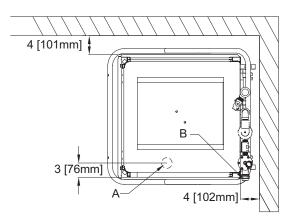
			RINSE HEATER	TOTAL	TYPICAL ELECTRICAL
VOLTS	<u>PH</u>	<u>HZ</u>	RATINGS	<u>AMPS</u>	CIRCUIT
208	1	60	N/A	12 A	15 AMP
230	1	60	N/A	12 A	15 AMP
208	3	60	N/A	12 A	15 AMP
230	3	60	N/A	12 A	15 AMP

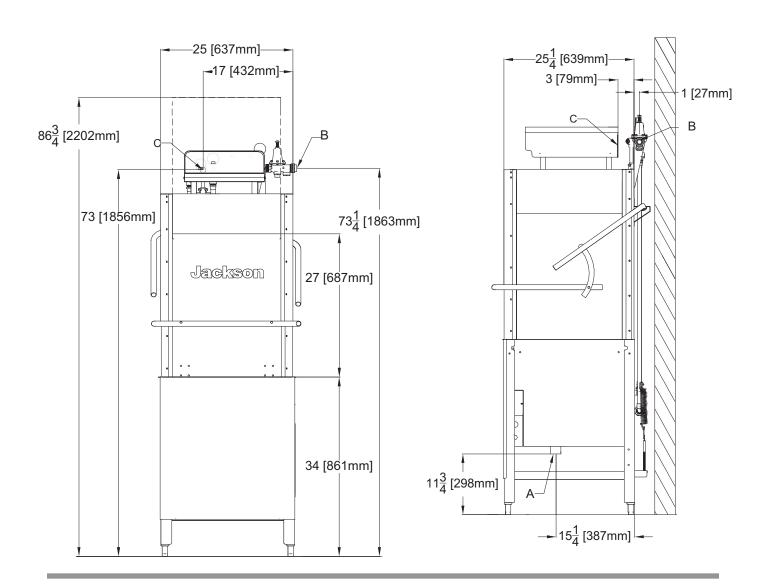
TEMPSTAR HH DIMENSIONS (TOP MOUNT CONTROL BOX)

LEGEND

- A DRAIN 1 1/2" IPS
- B WATER INLET 3/4" IPS
- **C ELECTRICAL CONNECTION**

All vertical dimensions are +/- 1/2" due to adjustable bullet feet.





TEMPSTAR HH DIMENSIONS (SIDE MOUNT CONTROL BOX)

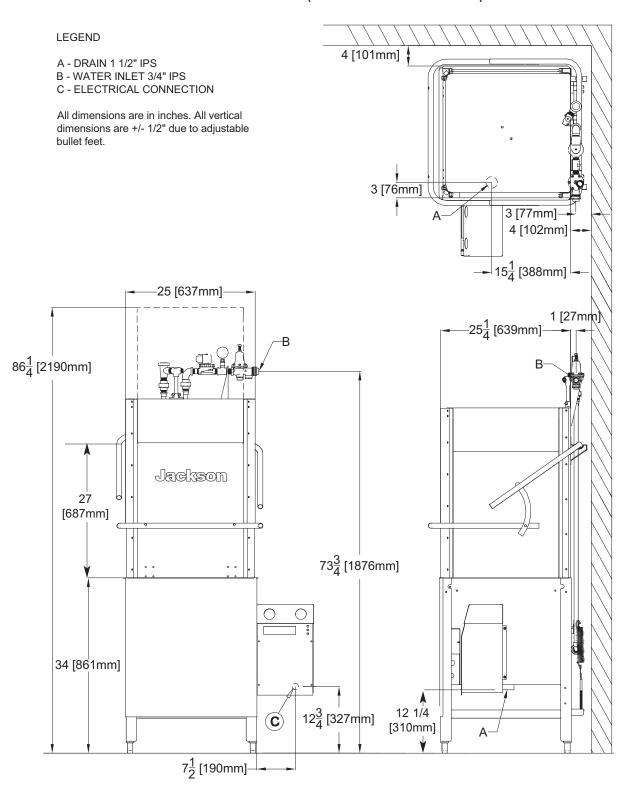
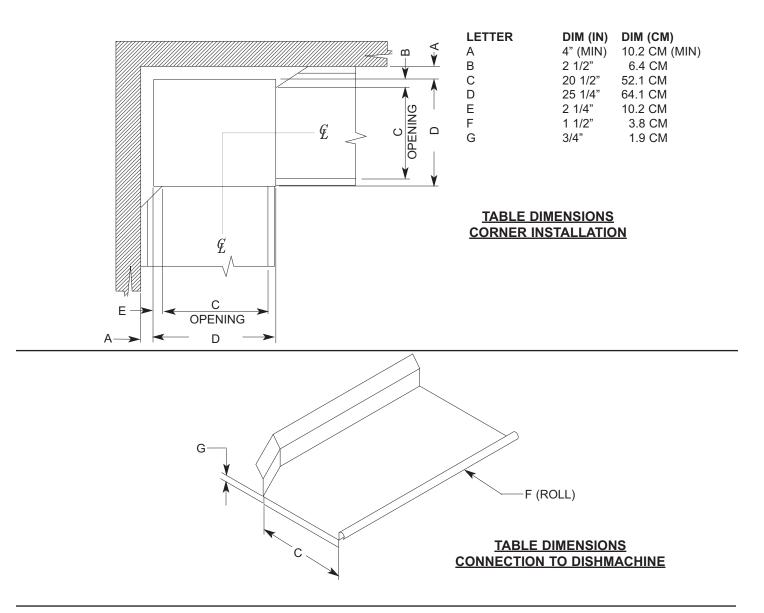
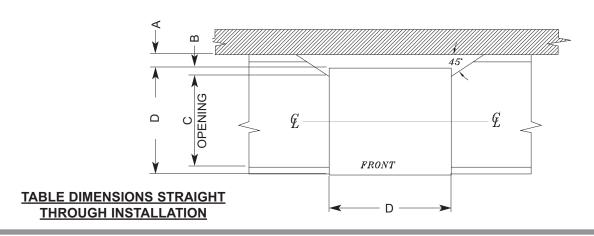


TABLE DIMENSIONS





INSTALLATION INSTRUCTIONS

Jackson MSC 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.

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 there being 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: Once the machine has been removed from the container, 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 to have the missing item shipped to you.

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.

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.

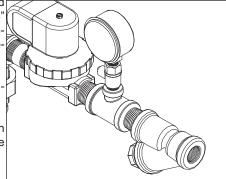
CONNECTING THE DRAIN LINE: The drain is a gravity discharge drain. All piping from the 1 1/2" FNPT connection on the wash tank must be pitched (1/4" per foot) to the floor or sink drain. All piping from the machine to the drain must be a minimum 1 1/2" I.P.S. and shall not be reduced. There must also be an air gap between the machine drain line and the floor sink or drain. If a grease trap is required by code, it should have a flow capacity of 5 gallons per minute.

WATER SUPPLY CONNECTION: Ensure that you have read the section entitled "PLUMBING THE DISHMACHINE" before proceeding. Install the water supply line (3/4" pipe size minimum) to the dishmachine line strainer using copper pipe. 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 20 ± 5 PSI "flow" pressure at the recommended temperature indicated on the data plate.

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.



Raise

Frame with Adjustable Foot

Incoming Plumbing Y-strainer Connection

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.

STEAM LINE CONNECTION: The steam machines come with lines by which the source steam needs to be connected. Connect all steam lines to the machine as all applicable codes provide. See machine data plate for information concerning steam flow pressure.

ELECTRICAL INSTRUCTIONS

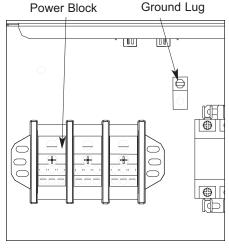
ELECTRICAL POWER CONNECTION: Electrical and grounding connections must comply with the applicable portions of the National Electrical Code ANSI/NFPA 70 (latest edition) and/or other electrical codes.

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. This will require taking a phillips head screwdriver and removing the four (4) screws on the front cover of the control box. Install 3/4" 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, & L3 (three 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.



Incoming Power Connection

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.

OPERATION INSTRUCTIONS

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

- 1. The pan strainer and pump suction strainer are in place and are clean.
- 2. The overflow tube and o-ring are installed.
- 3. That the wash and rinse arms are screwed securely into place and that their endcaps are tight. The wash and rinse arms should rotate freely.

POWER UP: 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.

FILLING THE WASH TUB: For the initial fill, ensure that the cycle selection switch is in the "AUTO" (automatic) position, and place the power switch in the "ON" position. The unit will fill automatically and run through a rinse cycle. Open the doors and verify that the water level is correct. Hereafter, the water level is controlled by the overflow tube. Verify that the drain stopper is preventing the wash tub water from draining excessively. There may be some slight leakage from the drain hole. Verify that there are no other leaks on the unit before proceeding any further. The wash tub must be completely filled before operating the wash pump to prevent damage to the component. Once the wash tub is filled, the unit is ready for operation.

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 required, 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.

WARM-UP CYCLES: For a typical daily start-up, it is recommended to run the machine through 3 cycles to ensure that all of the cold water is out of the system and to verify that the unit is operating correctly. To cycle the machine, ensure that the power is on and that the tub has filled to the correct level. Lift the doors and the cycle light will illuminate. When the light goes out, close the doors, the unit will start, run through the cycle, and shut off automatically. Repeat this two more times. The unit should now be ready to proceed with the washing of ware.

WASHING A RACK OF WARE: To wash a rack, open the doors completely (being careful for hot water that may drip from the doors) and slide the rack into the unit. Close the doors and the unit will start automatically. Once the cycle is completed, the cycle light will turn off, open the door (again watching for the dripping hot water) and remove the rack of clean ware. Replace with a rack of soiled ware and close the doors. The process will then repeat itself.

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, 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.

OPERATION INSTRUCTIONS (CONTINUED)

SHUTDOWN AND CLEANING: Secure steam flow to the machine in accordance with applicable codes and procedures. Steam flow must be secured prior to cleaning the inside of the machine. At the end of the workday, close the doors. When the unit completes the cycle, turn the power switch to the OFF position and open the doors. Remove and clean the pan strainer. Remove the drain stopper from the tub and allow the tub to drain (NOTE: The wash tank water will be hot so caution is advised). Once the wash tub is drained, remove the pump suction strainer. Remove soil and debris from the strainer and set to the side. Unscrew the wash and rinse arms from their manifolds. Remove the endcaps and flush the arms with water. Use a brush to clean out the inside of the arms. If the nozzles appear to be clogged, use a toothpick to remove the obstruction. Wipe the inside of the unit, removing all soil and scraps. Reassemble the wash and rinse arms and replace them in the unit. The arms only need to be hand tight, do not use tools to tighten them down. Reinstall the drain stopper and strainers and close the doors.

WATER CONSUMPTION ISSUES AND EFFICIENCY: The models covered in this manual provide you, the customer, with the ability to control the hourly rack capacity of the machine. Extending the wash cycle to wash severely soiled ware, such as mixing bowls, does not increase the machine's water consumption. However, selecting a longer time cycle does lower the amount of dishes the machine will be able to wash per hour. It is important for operators to select the correct wash cycle depending on the amount of washing required. Not every rack of dishes requires the machine to be set on the longest wash cycle!

Using good prescrapping procedures and observing the results of individual racks of ware, operators will soon gain the experience and knowledge required to ensure that the dishmachine operates at peak efficiency for your needs. Water hardness and detergent usage will also effect the results of the dishmachine.

SECTION 3: PREVENTATIVE MAINTENANCE

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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 one of the QUALIFIED SERVICE AGENCIES listed in the back of this manual.

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 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 a QUALIFIED SERVICE AGENCY.

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 a QUALIFIED SERVICE AGENCY 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 a QUALIFIED SERVICE AGENCY 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 4: TROUBLESHOOTING

SECTION 4: TROUBLESHOOTING

COMMON PROBLEMS



WARNING: Inspection, testing and repair of electrical equipment should only be performed by a qualified service technician. Many of the tests require that the unit have power to it and live electrical components be exposed. USE EXTREME CAUTION WHEN TESTING THE MACHINE.

Problem: Dishmachine will not fill after the door is close. Power "ON" light is illuminated.

- 1. Faulty rinse solenoid valve. Repair or replace valve as required.
- 2. Faulty door switch. Verify the wiring of the switch; if correct, replace the switch.
- 3. Fouled/faulty high level probe. Clean probe if fouled. If clean, and still not working, replace.

Problem: Dishmachine will not fill after the door is closed. Power "ON" light is not illuminated.

- 1. Service breaker tripped. Reset. If the breaker trips again, contact an electrician to verify the amp draw of the machine.
- 2. Machine not connected to power source. Verify that the machine has been properly connected to the power source.
- 3. Faulty power source. Verify the wiring of the switch; if correct, replace switch.

Problem: Dishmachine will not run after the door is closed. Power "ON" light is illuminated and the unit is filling.

- 1. Timer motor is faulty. Verify that the timer is rotating. If not, check to see that the motor is receiving power. If so, replace the motor and/or timer assembly.
- 2. Wash motor faulty/damaged. Verify that the wash motor is getting power. If so, replace the motor.
- 3. Wash motor contactor faulty. Check for continuity; if contacts are open, replace the contactor.

Problem: Dishmachine runs continuously in the wash cycle.

- 1. Machine is in delime mode. Change Operation Mode from DELIME to NORMAL position.
- 2. Wash cycle delay timer is faulty. During the wash cycle, the cam timer will move for the first 30 seconds of the wash cycle. The cycle delay timer will then cause the cam timer to stop, in order to increase the length of the wash cycle. The red light on the delay timer is in control of the cam timer. If the red light is not turning on (only during cycles B, C or D), replace the cycle timer.
- 3. Wash cycle delay timer settings not correctly adjusted. If the wash cycle delay timer and rotating cam timer are working correctly, the time cycles on the delay timer may be incorrectly adjusted. Adjust the delay potentiometer corresponding to the B, C or D cycle. Rerun the appropriate cycle and see if the adjustment has made any change in the length of the cycle. If not, replace the cycle delay timer.
- 4. Cam timer is faulty. Confirm that the wash cycle delay timer is functioning correctly (see above). Confirm that the timer motor is receiving power. If it is, replace the motor and/or timer assembly. Make sure there are no obstructions which limit the rotation of the cam timer.

Problem: Wash or rinse heater does not work.

- 1. Faulty heater element. Check element for continuity; if open, replace the heater.
- 2. Faulty heater contactor. Replace the contactor.
- 3. Misadjusted/faulty thermostat(s). Verify operation and setting of thermostats, replace if necessary.

Problem: Dishmachine fill slowly and/or the rinse is weak.

- 1. Clogged or obstructed rinse arms. Remove and clean the rinse arms.
- 2. Low incoming water pressure. Adjust the water pressure regulator to ensure that there is 20±5 PSI flow.
- 3. Y-strainer is clogged. Clean out the Y-strainer.

Problem: Rinse water not reaching required temperature.

- 1. Faulty rinse heater. Check element for continuity; if open, replace heater.
- 2. Misadjusted/faulty thermostat(s). Verify operation and setting of thermostats, replace if necessary.
- 3. Rinse thermometer is defective. Replace thermometer.

SECTION 4: TROUBLESHOOTING

COMMON PROBLEMS

Problem: Wash water is not reaching required temperature.

- 1. Faulty wash heater. Check element for continuity; if open, relace the heater.
- 2. Misadjusted/faulty thermostat(s). Verify operation and setting of thermostats, replace if necessary.
- 3. Wash thermometer is defective. Replace thermometer.

Problem: Doors will not close completely.

- 1. Improper spring tension. Adjust spring tension as required by loosening (not removing) spring bolt nuts and adjusting the tension. Tighten nuts back when done.
- 2. Obstruction in door channel. Remove the obstruction.
- 3. Doors are not square with frame. Adjust the frame to accommodate the doors.

Problem: Water leaks at the wash pump.

- 1. Wash pump seal defective. Replace the seal.
- 2. Petcock or pump drain (if equipped) not shut/tight. Close or tighten.
- 3. Loose hoses (hose clamps) on the wash pump. Tighten the hose clamps.

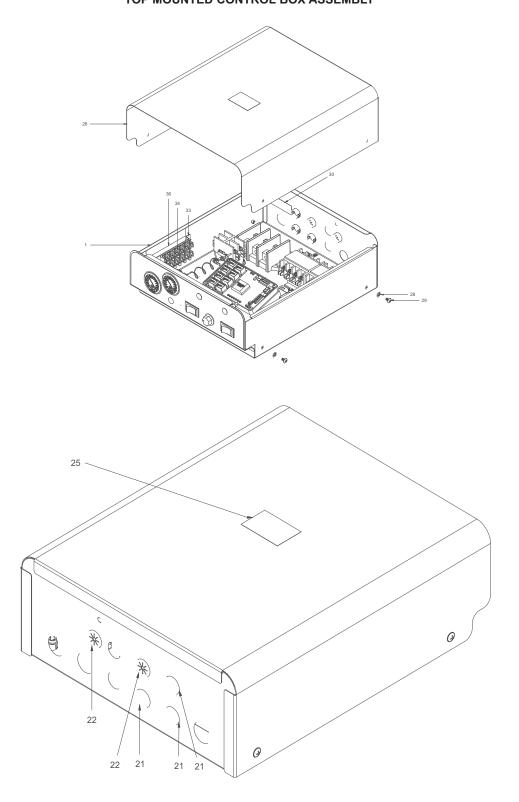
Problem: Will not rinse during autocycle.

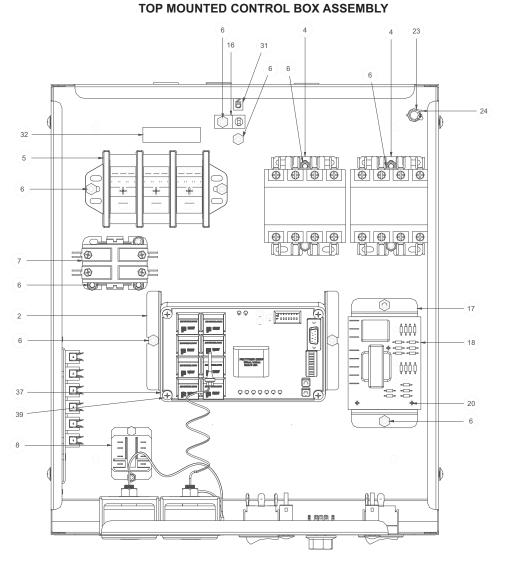
- 1. Defective rinse solenoid. Repair or replace the rinse solenoid as required.
- 2. Faulty fill microswitch. Replace microswitch.
- 3. No water to the machine. Verify that there is water at 20 ± 5 PSI connected to the machine.

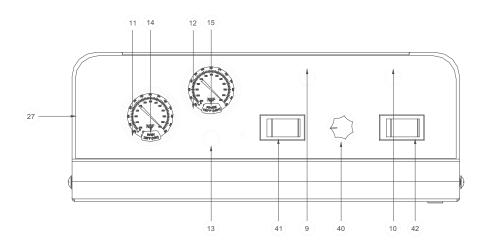
Problem: Dishes are not coming clean.

- 1. Machine temperatures are not up to the minimum requirements. Verify that incoming water, rinse water, and wash water match the required temperatures as listed on the machine data plate.
- 2. No detergent/too much detergent. Adjust detergent concentration as required for the amount of water held by the machine.
- 3. Solid dispenser canister is empty. Replace the canister.

SECTION 5: PARTS SECTION TOP MOUNTED CONTROL BOX ASSEMBLY





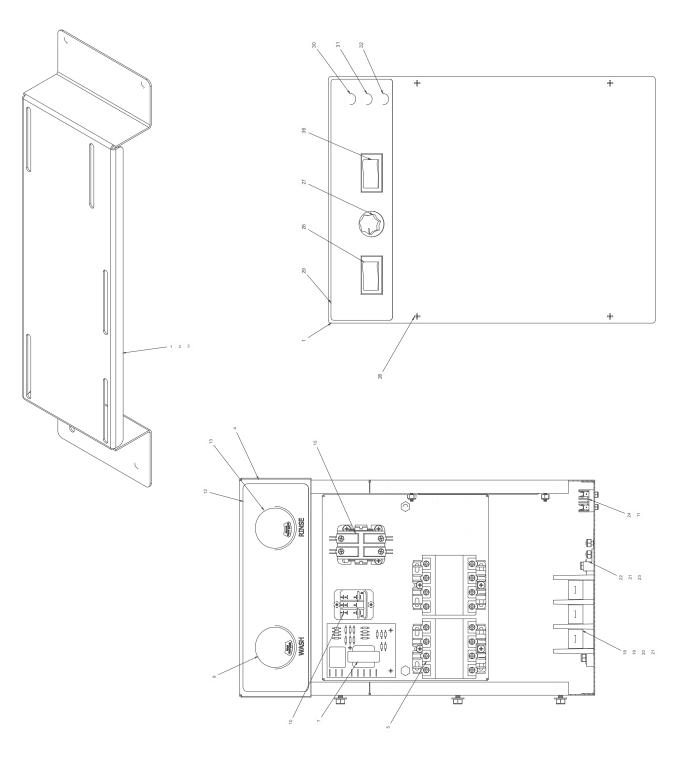


TOP MOUNTED CONTROL BOX ASSEMBLY WITH UNIVERSAL TIMER (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Control Box Weldment	05700-003-30-14
2	1	Timer Bracket	05700-003-00-14
3	2	Lock Nut 6-32	05310-373-03-00
3 4*	2		
		Heater Contactor	05945-109-01-69
5	1	Terminal Block	05940-011-48-27
6	17	Lock Nut 10-24	05310-373-01-00
7	1	Contactor, Wash Motor	05945-002-74-20
8	1	Relay	05945-111-47-51
	1	Relay, (415V, 3PH, 5 Wire Only)	05945-111-89-75
9	1	Light, Green	05945-111-44-43
10	1	Light, Red	05945-111-44-45
11	1	Temperature Gauge, Wash 96" Lead	06685-111-68-49
12	1	Temperature Gauge, Rinse 48" Lead	06685-111-68-48
13	1	Light, Yellow	05945-111-44-44
14	1	Decal,Wash 150F Min	09905-002-97-61
15	1	Decal,Rinse 180F Min	09905-002-97-62
16	1	Ground Lug	05940-200-76-00
17	1	Bracket, Liquid Level Control Board	05700-002-13-22
18	1	Liquid Level Control Board	06680-200-08-21
19	6	Tricnut, 6-32	05340-118-04-00
20	3	Screw,6-32 X 5/8"	05305-011-39-85
21	3	Plug, 1/2"	05975-011-47-81
22	2	Grommet, 7/8" Split	05975-200-40-00
23	1	Bushing Snap	05975-210-05-00
24	1	Clamp, Hose .25312	05975-002-61-43
25	1	Decal, Warning-Disconnect Power	09905-100-75-93
26	1	Cover, Top Mount Control Box	05700-002-23-03
27	1	Decal, Control Box	09905-003-97-38
28	4		
		Lockwasher, Int. Tooth #10	05311-273-03-00
29	4	Screw, 10-32X3/8" Phillips Truss Head	05305-173-12-00
30	1	Decal, Copper Conductors	09905-011-47-35
31	1	Decal,Ground	09905-011-86-86
32	1	Decal,L1, L2	09905-002-78-67
33	1	Bracket,Fuse Strip	05700-002-42-03
34	1	Fuse Holder, 6 pole	05920-002-42-13
35	2	Screw, 6-32 x 3/8" W/Ext Tooth Washer	05305-002-25-91
36	1	Decal, Dispenser Connection	09905-003-34-09
37	1	Timer, Universal	05945-003-33-09
		Timer,Universal Fused(Alternate)	05945-003-75-23
38	4	Locknut, 10-32	05310-373-02-00
39	4	Screw 10-32X1"	05305-002-19-42
40	1	Switch, Rotary Selector	05930-003-97-61
41	1	Switch, Operation	05930-301-53-00
42	1	Switch, Power	05930-011-49-55
*40	4	Overland TV ONY (ACO Valle Hair Only)	05045 000 05 00
*43	1	Overload, TK-ONY, (460 Volt Unit Only)	05945-002-65-02
*44	1	Motor Contactor, SC-03Y, (460 Volt Unit Only)	05945-002-65-00
*45	1	Din Rail 2-3/4" (460 Volt Unit Only)	05700-001-84-65

^{*}For a 460V Unit, Replace item 4 with items 43,44 and 45.

SIDE MOUNT CONTROL BOX ASSEMBLY



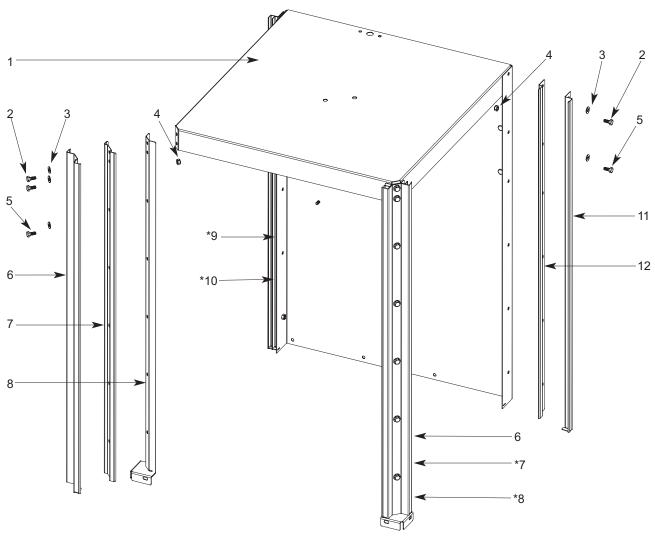
SIDE MOUNT CONTROL BOX ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Bracket, Electrical Box Mounting	05700-002-18-48
2	9	Locknut, 1/4:-20 S/S Hex with Nylon Insert	05310-374-01-00
3	9	Washer, 1/4"-20 I.D. S/S	05311-174-01-00
4	1	Control box Weldment, Right hand	05700-002-06-48
4	1	Control box Weldment,Left Hand	05700-002-23-08
5	2	Contactor,4 Pole 220V 1 Phase (only 1 for No Booster & Steam Models)	05945-109-01-69
6	4	Screw,10-32 x 1/2" Phillips Pan Head with Washer	05305-002-32-37
7	1	Liquid level Control	06680-200-08-21
8	3	Screw,6-32X5/8"	05305-011-39-85
9	1	Thermometer, 48 Lead, Wash	06685-111-68-48
	1	Decal, Wash 150 Deg.	09905-002-97-61
10	1	Relay,240V, 50/60HZ, Top Mount	05945-002-47-74
11	8	Screw, 6-32 x 3/8" SEMS with External Tooth Washer	05305-002-25-91
12	1	Decal, Control Box Gauge	09905-002-10-69
13	1	Thermometer, 96 Lead Rinse	06685-111-68-49
	1	Decal, Rinse 180 Deg	09905-002-97-62
14*	1	Timer,4CKT 208-230V Single Rev	05945-303-31-00
14*	1	Timer, Universal	05945-003-75-23
	1	Timer, Bracket	05700-003-02-08
	6	Holder, Keystone	05940-002-21-87
	1	Keying Plug	05940-003-11-66
	2	Connector	05940-003-11-65
15	1	Contactor, 2 Pole 220V 20 AMP (208-230 Volt Unit Only)	05945-002-74-20
16	3	Screw, 10-32x3/8" Phillips Pan Head	05305-173-26-00
17*	1	Timer,Cycle Delay (Not used with Universal timer)	05945-002-13-78
18	1	Terminal Block 3, Pole	05940-011-48-27
19	1	Decal, L1,L2,L3	09905-101-12-66
20	1	Deacl, Copper Conductors	09905-011-47-35
21	4	Locknut, 10-24 S/S Hex with Nylon Insert	05310-373-01-00
22	1	Wire Lug	05940-200-76-00
23	1	Deacl, Ground	09905-011-86-86
24	1	Holder, Fuse	05920-401-03-14
25	1	Cover, Control Box Weldment	05700-002-06-52
26	4	Bolt, 10-32 x 1/2" Slotted Truss	05305-173-04-00
27	1	Switch, Rotary Selector	05930-003-97-61
28	1	Switch, Operation	05930-301-53-00
29	1	Deacl, Control Box Cover	09905-003-97-39
30	1	Light, Red	05945-504-07-18
31	1	Light, Green Indicator	05945-504-08-18
32	1	Light, Amber	05945-504-06-18
33*	1	Cover, Dielectric Control Panel	05700-021-50-89
34	1	Contactor, 2 Pole 220V 20 AMP (460 Volt Unit Only)	05945-002-65-00
35 36	1 1	Overload (460 Volt Unit Only)	05945-002-65-01
30	ı	Switch, Power	05930-011-49-55

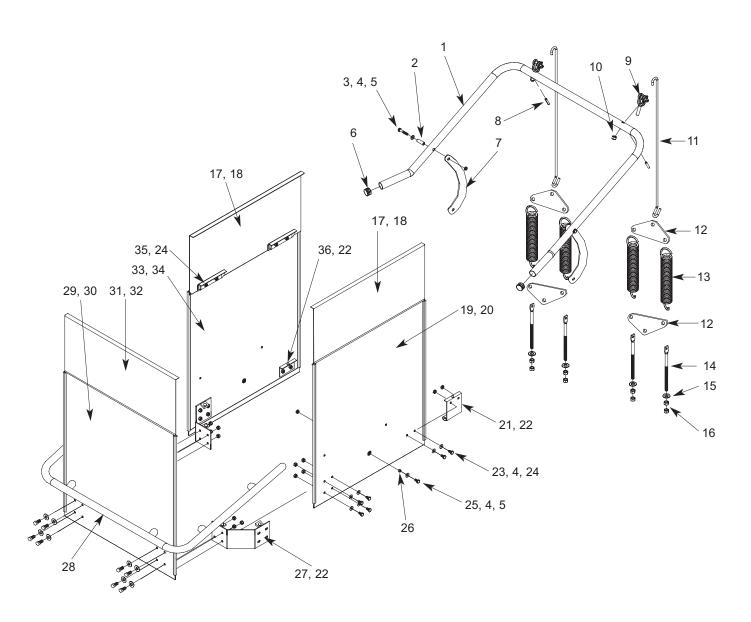
^{*}Represents an item not shown.

SECTION 5: PARTS SECTION HOOD ASSEMBLY

* Represents an item not shown.



QTY	DESCRIPTION	Mfg. No.
1	Hood Weldment (Side Mount Control Box) (Shown)	05700-002-01-23
1	Hood Weldment (Top Mount Control Box)	05700-003-52-53
6	Bolt, 1/4"- 20 x 5/8" Long Hex	05305-274-24-00
26	Washer, 1/4" ID S/S	05311-174-01-00
26	Locknut, 1/4"-20 S/S Hex with Nylon Inserts	05310-374-01-00
26	Bolt, 1/4"-20 x 1/2" Long Hex	05305-274-02-00
2	Right/Left Front Outer Door Guide	05700-031-76-85
2	Right/Left Front Inner Door Guide	05700-031-76-82
2	Right/Left Front Hood Support Weldment	05700-002-17-68
1	Left Rear Outer Door Guide	05700-031-76-34
1	Left Rear Inner Door Guide	05700-031-76-33
1	Right Rear Outer Door Guide	05700-031-76-35
1	Right Rear Inner Door Guide	05700-031-76-32
	1 1 6 26 26 26 26 2 2	1 Hood Weldment (Side Mount Control Box) (Shown) 1 Hood Weldment (Top Mount Control Box) 6 Bolt, 1/4"- 20 x 5/8" Long Hex 26 Washer, 1/4" ID S/S 26 Locknut, 1/4"-20 S/S Hex with Nylon Inserts 26 Bolt, 1/4"-20 x 1/2" Long Hex 2 Right/Left Front Outer Door Guide 2 Right/Left Front Inner Door Guide 2 Right/Left Front Hood Support Weldment 1 Left Rear Outer Door Guide 1 Left Rear Inner Door Guide 1 Right Rear Outer Door Guide



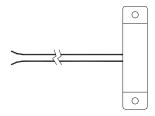
CANTILEVER ARM/DOOR ASSEMBLIES (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Cantilever Arm	05700-031-92-44
2	2	Sleeve, Cantilever Arm	05700-000-85-69
3	2	Screw, 1/4"-20 x 1 1/2" Long Hex Head	05305-274-23-00
4	4	Washer, 1/4" ID S/S	05311-174-01-00
5	4	Locknut, 1/4"-20 S/S Low Profile with Nylon Insert	05310-374-02-00
6	4	Plug, Cantilever	05340-011-35-00
7	2	Connecting Link	05700-021-92-45
8	2	Spring Pin, 1/4" x 1 1/8" Long	05315-407-06-00
9	2	Yoke Assembly	05700-000-75-77
10	2	Nut, 3/8"-16 S/S Hex Locking	05310-256-04-00
11	2	Rod, Spring Connecting	05700-002-00-91
12	4	Plate, Spring Multiplier	05700-002-00-88
13	4	Spring, Cantilever Door	05340-111-35-22
14	4	Bolt, Cantilever Hanger Eye 3/8"-16	05306-956-05-00
15	4	Washer, Impeller	05311-176-02-00
16	8	Nut, 3/8"-16 S/S Hex	05310-276-01-00
*	2	Door, Upper, Left and Right Assemblies	05700-002-01-30
17	2	Door, Upper, Left and Right Weldment	05700-002-29-59
18	4	Glide, Upper Door	05700-002-00-83
*	1	Door, Lower, Right Assembly	05700-002-01-33
19	1	Door, Lower, Right	05700-031-76-80
20	2	Glide, Lower Door	05700-002-23-64
21	1	Door Stop Magnet Assembly	06401-003-08-68
*	1	Door Stop Magnet Weldment	05700-002-01-27
*	1	Magnet	05930-111-69-25
*	2	End Cap	05700-011-60-92
22	6	Wear Button	05700-011-88-01
23	20	Screw, 1/4"-20 x 5/8"	05305-274-24-00
24	20	Locknut, 1/4"-20 S/S Hex with Nylon Insert	05310-374-01-00
25	2	Screw, 1/4"-20 x 1/2" Long Hex Head	05305-274-02-00
26	2	Spacer, PB Bolt	05700-000-29-40
27	2	Bracket, Door Connector	06401-003-08-75
28	1	Handle, Front Door Weldment	06401-003-08-67
*	1	Door, Lower, Front Assembly	05700-002-01-31
29	1	Door, Lower, Front	05700-031-76-77
30	2	Glide, Lower Door	05700-002-23-64
*	1	Door, Upper Front Assembly	05700-002-24-92
31	1	Door, Upper, Front Weldment	05700-002-29-57
32	2	Glide, Upper Door	05700-002-00-83
*	1	Door, Lower, Left Assembly	05700-002-01-32
33	1	Door, Lower, Left	05700-031-76-79
34	2	Glide, Lower Door	05700-002-23-64
35	6	Door Stop Weldment	05700-002-29-60
36	1	Door Stop	06401-003-08-69
37*	2	Cantilever Arm Support Bracket	09515-003-15-64
38*	6	Wear Button	05700-011-88-01
	-		

SECTION 5: PARTS SECTION TUB ASSEMBLY 2 3 11 9, 10 - 12 13, 10 14 32 34 35 33 25 34 29, 30 15 17 18, 10 19 SEE PAGE ENTITLED 21, 22 23 24, 25 26, 27 28 "WASH MOTORS" SEE PAGE ENTITLED * Represents an item not shown. "WASH/RINSE-HEATERS". Nut, 1/4"-20 Serrated Nut 05310-011-66-49 Bracket, Motor Support Weldment 05700-002-20-42 Pump Support Adjustable Bracket 05700-002-20-41

TUB ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Tub Weldment	05700-002-01-25
2	1	Rack Assembly	05700-002-01-00
3	2	Bulk Head Plug	04730-609-05-00
4	1	Gasket	05700-111-35-03
5	1	O-ring	05330-400-05-00
6	4	Bolt, Hex 3/8"-16 x 1 1/4" Long	05305-276-10-00
7	1	Lower Wash Manifold Weldment	05700-031-46-00
8	1	Suction Strainer Weldment	05700-002-16-13
9	1	Suction Strainer Bracket	05700-002-18-28
10	8	Locknut, 1/4"-20 with Nylon Insert	05310-374-02-00
11	1	Strainer Weldment	05700-031-50-07
12	1	Wash Overflow Weldment	05700-001-25-69
*	1	Support, Ball Stop Lift	05700-002-91-55
*	1	Ball Stop Lift	05700-003-07-50
13	1	Overflow Support Bracket	05700-001-27-55
14	1	O-Ring	05330-400-05-00
15	2	Clamp, Hose 1 5/16" to 2 1/4"	04730-719-01-37
16	1	Discharge Hose	05700-011-88-24
17	1	Nipple	05700-021-34-84
18	1	Pump Support Bracket Assembly	05700-002-22-73
19	1	Clamp, Hose 5 5/8" to 6"	04730-011-34-90
20	1	Connector, 1/2" 90°	05975-111-01-00
21	4	Nut, 3/8"-16 S/S Hex	05310-276-01-00
22	4	Lockwasher, 3/8"	05311-276-01-00
23	1	High Water Probe	06680-200-02-68
24	1	Clamp, 1/8" Nylon	05975-601-10-15
25	3	Locknut, 6-32 with Nylon Insert	05310-373-03-00
26	4	Lockwasher, 5/16", S/S, Split	05311-275-01-00
27	4	Nut, Hex, 5/16"-18, S/S	05310-275-01-00
28	4	Locknut, 10-24 with Nylon Insert	05310-373-01-00
29	1	Cover, Wash Heater	05700-031-47-57
30	1	Decal, Warning-Disconnect Power	09905-100-75-93
31	1	Decal, High Limit	09905-011-84-32
32	1	Wash Heater Gasket	05330-011-47-79
33	1	Thermostat Bracket	05700-011-81-64
34	1	Thermostat, Regulating with Imperial Brass Fitting	06401-003-18-22
35	1	Thermostat, High Limit	05930-011-49-43

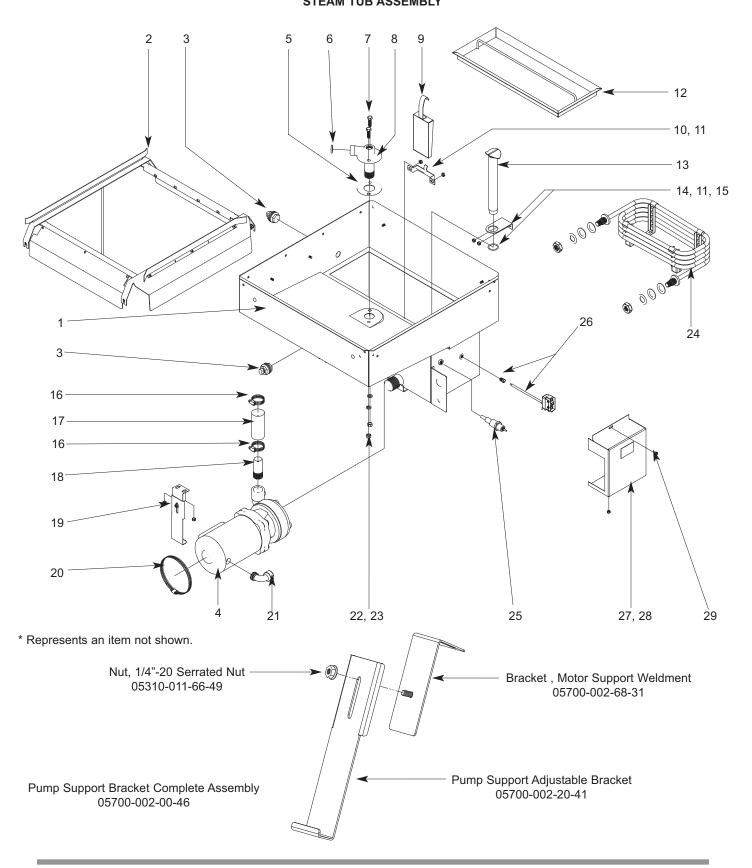


Magnetic Reed Switch 05930-003-05-84

Associated Hardware: Lockwasher, #8 Internal Tooth Locknut, 1/4"-20 S/S Hex w/Nylon Insert Screw, 8-32 x 3/4" Round Head

05311-272-03-00 05310-374-01-00 05305-172-06-00

SECTION 5: PARTS SECTION STEAM TUB ASSEMBLY

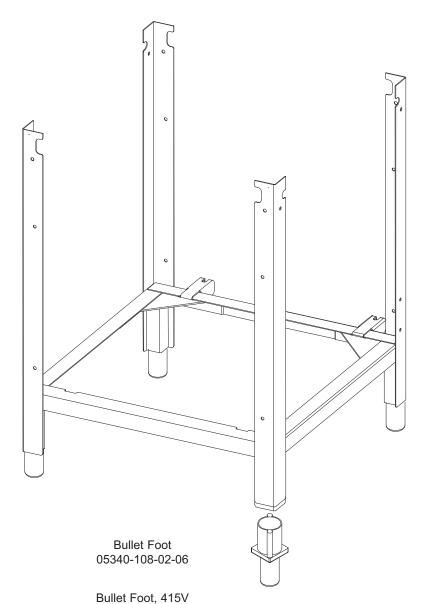


STEAM TUB ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Tub Weldment	05700-002-63-13
2	1	Rack Assembly	05700-002-01-00
3	2	Bulk Head Plug	04730-609-05-00
4	1	Motor & Pump Assembly	See page entitled Wash Motors
5	1	Gasket	05700-111-35-03
6	1	O-ring	05330-400-05-00
7	4	Bolt, Hex 3/8"-16 x 1 1/4" Long	05305-276-10-00
8	1	Lower Wash Manifold Weldment	05700-031-46-00
9	1	Suction Strain Weldment	05700-001-22-23
10	1	Suction Strain Bracket	05700-001-22-24
11	8	Locknut, 1/4"-20 with Nylon Insert	05310-374-02-00
12	1	Strainer Weldment	05700-021-50-07
13	1	Wash Overflow Weldment	05700-001-25-69
*	1	Support, Ball Stop Lift	05700-002-91-55
*	1	Ball Stop Lift	05700-003-07-50
14	1	Overflow Support Bracket	05700-001-27-55
15	1	O-Ring	05330-400-05-00
16	2	Clamp, Hose 1 5/16" to 2 1/4"	04730-719-01-37
17	1	Discharge Hose	05700-011-88-24
18	1	Nipple	05700-021-34-84
19	1	Pump Support Bracket Assembly	05700-002-00-46
20	1	Clamp, Hose 5 5/8" to 6"	04730-011-34-90
21	1	Connector, 1/2" 90°	05975-111-01-00
22	4	Nut, 3/8"-16 S/S Hex	05310-276-01-00
23	4	Lockwasher, 3/8"	05311-276-01-00
24	1	Steam Coil Assembly	05700-002-08-62
25	1	Probe, High Water	06680-200-02-68
26	1	Thermostat, Regulating with Imperial Brass Fitting	06401-003-18-23
27	1	Cover, Wash Heater	05700-031-47-57
28	1	Decal, Warning-Disconnect Power	09905-100-75-93
29	2	Locknut, 10-24 with Nylon Insert	05310-373-01-00

FRAME ASSEMBLY

Cover, Front Panel 05700-002-01-42



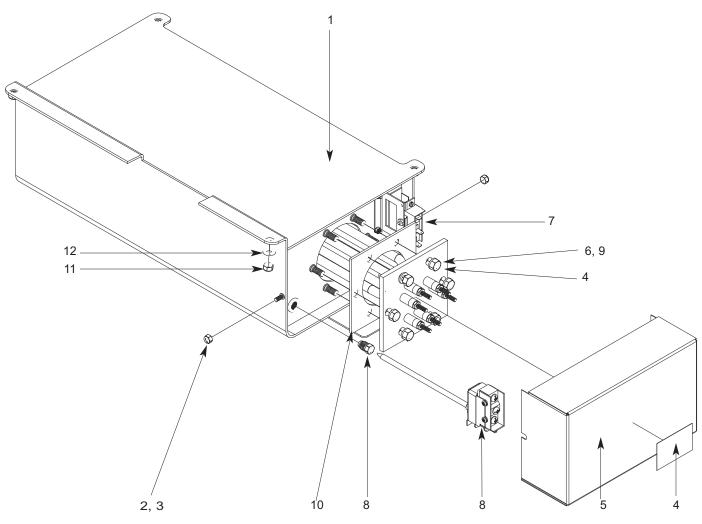
Frame Weldment 05700-002-03-49

Frame Weldment, 415V 05700-002-62-41

05340-002-14-55

Flange Feet 05340-002-01-15

RINSE TANK ASSEMBLY

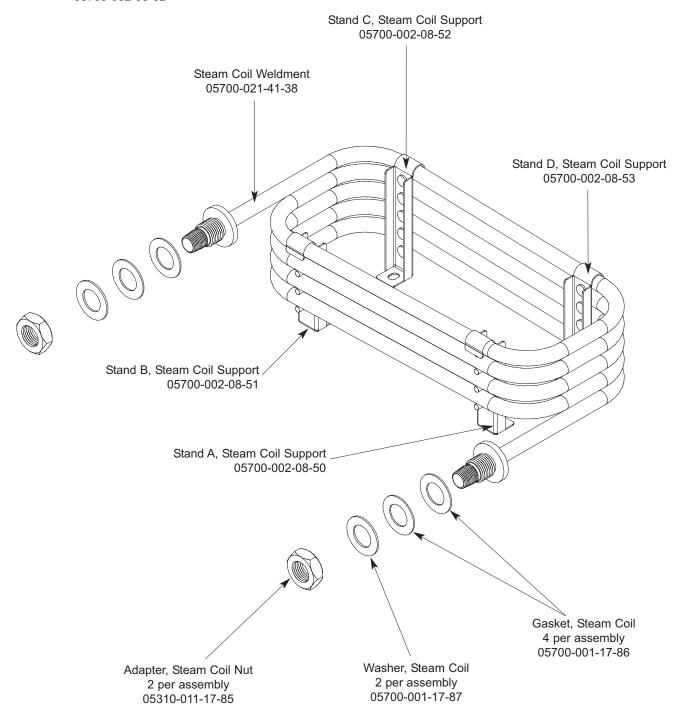


SEE PAGE ENTITLED "WASH HEATERS/RINSE HEATERS".

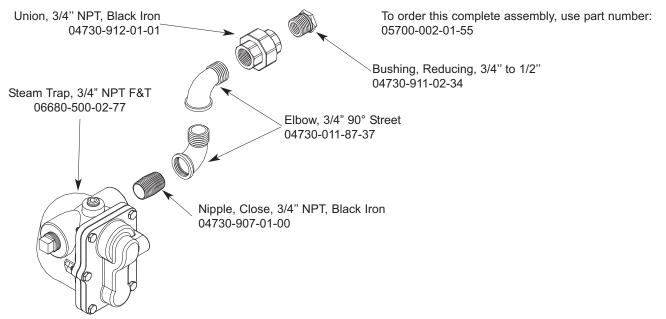
ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Booster Tank Weldment	05700-002-10-19
2	2	Locknut, 10-24 with Nylon Insert	05310-373-01-00
3	2	Washer, #10 S/S Flat	05311-173-01-00
4	1	Decal, Warning - Disconnect Power	09905-100-75-93
5	1	Booster Tank Cover Weldment	05700-002-16-51
6	6	Nut, Hex, 5/16"-18	05310-275-01-00
7	1	Thermostat, High Limit	05930-011-49-43
8	1	Thermostat, Regulating with Imperial Brass Fitting	06401-011-66-55
9	6	Lockwasher, 5/16" Split	05311-275-01-00
10	1	Gasket, Rinse Heater	05330-200-02-70
11	4	Locknut, 1/4"-20 with Nylon Insert	05310-374-01-00
12	4	Washer, 1/4" S/S Flat	05311-174-01-00

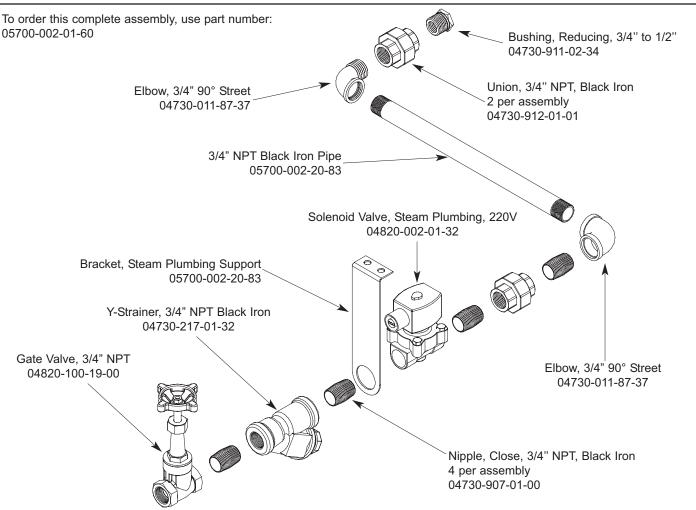
SECTION 5: PARTS SECTION COIL ASSEMBLY

Complete Steam Coil Assembly 05700-002-08-62



INCOMING STEAM PLUMBING ASSEMBLIES





MOTORS - WASH HEATERS - RINSE HEATERS

The models covered in this manual come supplied with various wash motor assemblies (a wash motor assembly includes the wash motor and the pump end), depending on the characteristics of the machine. To ensure that you order the correct wash motor assembly for the model you are servicing, please refer to the following table:

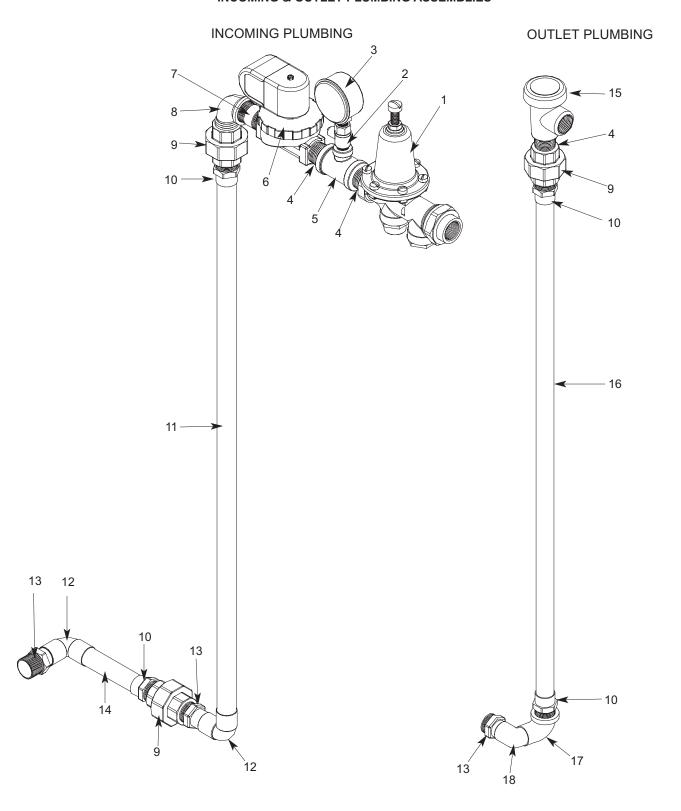
<u>Model</u>	<u>Volts</u>	<u>Hz</u>	<u>Phase</u>	Wash Motor Assembly
Tempstar HH	415	50	3	06105-002-45-07
Tempstar HH, HH NB, HH S	208	60	1	06105-002-01-29
Tempstar HH, HH NB, HH S	230	60	1	06105-002-01-29
Tempstar HH, HH NB, HH S	208	60	3	06105-002-01-29
Tempstar HH, HH NB, HH S	230	60	3	06105-002-01-29
Tempstar HH, HH NB, HH S	460	60	3	06105-002-09-30

Important note: When servicing a wash motor, it is important to refer to the wiring schematic found on the motor, to ensure that the motor is wired correctly. Different manufacturers of motors may not use the same wire color codes and therefore, your new motor, which may have been built by someone different than who built your original motor, may not connect using the same wires. Always refer to the wiring diagrams on the motor you are installing. If the motor you are installing has had the schematic removed, contact Jackson MSC immediately for technical support.

The Tempstar models covered in this manual come supplied with various heaters, depending on the characteristics of the machine. To ensure that you order the correct heater for the model you are servicing, please refer to the following table:

					40°F Rise	70°F Rise
<u>Model</u>	Volts	<u>Hz</u>	<u>Phase</u>	Wash Heater	Rinse Heater (12 KW)	Rinse Heater (14 KW)
Tempstar HH	415	50	3	04540-002-43-09	04540-002-43-10	N/A
Tempstar HH	208	60	1	04540-121-47-39	04540-121-47-40	04540-121-63-38
Tempstar HH	230	60	1	04540-121-47-39	04540-121-47-40	04540-121-63-38
Tempstar HH	208	60	3	04540-121-47-39	04540-121-47-40	04540-121-63-38
Tempstar HH	230	60	3	04540-121-47-39	04540-121-47-40	04540-121-63-38
Tempstar HH	460	60	3	04540-121-65-99	04540-100-01-15	04540-121-63-39
Tempstar HH NB	208	60	1	04540-121-47-39		
Tempstar HH NB	230	60	1	04540-121-47-39		
Tempstar HH NB	208	60	3	04540-121-47-39		
Tempstar HH NB	230	60	3	04540-121-47-39		
Tempstar HH NB	460	60	3	04540-121-65-99		
Tempstar HH S	208	60	1	04540-121-47-39		
Tempstar HH S	230	60	1	04540-121-47-39		
Tempstar HH S	208	60	3	04540-121-47-39		
Tempstar HH S	230	60	3	04540-121-47-39		
Tempstar HH S	460	60	3	04540-121-65-99		

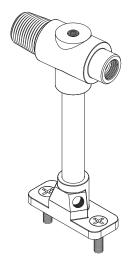
INCOMING & OUTLET PLUMBING ASSEMBLIES



INCOMING & OUTLET PLUMBING ASSEMBLIES (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Water Pressure Regulator, 3/4" NPT	06685-011-58-22
2	1	Valve, Ball, 1/4" NPT	04810-011-72-67
3	1	Gauge, Pressure, 0-100 PSI	06685-111-88-34
4	2	Nipple, Close, 3/4" NPT	04730-207-34-00
5	1	Tee, Brass, 3/4" NPT x 3/4" NPT x 1/4" NPT	04730-211-04-00
6	1	Valve, Solenoid, 3/4" NPT	04810-100-03-18
7	1	Nipple, Brass, 3/4" NPT x 2" Long	04730-207-46-00
8	1	Elbow, 3/4" NPT, Brass, Street	04730-206-04-34
9	3	Union, 3/4" NPT, Brass with O-ring	05700-002-63-79
10	4	Adapter, 3/4" Male	04730-401-11-01
11	1	Tube, Copper, 3/4" x 48" Long	05700-011-87-89
12	2	Elbow, 3/4", 90°, #707 Copper	04730-406-16-01
13	3	Adapter, 3/4", 604-2	04730-401-10-01
14	1	Tube, Copper, 3/4" x 3 3/4" Long	05700-011-58-28
15	1	Vacuum Breaker, 3/4" NPT	04820-002-53-77
16	1	Tube, Copper, 3/4" x 44 3/8" Long	05700-002-25-05
17	1	Elbow, 3/4" 90° Copper to FSPS Brass	04730-406-41-01
18	1	Elbow, 3/4" 90° Copper to Copper Street	04730-406-40-01
19*	2	Double Pipe Clamp	05700-002-23-89
20*	1	Bracket, Incoming Plumbing Support	05700-021-34-02

When servicing plumbing components, take care not to damage the threads of each individual item. Damaged threads can cause leaks and loss of pressure, which could adversely effect the performance of the dishmachine. It is strongly recommended that teflon thread tape, used in conservative amounts, be applied to threads when joining components together. It is not advised to use thread sealing compounds, sometimes referred to as "pipe dope". Compounds can be ejected from the threads during the tightening process and become lodged in key components, thereby rendering them useless. Some of the components include the solenoid valve and the pressure gauge isolation ball valve.



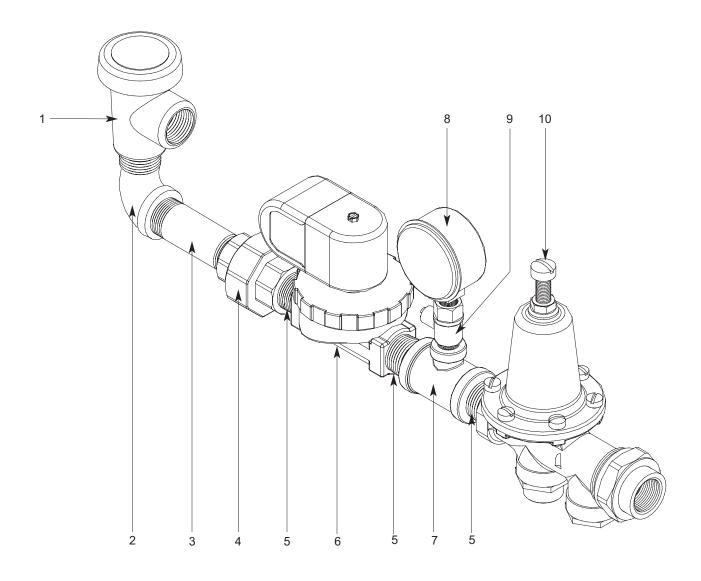
Rinse Injector Weldment 1 per machine 05700-021-47-65

Plug, 1/8" NPT, Brass 3 per Rinse Injector 04730-209-07-37



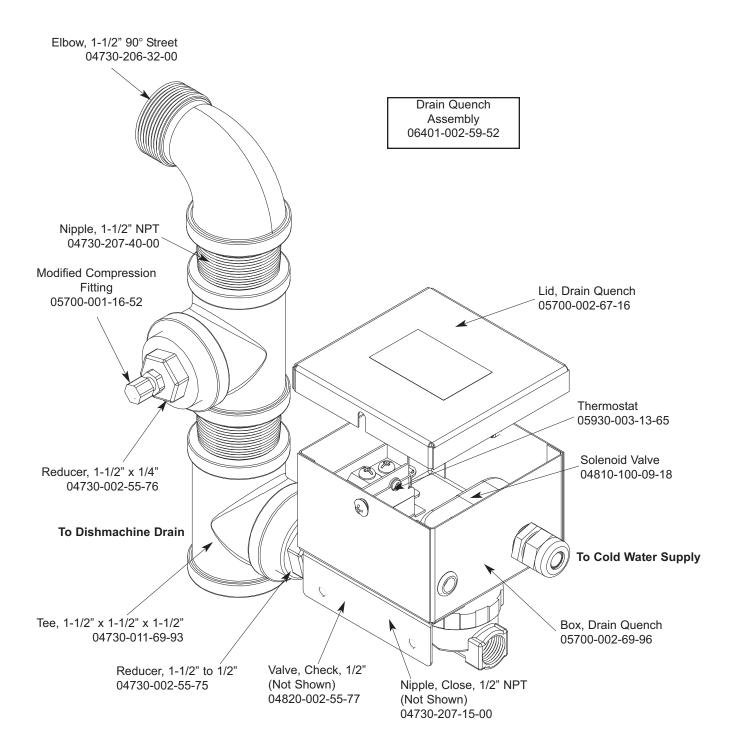
Rinse Injector Gasket 2 per machine 05330-111-42-81

INCOMING PLUMBING (TEMPSTAR HH NB)



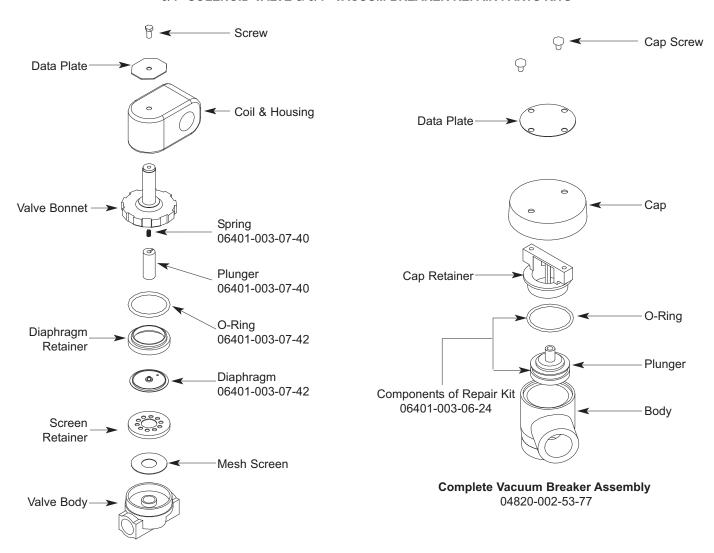
ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Vacuum Breaker, 3/4" NPT	04820-002-53-77
2	1	Elbow, Brass, Street, 3/4" NPT	04730-206-04-34
3	1	Nipple, Brass, 3/4" NPT x 3" Long	04730-011-38-29
4	1	Union, 3/4" NPT, Brass with O-ring	05700-002-63-79
5	3	Nipple, Close, Brass, 3/4" NPT	04730-207-34-00
6	1	Valve, Solenoid, 3/4" NPT	04810-100-03-18
7	1	Tee, Brass, 3/4" NPT x 3/4" NPT x 1/4" NPT	04730-211-04-00
8	1	Pressure Gauge, 0-100 PSI	06685-111-59-66
9	1	Valve, Ball, Bronze, 1/4" NPT	04810-011-72-67
10	1	Water Pressure Regulator	06685-011-58-22

DRAIN QUENCH ASSEMBLY



From the existing drain, attach the two additional Tees using the 1-1/2" NPT Close Nipples. Tighten the Reducers into the Tees as shown above. Attach the Modified Compression Fitting into the 1-1/2" to 1/4" Reducer. Position the bulb of the thermostat so that it rests approximately 1/4" from the bottom of the Tee. Tighten the Modified Compression Fitting as required. Attach to the incoming cold water line. Use pipe dope or thread tape as required to prevent any leaks.

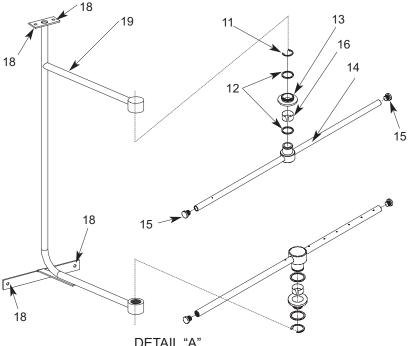
3/4" SOLENOID VALVE & 3/4" VACUUM BREAKER REPAIR PARTS KITS



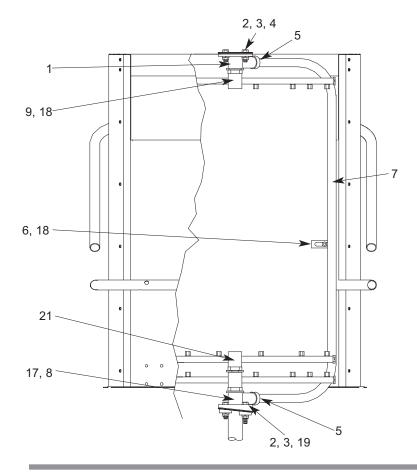
Complete 240 Volt Solenoid Valve Assembly 04810-100-03-18

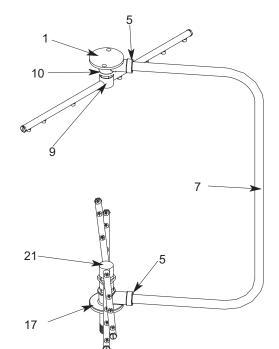
Coil & Housing only 06401-003-07-44

WASH & RINSE ARM/MANIFOLD ASSEMBLIES



<u>DETAIL "A"</u> FINAL RINSE ARMS & MANIFOLD



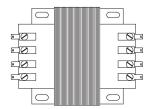


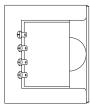
<u>DETAIL</u> <u>"B"</u> WASH ARMS & MANIFOLD

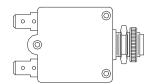
WASH & RINSE ARM/MANIFOLD ASSEMBLIES (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Upper Manifold	05700-031-34-82
2	4	Nut, 3/8"-16 S/S Hex	05310-276-01-00
3	4	Lockwasher, 3/8	05311-276-01-00
4	2	Bolt, Hex 3/8"-16 x 7/8" Long	05306-011-36-95
5	2	O Ring	05330-111-35-15
6	1	Positioning Bracket, Manifold Tube	05700-011-34-63
7	1	Tube, Wash Manifold	05700-031-92-58
8	2	Gasket, Manifold	05700-111-35-03
*	1	Wash Arm Assembly	05700-021-35-39
9	1	Wash Arm Weldment	05700-021-35-93
10	1	Bearing Assembly	05700-021-35-97
*	1	O-ring	05330-002-60-69
*	1	Wash Arm Assembly, 415V	05700-021-63-81
9	1	Wash Arm Weldment, 415V	05700-021-63-42
10	1	Bearing Assembly, 415V	05700-021-63-80
*	2	Rinse Arm Assembly	05700-002-58-09
11	2	Clip, Retaining, Rinse Head Bushing	05340-112-01-11
12	4	Washer	05330-011-42-10
13	2	Bushing, Rinse Head	05700-021-33-84
14	2	Rinse Arm	05700-031-49-58
15	4	Plug	04730-609-04-00
16	2	Bearing	03120-002-72-24
17	1	Lower Wash Manifold Weldment	05700-002-21-70
18	5	Locknut, 1/4"-20 S/S Hex with Nylon Insert	05310-374-01-00
19	1	Rinse Manifold Weldment	05700-002-01-19
20	2	Bolt, Hex 3/8"-16 x 1 1/4" Long	05305-276-10-00
21	1	Wash Arm, Double Assembly	05700-031-92-49
21	1	Wash Arm, Double Assembly, 415V	05700-002-46-86

460 VOLT MACHINE TRANSFORMER MOUNTING BOX



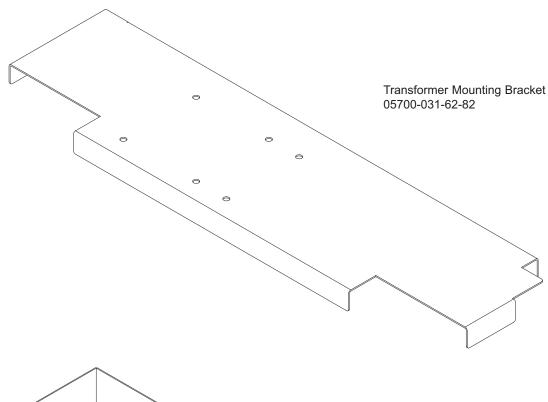


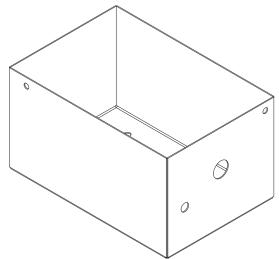




460V Transformer 05950-111-65-93

2 Amp Circuit Breaker 05925-111-64-18

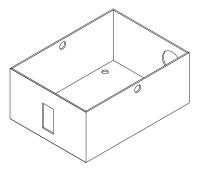


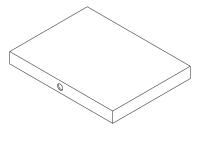


Transformer Mounting Box 05700-002-10-01

Transformer Mounting Box Top (not shown) 05700-000-78-53

SAFETY DOOR INTERLOCK/DOOR OVERRIDE INSTRUCTIONS





Other Safety Door Interlock (SDI) components (not shown):

Pipe Clamp (found on the side of the machine) 05700-000-35-05

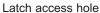
> Solenoid, Electrical Interlock Option 04810-100-61-33

Relay 05945-111-47-51

Safety Door Interlock Box Bottom 05700-001-21-26

Safety Door Interlock Box Cover 05700-001-21-27



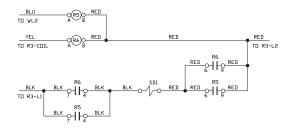




The following instructions are for Tempstar HH models equipped with the Safety Door Interlock option. These instructions are to only be used in the event that the door interlock fails to unlatch and the doors are unable to be opened.

- 1. To manually disengage, find the latch access hole.
- 2. Using a screwdriver, punch or even a metal utensil, gently insert the tip into the access hole, making contact with the latching
- 3. With a minimal amount of force, push the latching arm back, disengaging the interlock.
- 4. The doors should open now.

TEMPSTAR SDI OPTION



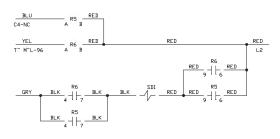
LEGEND

RINSE RELAY

WASH RELAY SAFETY DOOR INTERLOCK SOLENOID

09905-002-35-85a

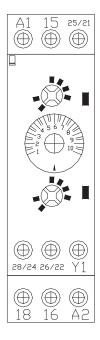
TEMPSTAR 460V SDI OPTION



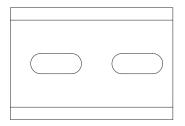
LEGEND

RINSE RELAY WASH RELAY SAFETY D'TR INTERLICK SILENIID

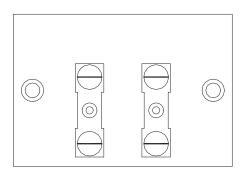
EXHAUST FAN CONTROL OPTION



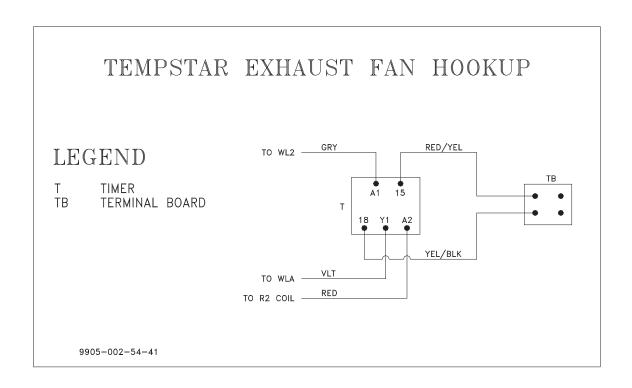
Delay Timer 05945-011-65-44



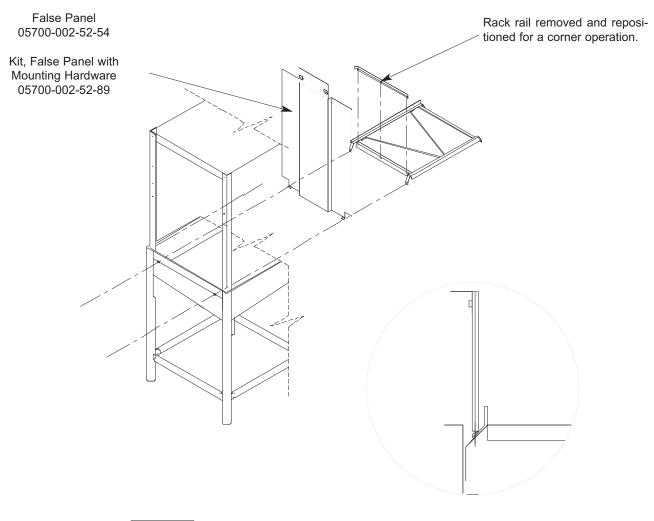
2" Din Rail 05700-002-36-09

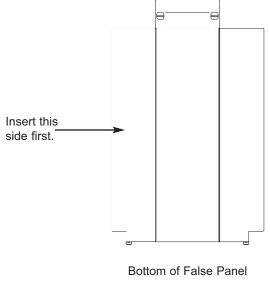


Terminal Board 05940-011-84-41



FALSE PANEL INSTALLATION

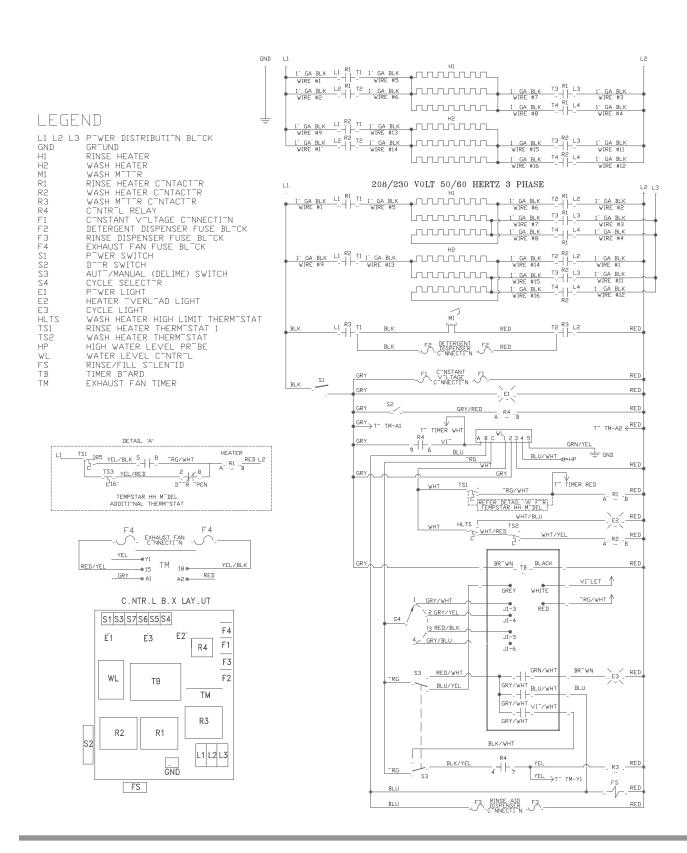




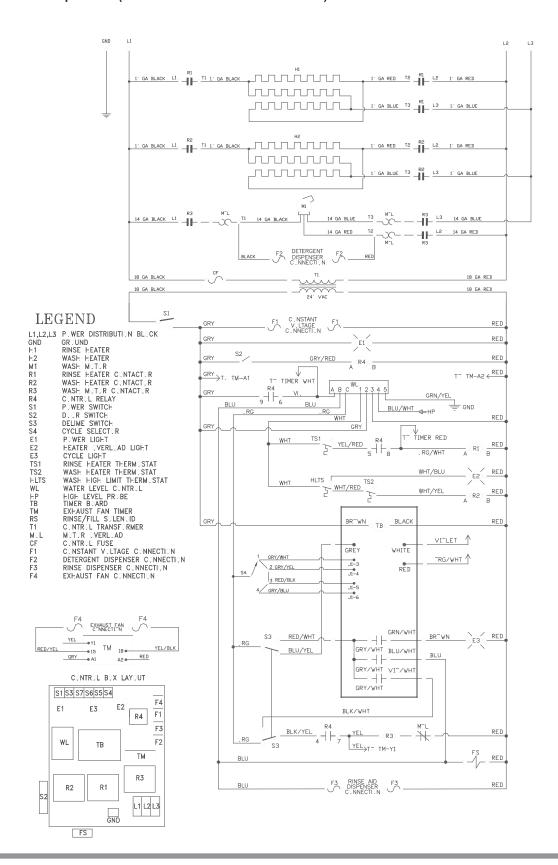
False Panel Positioned in unit.

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

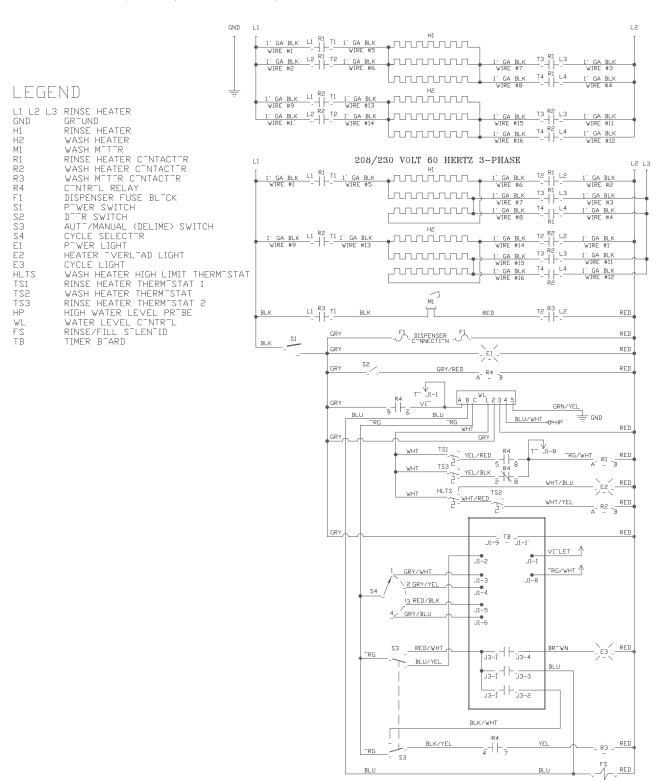
Tempstar HH (TOP MOUNT CONTROLS) 208-230 VOLT - 60 HERTZ - SINGLE & THREE PHASE



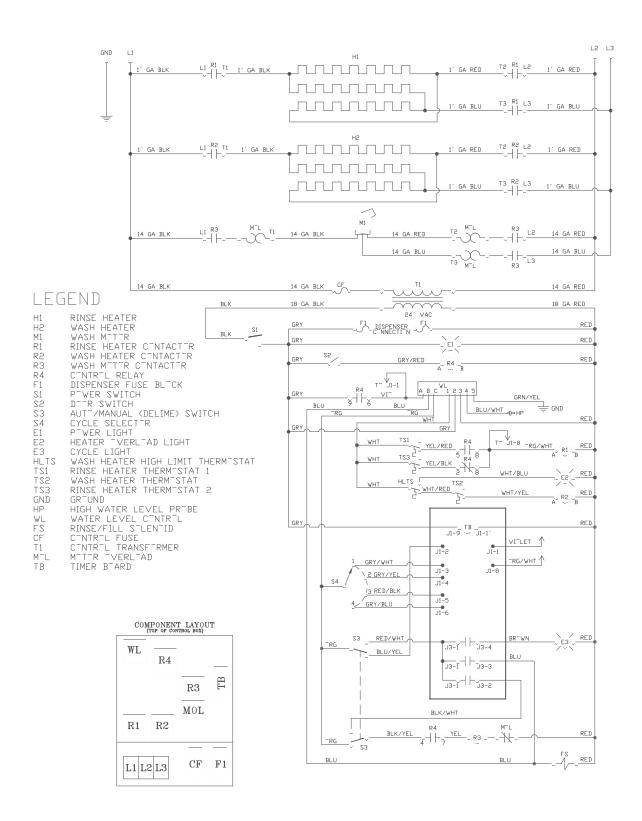
Tempstar HH (TOP MOUNT W/ CYCLE SWITCHES) 460 VOLT - 60 HERTZ -THREE PHASE



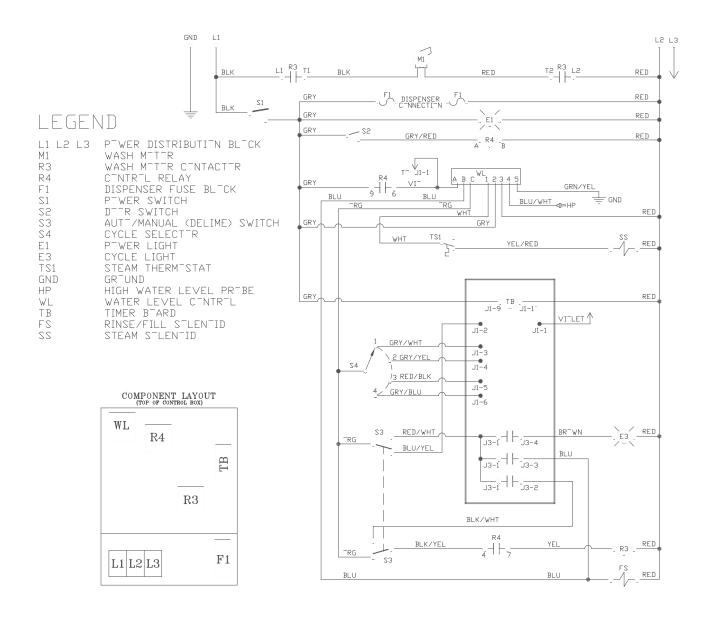
Tempstar HH (UNIVERSAL TIMER) 208-230 VOLT - 60 HERTZ - SINGLE & THREE PHASE



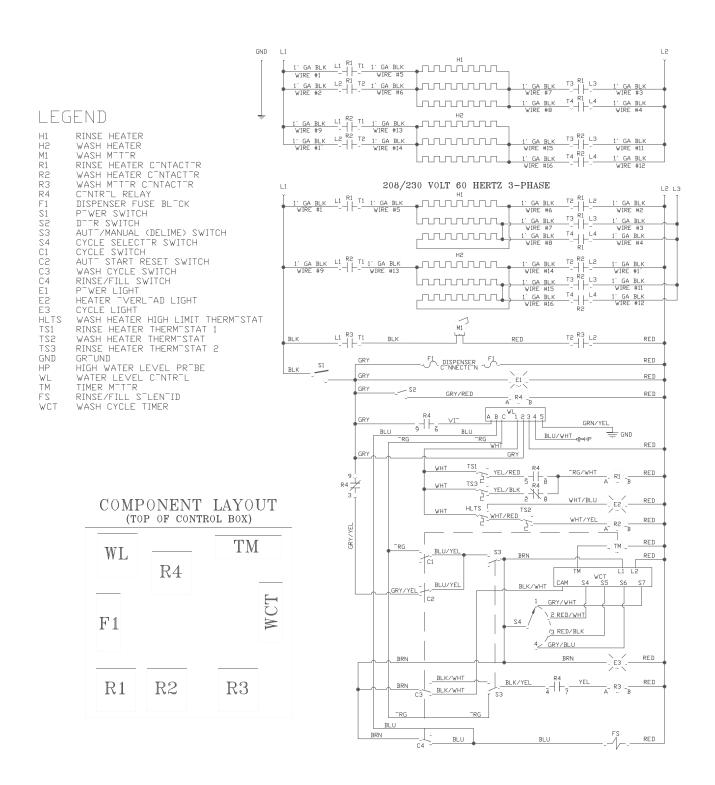
Tempstar HH (UNIVERSAL TIMER) 460 VOLT - 60 HERTZ - THREE PHASE



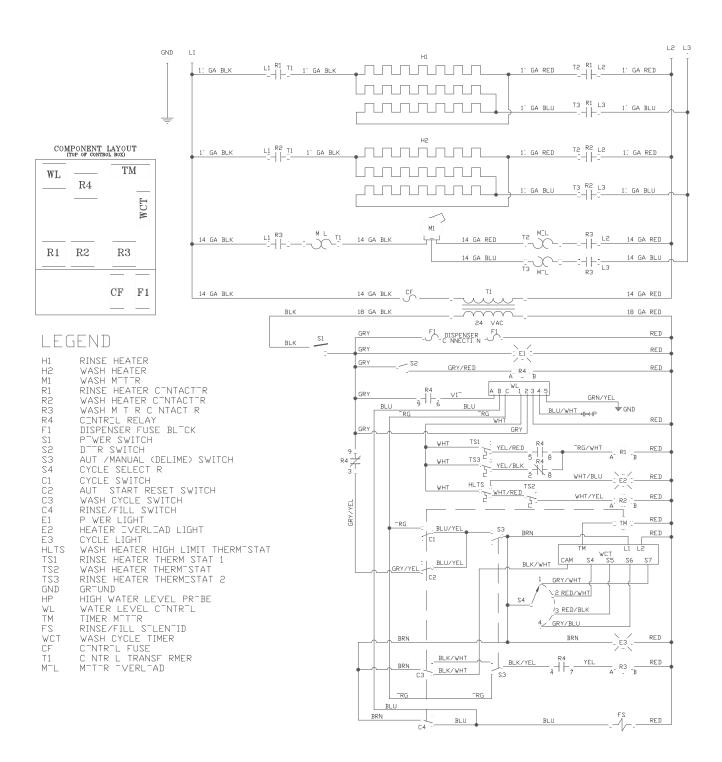
Tempstar HH S (UNIVSERAL TIMER)208-230 VOLT - 60 HERTZ - SINGLE & THREE PHASE



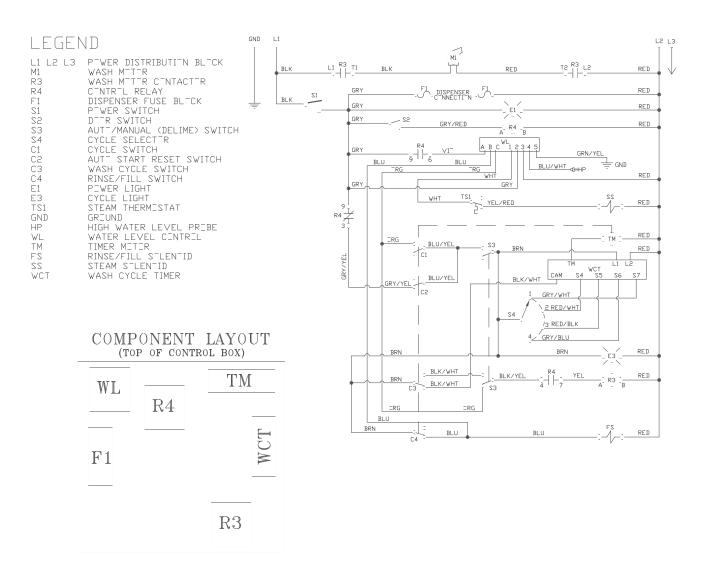
WAREFORE HT 180 HH 208-230 VOLT - 60 HERTZ - SINGLE& THREE PHASE



Tempstar HH 460 VOLT - 60 HERTZ - THREE PHASE



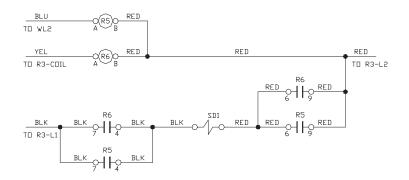
Tempstar HH S 208-230 VOLT - 60 HERTZ - SINGLE & THREE PHASE



SECTION 6C: ELECTRICAL SCHEMATICS FOR OPTIONS

SECTION 6: ELECTRICAL SCHEMATICS SDI OPTION

TEMPSTAR SDI OPTION



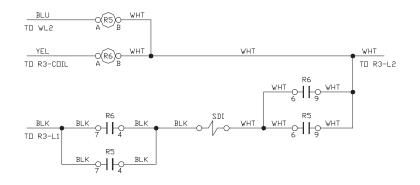
LEGEND

R5 RINSE RELAY R6

WASH RELAY SAFETY DOOR INTERLOCK SOLENOID SDI

09905-002-35-85a





LEGEND

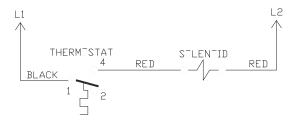
R5 R6 RINSE RELAY WASH RELAY

SAFETY DOOR INTERLOCK SOLENOID

09905-002-55-78a

SECTION 6: ELECTRICAL SCHEMATICS EXHAUST FAN HOOKUP/DRAIN QUENCH OPTIONS

DRAIN QUENCH SYSTEM



CONNECT BLACK WIRE TO MOTER CONTACTOR - L1 WITH PIGGYBACK TERMINAL PROVIDED CONNECT WHITE WIRE TO MOTER CONTACTOR - L2 WITH PIGGYBACK TERMINAL PROVIDED

SECTION 7: JACKSON MAINTENANCE & REPAIR CENTERS

SECTION 7: JACKSON MAINTENANCE & REPAIR CENTERS

ALABAMA TO FLORIDA

ALABAMA

JONES-McLEOD APPLIANCE SVC

1616 7TH AVE. NORTH BIRMINGHAM, AL 35203 (205) 251-0159 800-821-1150 FAX: (205) 322-1440 service@jones-mcleod.com

JONES-McLEOD APPLIANCE

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

ALASKA

RESTAURANT APPLIANCE SERVICE

7219 ROOSEVELT WAY NE SEATTLE, WA 98115 (206) 524-8200 800-433-9390 FAX: (206) 525-2890 info@restappl.com

ARIZONA

AUTHORIZED COMMERCIAL FOOD EQMT. SVC

4832 SOUTH 35TH STREET PHOENIX, AZ 85040 (602) 234-2443 800-824-8875 FAX: (602) 232-5862 acsboss@aol.com

GCS SERVICE INC.

PHOENIX, AZ (602) 474-4510 800-510-3497 FAX: (602) 470-4511

ARKANSAS

BROMLEY PARTS & SVC

10TH AND RINGO P.O. BOX 1688 LITTLE ROCK, AR 72202 (501) 374-0281 800-482-9269 FAX: (501) 374-8352 service@bromleyparts.com parts@bromleyparts.com

GCS SERVICE,INC. 3717 CHERRY ROAD

MEMPHIS, TN 38118 (901) 366-4587 800-262-9155 FAX: (901) 366-4588

CALIFORNIA

BARKERS FOOD MACHINERY SERVICES

5367 SECOND STREET IRWINDALE, CA 91706 (626) 960-9390 800-258-6999 FAX: (626) 337-4541 service@barkers.com

GCS SERVICE INC.

LOS ANGELES, CA (213) 683-2090 800-327-1433 FAX: (213) 683-2099

GCS SERVICE INC.

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

COMMERCIAL APPLIANCE SERVICE. INC.

6507 PACIFIC AVENUE, SUITE 102 STOCKTON, CA 95207 (916) 567-0203

(800) 464-2222 (916) 567-0266 FAX

GCS SERVICE INC.

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

INDUSTRIAL ELECTRIC SVC.

5662 ENGINEER DRIVE HUNTINGTON BEACH, CA 92649 (714) 379-7100 (800-457-3783 FAX: (714) 379-7109

P & D APPLIANCE SVC

100 SOUTH LINDEN AVE. S. SAN FRANCISCO, CA 94080 (650) 635-1900 800-424-1414 FAX: (650) 635-1919 pndappl@aol.com

P & D APPLIANCE

4220-C ROSEVILLE ROAD NORTH HIGHLANDS, CA 95660 (916) 974-2772 800-824-7219 FAX:(916) 974-2774

COMMERCIAL APPLIANCE SERVICE, INC.

281 LATHROP WAY, #100 SACRAMENTO, CA 95815 (916) 567-0203 (800) 464-2222 (916) 567-0324 FAX

COLORADO

GCS SERVICE INC.

SHERIDAN, CO (303) 371-9054 800-972-5314 FAX: (303) 371-4754

HAWKINS COMMERCIAL APPLIANCE SERVICE 3000 S. WYANDOT ST.

ENGLEWOOD, CO 80110 (303) 781-5548 (800) 624-2117 FAX: (303) 761-5561 johns@hawkinscommercial.com

METRO APPLIANCE SERVICE

1640 S BROADWAY DENVER, CO 80210 (303) 778-1126 800-525-3532 FAX: (303) 778-0268 metroappls@aol.com

CONNECTICUT

GCS SERVICE INC.

HARTFORD, CT (860) 549-5575 800-423-1562 FAX: (860) 527-6355

SUPERIOR KITCHEN SER-VICE INC.

22 THOMPSON ROAD WINDSOR, CT 06088 (888) 590-1899 (888) 590-1996 FAX

DELAWARE

FOOD SERVICE EQMT.

2101 PARKWAY SOUTH BROOMALL, PA 19008 (610) 356-6900 FAX: (610) 356-2038 dancerule@aol.com

GCS SERVICE INC.

PHILADELPHIA, PA (215)925-6217 800-441-9115 FAX: (215) 925-6208

ELMER SCHULTZ SERVICE

36 BELMONT AVE. WILLMINGTON, DE 19804 (302) 655-8900 800-225-0599 FAX: (302) 656-3673 elmer2@erols.com

EMR SERVICE DIVISION

106 WILLIAMSPORT CIRCLE SALISBURY, MD 21804 (410) 543-8197 FAX: (410) 548-4038

FLORIDA

COMMERCIAL APPLIANCE SERVICE

8416 LAUREL FAIR CIRCLE BLDG 6, SUITE 114 TAMPA, FL 33610 (813) 663-0313 800-282-4718 FAX: (813) 663-0212 commercialappliance@worldnet.att.net

GCS SERVICE INC

MIAMI, FL (305) 621-6666 800-766-8966 FAX: (305) 621-6656

GCS SERVICE INC

ORLANDO, FL (407) 841-2551 800-338-7322 FAX: (407) 423-8425

NASS PARTS AND SERVICE, INC.

1144 BELVILLE ROAD, UNIT 359 DAYTONA BEACH, FL 32114 (386) 226-2642 (800) 432-2795 (386) 736-7695 FAX

GCS SERVICE INC

TAMPA, FL (813) 626-6044 800-282-3008 FAX: (813) 621-1174

FLORIDA TO MARYLAND

JONES-McLEOD APPLIANCE SVC

854 LAKESIDE DRIVE MOBILE, AL 36693 (251) 666-7278 800-237-9859 FAX: (251) 661-0223 service@jones-mcleod.com

NASS PARTS AND SERVICE,

1108 SOUTH WOODS AVENUE ORLANDO, FL 32805 (407) 425-2681 (800) 432-2795 (407) 425-3463 FAX

NASS PARTS AND SERVICE, INC.

1376 HEIDE AVENUE PALM BAY, FL 32907 (321) 952-2012 (800) 432-2795 (321) 953-0266 FAX

GEORGIA

GCS SERVICE INC

ATLANTA, GA (770) 452-7322 800-334-3599 FAX: (770) 452-7473

HERITAGE FOODSERVICE GROUP OF ATLANTA

2100 NORCROSS PKWY. SUITE 130 NORCROSS, GA 30071 (770) 368-1465 866-388-9837 FAX: (866) 388-9838

WHALEY FOODSERVICE REPAIRS

109-A OWENS INDUSTRIAL DRIVE SAVANNAH, GA 31405 (912) 447-0827 888-765-0036 FAX: (912) 447-0826

PIERCE PARTS & SERVICE

2422 ALLEN ROAD MACON, GA 31216 (478) 781-6003 800-368-2512 FAX: (478) 781-7186

HAWAII

FOOD EQMT. PARTS & SERVICE CO.

300 PUUHALE RD. HONOLULU, HI 96819 (808) 847-4871 FAX: (808) 842-1560 fepsco@hula.net

IDAHO

RESTAURANT APPLIANCE SVC.

7219 ROOSEVELT WAY NE SEATTLE, WA 98115 (206) 524-8200 800-433-9390 FAX: (206) 525-2890 info@restappl.com

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

GCS SERVICE INC.

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

INDIANA

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

KENTUCKY

CERTIFIED SERVICE CENTER

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

CERTIFIED SERVICE CENTER RAMCO BUSINESS PARK

4283 PRODUCE ROAD LOUISVILLE, KY 40218 (502) 964-7007 800-637-6350 FAX: (502) 964-7202 cwalker@certifiedsc.com droenigk@certifiedsc.com

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.

LOUISVILLE, KY (502) 367-1788 800-752-6160 FAX: (502) 367-0400

GCS SERVICE INC.

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

LOUISIANA

HERITAGE SERVICE GROUP

1532 RIVER OAKS WEST NEW ORLEANS, LA 70123 (504) 734-8864 (800) 499-2351 (504) 733-2559 FAX

MAINE

GCS SERVICE INC.

CHELSEA, MA (617) 889-9393 800-225-1155 FAX: (617) 889-1222

MASSACHUSETTS RESTAU-RANT SUPPLY

34 SOUTH STREET SOMERVILLE, MA 02143 (617) 868-1930 800-338-6737 FAX: (617) 686-5331

PINE TREE FOOD EQUIP-MENT

175 LEWISTON ROAD GRAY, ME 04039 (207) 657-6400 (800) 540-5427 (207) 657-5464 FAX

MARYLAND

EMR SERVICE DIVISION

700 EAST 25TH STREET BALTIMORE, MD 21218 (410) 467-8080 800-879-4994 FAX: (410) 467-4191 baltparts@emrco.com

SECTION 7: JACKSON MAINTENANCE & REPAIR CENTERS —

MARYLAND TO NEW YORK

EMR SERVICE DIVISION

106 WILLIAMSPORT CIRCLE SALISBURY, MD 21804 (410) 543-8197 888-687-8080 FAX: (410) 548-4038 baltparts@emrco.com

EMR SERVICE DIVISION

5316 Sunnyside Ave.
Beltsville, MD 20715
(301) 931-7000
800-348-2365
FAX: (301) 931-3060
baltparts@emrco.com
GCS SERVICE INC.
SILVER SPRING, MD
(301) 585-7550 (DC)
(410) 792-0338 (BALT)
(800) 638-7278
FAX: (301) 495-4410

MASSACHUSETTS

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

MASSACHUSETTS RESTAU-RANT SUPPLY

34 SOUTH STREET SOMERVILLE, MA 02143 (617) 868-1930 800-338-6737 FAX: (617) 868-5331

GCS SERVICE INC.

CHELSEA, MA (617) 889-9393 800-225-1155 FAX: (617) 889-1222

GCS SERVICE INC.

HARTFORD, CT (860) 549-5575 800-723-1562 FAX: (860) 527-6355

SUPERIOR KITCHEN SER-VICE INC.

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

MICHIGAN

GCS SERVICE INC. LIVONIA, MI

(248) 426-9500 800-772-2936 FAX: (248) 426-7555

JACKSON SERVICE COMPA-

3980 BENSTEIN RD. COMMERCE TWSHP, MI 48382 (248) 363-4159 800-332-4053 FAX: (248) 363-5448

GCS SERVICE INC.

GRAND RAPIDS, MI (616) 241-0200 800-823-4866 FAX: (616) 241-0541

MINNESOTA

GCS SERVICE INC.

MINNEAPOLIS, MN (612) 546-4221 800-345-4221 FAX: (612) 546-4286

GENERAL PARTS, INC.

11311 HAMPSHIRE AVENUE SOUTH BLOOMINGTON, MN 55438-2456 (952) 944-5800 (800) 279-9980 (800) 279-9980 FAX

MISSISSIPPI

GCS SERVICE INC.

JACKSON, MS (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

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

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

RESTAURANT APPLIANCE SVC.

7219 ROOSEVELT WAY NE SEATTLE, WA 98115 (206) 524-8200 800-433-9390 FAX: (206) 525-2890 info@restappl.com

NEBRASKA

GOODWIN - TUCKER GROUP

7535 D STREET OMAHA, NE 68124 (402) 397-2880 800-228-0342 FAX: (402) 397-2881 askme@goodwintucker.com

NEVADA

HI TECH COMMERCIAL SER-VICE

1840 STELLA LAKE STREET NORTH LAS VEGAS, NV 89106 (702) 649-4616 (877) 924-4832 FAX: (702) 649-4607 larry@hitechnv.com

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

NEW HAMPSHIRE

GCS SERVICE INC.

CHELSEA, MA (617)889-9393 800-225-1155 FAX: (617) 889-1222

ACE SERVICE CO.

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

MASSACHUSETTS RESTAU-RANT SUPPLY

34 SOUTH STREET SOMERVILLE, MA 02143 (617) 868-1930 800-338-6737 FAX: (617) 868-5331

NEW JERSEY

JAY HILL REPAIRS

90 CLINTON RD. FAIRFIELD, NJ 07004 (973) 575-9145 800-836-0643 FAX: (973) 575-5890 jhrepair@aol.com

GCS SERVICE INC.

EAST RUTHERFORD, NJ (973) 614-0003 800-399-8294 FAX: (973) 614-0230

GCS SERVICE INC.

PHILADELPHIA, PA (215) 925-6217 800-441-9115 FAX: (215) 925-6208

ELMER SCHULTZ SERVICES

201 W. WASHINGTON AVE. PLEASANTVILLE, NJ 08232 (609) 641-0317 800-378-1641 FAX:(609) 641-8703 elmer2@erols.com

NEW YORK

APPLIANCE INSTALLATION AND SERVICE CORP.

1336 MAIN STREET BUFFALO, NY 14209 (716) 884-7425 800-722-1252 FAX: (716) 884-0410 ais@worldnet.att.net

SECTION 7: JACKSON MAINTENANCE & REPAIR CENTERS —

NEW YORK TO PENNSYLVANIA

B.E.S.T. INC.

3003 GENESEE STREET BUFFALO, NY 14225 (716) 893-6464 800-338-5011 FAX: (716) 893-6466 bestserv@aol.com

DUFFY'S EQUIPMENT SVC.

3138 ONEIDA STREET SAUQUOIT, NY 13456 (315) 737-9401 800-443-8339 FAX: (315) 737-7132 duffyequip@aol.com

NORTHERN PARTS & SVC.

21 NORTHERN AVENUE PLATTSBURGH, NY 12903 (518) 563-3200 800-634-5005 FAX: (800) 782-5424 info@northernparts.com

GCS SERVICE INC.

BROOKLYN, NY (718) 486-5220 800-969-4271 FAX: (718) 486-6772

ALL SERVICE KITCHEN

EQUIPMENT REPAIR 10 CHARLES ST. NEW HYDE PARK, NY 11040 (516) 378-1176 FAX: (516) 378-1735

ALL ISLAND REPAIRS

40-9 BURT DRIVE DEER PARK, NY 11729 (631) 242-5588 FAX: (631) 242-6102

NORTH CAROLINA

AUTHORIZED APPLIANCE

SERVICECENTER 1020 TUCKASEEGEE RD. CHARLOTTE, NC 28208 (704) 377-4501 (800) 532-6127 FAX:(704) 377-4504

AUTHORIZED APPLIANCE

SERVICECENTER 800 N. PERSON ST. RALEIGH, NC 27604 (919) 834-3476 FAX:(919) 834-3477

AUTHORIZED APPLIANCE SERVICECENTER

904 S. MARSHALL ST. WINSTON-SALEM, NC 27403 (336) 725-5396 FAX:(336) 721-1289

AUTHORIZED APPLIANCE SERVICECENTER

104 HINTON AVE. WILMINGTON, NC 28403 (910) 313-1250 FAX:(910) 313-6130

WHALEY FOODSERVICE

8334-K ARROWRIDGE BLVD CHARLOTTE, NC 28273 (704) 529-6242 FAX: (704) 529-1558 info@whaleyfoodservice.com

WHALEY FOODSERVICE REPAIRS

203-D CREEK RIDGE RD. GREENSBORO, NC 27406 (336) 333-2333 FAX: (336) 333-2533 info@whaleyfoodservice.com

WHALEY FOODSERVICE REPAIRS

335-105 SHERWEE DRIVE RALEIGH, NC 27603 (919) 779-2266 FAX: (919) 779-2224 info@whaleyfoodservice.com

WHALEY FOODSERVICE REPAIRS

6418-101 AMSTERDAM WAY WILMINGTON, NC 28405 (910) 791-0000 FAX: (910) 791-6662 info@whaleyfoodservice.com

NORTH 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

OHIO

CERTIFIED SERVICE CENTER

890 REDNA TERRACE CINCINNATI, OH 45215 (513) 772-6600 800-543-2060 FAX: (513) 612-6600 sbarasch@certifiedsc.com

CERTIFIED SERVICE CENTER 171J-K NORTH HAMILTON RD.

COLUMBUS, OH 43213 (614) 751-3769 (866) 862-1252 FAX: (614) 751-5792 jadkins@certifiedsc.com

CERTIFIED SERVICE CENTER

6025 N. DIXIE DRIVE DAYTON, OH 45414 (937) 898-4040 (800) 257-2611 FAX: (937) 898-4177 dharvey@certifiedsc.com

COMMERCIAL PARTS & SVC. OF COLUMBUS

5033 TRANSAMERICA DRIVE COLUMBUS, OH 43228 (614) 221-0057 800-837-8327 FAX: (614) 221-3622

GCS SERVICE INC.

COLUMBUS, OH (614) 476-3225 800-282-5406 FAX: (614) 476-1196

ELECTRICAL APPLIANCE REPAIR SVC.

5805 VALLEY BELT ROAD CLEVELAND, OH 44131 (216) 459-8700 800-621-8259 FAX: (216) 459-8707 tomr@electapplrep.com

OKLAHOMA

HAGAR RESTAURANT EQMT.

1229 W MAIN STREET OKLAHOMA CITY, OK 73106 (405) 235-2184 800-445-1791 FAX: (405) 236-5592

OREGON

RON'S SERVICE

16364 SW 72ND AVE PORTLAND, OR 97224 (503) 624-0890 800-851-4118 FAX: (503) 684-6107 Irobinson@ronsservice.com

PENNSYLVANIA

A.I.S. COMMERCIAL PARTS & SERVICE

1816 WEST 26TH STREET ERIE, PA 16508 (814) 456-3732 800-332-3732 FAX: (814) 452-4843 aiserie@aol.com

ELMER SCHULTZ SVC.

540 NORTH 3RD STREET PHILADELPHIA, PA 19123 (215) 627-5400 FAX: (215) 627-5408 elmer2@erols.com

GCS SERVICE INC.

PHILADELPHIA, PA (215) 925-6217 800-441-9115 FAX: (215) 925-6208

GCS SERVICE INC.

HARRISBURG, PA (717) 564-3282 800-367-3225 FAX: (717) 564-9286

GCS SERVICE INC.

PITTSBURGH, PA (412) 787-1970 800-738-1221 FAX: (412) 787-5005

K & D PARTS AND SERVICE

1833-41 N CAMERON STREET HARRISBURG, PA 17103 (717) 236-9039 800-932-0503 FAX: (717) 238-4367 kdparts-service@paonline.com

CLARK SERVICE & PARTS

306 AIRPORT DRIVE BOX 10 SMOKETOWN, PA 17576 (717) 392-5590 (717) 392-5735

SECTION 7: JACKSON MAINTENANCE & REPAIR CENTERS —

RHODE ISLAND TO WISCONSIN

RHODE ISLAND

GCS SERVICE INC.

EAST PROVIDENCE, RI (401) 434-6803 800-462-6012 FAX: (401) 438-9400

SUPERIOR KITCHEN SER-VICE INC.

669 ELMWOOD AVENUE PROVIDENCE, RI 02907 (888) 590-1899 (401) 781-1996 FAX

SOUTH CAROLINA

AUTHORIZED APPLIANCE SERVICECENTER

1811 TAYLOR ST. COLUMBIA, SC 29202 (803) 254-8414 FAX: (803) 254-5146

AUTHORIZED APPLIANCE SERVICECENTER

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

748 CONGAREE ROAD GREENVILLE, SC 29607 (864) 234-7011 800-494-2539 FAX: (864) 234-6662 info@whaleyfoodservice.com

WHALEY FOODSERVICE REPAIRS

1406-C COMMERCE PL. MYRTLE BEACH, SC 29577 (843) 626-1866 FAX: (843) 626-2632 info@whaleyfoodservice.com

WHALEY FOODSERVICE REPAIRS

4740-A FRANCHISE STREET N. CHARLESTON, SC 29418 (843) 760-2110 FAX: (843) 760-2255 info@whaleyfoodservice.com

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.

DALLAS, TX (972) 484-2954 800-442-5026 FAX: (972) 484-2531

GCS SERVICE INC.

HOUSTON, TX (713)785-9187 800-868-6957 FAX: (713) 785-3979

GCS/STOVE PARTS

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

UTAH

LA MONICA'S RESTAURANT EQMT. SVC.

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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CANADA

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