

INSTALLATION/OPERATION & TECHNICAL MANUAL

ELECTRICALLY HEATED MODELS:

TEMPSTAR

TEMPSTAR LT

TEMPSTAR NB

TEMPSTAR - VENTLESS



STEAM HEATED MODELS:

TEMPSTAR S



REVISION	REVISION DATE	MADE BY	APPLICABLE ECN	DETAILS
A	11/11/08	ARL	8045	Released to production.
B	04/22/2009	ARL	8094	Added new NSF rating.
C	06/22/2009	JC	8114	Removed NSF Rating from steam heated unit.
D	07/24/2009	ARL	8104	Added information regarding electrical field conversion.
E	02/02/2010	RLC	Pending	Added information about Fused Universal Timer (pg 19)
F	01/10/2013	RLC	8252	Updated schematic and control box assembly for rotary switch/Removed EnergyStar Logo.
G	03/07/2013	RLC	QOF NDB-219	Updated Jackson logo and company name
H	12/17/2013	MHH		Corrected part number for "right false panel kit," pg. 43. Removed "STOP" warning page, pg. 3.
I	05/28/2014	MHH	8287	New bearing & part # on rinse arm assy, pg. 41
J	11/17/2014	KAP	N/A	Updated Drain Quench Image on pg. 45 Added Drain Quench Miscellaneous Parts on pg. 55
K	01/06/2015	KAP	N/A	Updated part number for O-Ring & Diaphragm on pg. 39 P/N 06401-003-07-42 was replaced by P/N 4810-200-03-18 .
L	01/14/15	KAP	QOF-386	Removed regulator, and added Y-Strainer to the assemblies on pg. 4, 36 & 38. Paragraph content was changed on pg. 7. Changes the PSI flow on pg. 15
M	03/02/15	KAP	QOF-386	Updated wire colors on schematic pg's 49, 50, 51, 52, & 53.
N	04/06/15	KAP	N/A	Inserted note pertaining to corner installation pg. 6
P	06/10/15	KAP	N/A	Added Ventless Operating Capacities on pg. 2 Added Pressure Regulator Option Dimensions on pg. 5 Added Ventless Machine Dimensions on pg. 6 Added Ventless pipe line size on pg. 9 Added Door interlock items on pg. 23 Updated Tub & Tub Assembly Thermostats on pg's. 25-28 Added thermister to Rinse Tank Assembly on pg. 30 Added Ventless Plumbing pg's. 41 & 42 Added Ventless Heat Recovery Assembly pg. 46 Updated Schematic pg's. 54 & 55 Added Solid State BB/LT Schematic on page 59

NOMENCLATURE FOR THE MODELS COVERED IN THIS MANUAL



TEMPSTAR

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

TEMPSTAR LT

Electrically heated, low temp, chemical sanitizing, no rinse booster, door-type dishmachine

TEMPSTAR NB

Electrically heated, high temp, hot water sanitizing, no rinse booster, door-type dishmachine

TEMPSTAR S

Steam heated, high temp, hot water sanitizing, door-type dishmachine

TEMPSTAR HH VENTLESS

Electrically heated high temp, hot water sanitizing, with booster heater
and ventless heat recovery system

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.

TABLE OF CONTENTS

<u>Section</u>	<u>Description</u>	<u>Page</u>
I.	Specifications	
	Operating Capacities	2
	Electrical Requirements	3
	Dimensions Tempstar/Tempstar LT/Tempstar NB (Y-Strainer Option)	4
	Dimensions Tempstar/Tempstar LT/Tempstar NB (Pressure Regulator Option)	5
	Dimensions Tempstar Ventless Heat Recovery System	6
	Table Dimensions	7
II.	Installation/Operation Instructions	
	Installation Instructions	9
	Electrical Installation Instructions	10
	Operation Instructions	11
	Detergent Control	12
	False Panel Installation	13
III.	Preventative Maintenance	14
IV.	Troubleshooting Section	16
V.	Drawing/Parts Section	
	Top Mounted Control Box Assembly (Universal Timer)	20
	Hood Assembly (Bolted Single Support Design)	22
	Cantilever Arm/Door Assemblies	23
	Tub Assembly	25
	Steam Tub Assembly	27
	Frame Assembly	29
	Rinse Tank Assembly	30
	Coil Assembly	32
	Incoming Steam Plumbing Assembly	33
	Wash Motors	34
	Motor & Pump Assembly	35
	Wash Heaters/Rinse Heaters	36
	Incoming Plumbing Assembly (Y-Strainer Option)	38
	Incoming Plumbing Assembly (Pressure Regulator Option)	41
	Tempstar Ventless Heat Recovery Plumbing	44
	1/2" Solenoid Valve & 1/2" NPT Vacuum Breaker Repair Parts Kits	46
	Wash and Rinse Arm/Manifold Assemblies	47
	Ventless Heat Recovery Assembly	49
	Door Interlock Assembly	51
	Safety Door Interlock (SDI)/Exhaust Fan Control/Transformer Mounting Box Components	52
	GO*BOX Kit	53
	Drain Quench Assembly	54

TABLE OF CONTENTS

VI.A	Electrical Diagrams - Top Mounted Control Boxes	
	Solid State 208 - 230V, 50/60 Hz, single/three phase	58
	Tempstar (UT w/Cycle Switches) 208 - 230V, 50/60 Hz, single/three phase	59
	Solid State 460V, 60 Hz, three phase	60
	Tempstar (UT w/Cycle Switches) 460V, 60 Hz, three phase	61
	Solid State Tempstar LT & NB 208 - 230V, 50/60 Hz, single/three phase	62
	Tempstar LT & NB 208 - 230V, 50/60 Hz single/three phase	63
	Tempstar 208 - 230V, 50/60 Hz single/three phase	64
	Tempstar LT & NB (UT w/Cycle Switches) 460V, 60 Hz, three phase	65
	Tempstar S (Universal Timer) 208 - 230V, 60 Hz, single/three phase	66
 VI.C	 Electrical Diagram Options	
	Safety Door Interlock (SDI)	68
	Drain Quench	69

SECTION 1: SPECIFICATION INFORMATION

SECTION 1: SPECIFICATION INFORMATION

OPERATING CAPACITIES

PERFORMANCE/CAPABILITIES

Operating Capacity:

High Temperature	
Racks per Hour	58
Dishes per Hour	1450
Glasses per Hour	1450

Low Temperature	
Racks per Hour	50
Dishes per Hour	1250
Glasses per Hour	1250

Operating Cycle (SECONDS):

Minimum (other cycle times are available)

High Temperature	
Wash Time	40
Rinse Time	13
Dwell Time	4
Total Cycle Time	57

High Temperature Ventless	
Wash Time	40
Rinse Time	13
Dwell Time	4
Condensate Removal	30
Total Cycle Time	87

Low Temperature	
Wash Time	45
Rinse Time	11
Dwell Time	10
Total Cycle Time	66

Tank Capacity (Gallons):	
Wash Tank	8.0
Rinse Tank (TEMPSTAR)	3.0

Tank Capacity (Liters):	
Wash Tank	30.3
Rinse Tank (TEMPSTAR)	11.4

Steam Requirements:

Coil Size	3/4"
Steam Flow Pressure (P.S.I.)	10-20
Consumption @ 15 P.S.I. (Lbs/Hr)	45

Electrical Loads (as applicable):

Wash Motor HP	3/4
---------------	-----

Water Requirements

Tempstar & Ventless:

Wash Temperature (Minimum)(°F)	150
Wash Temperature (Minimum)(°C)	66
Rinse Temperature (Minimum)(°F)	180
Rinse Temperature (Minimum)(°C)	83
Inlet Water Temperature:	
12KW Rinse Heater (°F)	140
12KW Rinse Heater (°C)	60
14KW Rinse Heater (°F)	110
14KW Rinse Heater (°C)	44
14KW Ventless (°F)	40-70
14KW Ventless (°C)	4.4-21
Flow Pressure (PSI)	10
Water Line Size (NPT) (Vented)	1/2"
Water Line Size (Ventless)	3/4"
Drain Line Size (NPT)	1 1/2"

Tempstar LT:

Wash Temperature (Minimum)(°F)	130
Wash Temperature (Minimum)(°C)	55
Rinse Temperature (Minimum)(°F)	130
Rinse Temperature (Minimum)(°C)	55
Inlet Water Temperature (°F)	130
Inlet Water Temperature (°C)	55
Flow Pressure (PSI)	10
Water Line Size (NPT)	1/2"
Drain Line Size (NPT)	1 1/2"
Minimum Chlorine Required (PPM)	50

Tempstar NB/ Tempstar s:

Wash Temperature (Minimum)(°F)	150
Wash Temperature (Minimum)(°C)	66
Rinse Temperature (Minimum)(°F)	180
Rinse Temperature (Minimum)(°C)	83
Inlet Water Temperature (°F)	180
Inlet Water Temperature (°C)	83
Flow Pressure (PSI)	10
Water Line Size (NPT)	1/2"
Drain Line Size (NPT)	1 1/2"

SECTION 1: SPECIFICATION INFORMATION

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:

<u>VOLTS</u>	<u>PH</u>	<u>HZ</u>	<u>RINSE HEATER RATINGS</u>	<u>TOTAL AMPS</u>	<u>TYPICAL ELECTRICAL CIRCUIT</u>
208	1	50	12KW@240V	71 A	90 AMP
208	1	50	14KW@240V	78 A	100 AMP
230	1	50	12KW@240V	78 A	100 AMP
230	1	50	14KW@240V	86 A	110 AMP
208	3	50	12KW@240V	45 A	60 AMP
208	3	50	14KW@240V	49 A	70 AMP
230	3	50	12KW@240V	48 A	60 AMP
230	3	50	14KW@240V	53 A	70 AMP
380	3	50	12KW@380V	29 A	40 AMP
380*	3	50	14KW@208V	34 A	45 AMP
415	3	50	12KW@415V	26 A	35 AMP
415	3	50	14KW@415V	29 A	40 AMP
440	3	50	12KW@460V	21 A	30 AMP
440	3	50	14KW@460V	25 A	35 AMP
208	1	60	12KW@240V	69 A	90 AMP
208	1	60	14KW@240V	76 A	100 AMP
230	1	60	12KW@240V	76 A	100AMP
230	1	60	14KW@240V	84 A	110 AMP
208	3	60	12KW@240V	43 A	60 AMP
208	3	60	14KW@240V	47 A	60 AMP
230	3	60	12KW@240V	46 A	60 AMP
230	3	60	14KW@240V	51 A	70 AMP
460	3	60	12KW@480V	22 A	30 AMP
460	3	60	14KW@480V	25 A	35 AMP

TEMPSTAR LT/TEMPSTAR NB:

<u>VOLTS</u>	<u>PH</u>	<u>HZ</u>	<u>RINSE HEATER RATINGS</u>	<u>TOTAL AMPS</u>	<u>TYPICAL ELECTRICAL CIRCUIT</u>
208	1	50	N/A	28 A	35 AMP
230	1	50	N/A	30 A	40 AMP
208	3	50	N/A	20 A	25 AMP
230	3	50	N/A	21 A	30 AMP
380	3	50	N/A	10 A	15 AMP
415	3	50	N/A	10 A	15 AMP
440	3	50	N/A	8 A	15 AMP
208	1	60	N/A	26 A	35 AMP
230	1	60	N/A	28 A	35 AMP
208	3	60	N/A	18 A	25 AMP
230	3	60	N/A	28 A	35 AMP
460	3	60	N/A	8 A	15 AMP

TEMPSTAR S:

<u>VOLTS</u>	<u>PH</u>	<u>HZ</u>	<u>RINSE HEATER RATINGS</u>	<u>TOTAL AMPS</u>	<u>TYPICAL ELECTRICAL CIRCUIT</u>
208	1	60	N/A	6 A	15 AMP
230	1	60	N/A	6 A	15 AMP
208	3	60	N/A	6 A	15 AMP
230	3	60	N/A	6 A	15 AMP

* This model is wired in a wye configuration for the heaters.

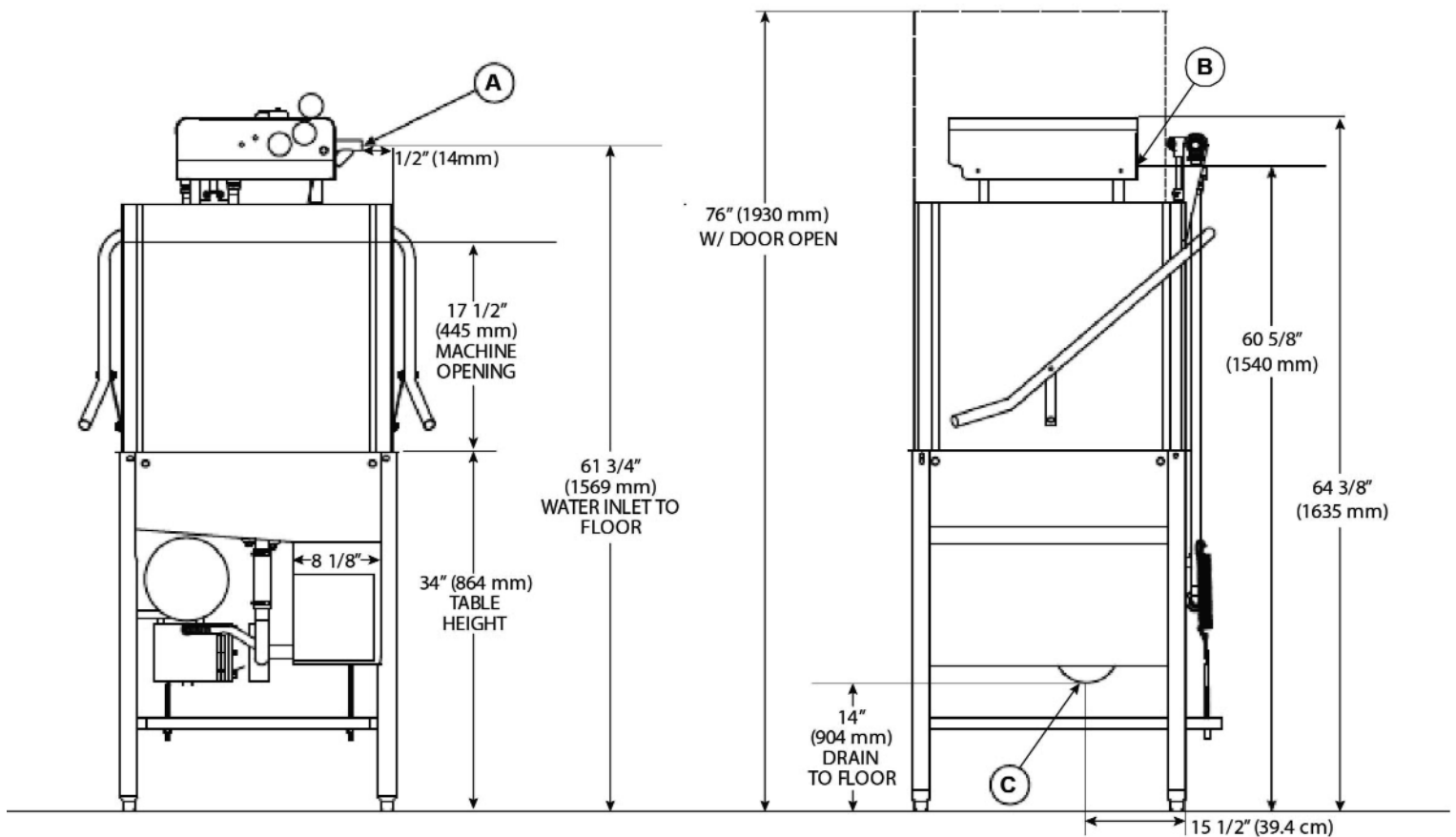
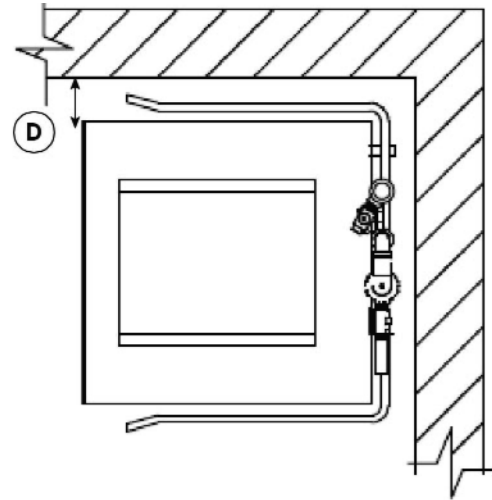
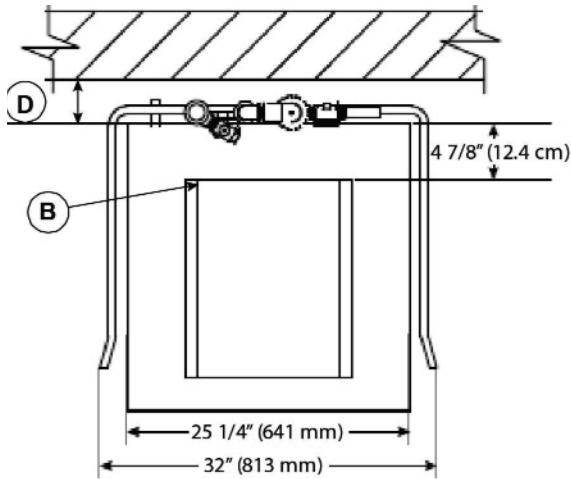
SECTION 1: SPECIFICATION INFORMATION

DIMENSIONS TEMPSTAR/NB/LT/S (TOP MOUNTED CONTROL BOX) Y-STRAINER OPTION

A- WATER INLET (1/2" NPT)
B- ELECTRICAL CONNECTION POINT
C- DRAIN (1 1/2" NPT)

LEGEND

D- STANDARD CLEARANCE BETWEEN
MACHINE AND WALL (WITH DISHTABLE) IS 4" (10.2 cm).



SECTION 1: SPECIFICATION INFORMATION

DIMENSIONS TEMPSTAR/NB/LT/S (TOP MOUNTED CONTROL BOX) PRESSURE REGULATOR OPTION

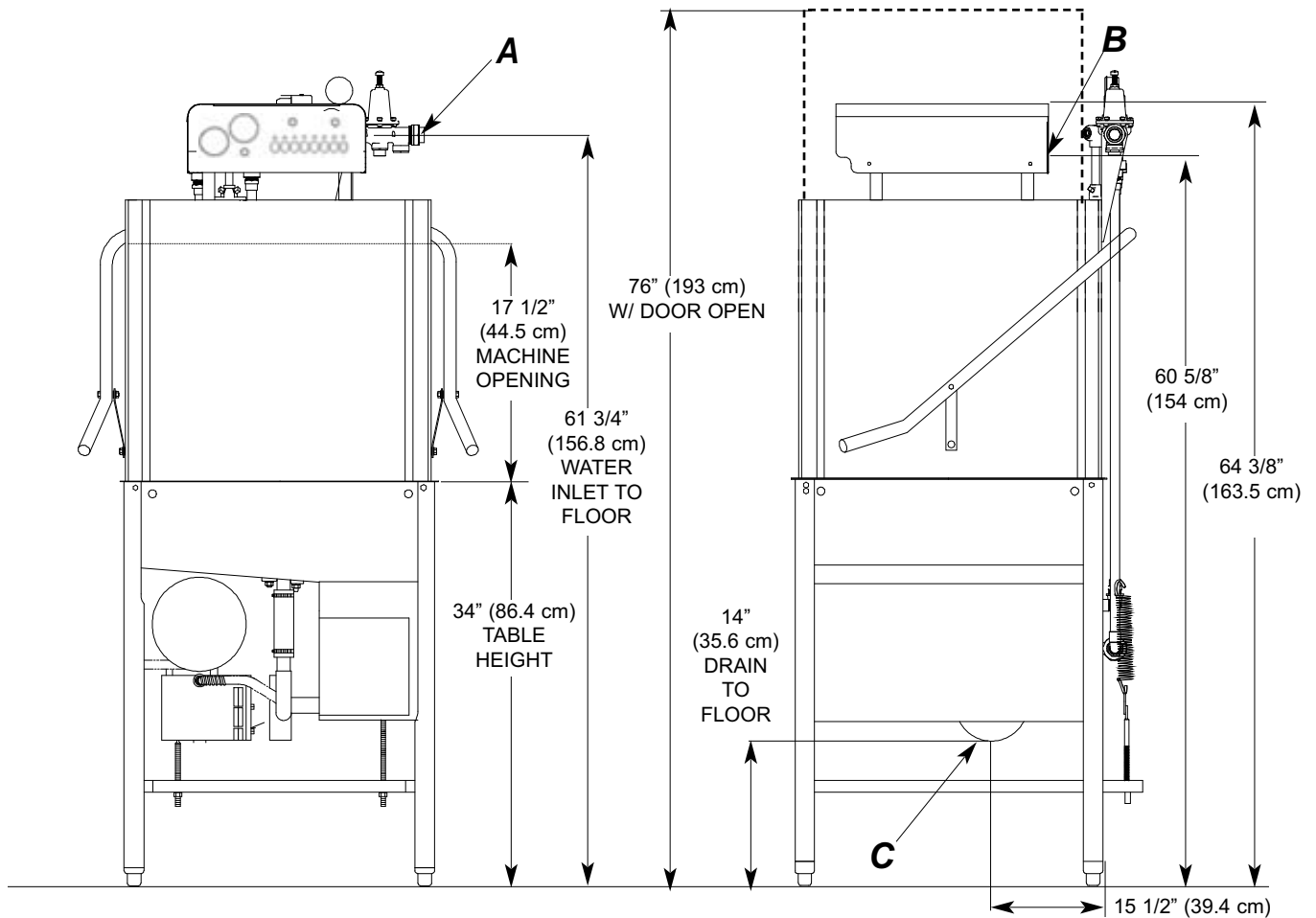
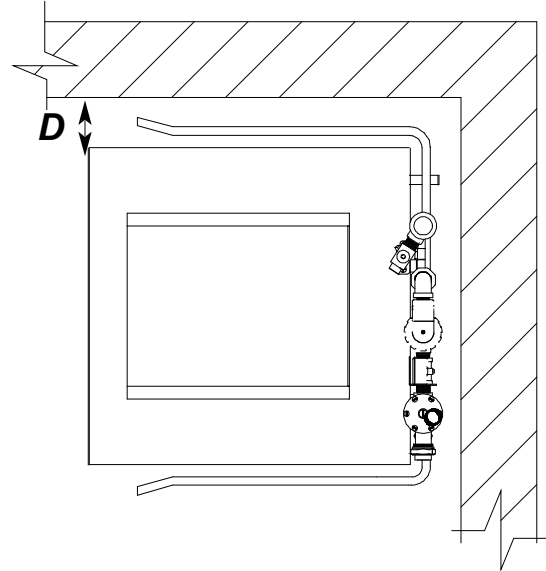
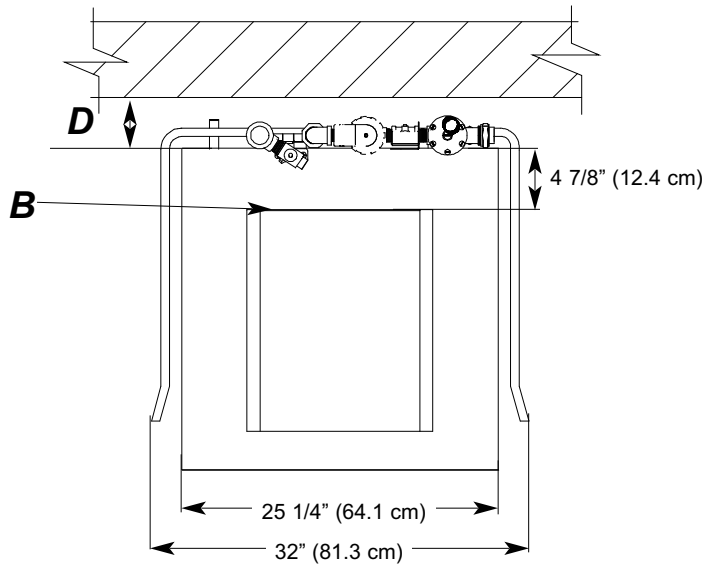
A- WATER INLET (1/2" NPT)

B- ELECTRICAL CONNECTION POINT

C- DRAIN (1 1/2" NPT)

LEGEND

**D- STANDARD CLEARANCE BETWEEN
MACHINE AND WALL (WITH DISHTABLE) IS 4" (10.2 cm).**



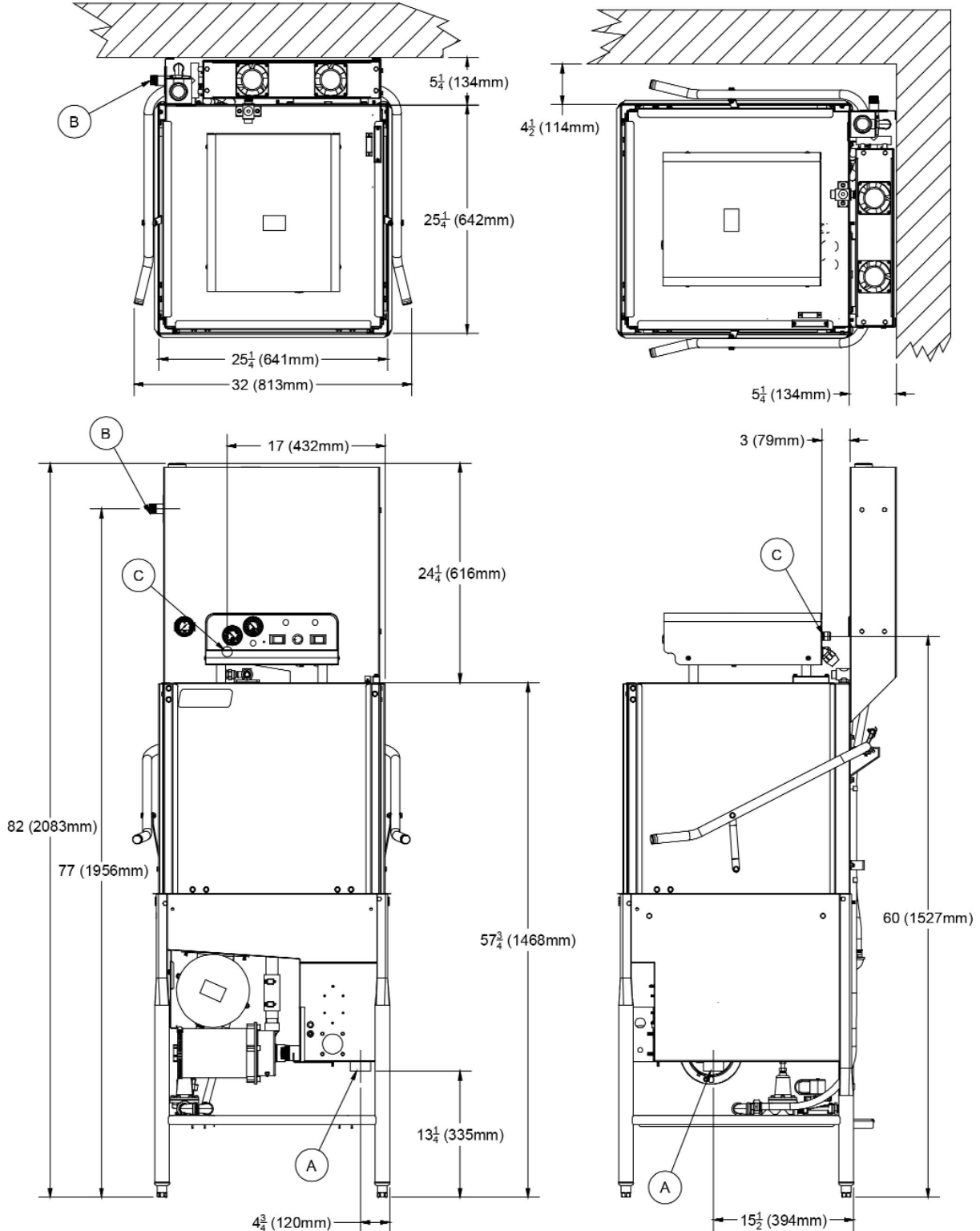
SECTION 1: SPECIFICATION INFORMATION

DIMENSIONS TEMPSTAR - VENTLESS

- A) DRAIN 1 1/2 IPS
- B) WATER INLET 3/4 MIP
- C) ELECTRICAL CONNECTIONS

LEGEND

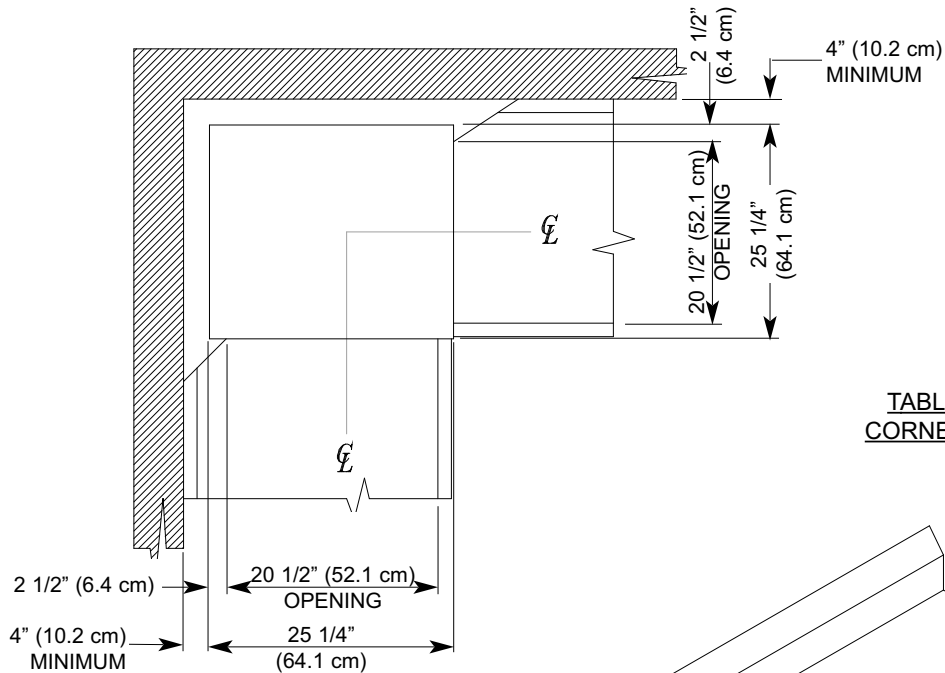
All vertical dimensions are 1/2" due to ± adjustable Bullet feet



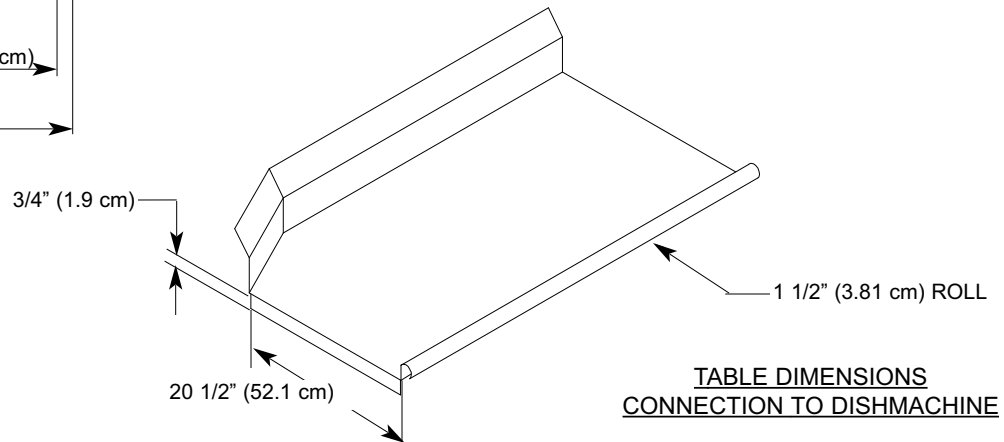
SECTION 1: SPECIFICATION INFORMATION

TABLE DIMENSIONS

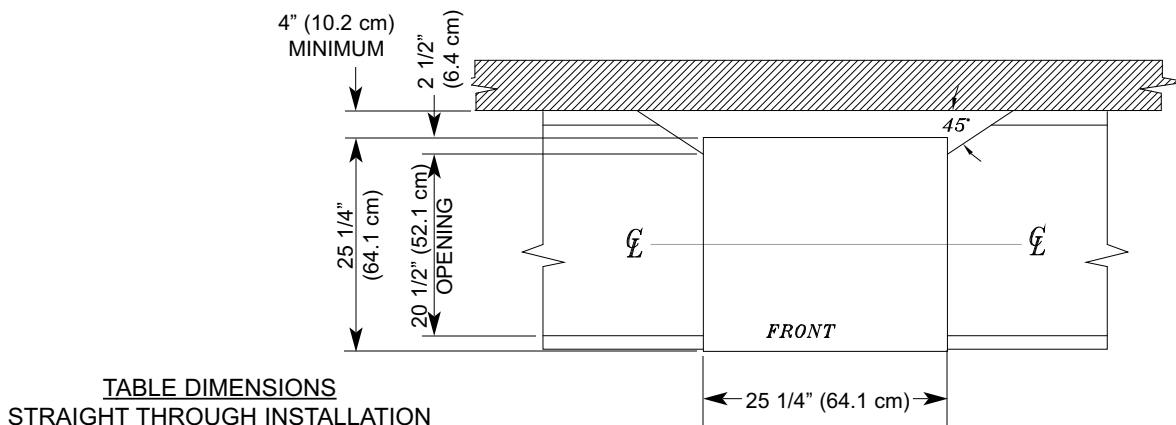
NOTE: Please remove the front dress panel from the dishmachine if mounting dishmachine for a corner installation and attaching side tables. Corner installation will trap panel making it difficult to remove.



**TABLE DIMENSIONS
CORNER INSTALLATION**



**TABLE DIMENSIONS
CONNECTION TO DISH MACHINE**



**TABLE DIMENSIONS
STRAIGHT THROUGH INSTALLATION**

SECTION 2: INSTALLATION/OPERATION INSTRUCTIONS

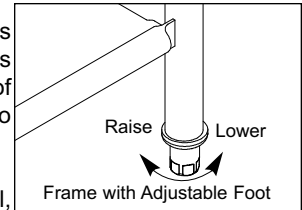
SECTION 2: INSTALLATION/OPERATION INSTRUCTIONS

INSTALLATION INSTRUCTIONS

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.

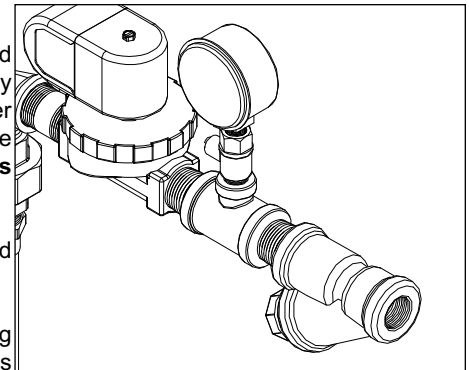


PLUMBING THE DISHMACHINE: All plumbing connections must comply with all applicable local, state, and national plumbing codes. The plumber is responsible for ensuring that the incoming water line is thoroughly flushed prior to connecting it to any component of the dishmachine. It is necessary to remove 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 for the Tempstar models covered in this manual are gravity discharge drains. 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.

Units equipped with Drain Quench Option, see page 47.

WATER SUPPLY CONNECTION: Ensure that you have read the section entitled "PLUMBING THE DISHMACHINE" above before proceeding. Install the water supply line (1/2" pipe size minimum) (3/4" pipe for ventless) 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. **Units equipped with Drain Quench Option, see page 47.**



Incoming Plumbing Y-strainer Connection

The water supply line is to be capable of 10 PSI "flow" pressure at the recommended temperature indicated on the data plate.

Jackson recommends the installation of a water pressure regulator in the incoming water line of all Tempstar models to ensure proper flowrate at all times. Jackson does provide such devices as options. Please contact your dealer with any questions you may have.

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 with the Tempstar model) 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.

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.

CHEMICAL DISPENSING EQUIPMENT: The Tempstar LT machine requires that a separate chemical feeder be connected to it to provide the required detergent and sanitizer. This feeder needs to be able to operate against a head of 25 PSI and provide 1.79 ml of a 10% Chlorine sanitizer per minute.

SECTION 2: INSTALLATION/OPERATION INSTRUCTIONS

INSTALLATION INSTRUCTIONS (CONTINUED)

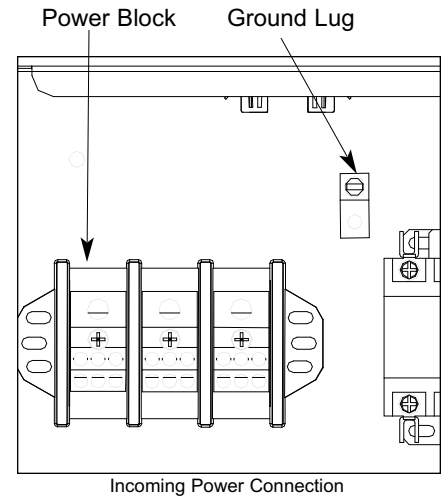
PLUMBING CHECK: Slowly turn on the water supply to the machine after the incoming fill line and the drain line have been installed. Check for any leaks and repair as required. All leaks must be repaired prior to placing the machine in operation.

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. This will require taking a phillipshead 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, 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.

SECTION 2: INSTALLATION/OPERATION INSTRUCTIONS

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: Ensure that the delime switch is in the NORMAL position, and place the power switch into the ON position. The Tempstar should fill automatically and shut off when the appropriate level is reached (just below the pan strainer). Verify that the drain stopper is preventing the wash tub water from leaking 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 unscrapped 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.

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 may be necessary 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, 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.

SHUTDOWN AND CLEANING: 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 out, removing all soil and scraps. Reassembly 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.

SECTION 2: INSTALLATION/OPERATION INSTRUCTIONS

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.

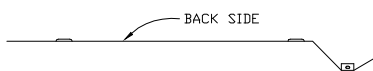
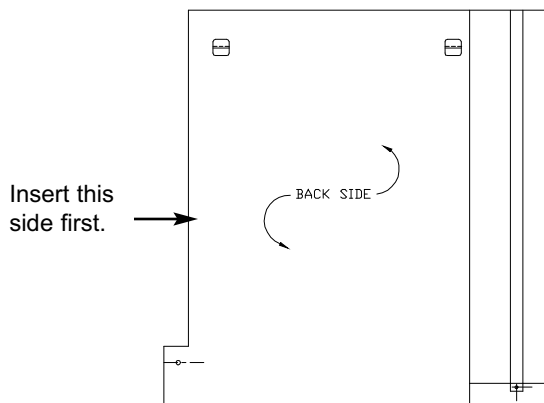
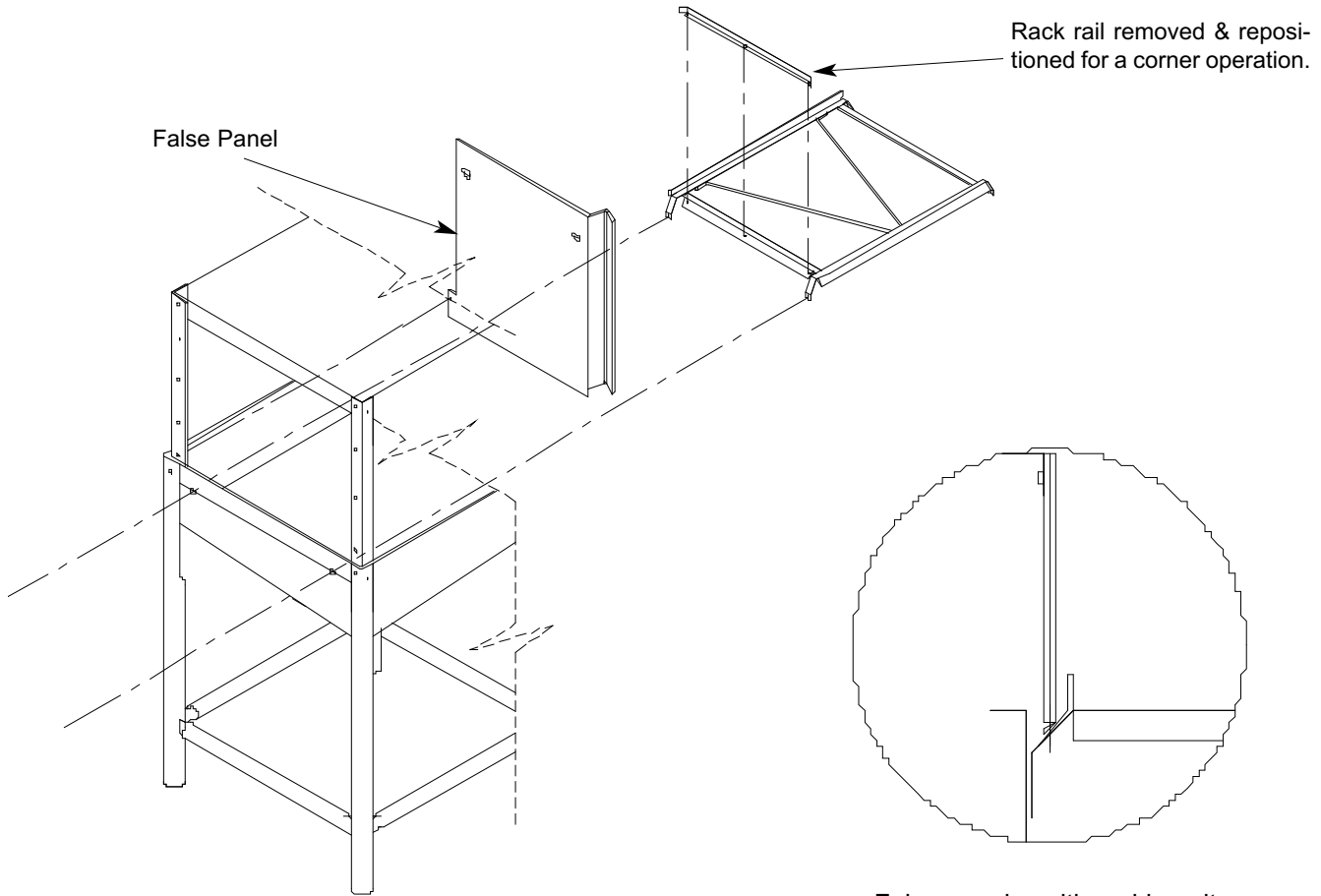
Some dishmachines come equipped with integral solid detergent dispensers. These dispensers are designed to accommodate detergents in a certain sized container. If you have such a unit, remember to explain this to your chemical distributor upon first contacting them.

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

FALSE PANEL INSTALLATION



Bottom of side panel.

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

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 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 have 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

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 is faulty. Check to see that the timer is receiving power. If so, replace the 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. Flip NORMAL/DELIME switch to NORMAL mode.
2. 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.
3. Cam timer jammed by obstruction. Remove obstruction.

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 10 ± 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.

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.

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: 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 timer. Replace timer.
3. No water to the machine. Verify that there is water at 10 PSI connected to the machine.

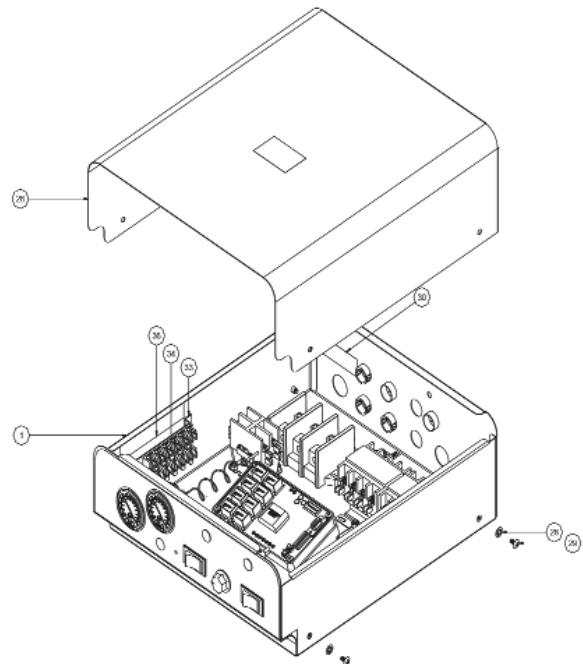
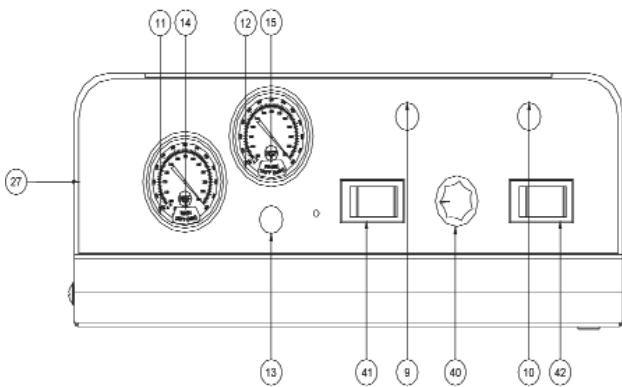
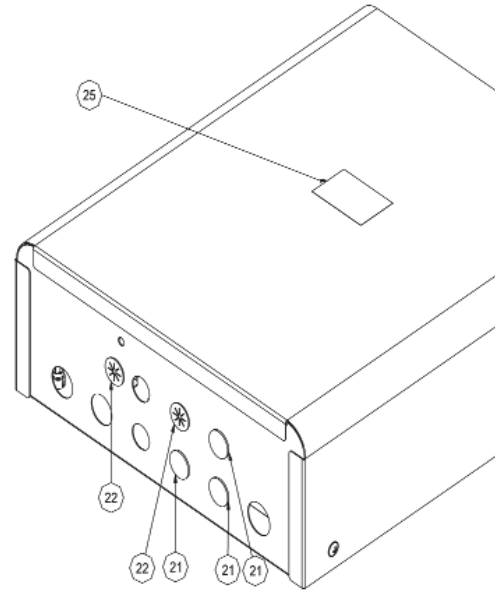
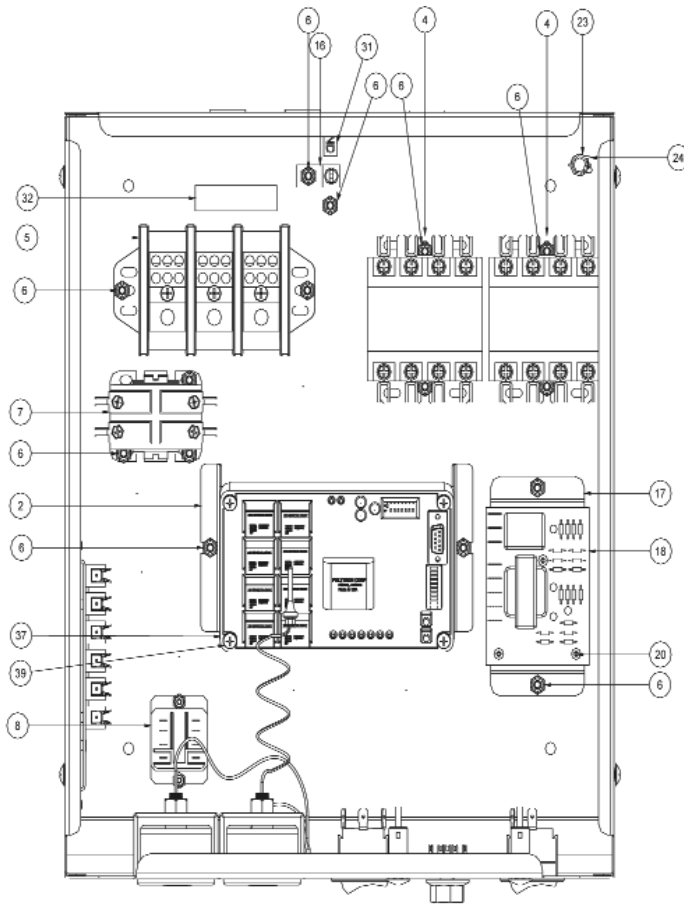
Problem: Dishes are not coming clean.

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

SECTION 5: PARTS SECTION

TOP MOUNTED CONTROL BOX ASSEMBLY WITH UNIVERSAL TIMER



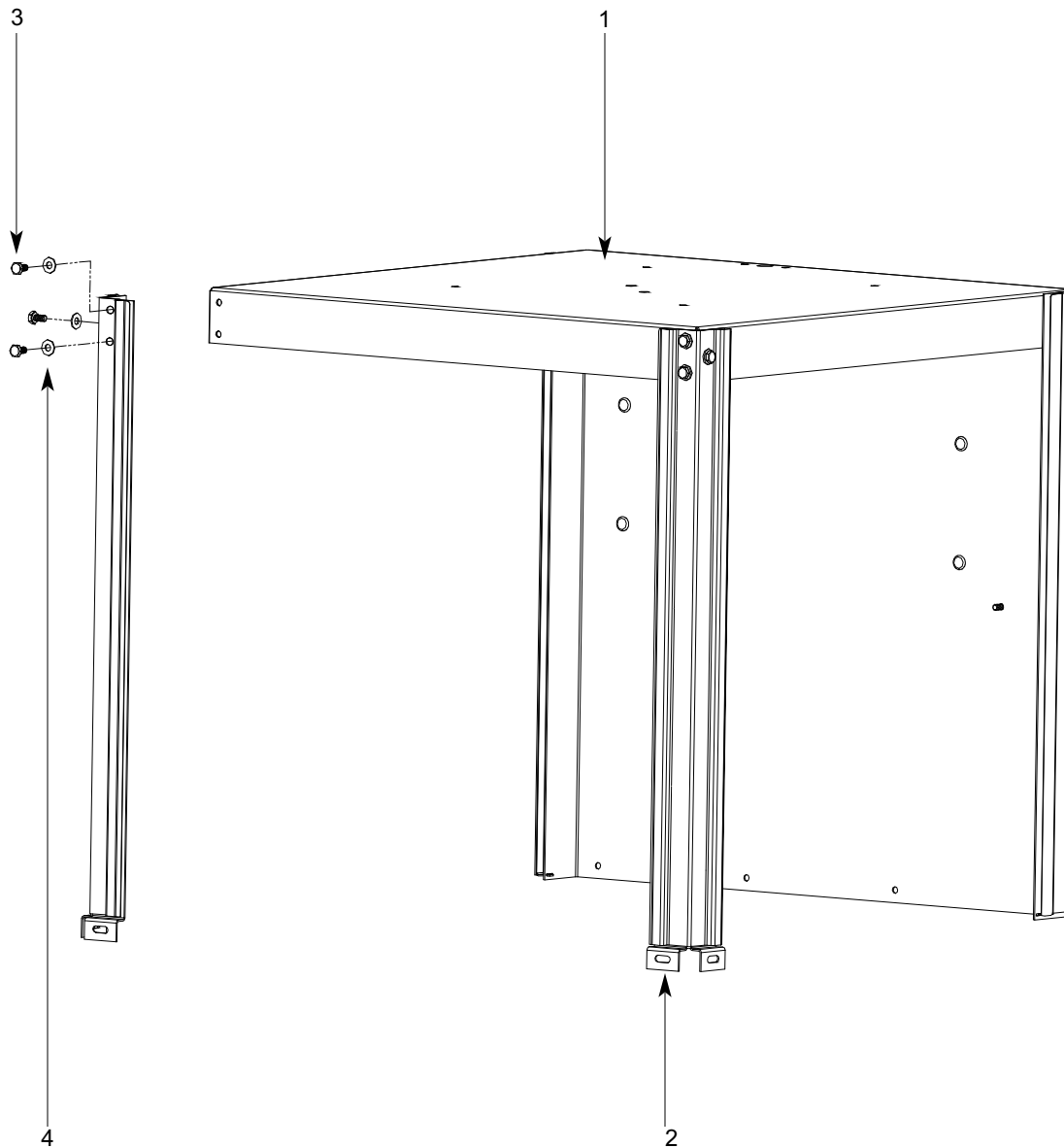
SECTION 5: PARTS SECTION

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	05700-003-02-08
3	2	Lock Nut 6-32	05310-373-03-00
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 .25-.312	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	09905-003-97-67
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

SECTION 5: PARTS SECTION

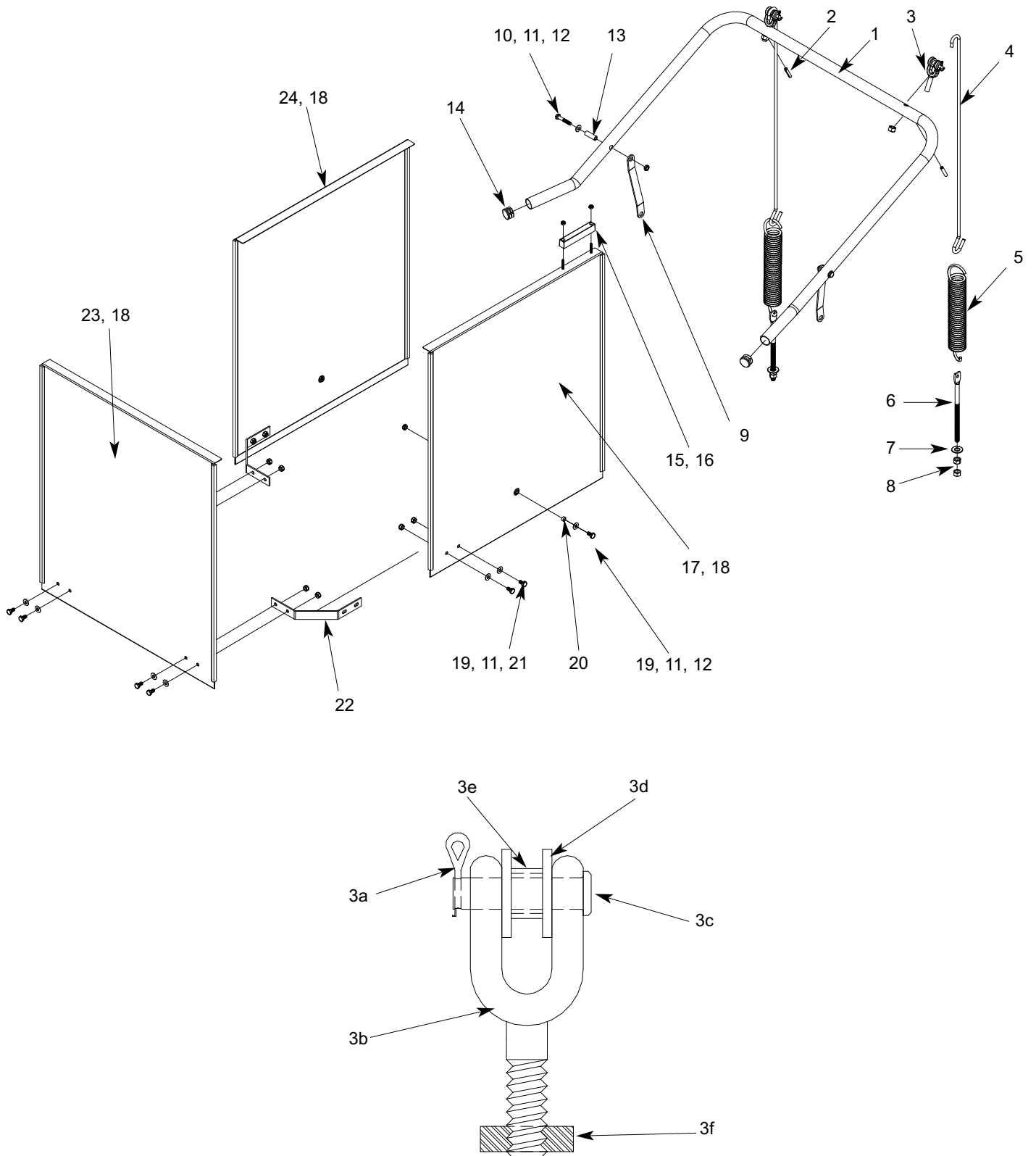
HOOD ASSEMBLY (BOLTED SINGLE SUPPORT DESIGN)



ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Hood Weldment (Tempstar/Tempstar LT/Tempstar NB)	05700-002-29-79
2	2	Hood Support	05700-002-78-99
3	6	Bolt, 1/4"-20 x 1/2" Long	05305-274-21-00
4	6	Washer, Flat, SS, 1/4"-20 ID	05311-174-01-00
5	6	Locknut, 1/4"-20 with Nylon Insert (Not Shown)	05310-374-01-00
6	4	Block Spacer	05700-002-81-02

SECTION 5: PARTS SECTION

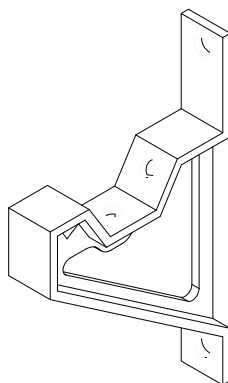
CANTILEVER ARM/DOOR ASSEMBLIES



SECTION 5: PARTS SECTION

CANTILEVER ARM/DOOR ASSEMBLIES (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Cantilever Arm	05700-031-50-67
2	2	Spring Pin, 1/4" x 1 1/8"	05315-407-06-00
3	2	Yoke Assembly	05700-000-75-77
3a	1	Cotter Pin	05315-207-01-00
3b	1	Yoke	05700-000-75-78
3c	1	Clevis Pin, 5/16" x 1 3/8"	05315-700-01-00
3d	2	Nylon Washer	05311-369-03-00
3e	1	Bushing	03120-100-03-00
3f	2	Locknut, 3/8"-16 S/S Hex Center	05310-256-04-00
4	2	Rod, Spring	05700-002-29-38
5	2	Spring	05340-109-02-00
6	2	Bolt, Cantilever Hanger Eye 3/8"-16	05306-956-05-00
7	2	Washer, 3/8" ID x 7/8" OD S/S	05311-176-02-00
8	4	Nut, 3/8"-16 S/S Hex	05310-276-01-00
9	2	Connector, Cantilever Arm	05700-011-90-99
10	2	Screw, 1/4"-20 x 1 1/2" Long S/S	05305-274-23-00
11	4	Washer, 1/4" S/S	05311-174-01-00
12	4	Locknut, 1/4"-20 S/S Hex with Nylon Insert Low Profile	05310-374-02-00
13	2	Sleeve, Cantilever Arm	05700-000-85-69
14	2	Plug, Cantilever Arm	05340-011-35-00
15	1	Magnet, Reed Switch	05930-111-51-68
16	2	Locknut, 8-32 S/S Hex with Nylon Insert	05310-272-02-00
17	1	Door, Right Side (Complete Assembly)	05700-002-30-88
17A	1	Right Door Weldment with Studs	05700-002-29-85
18	6	Door, Guides	05700-111-33-59
19	2	Screw, 1/4"-20 x 1/2" Long S/S	05305-274-02-00
20	2	Spacer, PB Bolt	05700-000-29-40
21	4	Locknut, 1/4"-20 S/S Hex with Nylon Insert	05310-374-01-00
22	2	Door Connector Bracket	05700-021-33-39
23	1	Door, Front (Complete Assembly) w/ Decal	05700-002-30-89
23A	1	Door Only, Front	05700-002-29-83
24	1	Door, Left Side (Complete Assembly)	05700-002-30-87
	1	Door, Left Side (Complete Assembly) (Door Interlock) (Not Shown)	05700-004-24-32
24A	1	Door Only, Left Side	05700-002-29-86
	1	Door Only, Left Side (Door Interlock) (Not Shown)	05700-004-24-34
25	4	Door Connecting Plate	05700-002-20-78
26*	2	Bracket, Cantilever Arm Support	05700-031-88-00
27*	6	Wear Button, 1/2" Dia. UHMW	05700-011-88-01
28	1	Decal, Jackson LOGO (Not Shown)	09905-004-03-02
	1	Door Interlock Bracket (Not Shown)	05700-004-23-14

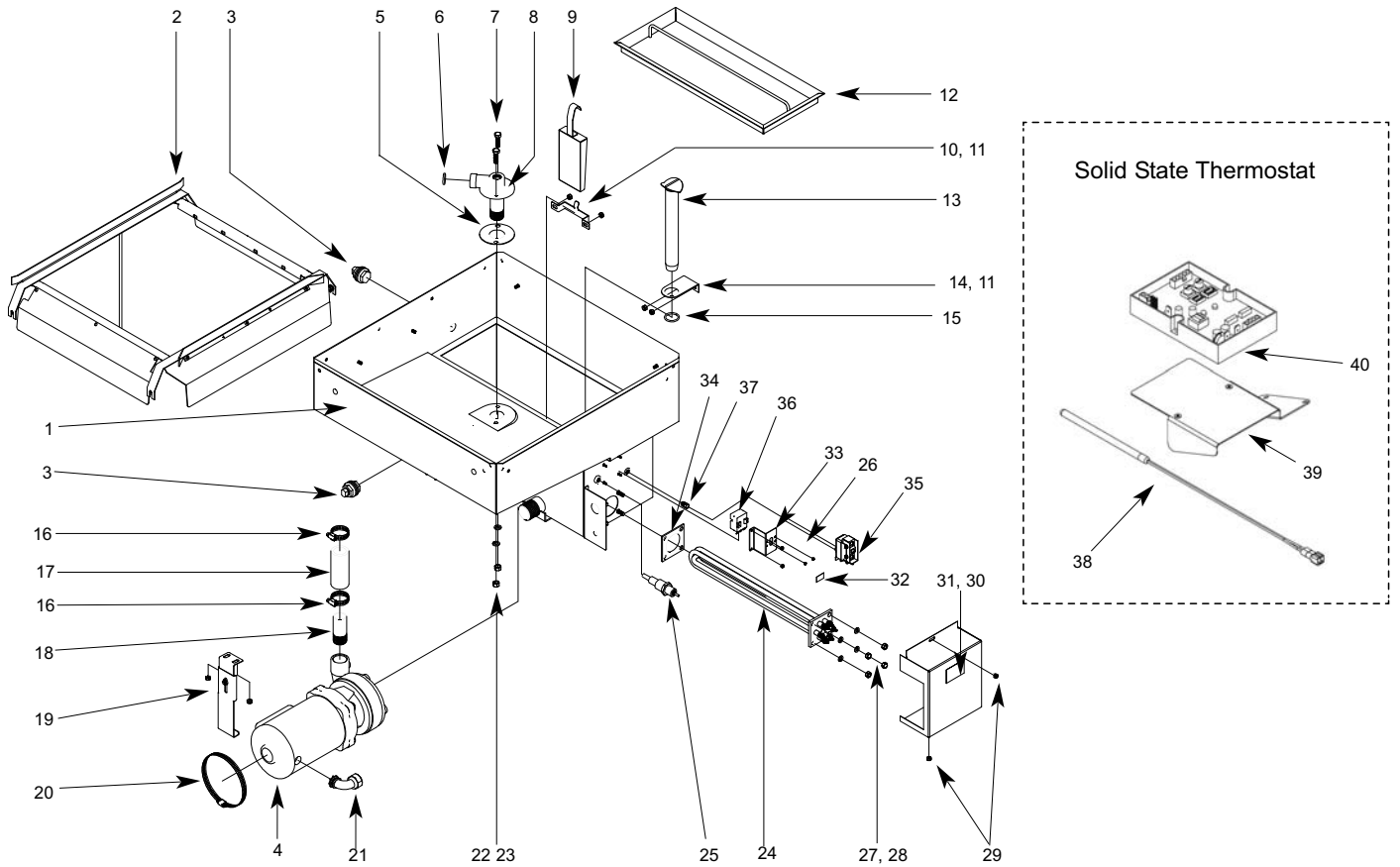


Bracket, Cantilever Arm Support
09515-003-15-64

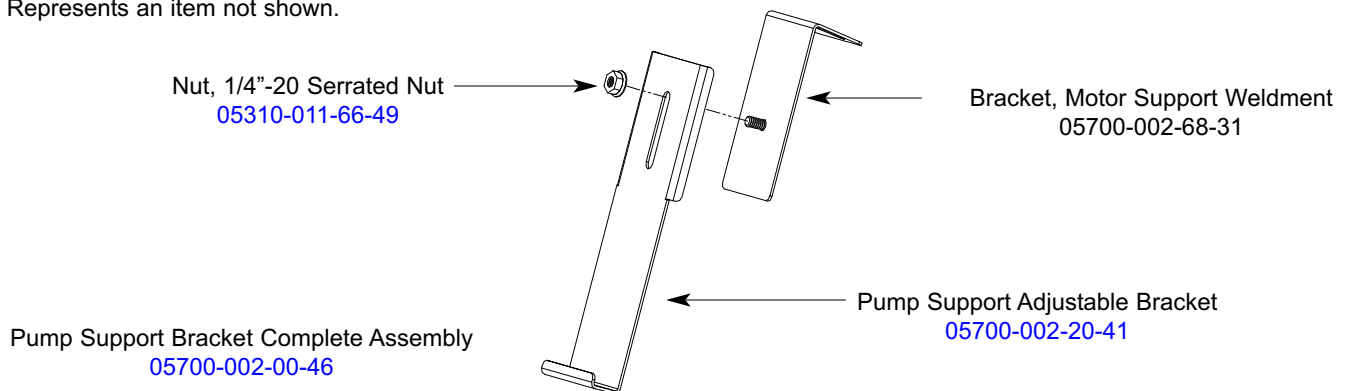
Wear Button, 1/2" Dia. UHMW
05700-011-88-01

SECTION 5: PARTS SECTION

TUB ASSEMBLY



* Represents an item not shown.

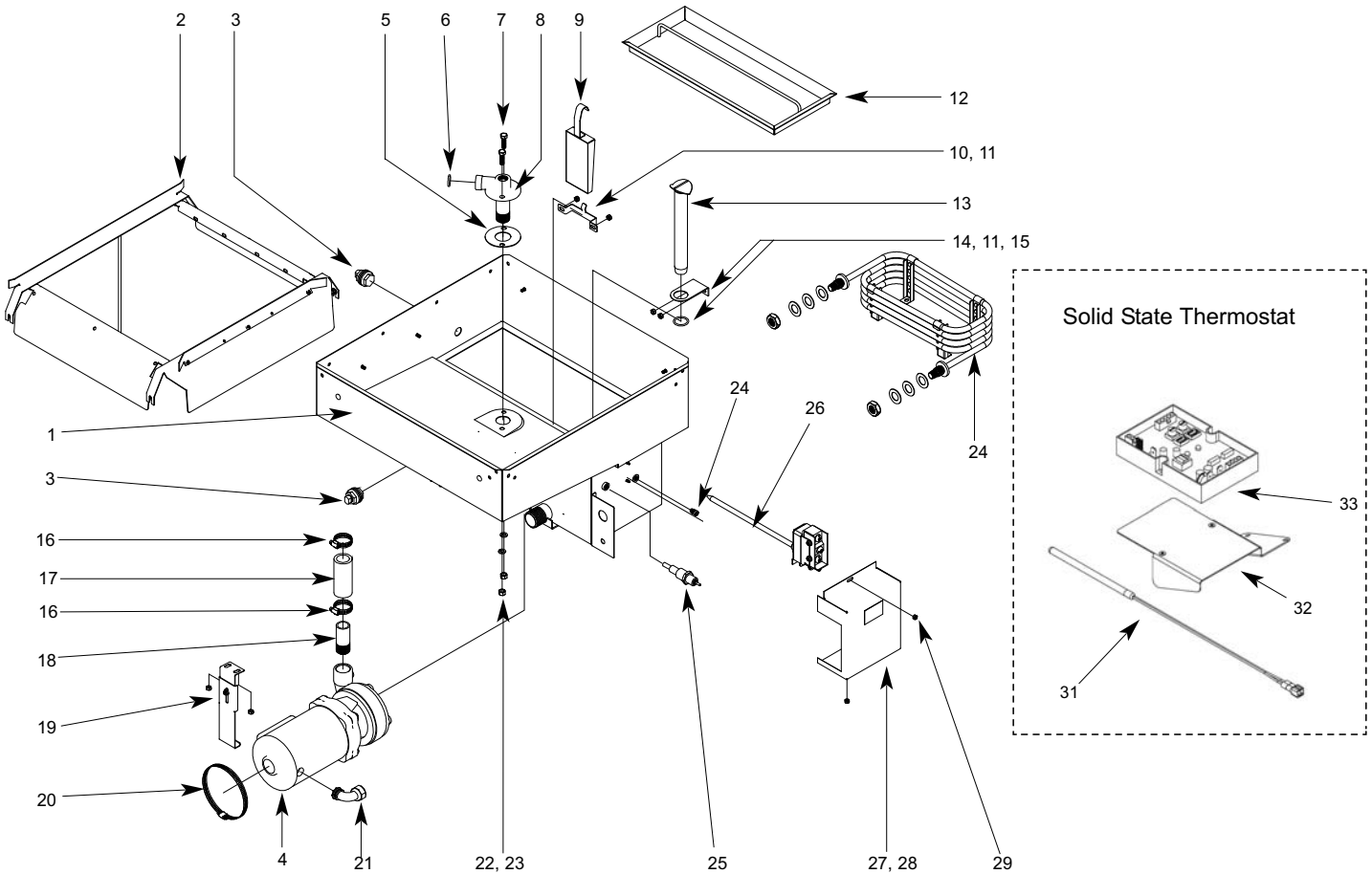


SECTION 5: PARTS SECTION**TUB ASSEMBLY (CONTINUED)**

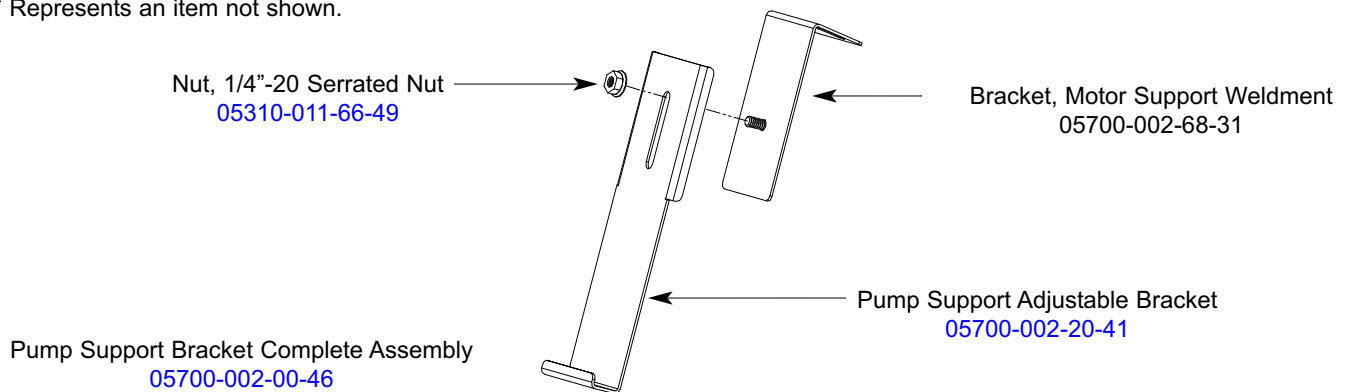
ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Tub Weldment	05700-002-12-59
2	1	Rack Assembly	05700-002-01-00
3	2	Bulk Head Plug	04730-609-05-00
4	1	See Page Entitled "Wash Motors"	N/A
5	1	Gasket	05700-111-35-03
6	1	O-ring	05330-400-05-00
7	4	Bolt, Hex 3/8"-16 x 1 1/4" Long	05305-276-10-00
8	1	Lower Wash Manifold 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	05700-002-91-54
*	1	Shim, Overflow Support	05700-002-96-48
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	See Page Entitled "Wash Heaters/Rinse Heaters"	N/A
		See page 27 to order phase conversion kits for the heater.	
25	1	Probe, High Water	06680-200-02-68
26	5	Locknut, 6-32 with Nylon Insert	05310-373-03-00
27	4	Lockwasher, 5/16", S/S, Split	05311-275-01-00
28	4	Nut, Hex, 5/16"-18, S/S	05310-275-01-00
29	4	Locknut, 10-24 with Nylon Insert	05310-373-01-00
30	1	Cover, Wash Heater	05700-031-47-57
31	1	Decal, Warning-Disconnect Power	09905-100-75-93
32	1	Decal, High Limit	09905-011-84-32
33	1	Thermostat Bracket	05700-011-81-64
34	1	Wash Heater Gasket	05330-011-47-79
35	1	Thermostat, Regulating	05930-510-02-79
	1	Kit, Wash Thermostat Replacement (Includes: thermostat, brass fitting, 2 jumper wires & instructions)	06401-003-18-22
36	1	Thermostat, High Limit	05930-011-49-43
37	1	Fitting, 1/4" Imperial Brass	05310-924-02-05
38	1	Probe, Thermister 4" LG	06685-004-17-26
39	1	Thermostat Mounting Bracket	05700-004-22-17
40	1	Thermostat, Elan Electric Dual	05585-004-17-27

SECTION 5: PARTS SECTION

STEAM TUB ASSEMBLY



* Represents an item not shown.

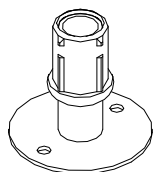
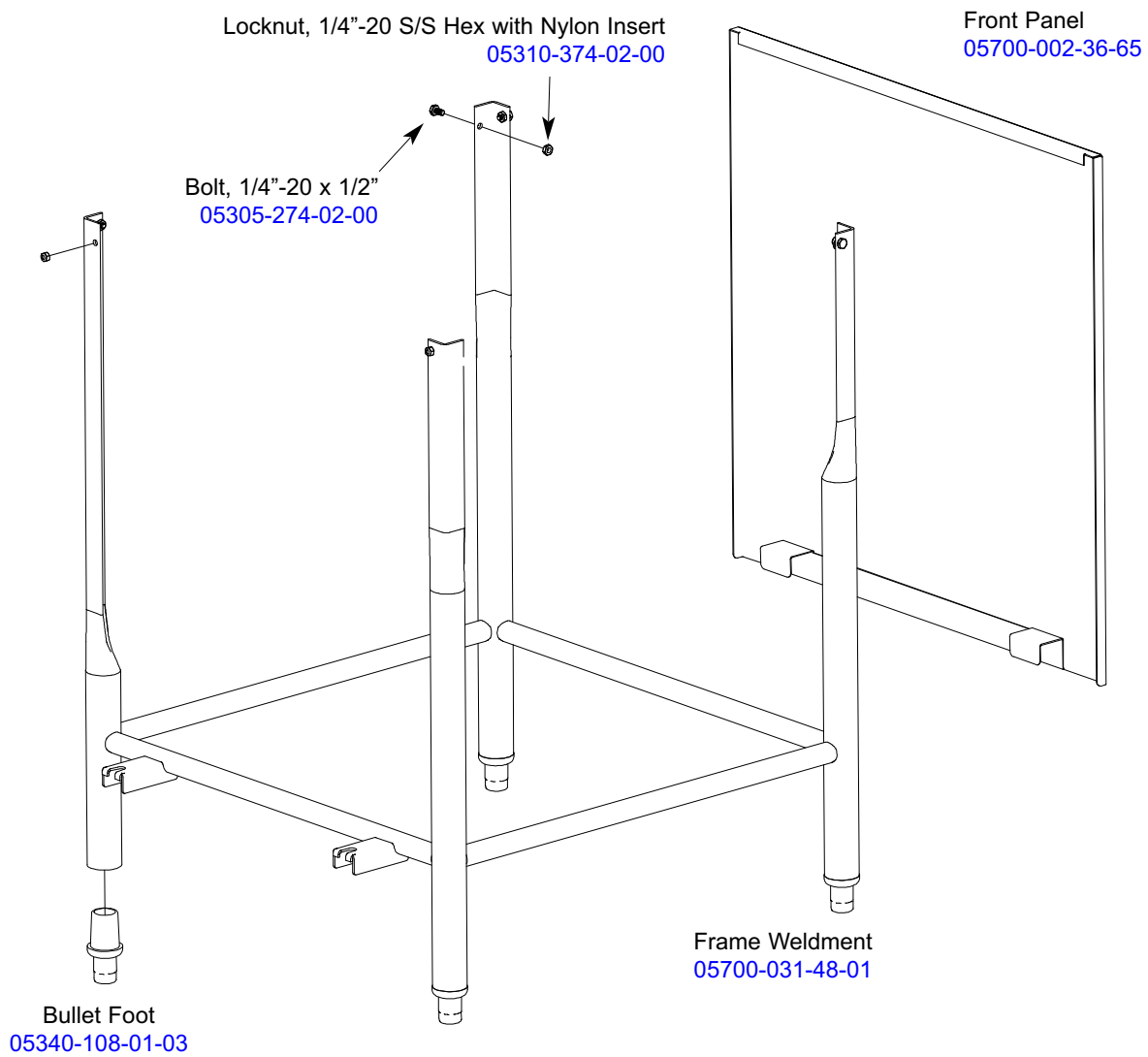


SECTION 5: PARTS SECTION**STEAM TUB ASSEMBLY (CONTINUED)**

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Tub Weldment	05700-002-09-26
2	1	Rack Assembly	05700-002-01-00
3	2	Bulk Head Plug	04730-609-05-00
4	1	See page entitled "Wash Motors"	N/A
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	05700-002-91-54
*	1	Shim, Overflow Support	05700-002-96-48
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 Deg.	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	Fitting, 1/4" Imperial Brass	05310-924-02-05
25	1	Probe, High Water	06680-200-02-68
26	1	Thermostat, Regulating	05930-510-02-79
	1	Kit, Wash Thermostat Replacement (Includes: thermostat, brass fitting, 2 jumper wires & instructions)	06401-003-18-67
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
30	3	Locknut, 6-32 with Nylon Insert	05310-373-03-00
31	1	Probe, Thermister 4" LG	06685-004-17-26
32	1	Thermostat Mounting Bracket	05700-004-22-17
33	1	Thermostat, Elan Electric Dual	05585-004-17-27

SECTION 5: PARTS SECTION

FRAME ASSEMBLY

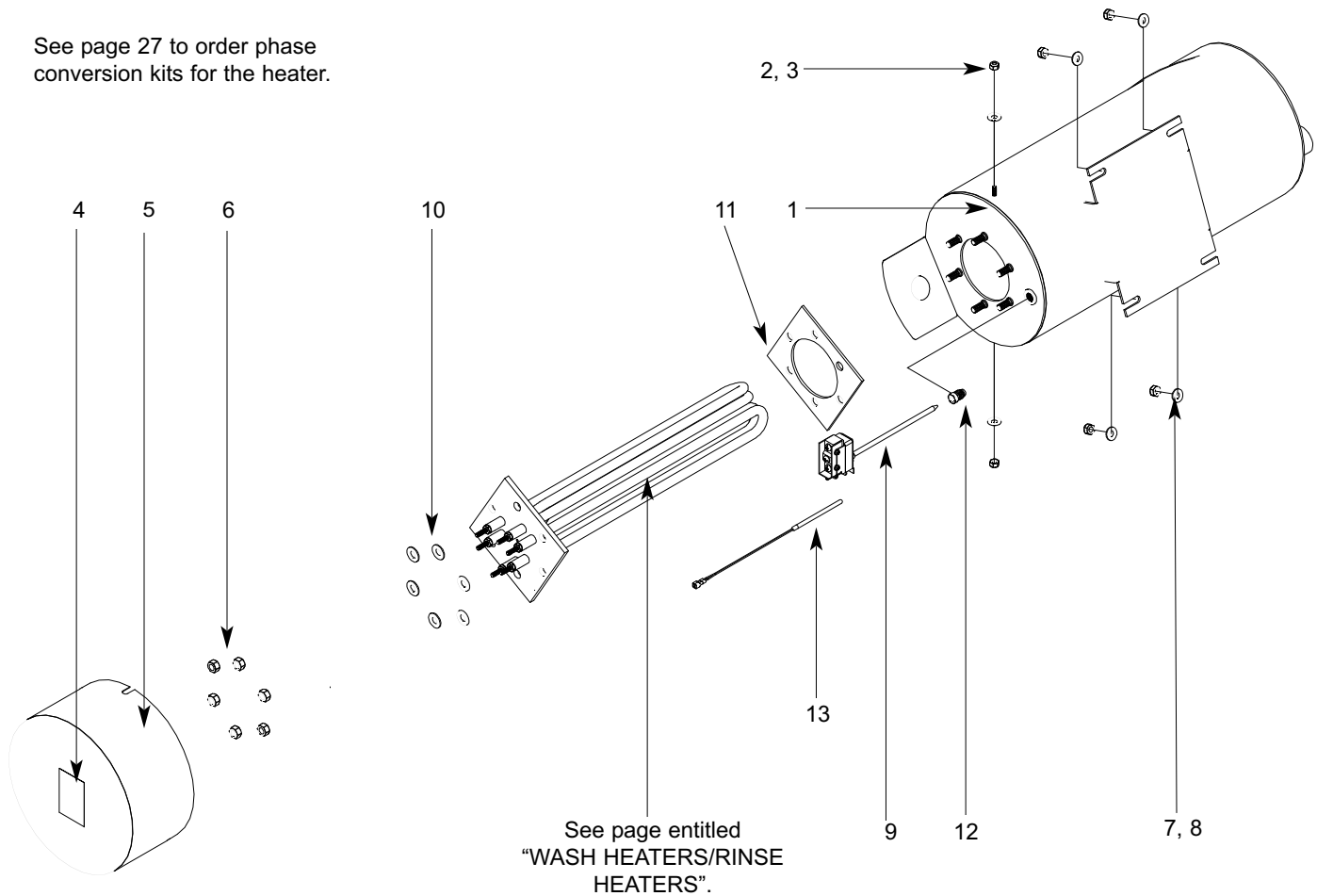


Flanged Bullet Foot
05340-002-34-86

SECTION 5: PARTS SECTION

RINSE TANK ASSEMBLY

See page 27 to order phase conversion kits for the heater.



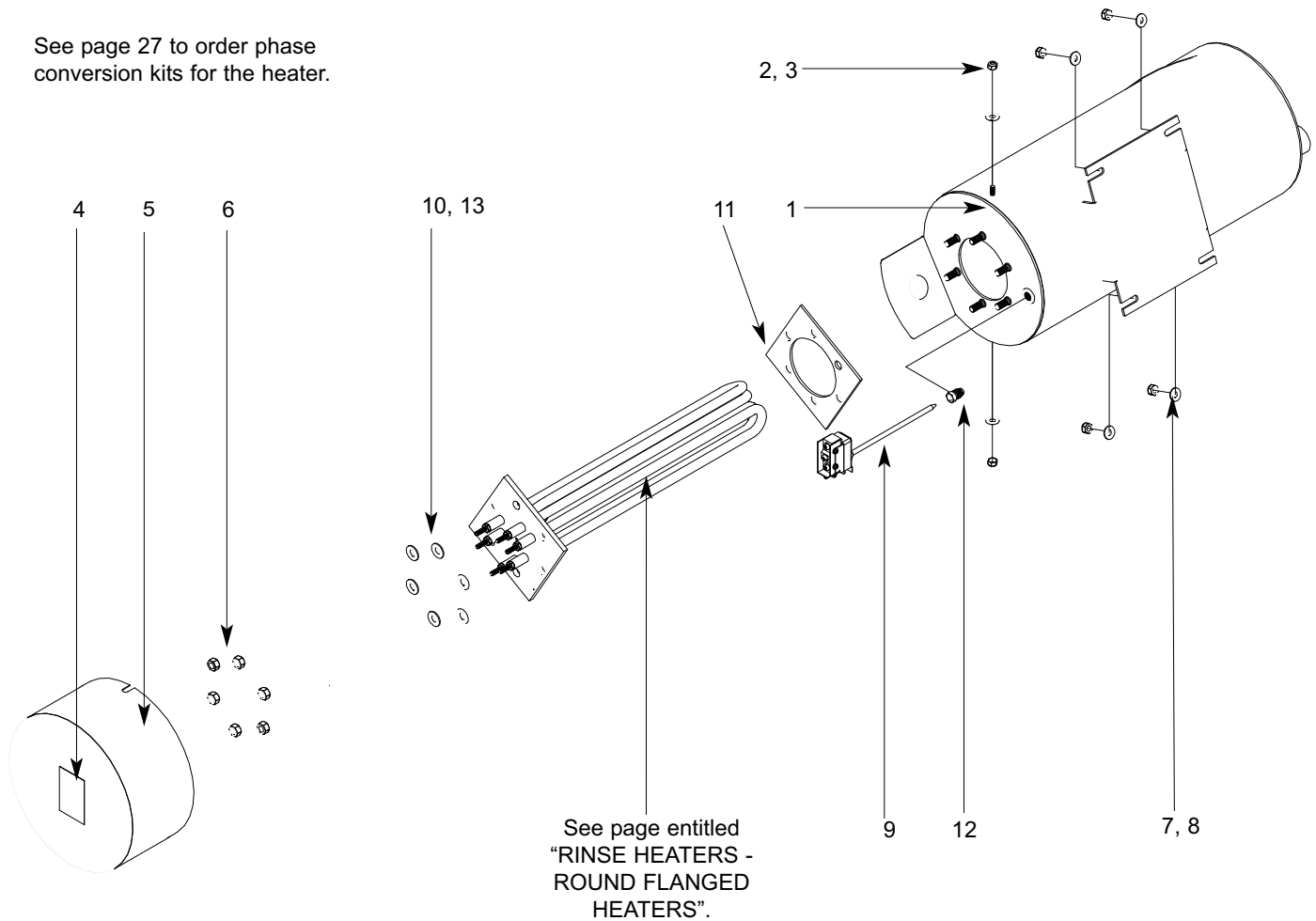
See page entitled
"WASH HEATERS/RINSE
HEATERS".

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Booster Tank Weldment	05700-001-22-02
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	05700-001-29-30
6	6	Nut, Hex, 5/16"-18	05310-275-01-00
7	4	Locknut, 1/4"-20 with Nylon Insert	05310-374-01-00
8	4	Washer, 1/4" ID, S/S, Flat	05311-174-01-00
9	1	Thermostat, Rinse	05930-510-03-79
	1	Kit, Rinse Thermostat Replacement (Includes: thermostat, brass fitting, 2 jumper wires & instructions)	06401-011-66-55
10	6	Washer, 5/16" I.D.	05311-175-01-00
11	1	Gasket, Rinse Heater	05330-200-02-70
12	1	Fitting, 1/4" Imperial Brass	05310-924-02-05
13	1	Probe, Thermistor 4" LG	06685-004-17-26

SECTION 5: PARTS SECTION

RINSE TANK AND ROUND FLANGE HEATER ASSEMBLY

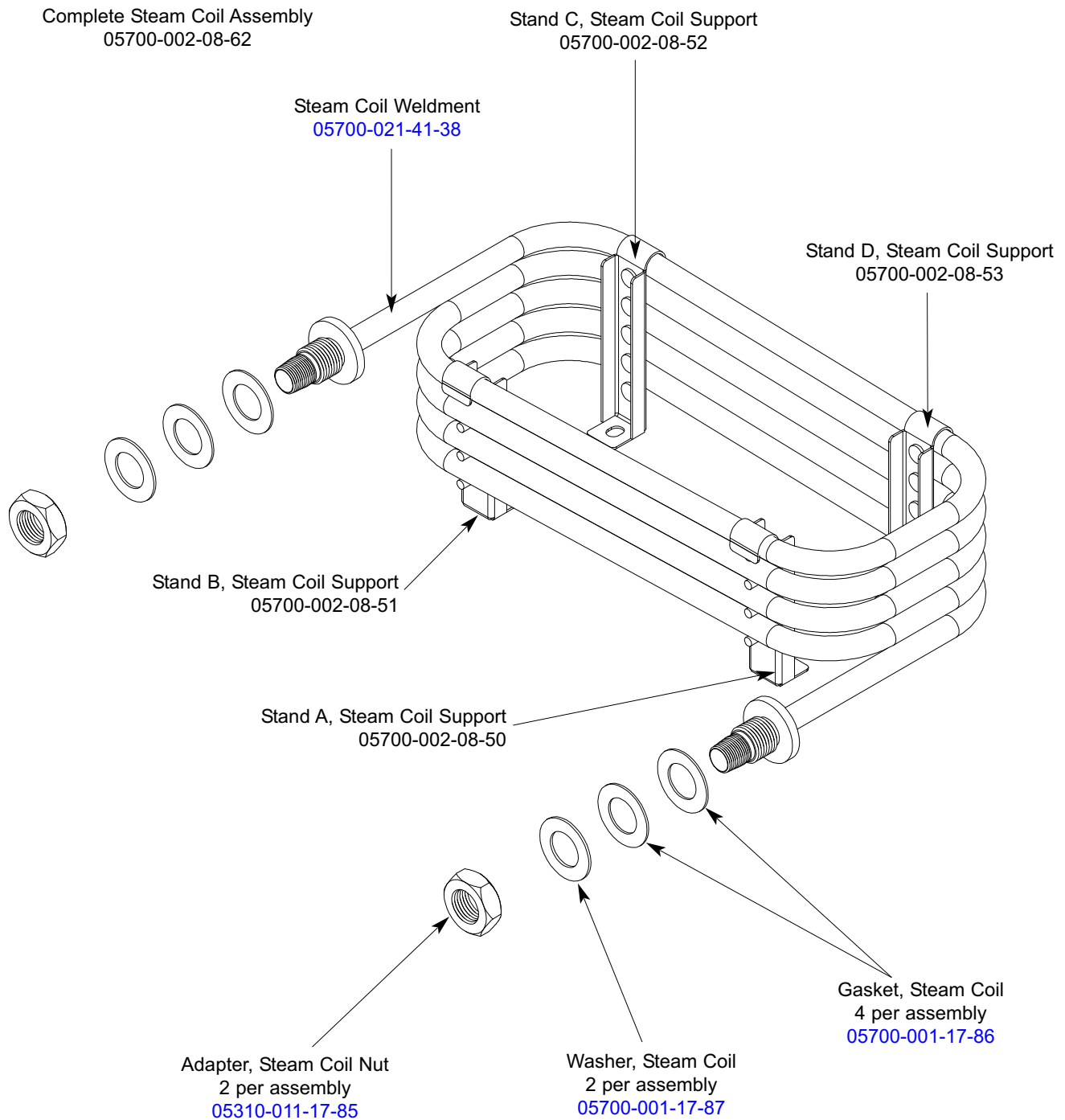
See page 27 to order phase conversion kits for the heater.



ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Booster Tank Weldment	05700-003-58-41
2	2	Locknut, 1/4-20 with Nylon Insert	05310-374-01-00
3	2	Washer, 1/4" S/S Flat	05311-174-01-00
4	1	Decal, Warning - Disconnect Power	09905-100-75-93
5	1	Booster Tank Cover Weldment	05700-001-29-30
6	8	Nut, Hex, 1/4-20"-18	05310-274-01-00
7	4	Locknut, 1/4"-20 with Nylon Insert	05310-374-01-00
8	4	Washer, 1/4" ID, S/S, Flat	05311-174-01-00
9	1	Thermostat, Rinse	05930-510-03-79
	1	Kit, Rinse Thermostat Replacement (Includes: thermostat, brass fitting, 2 jumper wires & instructions)	06401-011-66-55
10	8	Washer, 1/4" I.D.	05311-174-01-00
11	1	Gasket, Rinse Heater	05330-200-02-70
12	1	Fitting, 1/4" Imperial Brass	05310-924-02-05
13	8	Washer, 1/4" Split Lock	05311-274-01-00

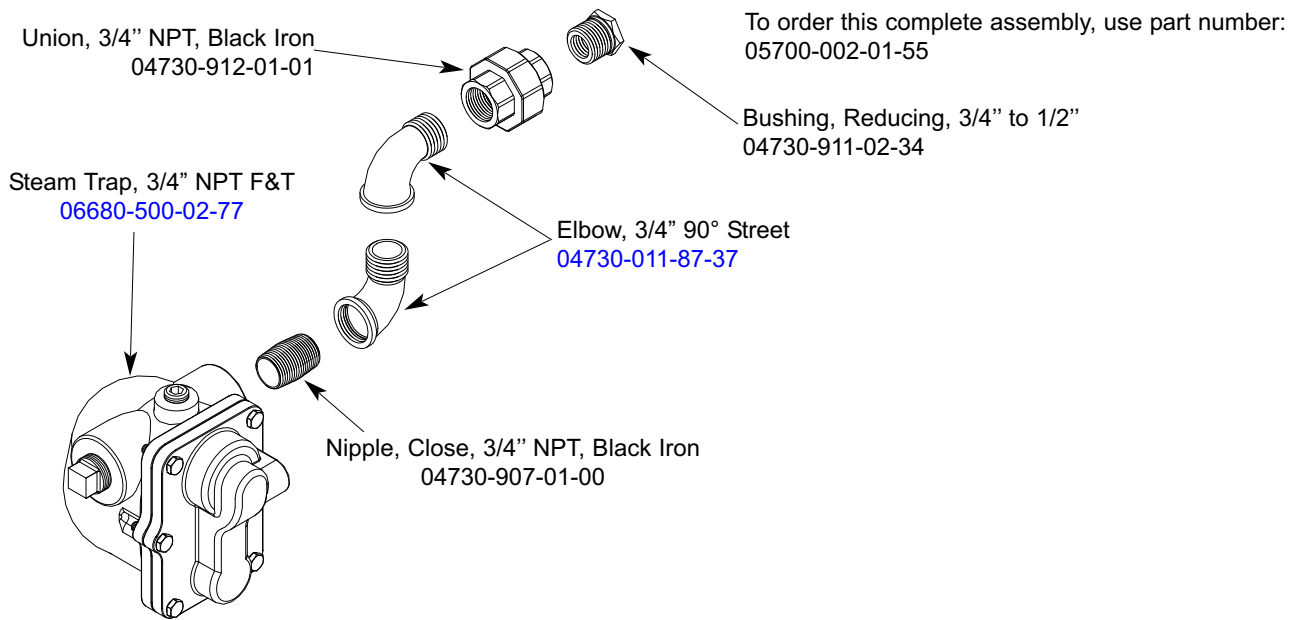
SECTION 5: PARTS SECTION

COIL ASSEMBLY

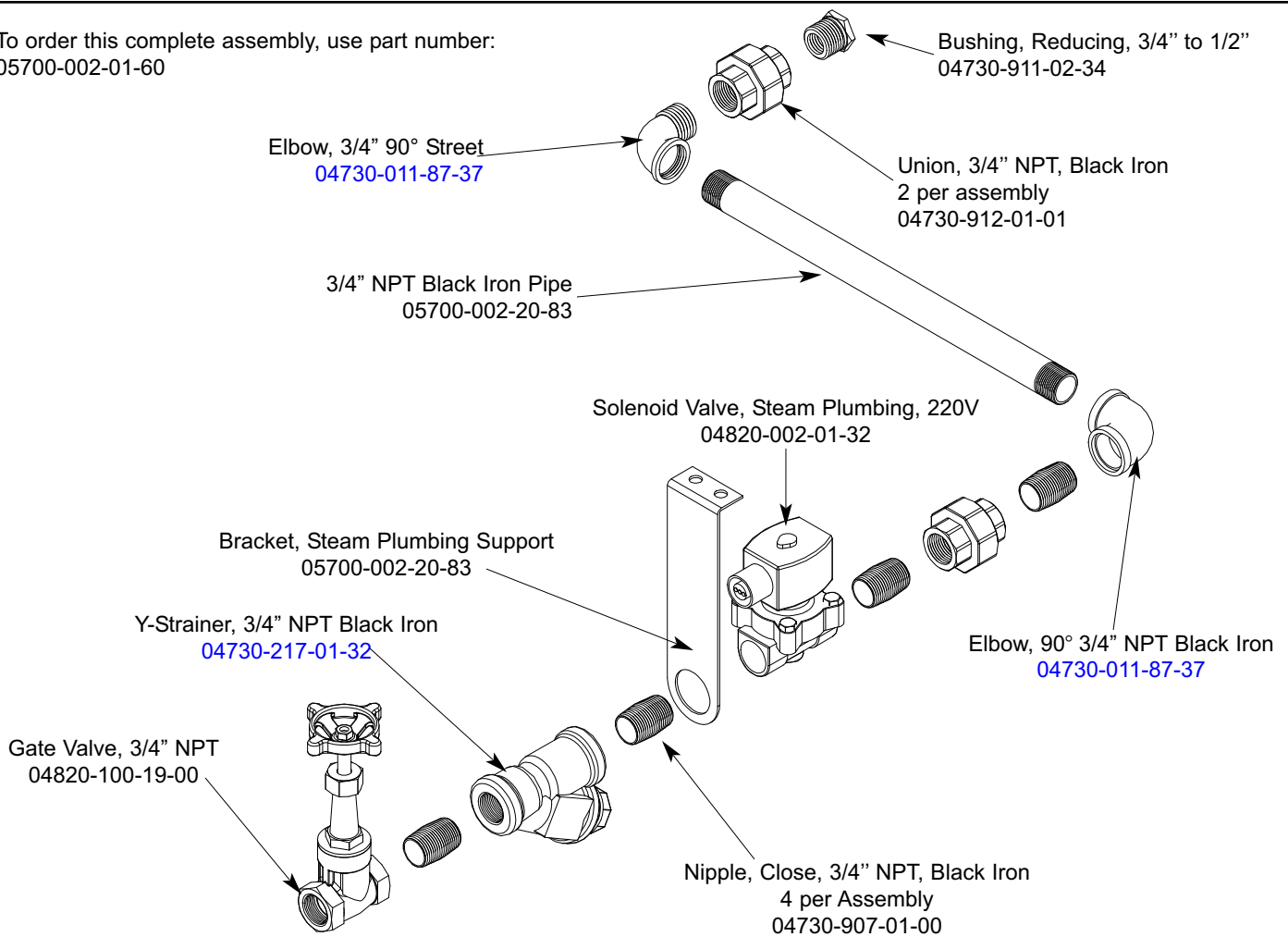


SECTION 5: PARTS SECTION

INCOMING STEAM PLUMBING ASSEMBLIES



To order this complete assembly, use part number:
05700-002-01-60



SECTION 5: PARTS SECTION

WASH MOTORS

The Tempstar 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>	<u>Wash Motor Assembly</u>
Tempstar/Tempstar NB	208	50	1	06105-002-19-87
Tempstar/Tempstar NB	208	50	3	06105-002-19-87
Tempstar/Tempstar NB	208	60	1	06105-002-69-78
Tempstar/Tempstar NB	208	60	3	06105-002-69-78
Tempstar/Tempstar NB	230	50	1	06105-002-19-87
Tempstar/Tempstar NB	230	50	3	06105-002-19-87
Tempstar/Tempstar NB	230	60	1	06105-002-69-78
Tempstar/Tempstar NB	230	60	3	06105-002-69-78
Tempstar/Tempstar NB	380	50	3	06105-002-41-24
Tempstar/Tempstar NB	415	50	3	06105-002-41-24
Tempstar/Tempstar NB	440	50	3	06105-002-41-24
Tempstar/Tempstar NB	460	60	3	06105-121-64-21
Tempstar LT	208	50	1	06105-002-19-87
Tempstar LT	208	50	3	06105-002-19-87
Tempstar LT	208	60	1	06105-002-69-78
Tempstar LT	208	60	3	06105-002-69-78
Tempstar LT	230	50	1	06105-002-19-87
Tempstar LT	230	50	3	06105-002-19-87
Tempstar LT	230	60	1	06105-002-69-78
Tempstar LT	230	60	3	06105-002-69-78
Tempstar LT	380	50	3	06105-002-41-24
Tempstar LT	415	50	3	06105-002-41-24
Tempstar LT	440	50	3	06105-002-41-24
Tempstar LT	460	60	3	06105-121-64-21
Tempstar S	208	60	1	06105-002-69-78
Tempstar S	208	60	3	06105-002-69-78
Tempstar S	230	60	1	06105-002-69-78
Tempstar S	230	60	3	06105-002-69-78

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 WWS, INC. immediately for technical support.

SECTION 5: PARTS SECTION

MOTOR & PUMP ASSEMBLY

Complete Pump & Motor Assembly, 60HZ
06105-002-69-78

Complete Pump & Motor Assembly, 50HZ
06105-002-19-87

Pump Only Assembly, 60HZ
(Area indicated within box, Casing is included)
05700-002-79-51

Pump Only Assembly, 50HZ
(Area indicated within box, Casing is included)
05700-002-85-38

Motor Only, 60HZ
06105-002-79-61

Motor Only, 50HZ
06105-002-85-36

Pump Casing (Not shown), 50HZ
05700-002-41-50

Impeller Assembly, 60HZ
05700-002-81-86

Impeller Assembly, 50HZ
05700-002-41-49

Shim Kit, 60HZ
05700-002-82-58

Pump Casing 60HZ
05700-002-85-01

Case O-Ring, 60HZ
05330-002-81-83

Seal Plate, 60HZ
05700-002-81-87

Gasket, 50HZ
05330-002-41-48

Mechanical Seal, 60HZ
05330-002-34-22

Seal, 50HZ
05330-002-06-21

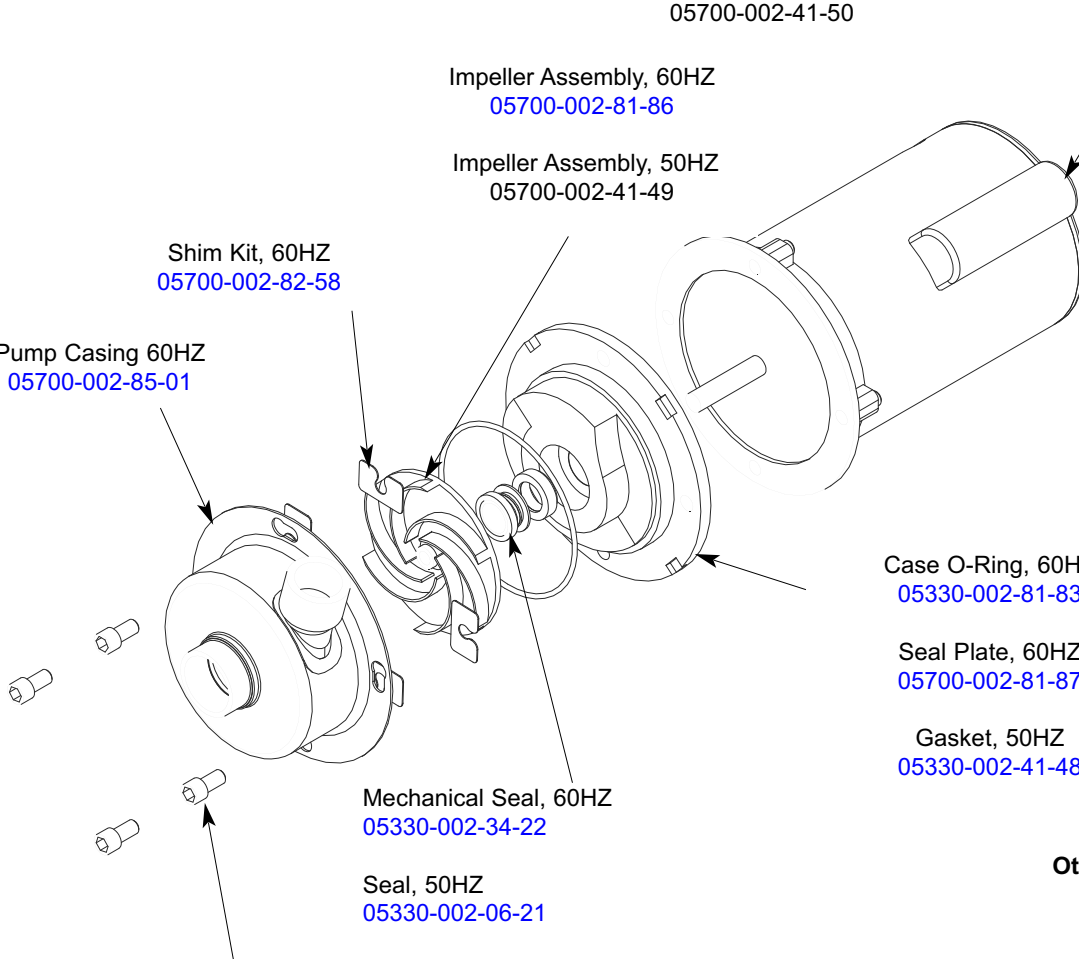
Case Capscrew, 60HZ
05305-002-81-88

Other parts not shown.

Drain Plug, 60HZ
04730-002-81-89

Bracket, 50HZ
05700-002-06-22

Shaft Adapter, 50HZ
05700-011-95-49



SECTION 5: PARTS SECTION

WASH HEATERS/RINSE HEATERS

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:

<u>Model</u>	<u>Volts</u>	<u>Hz</u>	<u>Phase</u>	<u>Wash Heater</u>	<u>Rinse Heater (12 KW)</u>	<u>Rinse Heater (14 KW)</u>
Tempstar	208	50	1	04540-121-47-39	04540-121-47-40	04540-121-63-38
Tempstar	208	50	3	04540-121-47-39	04540-121-47-40	04540-121-63-38
Tempstar	208	60	1	04540-121-47-39	04540-121-47-40	04540-121-63-38
Tempstar	208	60	3	04540-121-47-39	04540-121-47-40	04540-121-63-38
Tempstar	230	50	1	04540-121-47-39	04540-121-47-40	04540-121-63-38
Tempstar	230	50	3	04540-121-47-39	04540-121-47-40	04540-121-63-38
Tempstar	230	60	1	04540-121-47-39	04540-121-47-40	04540-121-63-38
Tempstar	230	60	3	04540-121-47-39	04540-121-47-40	04540-121-63-38
Tempstar	380	50	3	04540-002-44-31	04540-002-44-32	04540-121-63-38
Tempstar	415	50	3	04540-002-43-09	04540-002-43-10	04540-002-77-24
Tempstar	440	50	3	04540-121-65-99	04540-100-01-15	04540-121-63-39
Tempstar	460	60	3	04540-121-65-99	04540-100-01-15	04540-121-63-39
Tempstar LT	208	50	1	04540-121-47-39		
Tempstar LT	208	50	3	04540-121-47-39		
Tempstar LT	208	60	1	04540-121-47-39		
Tempstar LT	208	60	3	04540-121-47-39		
Tempstar LT	230	50	1	04540-121-47-39		
Tempstar LT	230	50	3	04540-121-47-39		
Tempstar LT	230	60	1	04540-121-47-39		
Tempstar LT	230	60	3	04540-121-47-39		
Tempstar LT	380	50	3	04540-002-44-31		
Tempstar LT	440	50	3	04540-121-65-99		
Tempstar LT	460	60	3	04540-121-65-99		
Tempstar NB	208	50	1	04540-121-47-39		
Tempstar NB	208	50	3	04540-121-47-39		
Tempstar NB	208	60	1	04540-121-47-39		
Tempstar NB	208	60	3	04540-121-47-39		
Tempstar NB	230	50	1	04540-121-47-39		
Tempstar NB	230	50	3	04540-121-47-39		
Tempstar NB	230	60	1	04540-121-47-39		
Tempstar NB	230	60	3	04540-121-47-39		
Tempstar NB	380	50	3	04540-002-44-31		
Tempstar NB	415	50	3	04540-002-43-09		
Tempstar NB	440	50	3	04540-121-65-99		
Tempstar NB	460	60	3	04540-121-65-99		

SECTION 5: PARTS SECTION

RINSE HEATERS - ROUND FLANGED HEATER

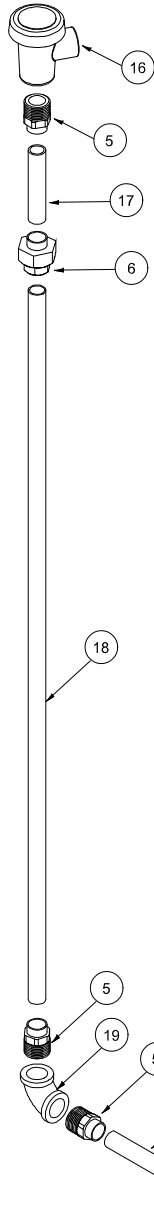
The Tempstar models covered in this manual come supplied with various heaters, depending on the characteristics of the machine. To ensure that you order the correct heater for the model you are servicing, please refer to the following table:

<u>Model</u>	<u>Volts</u>	<u>Hz</u>	<u>Phase</u>	<u>Rinse Heater (12 KW)</u>	<u>Rinse Heater (14 KW)</u>
Tempstar	208	50	1	04540-003-58-27	04540-003-58-28
Tempstar	208	50	3	04540-003-58-27	04540-003-58-28
Tempstar	208	60	1	04540-003-58-27	04540-003-58-28
Tempstar	208	60	3	04540-003-58-27	04540-003-58-28
Tempstar	230	50	1	04540-003-58-27	04540-003-58-28
Tempstar	230	50	3	04540-003-58-27	04540-003-58-28
Tempstar	230	60	1	04540-003-58-27	04540-003-58-28
Tempstar	230	60	3	04540-003-58-27	04540-003-58-28

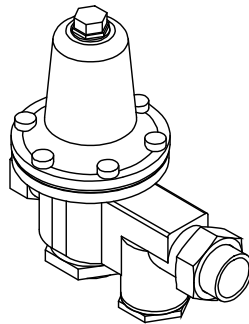
SECTION 5: PARTS SECTION

TEMPSTAR INCOMING PLUMBING/OUTLET PLUMBING ASSEMBLY (Y-STRAINER OPTION)

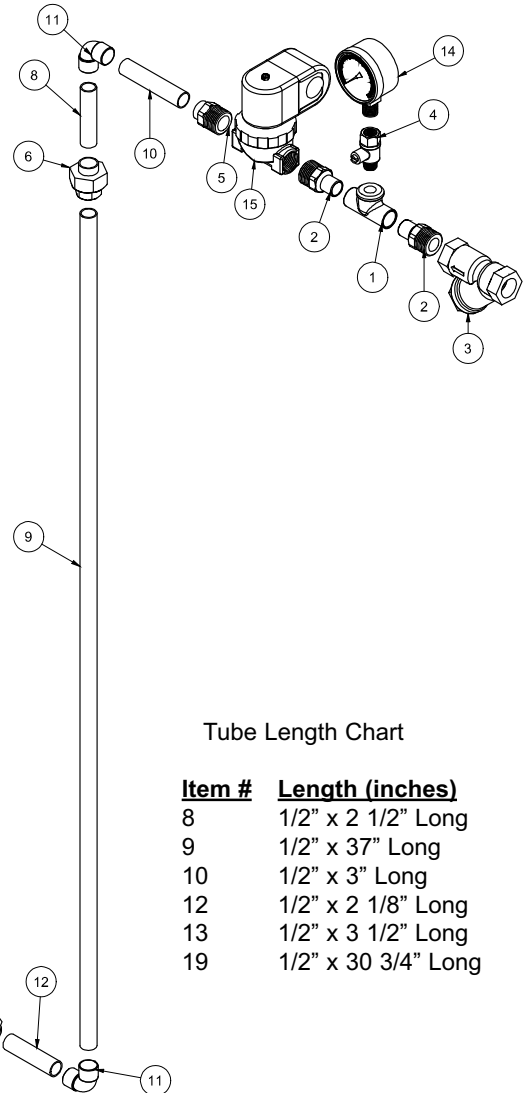
TEMPSTAR OUTLET PLUMBING
(Complete assembly)
05700-003-60-75



OPTIONAL FOR PLUMBING ASSEMBLY
REGULATOR
04820-100-04-07



TEMPSTAR INCOMING PLUMBING
(Complete Assembly)
05700-003-60-74



Tube Length Chart

Item #	Length (inches)
8	1/2" x 2 1/2" Long
9	1/2" x 37" Long
10	1/2" x 3" Long
12	1/2" x 2 1/8" Long
13	1/2" x 3 1/2" Long
19	1/2" x 30 3/4" Long

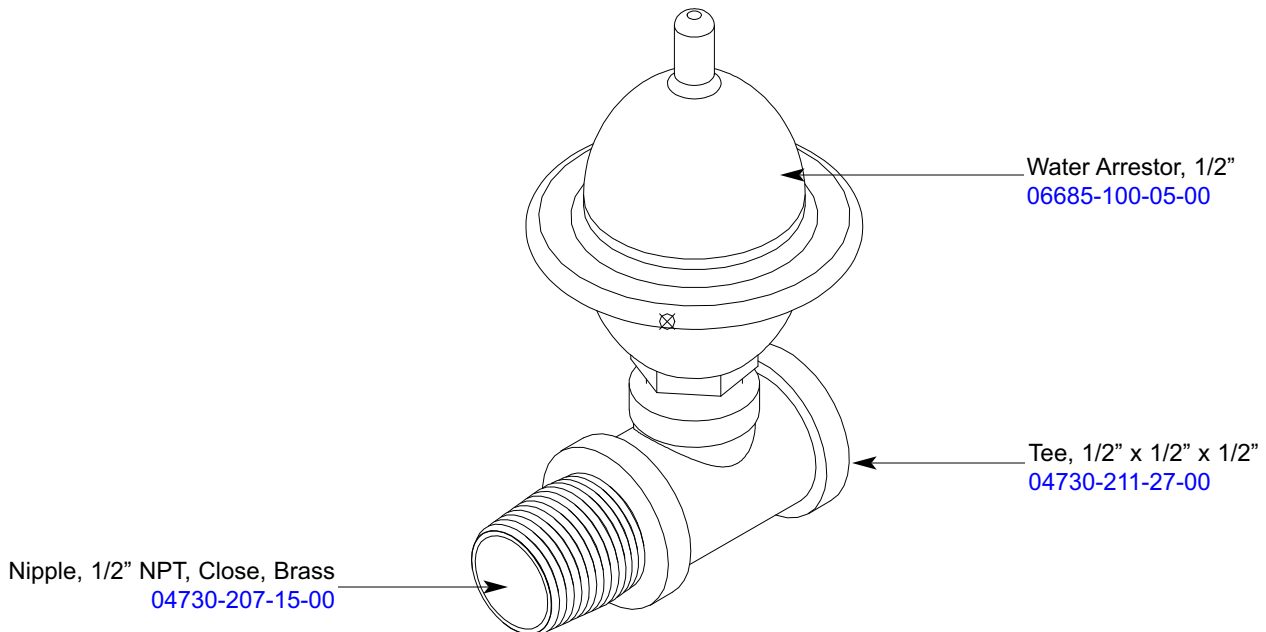
SECTION 5: PARTS SECTION

TEMPSTAR INCOMING PLUMBING/OUTLET PLUMBING ASSEMBLY/WPRK KIT OPTION (Y-STRAINER OPTION)

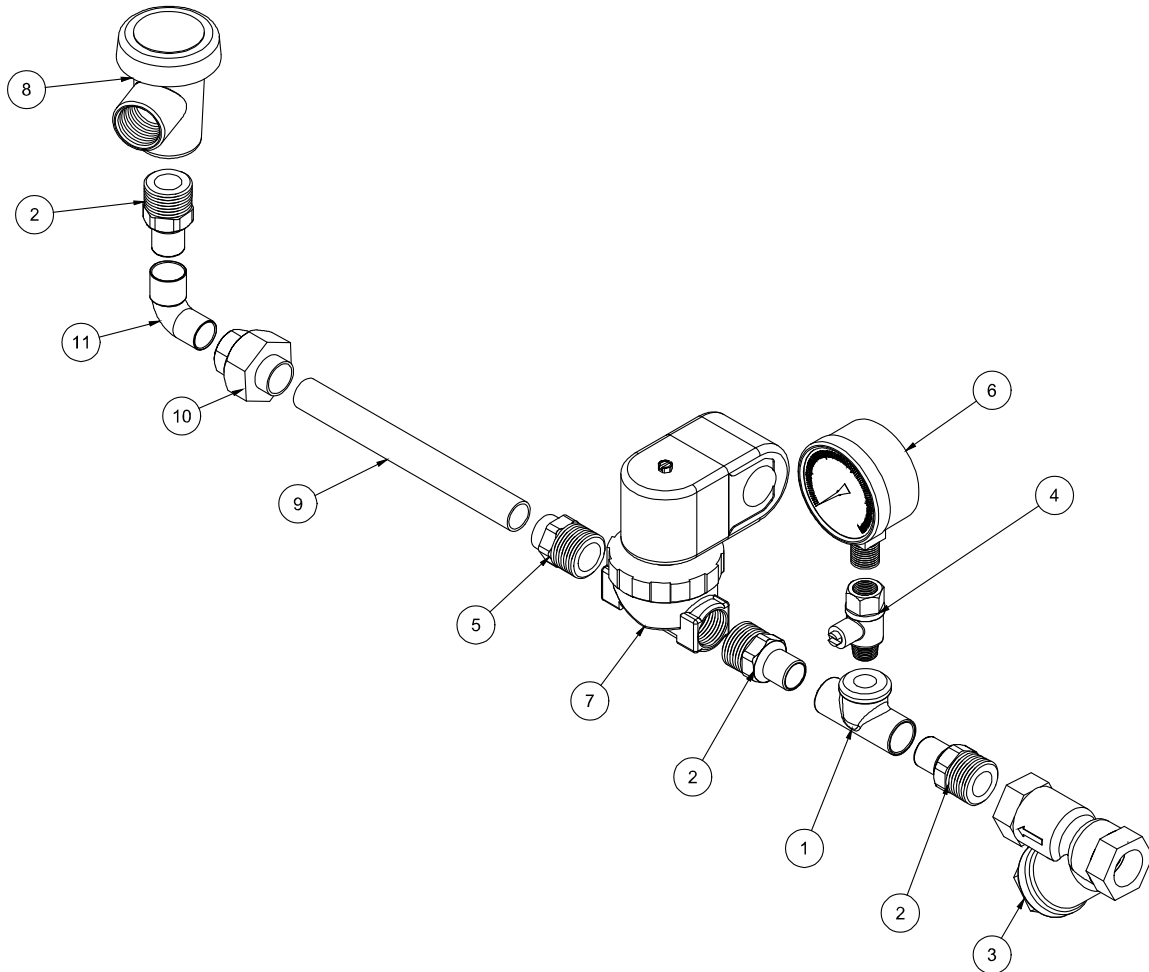
ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Fitting, Tee, 1/2" x 1/2" x 1/4"	04730-411-25-01
2	2	Adapter, 1/2" MNPT x CU Male	04730-011-59-53
3	1	Strainer, Y 1/2"	04730-217-01-10
4	1	Vave, Ball Test Cock 1/4" Bronze	04810-011-72-67
5	6	Adapter, 1/2"	04730-401-03-01
6	3	Union, 1/2"	04730-412-05-01
7	1	Bushing, HEX 3/4 MNPT-1/2 FNPT Brass	04730-002-56-27
8	3	F-Tube, Copper 1/2" x 2.5"	05700-002-17-38
9	2	F-Tube, Copper 1/2" x 37"	05700-003-60-80
10	1	F-Tubing, Copper 1/2" x 3"	05700-001-05-21
11	3	Elbow, 1/2" CU x CU, 90°	04730-406-01-01
12	2	F-Tube, Copper 1/2" x 2.406"	05700-003-60-79
13	1	F-Tube, Copper 1/2" x 3.5	05700-003-60-78
14	1	Gauge 0-100# Pressure	06685-111-88-34
15	1	Valve, 1/2" 208-240 Red	04810-100-09-18
16	1	Vacuum Breaker, 1/2" NPT	04820-003-06-13
17	1	Adapter, Male	04730-401-03-01
18	1	F-Tube, Copper 1/2" x 30.75"	05700-003-60-81
19	1	Elbow, 1/2" NPT 90 Brass	04730-011-42-96

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 Tempstar 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.

WPRK KIT OPTION



SECTION 5: PARTS SECTION
TEMPSTAR LT & TEMPSTAR NB INCOMING PLUMBING ASSEMBLY
(Y-STRAINER OPTION)
 (Complete Assembly) [05700-003-60-73](#)



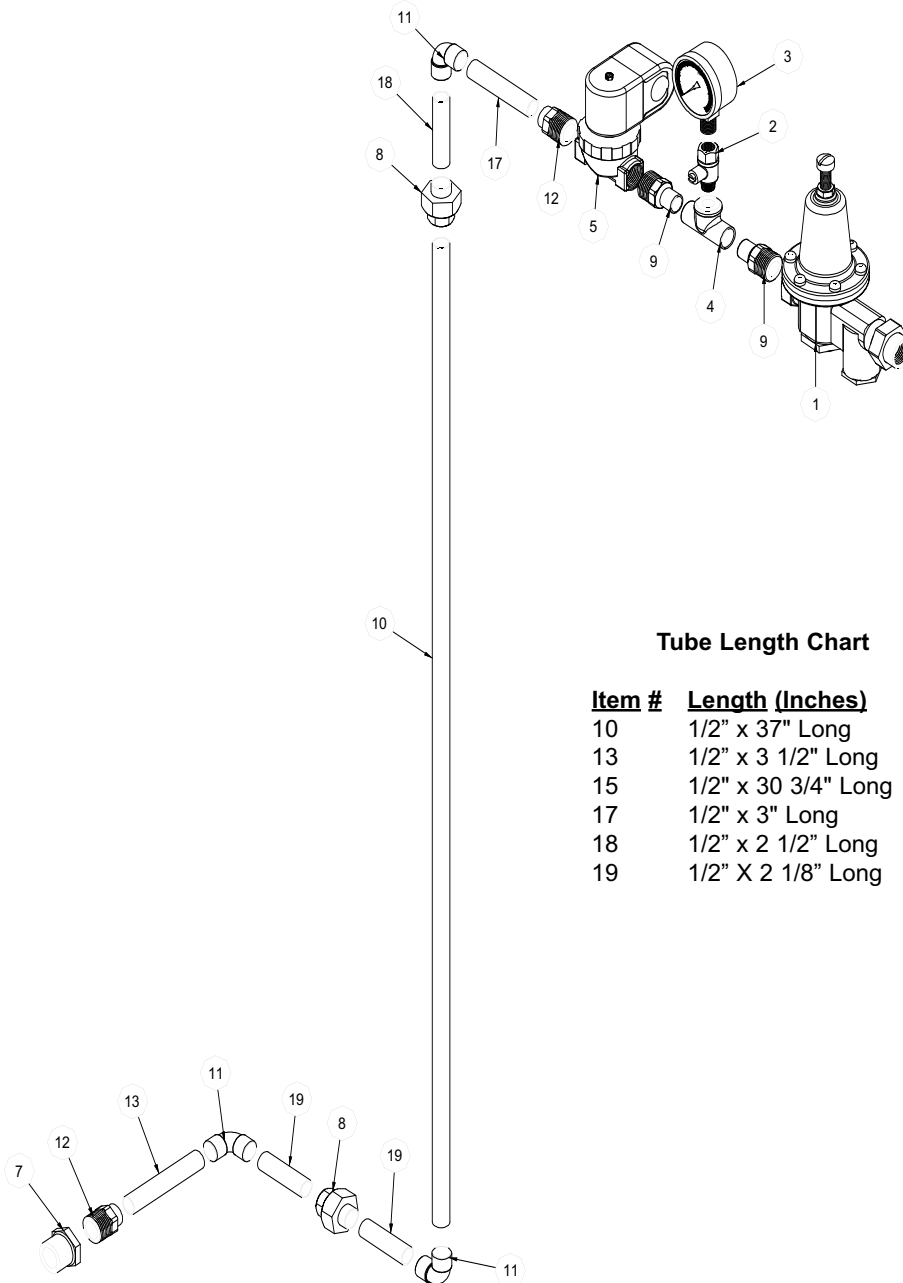
ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Tee, Brass, 1/2" x 1/2" x 1/4" NPT	04730-411-25-01
2	3	Adapter, 1/2" MNPT x Cu Male	04730-011-59-53
3	1	Strainer, Y 1/2"	04730-217-01-10
4	1	Valve, Ball, Bronze, 1/4" NPT	04810-011-72-67
5	1	Adapter, 1/2" Male/Cu to MSPS	04730-401-03-01
6	1	Pressure Gauge, 0-100 PSI	06685-111-59-66
7	1	Valve, Solenoid, 1/2" NPT 208-240V	04810-100-09-18
8	1	Vacuum Breaker, 1/2" NPT	04820-003-06-13
9	1	Tube, Copper 1/2" x 5.75	05700-002-91-03
10	1	Union, 1/2"	04730-412-05-01
11	1	Elbow, 1/2" 90° Cu to MSPS	04730-406-32-01

SECTION 5: PARTS SECTION

TEMPSTAR INCOMING PLUMBING/OUTLET PLUMBING ASSEMBLY (PRESSURE REGULATOR OPTION)

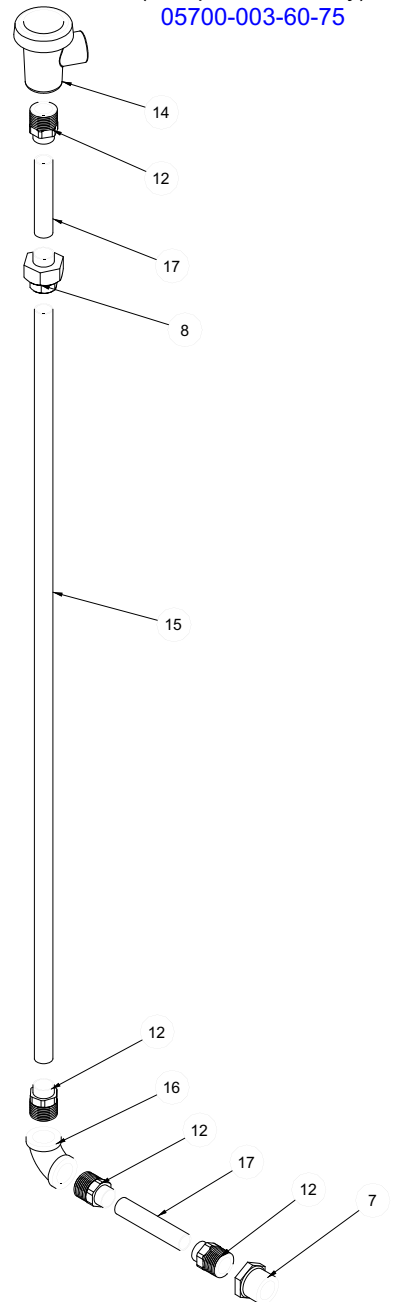
TEMPSTAR INCOMING PLUMBING
(Complete Assembly) [05700-003-60-74](#)

TEMPSTAR
OUTLET PLUMBING
(Complete assembly)
[05700-003-60-75](#)



Tube Length Chart

Item #	Length (Inches)
10	1/2" x 37" Long
13	1/2" x 3 1/2" Long
15	1/2" x 30 3/4" Long
17	1/2" x 3" Long
18	1/2" x 2 1/2" Long
19	1/2" X 2 1/8" Long



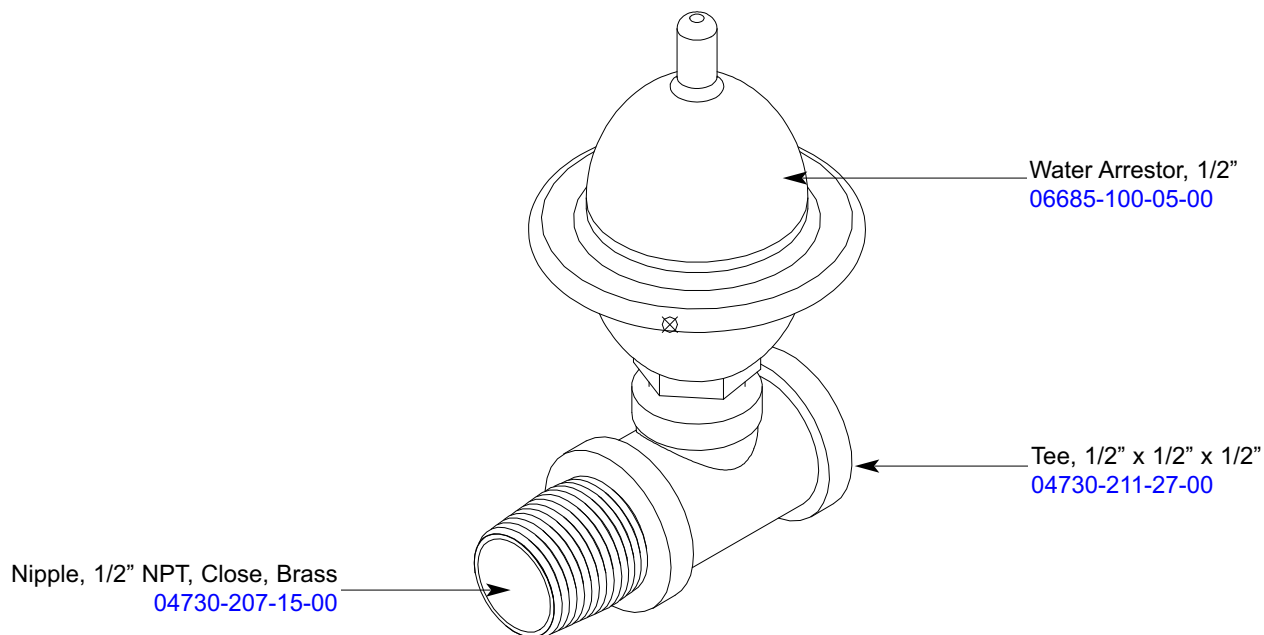
SECTION 5: PARTS SECTION

TEMPSTAR INCOMING PLUMBING/OUTLET PLUMBING ASSEMBLY/WPRK KIT OPTION (PRESSURE REGULATOR OPTION)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Water Pressure Regulator, 1/2" NPT	05700-100-04-07
2	1	Valve, Ball, 1/4" NPT	04810-011-72-67
3	1	Gauge, Pressure, 0-100 PSI	06685-111-88-34
4	1	Tee, Brass, 1/2" NPT x 1/2" x 1/4"	04730-411-25-01
5	1	Valve, Solenoid, 1/2" NPT	04730-100-09-18
6	2	Bracket, Booster Plumbing 1/2" (Not Shown)	05700-003-60-90
7	2	Bushing, HEX 3/4 MNPT-1/2 FNPT Brass	04730-002-56-27
8	3	Union, 1/2"	04730-406-01-01
9	2	Adapter, 1/2" MNPT x CU Male	04730-011-59-53
10	1	Tube, Copper	See Chart
11	3	Elbow, 1/2" CU x CU, 90°	04730-406-01-01
12	6	Adapter, 1/2"	04730-401-03-01
13	1	Tube, Copper	See Chart
14	1	Vacuum Breaker, 1/2" NPT	04820-003-06-13
15	1	Tube, Copper	See Chart
16	1	Elbow, 1/2" NPT, 90°, Brass	04730-011-42-96
17	3	Tube, Copper	See Chart
18	1	Tube, Copper	See Chart
19	2	Tube, Copper	See Chart

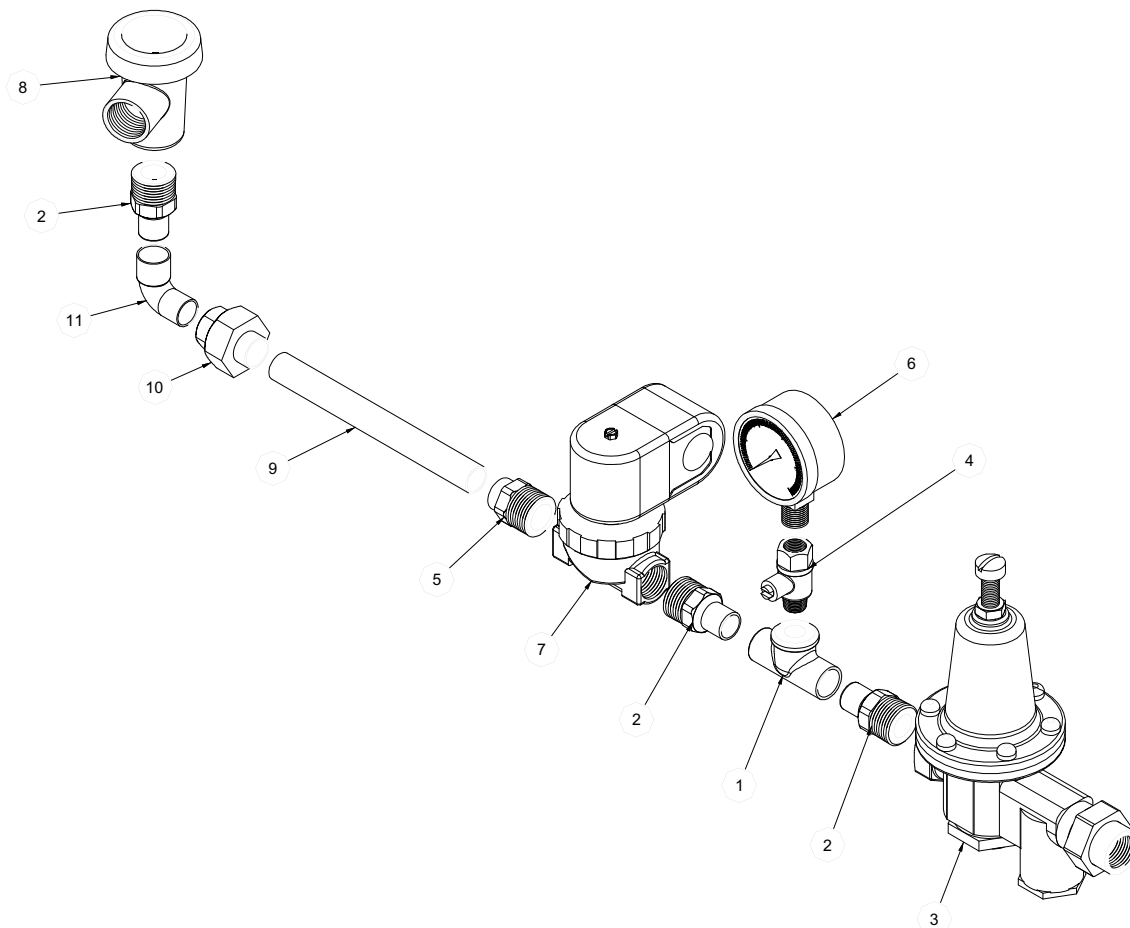
When servicing plumbing components, take care not to damage the threads of each individual item. Damaged threads can cause leaks and loss of pressure, which could adversely effect the performance of the Tempstar dishmachine. It is strongly recommended that teflon thread tape, used in conservative amounts, 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.

WPRK KIT OPTION



SECTION 5: PARTS SECTION

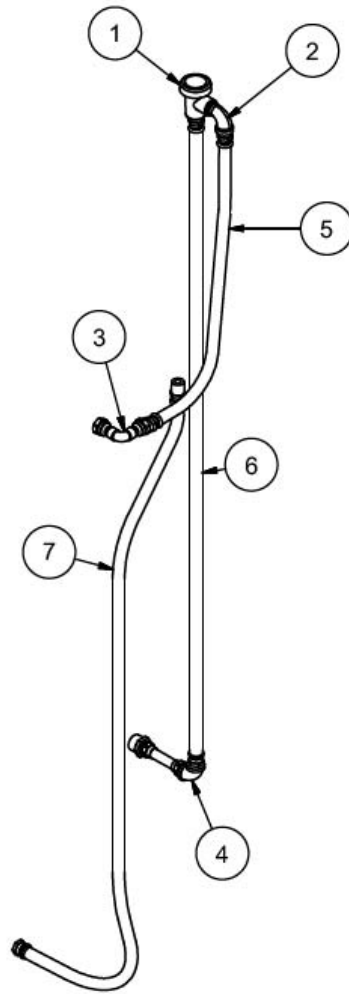
TEMPSTAR LT & TEMPSTAR NB INCOMING PLUMBING ASSEMBLY (PRESSURE REGULATOR OPTION) (Complete Assembly) 05700-003-60-73



ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Tee, Brass, 1/2" x 1/2" x 1/4" NPT	04730-411-25-01
2	3	Adapter, 1/2" MNPT x Cu Male	04730-011-59-53
3	1	Water Pressure Regulator, 1/2" NPT	04820-100-04-07
4	1	Valve, Ball, Bronze, 1/4" NPT	04810-011-72-67
5	1	Adapter, 1/2" Male/Cu to MSPS	04730-401-03-01
6	1	Pressure Gauge, 0-100 PSI	06685-111-59-66
7	1	Valve, Solenoid, 1/2" NPT 208-240V	04810-100-09-18
8	1	Vacuum Breaker, 1/2" NPT	04820-003-06-13
9	1	Tube, Copper 1/2" x 5.75	05700-002-91-03
10	1	Union, 1/2"	04730-412-05-01
11	1	Elbow, 1/2" 90° Cu to MSPS	04730-406-32-01

SECTION 5: PARTS SECTION

TEMPSTAR - VENTLESS PLUMBING ASSEMBLY



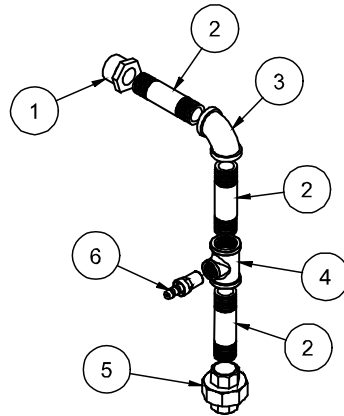
RINSE INJECTOR
09515-004-22-73



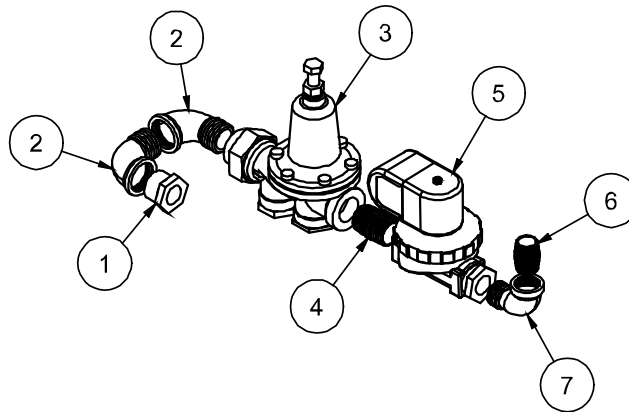
ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Vac Breaker 1/2 Brass	04820-003-06-13
2	1	Elbow, 90 Degree 1/2 Street Brass	04730-206-08-00
3	1	W-Plumbing, Rinse Injector	05700-004-19-83
4	1	A-Plumbing, Outlet w/ Heat Exc.	05700-004-19-12
5	1	Hose, 1/2" ID X 24" LG Red	05700-004-19-89
6	1	Hose, 1/2" ID X 60" LG Red	05700-004-19-90
7	1	Hose, 1/2" ID X 58" LG Blue	05700-004-19-91

SECTION 5: PARTS SECTION

TEMPSTAR - VENTLESS PLUMBING



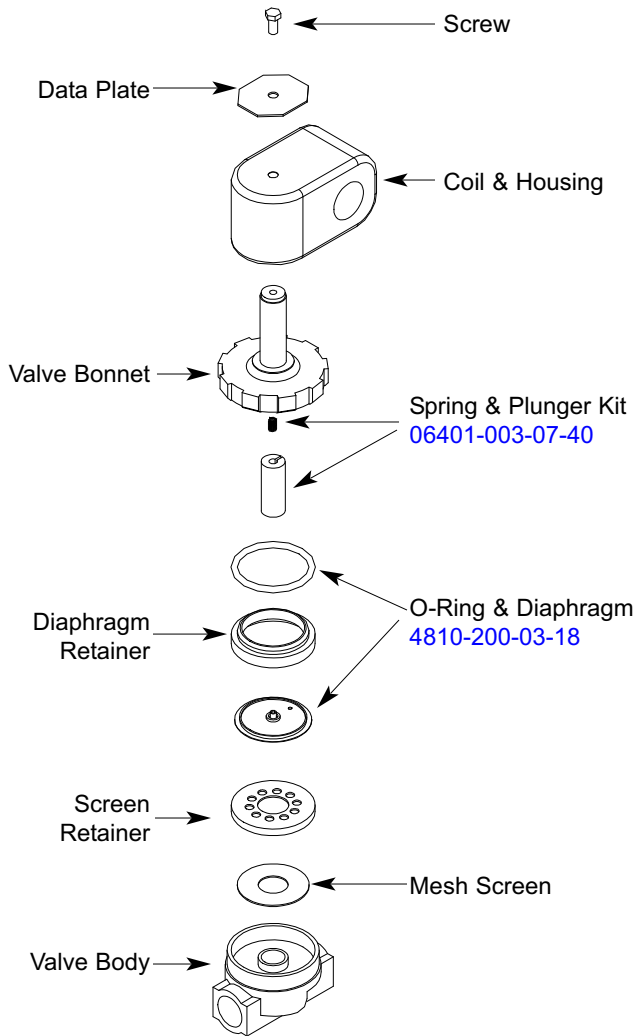
ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Bushing, Hex 3/4"M to 1/2" Brass	04730-002-56-27
2	3	Nipple, Brass 1/2" X 3" NPT	04730-004-20-10
3	1	Elbow, 1/2 NPT 90 Brass	04730-011-42-96
4	1	Tee, 1/2 FNPT X 1/2 FNPT 1/4 FNPT	04730-002-22-56
5	1	Union, 1/2" X 1/2" Brass	04730-003-62-44
6	1	Fitting, 1/4 Barb 1/4 MNPT Swivel	04730-011-95-41



ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Bushing, Hex 3/4"M to 1/2" Brass	04730-002-56-27
2	3	Elbow, 3/4 Street Brass 90 Degree	04730-206-04-34
3	1	Regulator, Pressure 3/4	06685-011-58-22
4	1	Nipple, 3/4 NPT X 1-3/8 Closed Brass	04730-207-34-00
5	1	Valve, 3/4" - 220V Solenoid	04810-100-03-18
6	1	Nipple, 1/2 Closed Brass	04730-207-15-00
7	1	Elbow, 90 Degree 1/2 Street Brass	04730-206-08-00

SECTION 5: PARTS SECTION

1/2" SOLENOID VALVE & 1/2" NPT VACUUM BREAKER REPAIR PARTS KITS



Complete 110 Volt Solenoid Valve Assembly, 1/2"

04810-100-12-18

Coil & Housing only

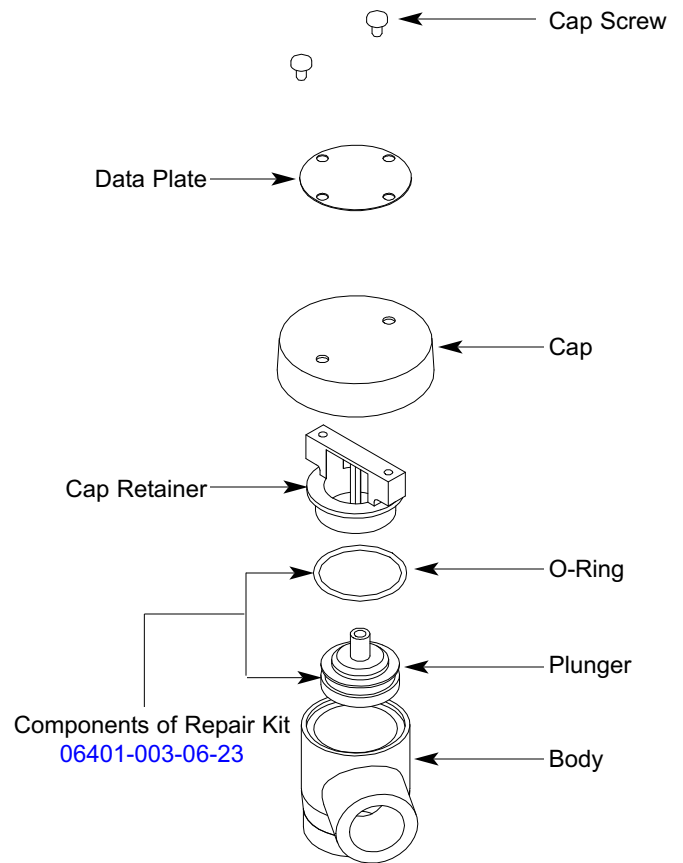
06401-003-07-43

Complete 240 Volt Solenoid Valve Assembly, 1/2"

04810-100-09-18

Coil & Housing only

06401-003-07-44

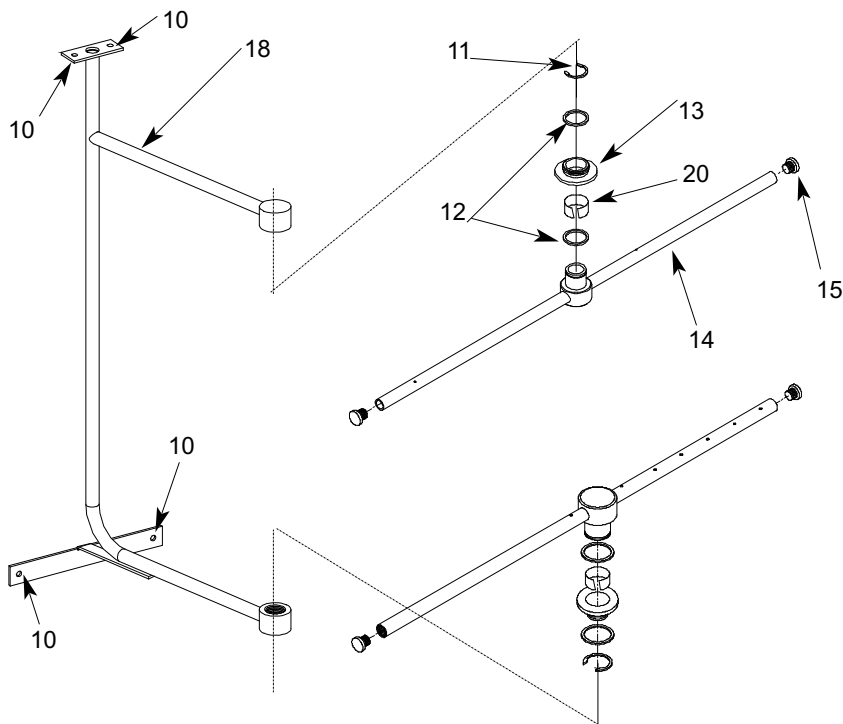


Complete Vacuum Breaker Assembly, 1/2" NPT

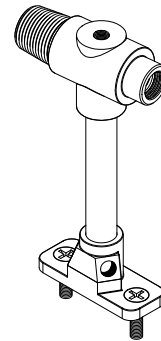
04820-003-06-13

SECTION 5: PARTS SECTION

WASH & RINSE ARM/MANIFOLD ASSEMBLIES

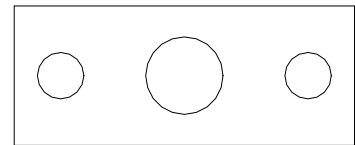


DETAIL "A"
FINAL RINSE ARMS & MANIFOLD

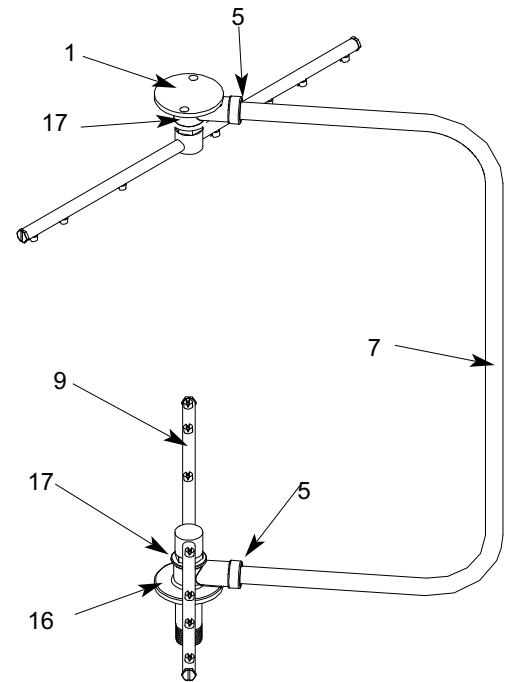
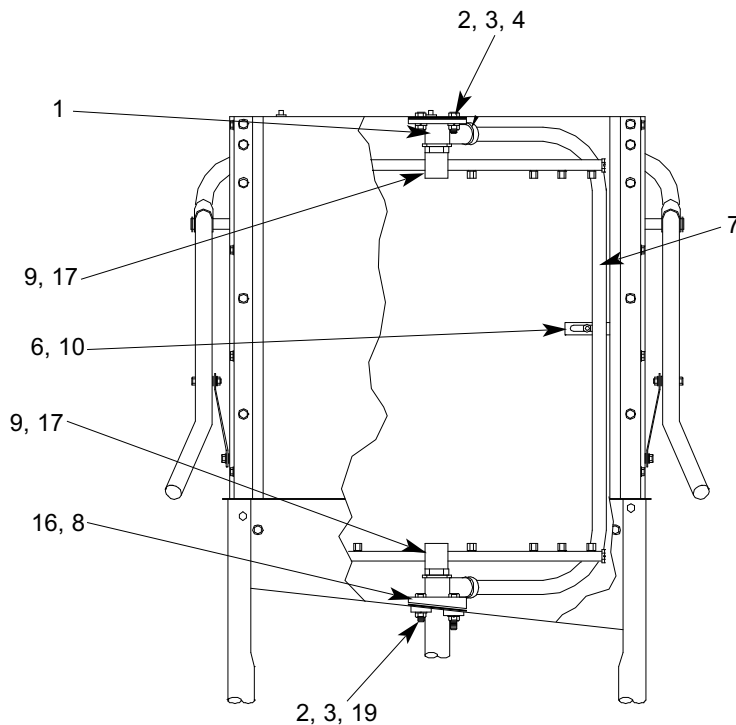


Rinse Injector Weldment
1 per machine
[05700-002-56-75](tel:05700-002-56-75)

Plug, 1/8" NPT, Brass
3 per Rinse Injector
[04730-209-07-37](tel:04730-209-07-37)



Rinse Injector Gasket
2 per machine
[05330-111-42-81](tel:05330-111-42-81)

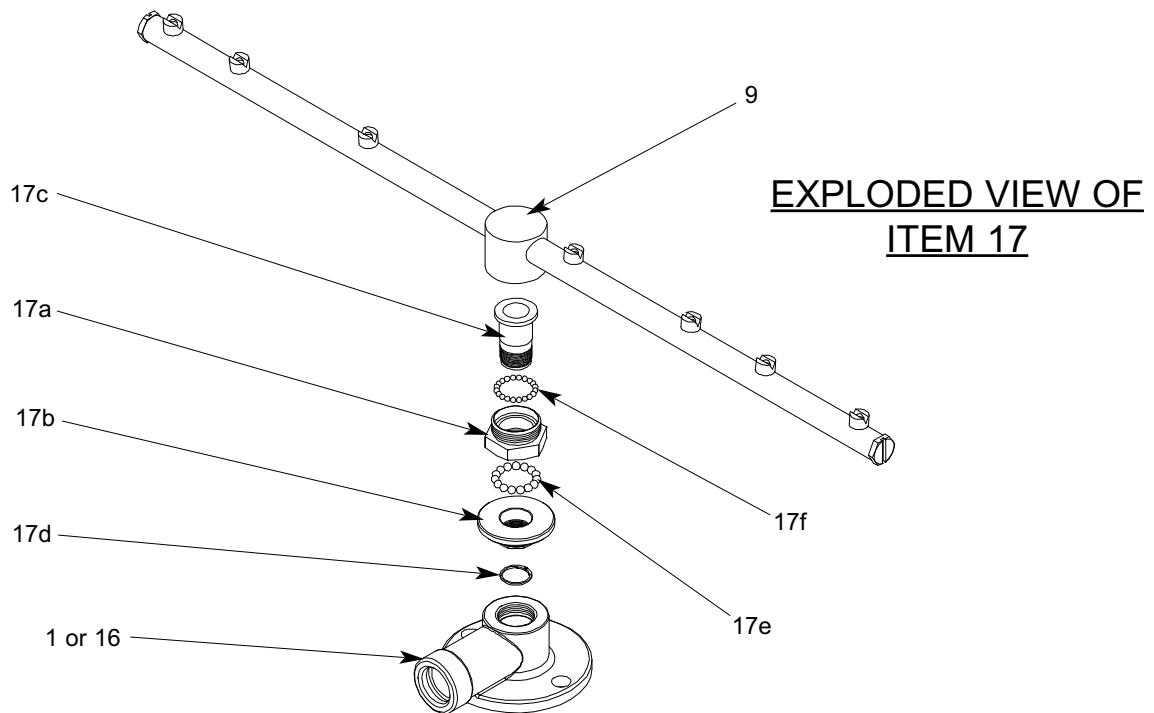


DETAIL "B"
WASH ARMS & MANIFOLD

SECTION 5: PARTS SECTION

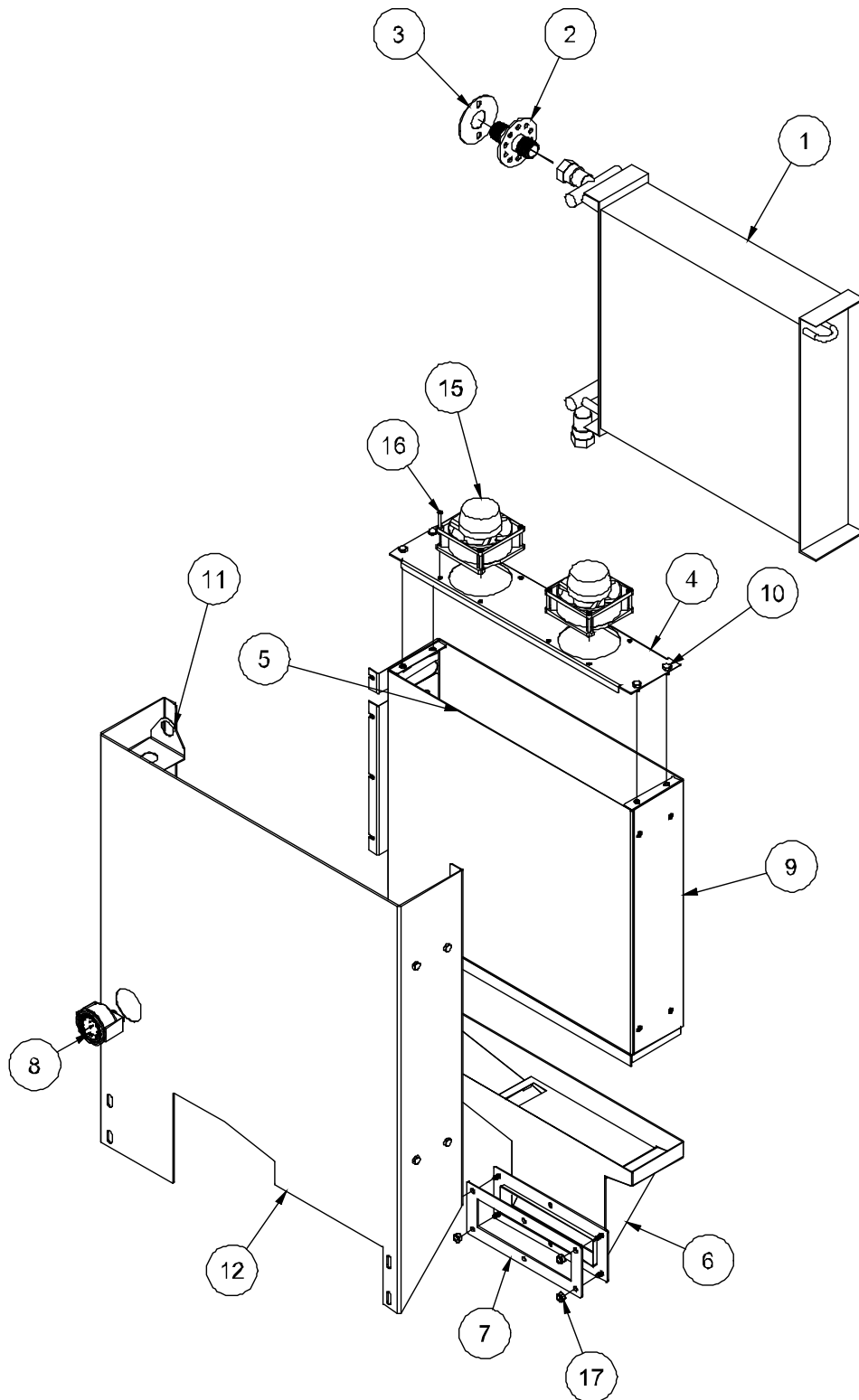
WASH & RINSE ARM/MANIFOLD ASSEMBLIES (CONTINUED)

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	05700-131-15-07
8	2	Gasket, Manifold	05700-111-35-03
9	2	Wash Arm	05700-021-35-93
10	5	Locknut, 1/4"-20 S/S Hex with Nylon Insert	05310-374-01-00
11	2	Clip, Retaining, Rinse Head Bushing	05340-112-01-11
12	4	Rinse Arm Washer	05330-011-42-10
13	2	Bushing, Rinse Head	05700-021-33-84
14	2	Rinse Arm	05700-003-58-94
15	4	Plug, Rinse Arm	04730-609-04-00
16	1	Lower Wash Manifold	05700-031-46-00
17	2	Bearing Assembly	05700-021-35-97
17a	1	Hub Nut	05700-011-35-94
17b	1	Hub Bushing	05700-011-35-96
17c	1	Hub Spindle	05700-011-35-95
17d	1	Ring, Retainer	05340-011-37-81
17e	15	3/16" Stainless Steel Ball	03120-100-02-00
17f	20	1/8" Stainless Steel Ball	03120-011-37-82
18	1	Rinse Manifold Assembly	05700-021-47-61
19	2	Bolt, Hex 3/8"-16 x 1 1/4" Long	05305-276-10-00
20	2	Bearing, Rinse Head	03120-004-12-13



SECTION 5: PARTS SECTION

TEMPSTAR HH VENTLESS HEAT RECOVERY SYSTEM ASSEMBLY



SECTION 5: PARTS SECTION

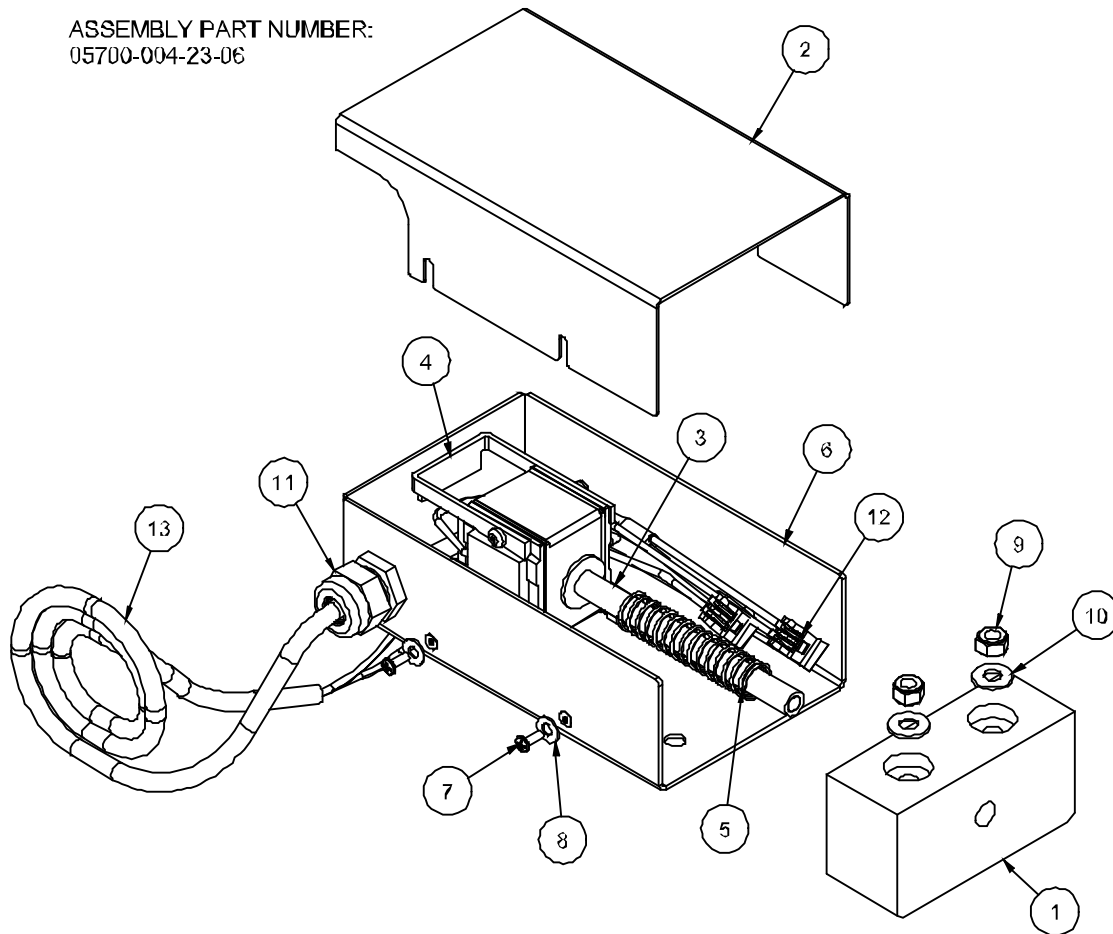
TEMPSTAR HH VENTLESS HEAT RECOVERY SYSTEM ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1		Coil, Heat Exchanger	04420-004-19-61
2		Inlet, Cold Water	05700-004-19-01
3		Ring, Water Inlet	05700-004-19-24
4		Plate, Fan Mounting	05700-004-18-07
5		Upper Shroud	05700-004-18-06
6		Exhaust Box	05700-004-18-04
7		Gasket, Heat Exchanger	05330-004-18-22
8		Gauge	06680-011-86-42
9		Coil Box Back	05700-004-18-03
10		Bolt, 1/4-20 X 3/8 Hex	05305-274-20-00
11		Bracket, Vacuum Breaker	05700-004-18-91
12		Shroud, Heat Exchanger	05700-004-18-92
13		Nut, Lock 10-24 S/S Hex w/ Nylon	05310-373-01-00
14		Washer, Flat	05311-173-02-00
15		Fan, 3.62 Square, 85-236V AC Corrosion Resistant	05999-004-19-46
16		Screw, 6-32 X 1 1/2 Long	05305-003-11-33
17		Nut, Lock 1/4-20 Hex Nylon Insert	05310-374-01-00

SECTION 5: PARTS SECTION

TEMPSTAR VENTLESS DOOR INTERLOCK

ASSEMBLY PART NUMBER:
05700-004-23-06



ITEM	QTY	DESCRIPTION
------	-----	-------------

1	1	Guide Block, Door Lock
2	1	F-Cover, Door Lock Mounting
3	1	W-Rod, Interlock Weldment
4	1	Soleniod, Horizontal 1" Push
5	1	Spring, Comp.
6	1	W-Base, Door Interlock Box
7	8	Screw 3/8 Pan Head
8	8	Washer, Flat #10
9	2	Locknut, 1/4-20
10	2	Washer, S/S 1/4-20 I.D.
11	1	Fitg, 3216 Liqtite Blk
12	2	Connector, 2-Conductor
13	1	Cord, SJ 55" LG

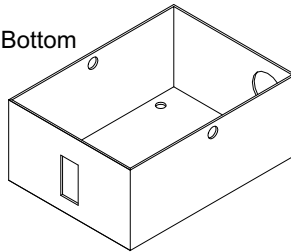
Mfg. No.

09330-004-22-72
05700-004-22-80
05700-004-23-15
04820-004-24-11
05935-004-24-10
05700-004-24-25
05305-171-02-00
05311-173-02-00
05310-374-01-00
05311-174-01-00
05975-011-59-50
05935-004-03-49
05700-004-24-31

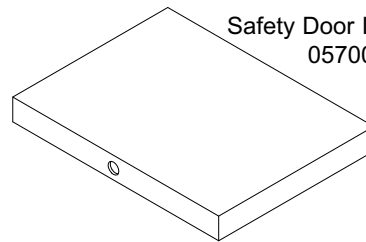
SECTION 5: PARTS SECTION

SAFETY DOOR INTERLOCK (SDI) /EXHAUST FAN CONTROL/TRANSFORMER MOUNTING BOX

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



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

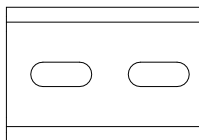
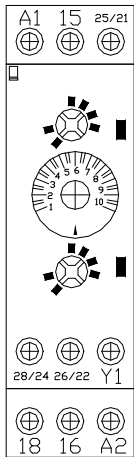


Other Safety Door Interlock (SDI) components (not shown): DESCRIPTION

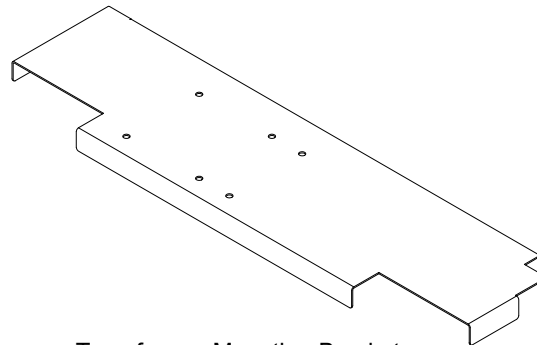
Pipe Clamp (found on the side of the machine)
Solenoid, Electrical Interlock Option
Relay

Mfg. No.

05700-000-35-05
04810-100-61-33
05945-111-47-51

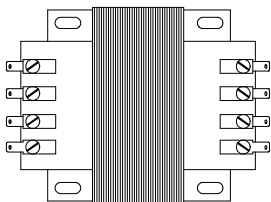


Exhaust Fan
Control
2" Din Rail
05700-002-36-09

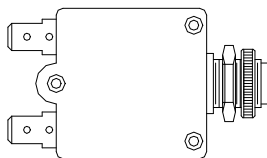


Transformer Mounting Bracket
05700-031-62-82

Exhaust Fan
Control
Delay Timer
05945-011-65-44



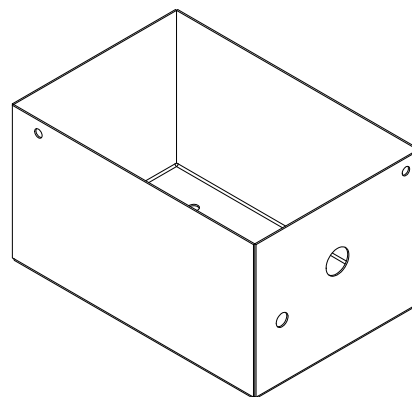
415/440/460V
Transformer
05950-111-65-93



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

380V Transformer
05950-111-64-17

SECTION 5: PARTS SECTION

GO*BOX COMPONENTS

A GO*BOX is a kit of the most needed parts for a particular model or model family to successfully effect a repair in the first call 90% or more of the time.

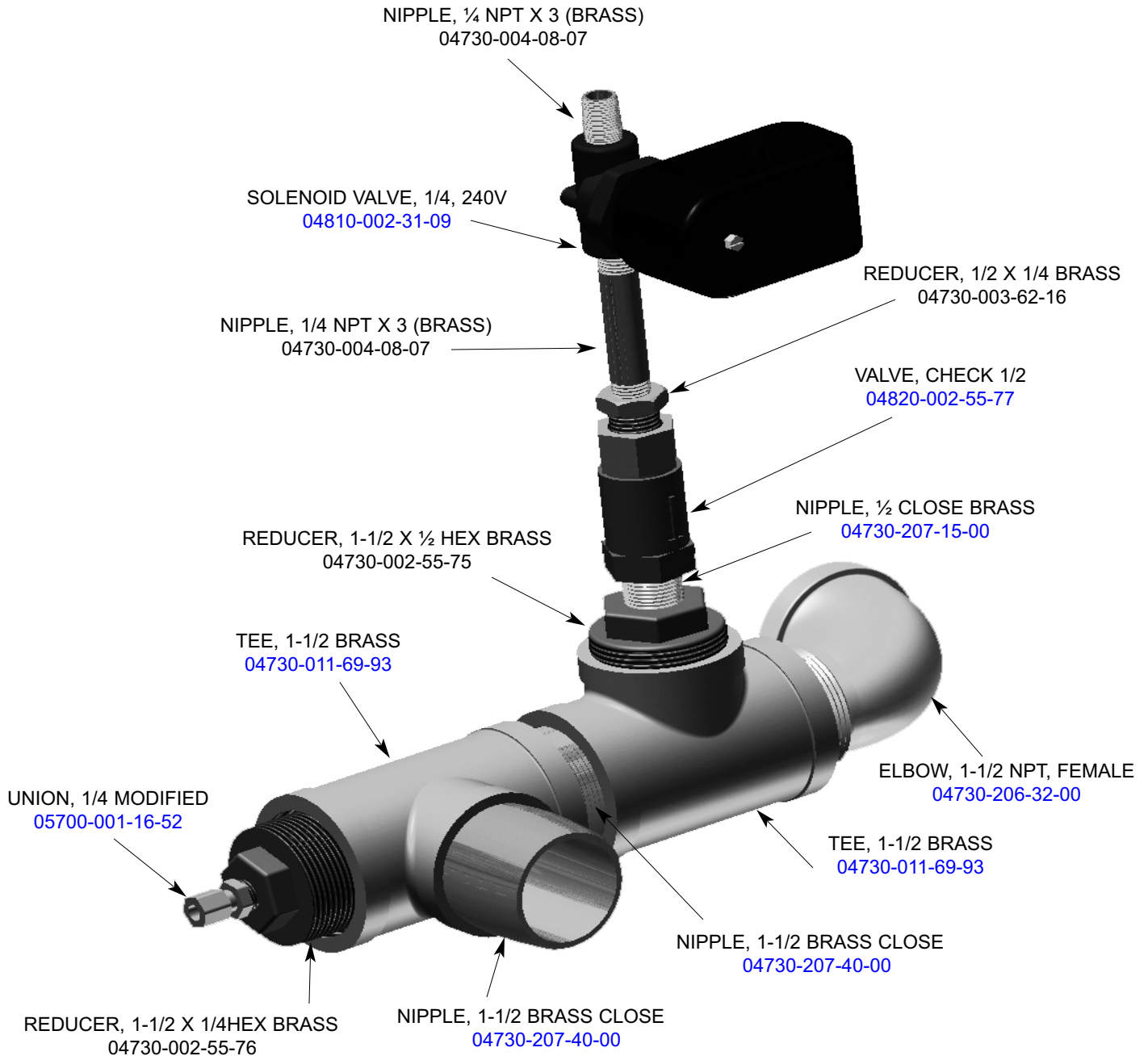
The following components may be ordered together using the following Mfg. No.: 06401-003-62-04

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Contactor, Rinse/Wash Heater	05945-109-01-69
2	1	Contactor, Wash Motor	05945-002-74-20
3	1	Gauge, Pressure, 0-100 PSI	06685-111-88-34
4	1	Thermometer, 96" Capillary	06685-111-68-49
5	1	Thermometer, 48" Capillary	06685-111-68-48
6	1	Thermostat, Rinse Operating	06401-140-00-33
7	1	Thermostat, Wash Operating	06401-140-00-32
8	1	Thermostat, Hi-Limit	05930-011-49-43
9	1	Liquid Level Control	06680-200-08-21
10	1	Probe, water level sensing	06680-200-02-68
11	1	Magnet, Door	05930-111-51-68
12	6	Glide, Door Edge	05700-111-33-59
13	2	O-Ring Wash Manifold	05330-111-35-15
14	1	Relay, Control 240V 50/60Hz	05945-111-47-51
15	1	Seal, Mechanical Pump (S/S Pumps)	05330-002-34-22
16	1	O-Ring, Wash Pump Gasket	05330-002-81-83
17	1	Switch, Door, Magnetic Reed	05930-111-51-69
18	2	Snap Ring, Retaining, Rinse Arm	05340-112-01-11
19	1	Bearing Assembly, Wash Arm	05700-021-35-97
20	1	Switch, Power Push Button	05930-002-29-13
21	1	Timer, Universal	05945-003-33-09
22	4	Washer, Rinse Arm Nylatron	05330-011-42-10
23	1	Vacuum Breaker 1/2" Brass	04820-003-06-13
24	1	Valve, Solenoid, 1/2", 208-220V	04810-100-09-18
*	1	Pump & Motor Assembly, S/S Special pricing available when purchased with above GO*BOX. Call for details.	06105-002-69-78

SECTION 5: PARTS SECTION

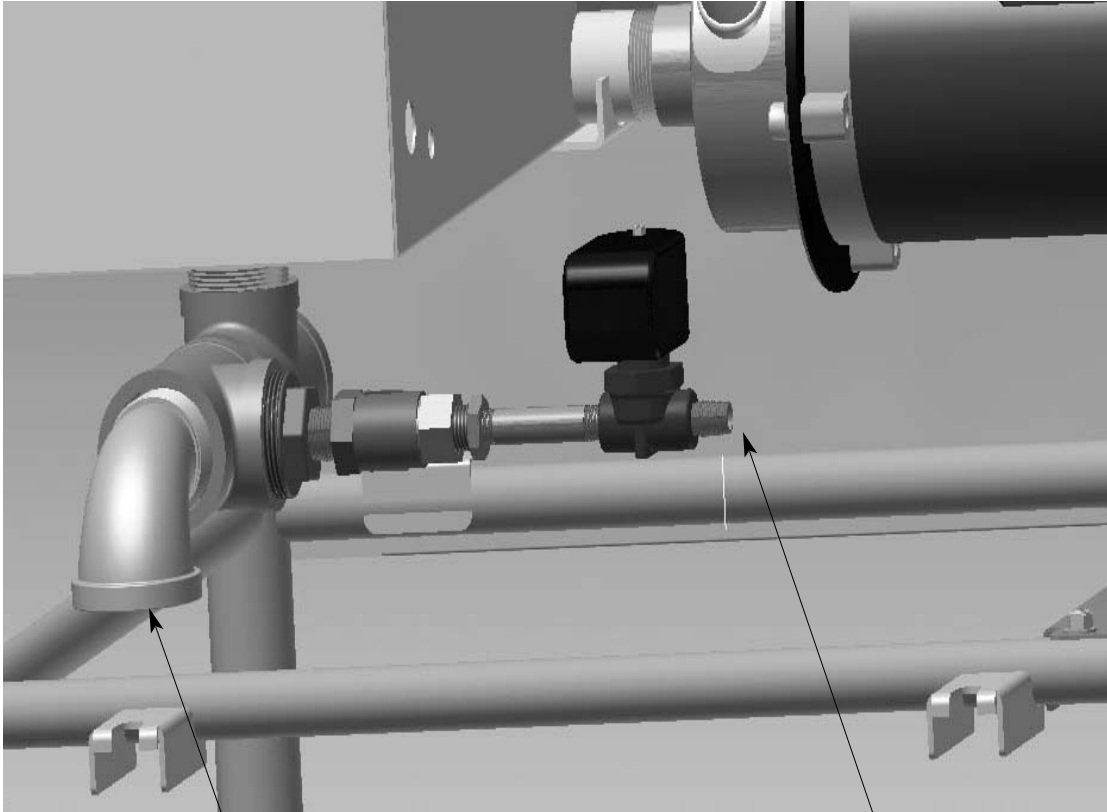
DRAIN QUENCH ASSEMBLY

Drain Quench Assembly 06401-004-07-86



SECTION 5: PARTS SECTION
DRAIN QUENCH ASSEMBLY (CONTINUED)

BACK OF MACHINE VIEW



Connect 1 1/2" drain plumbing
(elbow can be removed if not needed)

Connect 1/4" cold water line

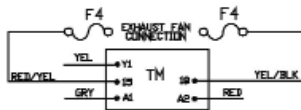
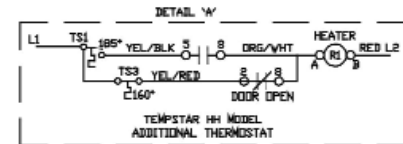
SECTION 6A: ELECTRICAL SCHEMATICS FOR TOP MOUNT UNITS

SECTION 6: ELECTRICAL SCHEMATICS

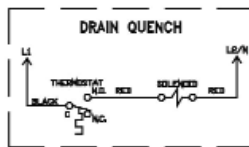
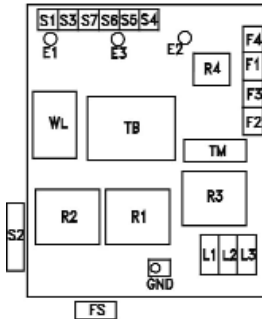
SOLID STATE 208-230 VOLT - 50/60 HERTZ - SINGLE & THREE PHASE

LEGEND

L1 L2 L3 POWER DISTRIBUTION BLOCK
 GND GROUND
 H1 RINSE HEATER
 H2 WASH HEATER
 M1 WASH MOTOR
 R1 RINSE HEATER CONTACTOR
 R2 WASH HEATER CONTACTOR
 R3 WASH MOTOR CONTACTOR
 R4 CONTROL RELAY
 F1 CONSTANT VOLTAGE CONNECTION
 F2 DETERGENT DISPENSER FUSE BLOCK
 F3 RINSE DISPENSER FUSE BLOCK
 F4 EXHAUST FAN FUSE BLOCK
 S1 POWER SWITCH
 S2 DOOR SWITCH
 S3 AUTO/MANUAL (DELIME) SWITCH
 S4 CYCLE SELECTOR
 E1 POWER LIGHT
 E2 HEATER OVERLOAD LIGHT
 E3 CYCLE LIGHT
 HLTS WASH HEATER HIGH LIMIT
 TS1 RINSE HEATER THERMOSTAT
 TS2 WASH HEATER THERMOSTAT
 HP HIGH WATER LEVEL PROBE
 WL WATER LEVEL CONTROL
 FS RINSE/FILL SOLENOID
 TB TIMER BOARD
 TM EXHAUST FAN TIMER
 PB1 RINSE TEMP PROBE
 PB2 WASH TEMP PROBE
 RF RECOVERY FANS
 DI DOOR INTERLOCK



CONTROL BOX LAYOUT



DIP SWITCH SETTINGS

TEMPSTAR

ON	1	2	3	4	5	6	7	8
↑	0	0	0	0	0	0	0	0

TEMPSTAR HH

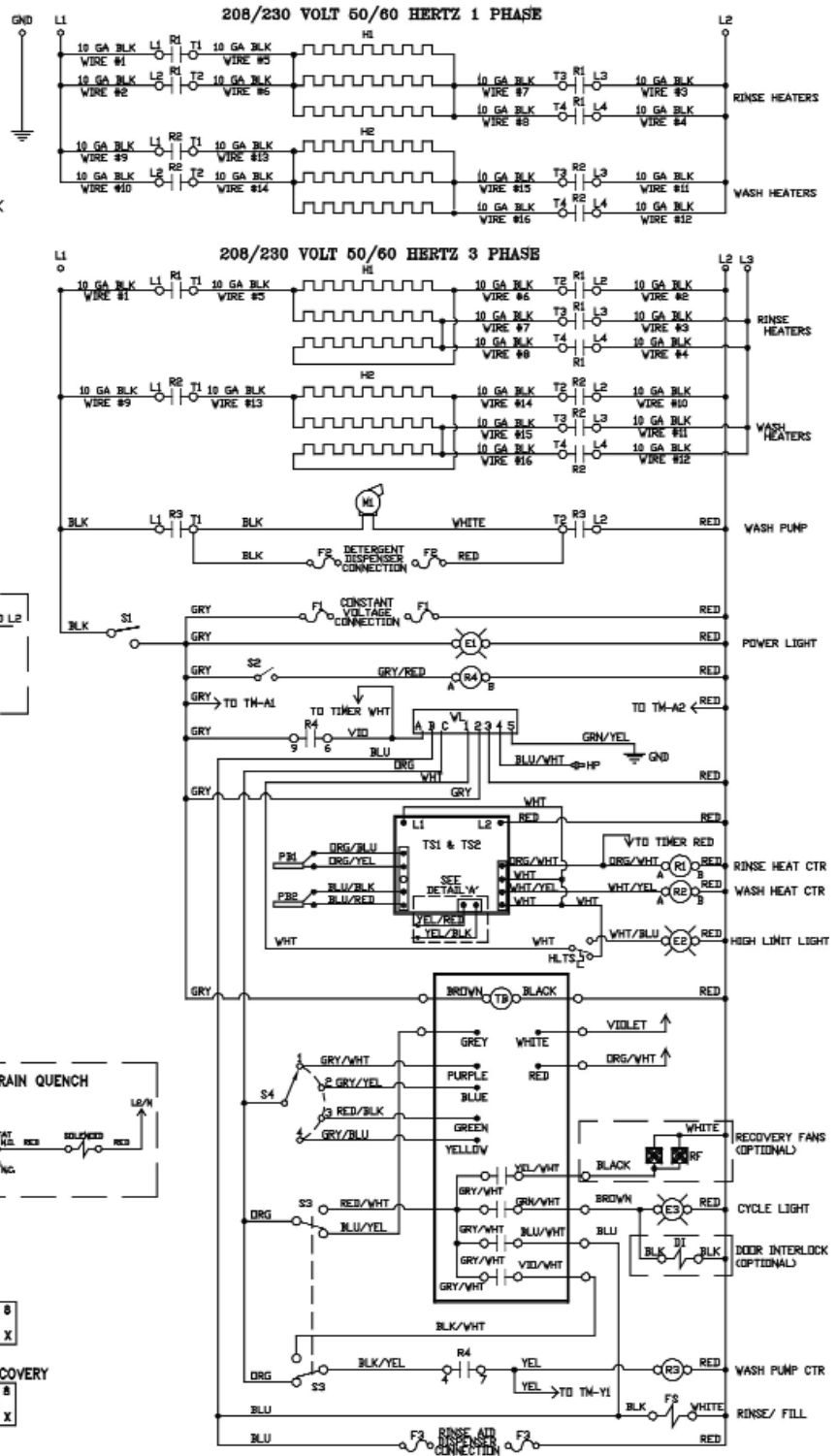
ON	1	2	3	4	5	6	7	8
↑	0	0	0	0	0	0	0	0

WITH HEAT RECOVERY

ON	1	2	3	4	5	6	7	8
↑	0	0	0	0	0	0	0	0

HH WITH HEAT RECOVERY

ON	1	2	3	4	5	6	7	8
↑	0	0	0	0	0	0	0	0

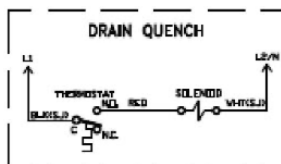
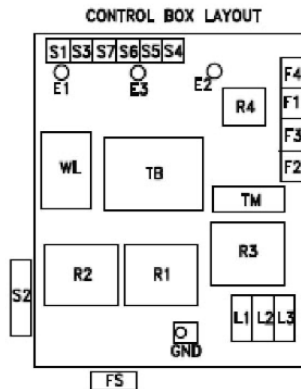
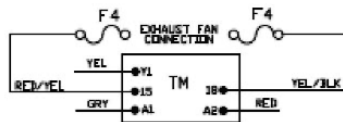
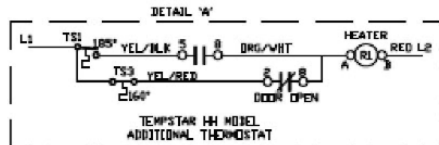


SECTION 6: ELECTRICAL SCHEMATICS

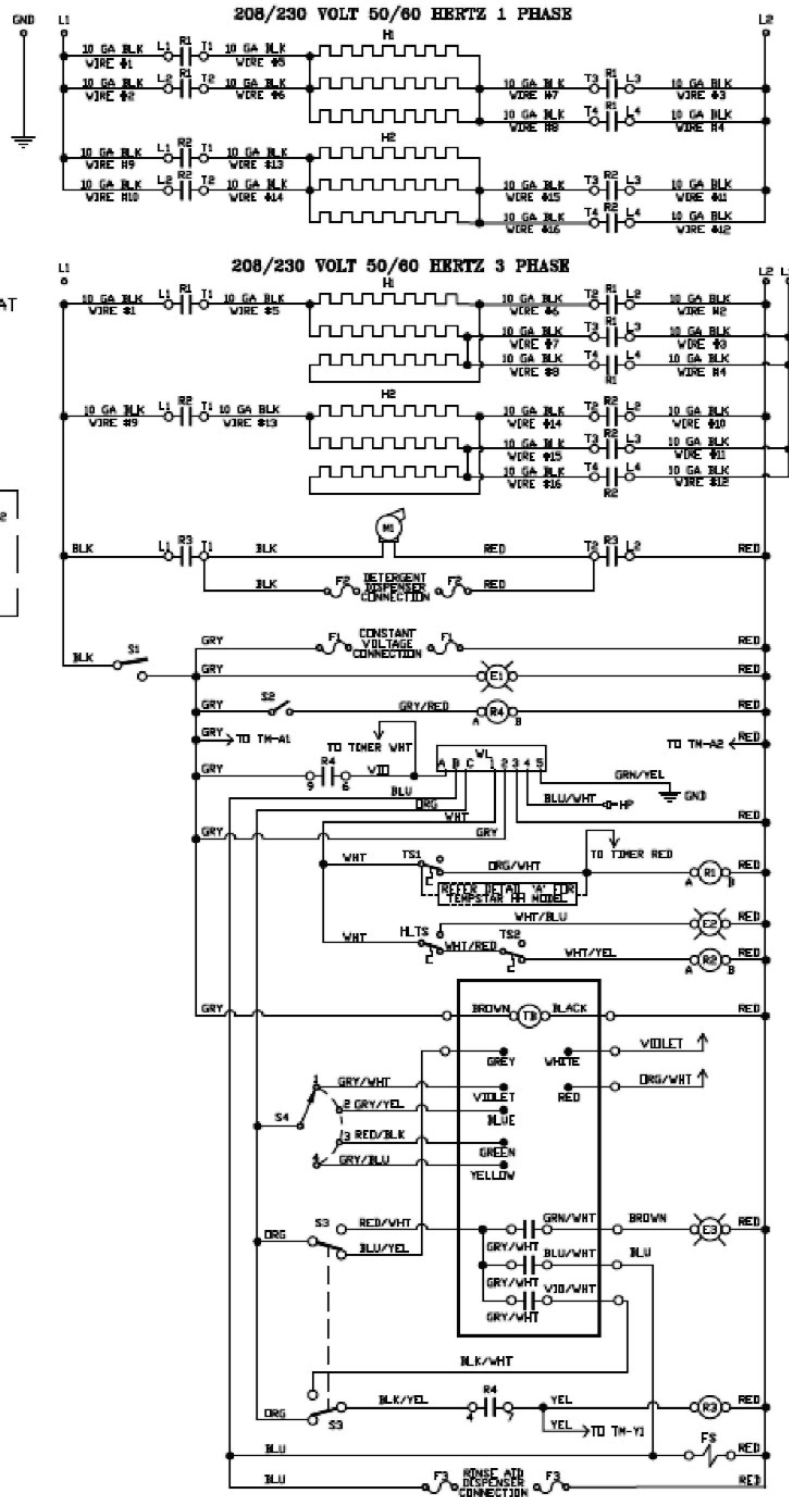
TEMPSTAR (TOP MOUNT W/ CYCLE SWITCHES) 208-230 VOLT - 50/60 HERTZ - SINGLE & THREE PHASE

LEGEND

L1 L2 L3	POWER DISTRIBUTION BLOCK
GND	GROUND
H1	RINSE HEATER
H2	WASH HEATER
M1	WASH MOTOR
R1	RINSE HEATER CONTACTOR
R2	WASH HEATER CONTACTOR
R3	WASH MOTOR CONTACTOR
R4	CONTROL RELAY
F1	CONSTANT VOLTAGE CONNECTION
F2	DETERGENT DISPENSER FUSE BLOCK
F3	RINSE DISPENSER FUSE BLOCK
F4	EXHAUST FAN FUSE BLOCK
S1	POWER SWITCH
S2	DOOR SWITCH
S3	AUTO/MANUAL (DELIME) SWITCH
S4	CYCLE SELECTOR
E1	POWER LIGHT
E2	HEATER OVERLOAD LIGHT
E3	CYCLE LIGHT
HLTS	WASH HEATER HIGH LIMIT THERMOSTAT
TS1	RINSE HEATER THERMOSTAT 1
TS2	WASH HEATER THERMOSTAT
HP	HIGH WATER LEVEL PROBE
WL	WATER LEVEL CONTROL
FS	RINSE/FILL SOLENOID
TB	TIMER BOARD
TM	EXHAUST FAN TIMER

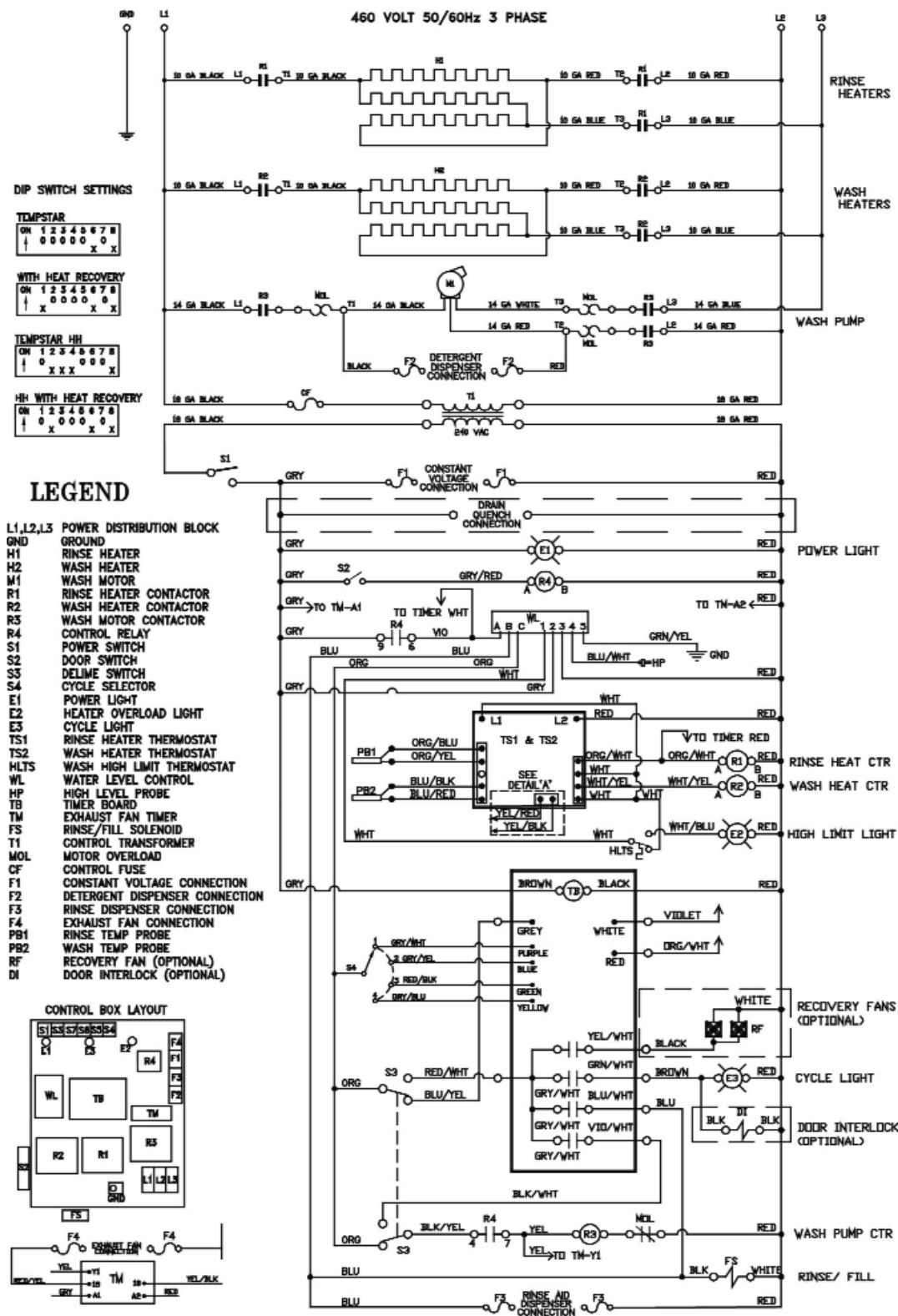


TEMPSTAR/TEMPSTAR HH ELECTRICAL DIAGRAM



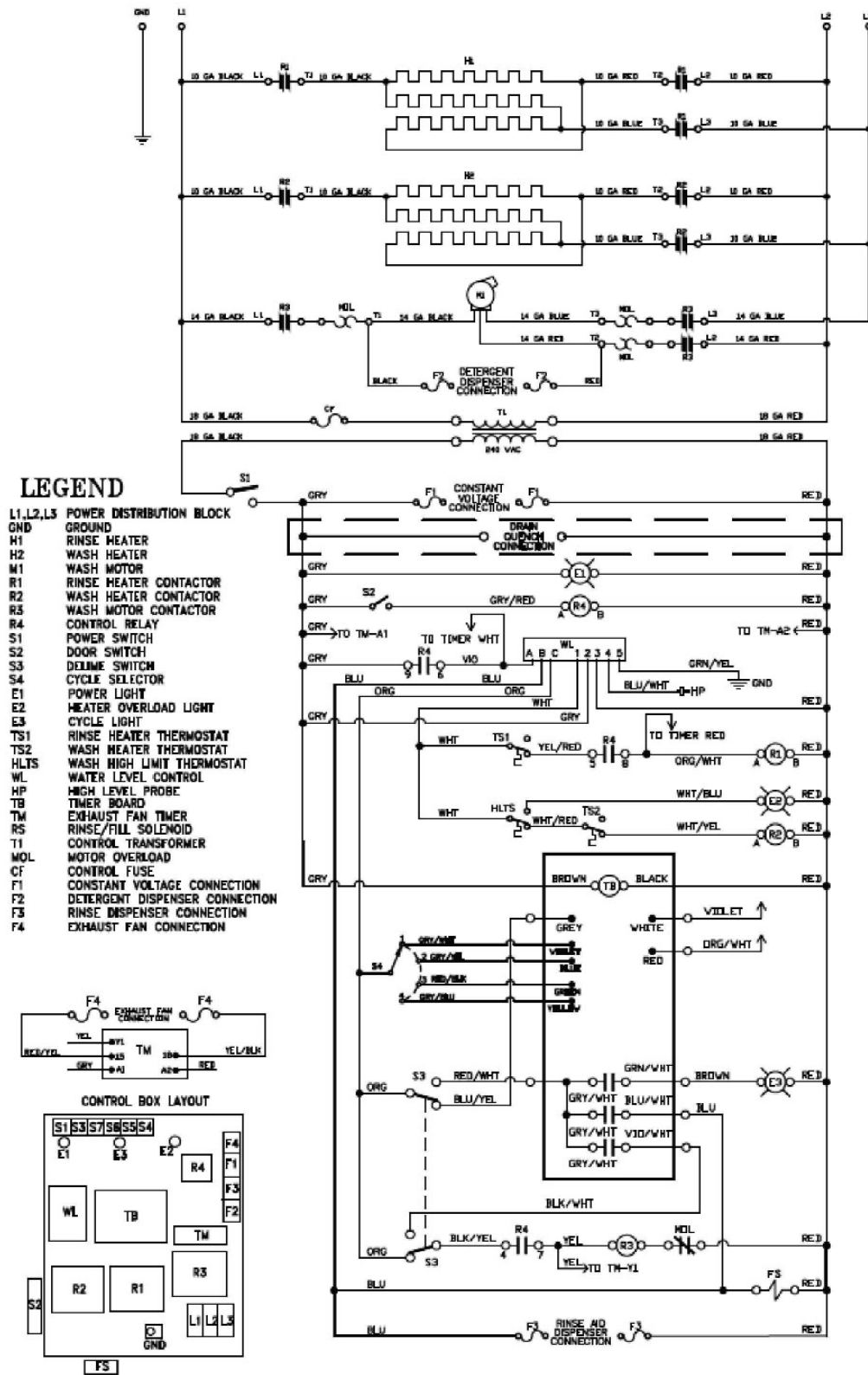
SECTION 6: ELECTRICAL SCHEMATICS

SOLID STATE 460 VOLT - 60 HERTZ -THREE PHASE



SECTION 6: ELECTRICAL SCHEMATICS

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



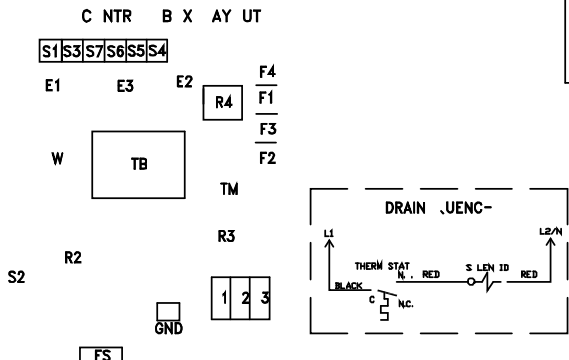
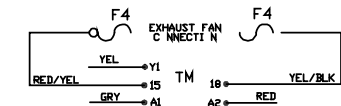
SECTION 6: ELECTRICAL SCHEMATICS

SOLID STATE TEMPSTAR LT & NB 208-230 VOLT - 50/60 HERTZ - SINGLE & THREE PHASE

TEMPSTAR NB/LT & TEMPSTAR HH NB/LT ELECTRICAL DIAGRAM

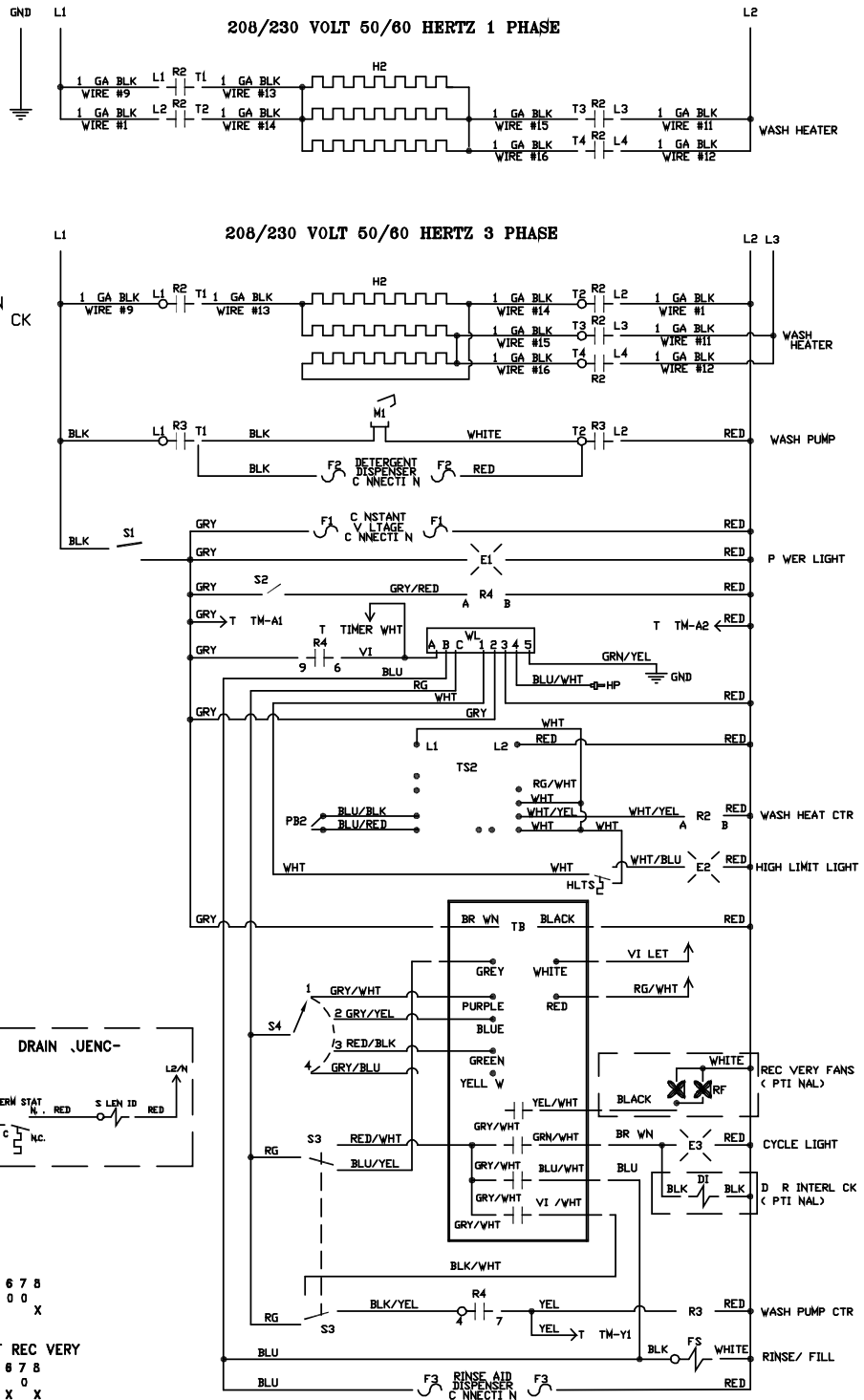
LEGEND

L1 L2 L3 P WER DISTRIBUTI N BL CK
GND GR UND
H2 WASH HEATER
M1 WASH M T R
R2 WASH HEATER C NTRACT R
R3 WASH M T R C NTRACT R
R4 C NTR L RELAY
F1 C NSTANT V LTAGE C NNECTI N
F2 DETERGENT DISPENSER FUSE BL CK
F3 RINSE DISPENSER FUSE BL CK
F4 EXHAUST FAN FUSE BL CK
S1 P WER SWITCH
S2 D R SWITCH
S3 AUT /MANUAL (DELIME) SWITCH
S4 CYCLE SELECT R
E1 P WER LIGHT
E2 HEATER VERL AD LIGHT
E3 CYCLE LIGHT
HLTS WASH HEATER HIGH LIMIT
TS2 WASH HEATER THERM STAT
HP HIGH WATER LEVEL PR BE
WL WATER LEVEL C NTR L
FS RINSE/FILL S LEN ID
TB TIMER B ARD
TM EXHAUST FAN TIMER
PB2 WASH TEMP PR BE
RF REC VERY FANS
DI D R INTERL CK



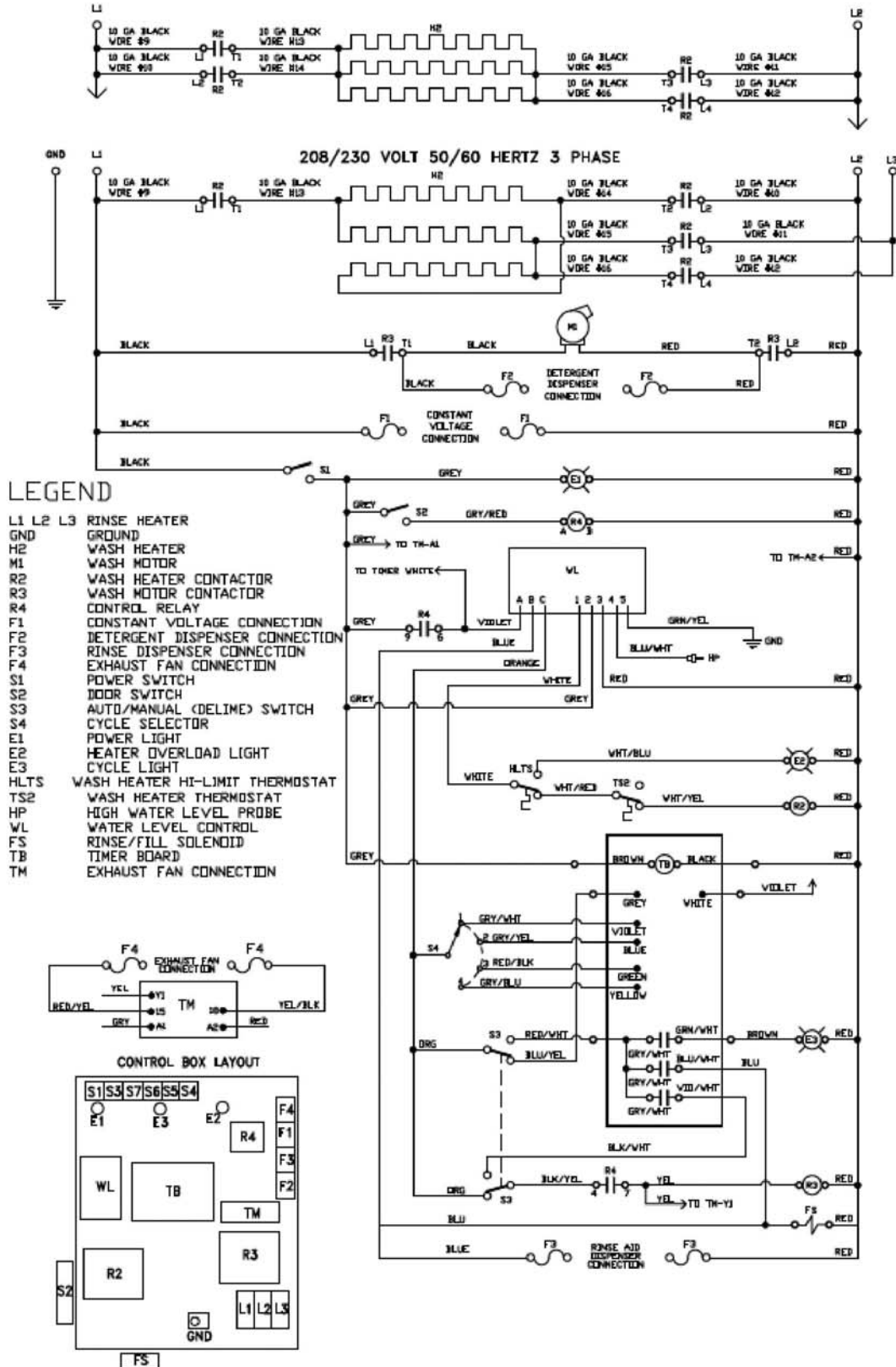
DIP SWITC- SETTINGS

TEMPSTAR	TEMPSTAR --
N 1 2 3 4 5 6 7 8	N 1 2 3 4 5 6 7 8
↑ 0 0 0 0 X X	↑ 0 X X X 0 0 X
WIT- -EAT REC VERY	-- WIT- -EAT REC VERY
N 1 2 3 4 5 6 7 8	N 1 2 3 4 5 6 7 8
↑ X X X X 0 X	↑ X X X X 0 X



SECTION 6: ELECTRICAL SCHEMATICS

TEMPSTAR LT & NB (TOP MOUNT W/ CYCLE SWITCHES) 208-230 VOLT - 50/60 HERTZ - SINGLE & THREE PHASE



SECTION 6: ELECTRICAL SCHEMATICS

TEMPSTAR 208-230 VOLT - 50/60 HERTZ - SINGLE & THREE PHASE

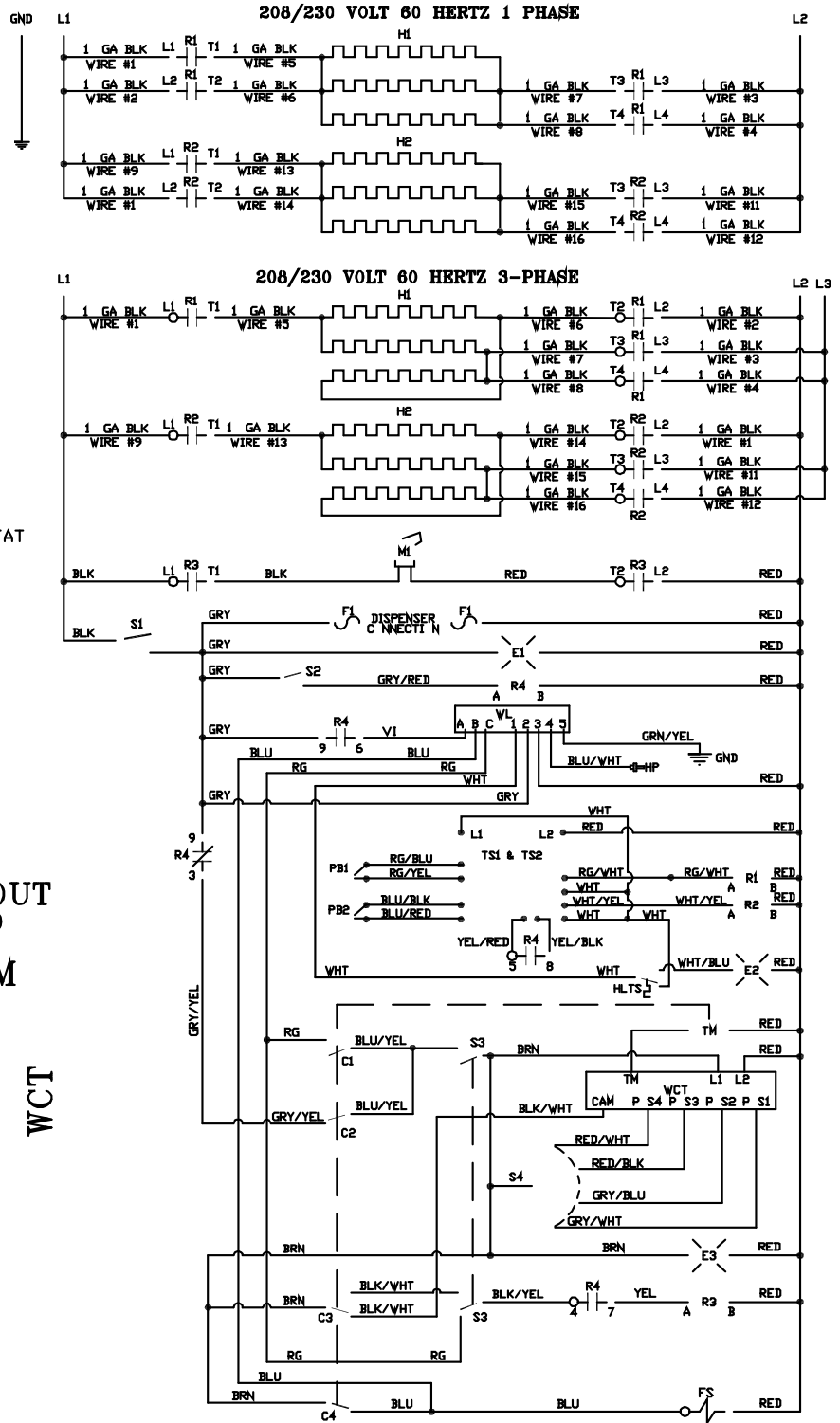
ELECTRICAL DIAGRAM

LEGEND

H1	RINSE HEATER
H2	WASH HEATER
M1	WASH M T R
R1	RINSE HEATER C NTACT R
R2	WASH HEATER C NTACT R
R3	WASH M T R C NTACT R
R4	C NTR L RELAY
F1	DISPENSER FUSE BL CK
S1	P WER SWITCH
S2	D R SWITCH
S3	AUT /MANUAL (DELIME) SWITCH
S4	CYCLE SELECT R SWITCH
C1	CYCLE SWITCH
C2	AUT START RESET SWITCH
C3	WASH CYCLE SWITCH
C4	RINSE/FILL SWITCH
E1	P WER LIGHT
E2	HEATER VERL AD LIGHT
E3	CYCLE LIGHT
HLTS	WASH HEATER HIGH LIMIT THERM STAT
TS1	RINSE HEATER THERM STAT
TS2	WASH HEATER THERM STAT
GND	GR UND
HP	HIGH WATER LEVEL PR BE
WL	WATER LEVEL C NTR L
TM	TIMER M T R
FS	RINSE/FILL S LEN ID
WCT	WASH CYCLE TIMER
PB1	RINSE THERM STAT PR BE
PB2	WASH THERM STAT PR BE

COMPONENT LAYOUT (TOP OF CONTROL BOX)

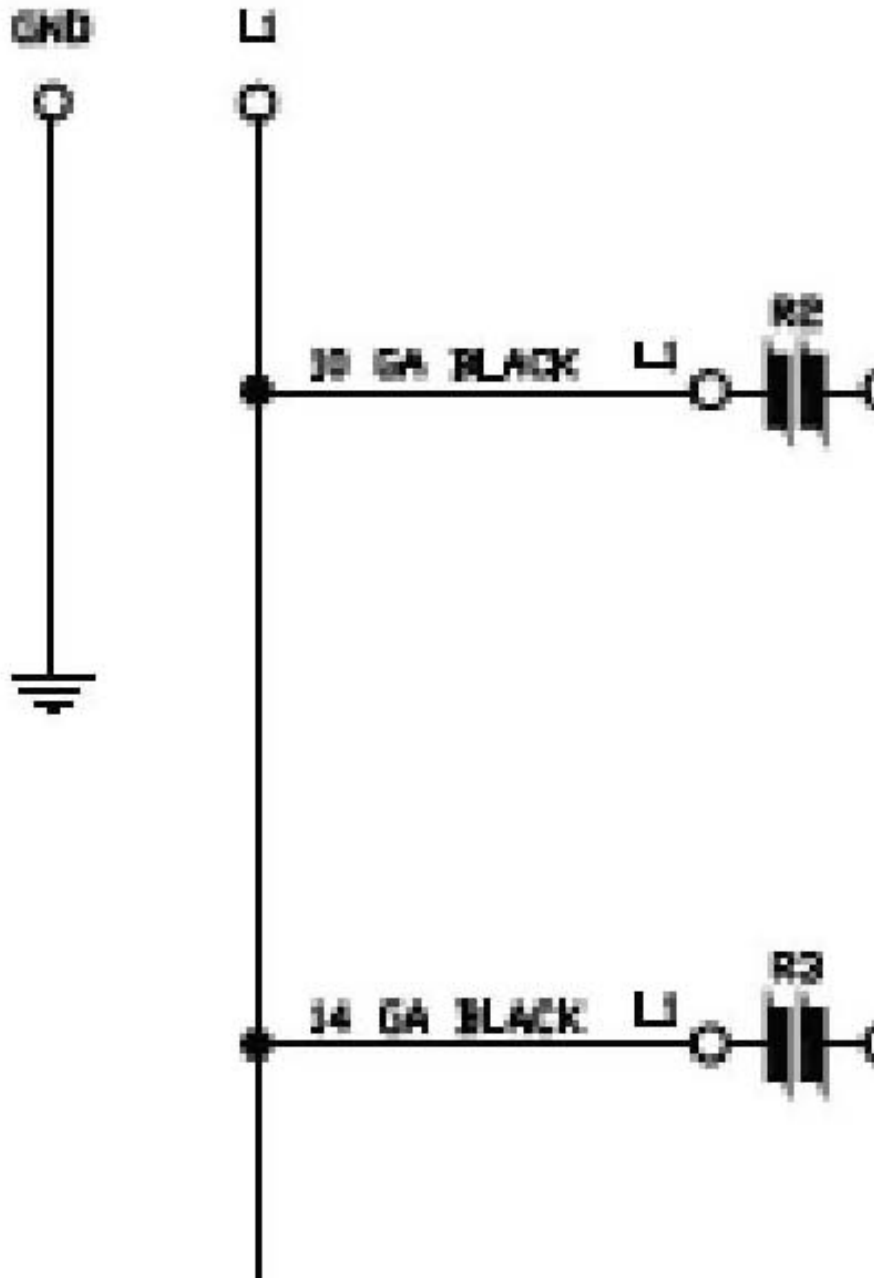
WL TM
R4
F1 WCT
R1 R2 R3



9905-002-06-54 G

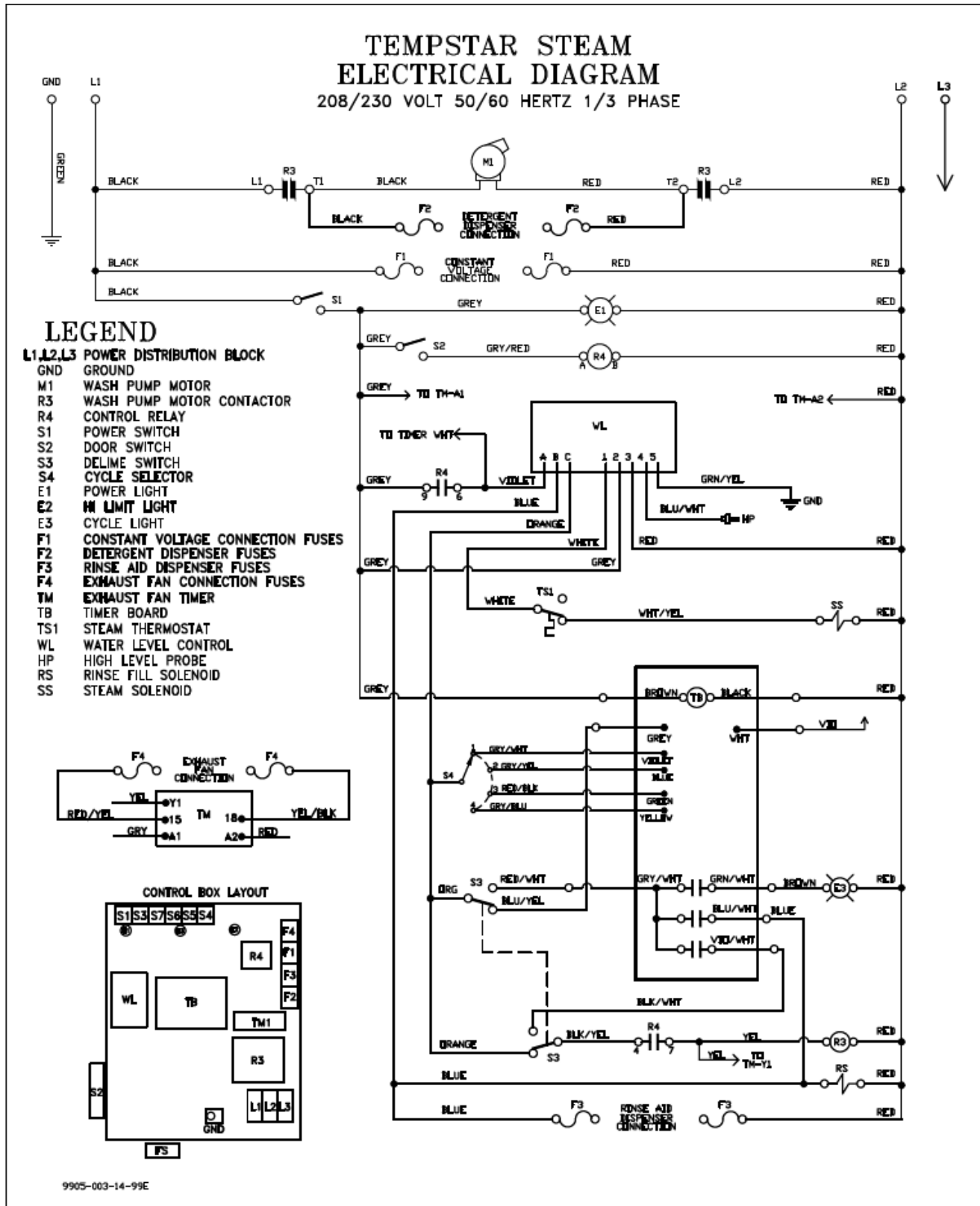
SECTION 6: ELECTRICAL SCHEMATICS

TEMPSTAR LT & NB (TOP MOUNT W/ CYCLE SWITCHES) 460 VOLT - 50/60 HERTZ - SINGLE & THREE PHASE



SECTION 6: ELECTRICAL SCHEMATICS

TEMPSTAR S (TOP MOUNT UNIVERSAL TIMER) 208-230 VOLT - 50/60 HERTZ - SINGLE & THREE PHASE

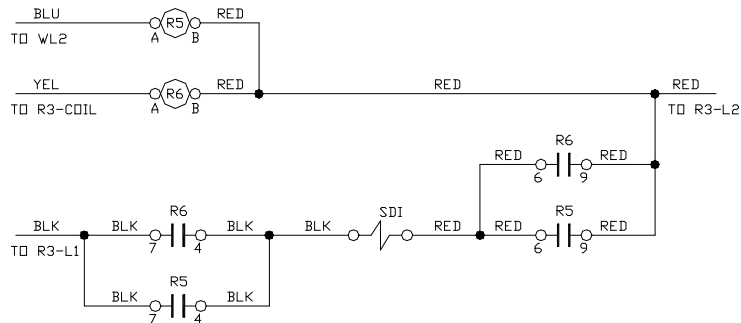


SECTION 6C: ELECTRICAL SCHEMATICS FOR OPTIONS

SECTION 6: ELECTRICAL SCHEMATICS

SDI OPTION

TEMPSTAR SDI OPTION

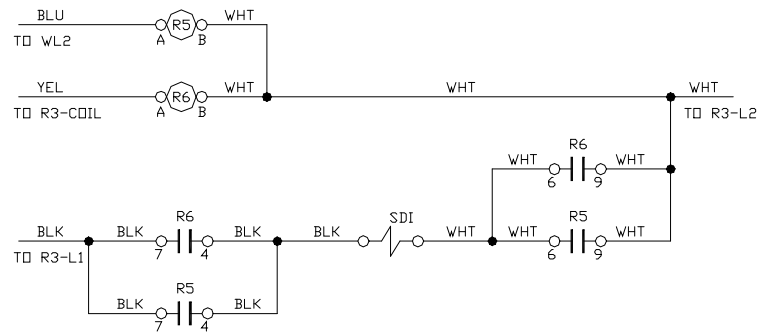


LEGEND

R5 RINSE RELAY
R6 WASH RELAY
SDI SAFETY DOOR INTERLOCK SOLENOID

09905-002-35-85a

TEMPSTAR SDI OPTION



LEGEND

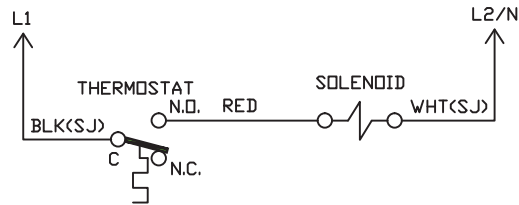
R5 RINSE RELAY
R6 WASH RELAY
SDI SAFETY DOOR INTERLOCK SOLENOID

09905-002-55-78a

SECTION 6: ELECTRICAL SCHEMATICS

DRAIN QUENCH OPTIONS

DRAIN QUENCH SYSTEM



TEMPSTAR UNITS

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

09905-004-07-98

Jackson Technical Manual Addendum

		SERIAL NUMBER: XXXXXXXXX	
		MODEL: Tempstar	
208-230-460 Volt/60 Hz/3 Phase			
	40°F RISE BOOSTER		208V 230V 460V
	WASH MOTOR	3/4 HP 5.7 A	3/4 HP 5.7 A 3/4 HP 1.8 A
	WASH HEATER	4.1 KW 11.4 A	5 KW 12.6 A 5 KW 6.3 A
	RINSE HEATER	9 KW 25.0 A	11 KW 27.2 A 11 KW 13.8 A
	TOTAL LOAD	42.1 A	45.5 A 21.9 A
 Intertek 4000897 Conforms to UL Std 921 Conforms to CSA Std C22.2 No.168	70°F RISE BOOSTER		208V 230V 460V
	WASH MOTOR	3/4 HP 5.7 A	3/4 HP 5.7 A 3/4 HP 1.8 A
	WASH HEATER	4.1 KW 11.4 A	5 KW 12.6 A 5 KW 6.3 A
	RINSE HEATER	10.5 KW 29.1 A	12.9 KW 32.4 A 12.9 KW 16.2 A
	TOTAL LOAD	46.2 A	50.7 A 24.3 A
208-230 Volt/60 Hz/1 Phase			
40°F RISE BOOSTER		208V 230V	
WASH MOTOR	3/4 HP 5.7 A	3/4 HP 5.7 A	
WASH HEATER	4.1 KW 19.7 A	5 KW 21.7 A	
RINSE HEATER	9 KW 43.3 A	11 KW 47.8 A	
TOTAL LOAD	68.7 A	75.2 A	
70°F RISE BOOSTER		208V 230V	
WASH MOTOR	3/4 HP 5.7 A	3/4 HP 5.7 A	
WASH HEATER	4.1 KW 19.7 A	5 KW 21.7 A	
RINSE HEATER	10.5 KW 50.4 A	12.9 KW 56.1 A	
TOTAL LOAD	75.8 A	83.6 A	
OPERATING PARAMETERS			
MINIMUM WASH TEMPERATURE		150°F	
MINIMUM RINSE TEMPERATURE		180°F	
MINIMUM INCOMING WATER TEMPERATURE			
70°F RISE BOOSTER		110°F	
40°F RISE BOOSTER		140°F	
WASH CYCLE TIME		45 SEC	
RINSE CYCLE TIME		11 SEC	
FLOW PRESSURE		10 PSI	
Made in the USA Jackson WWS, Inc. P.O. Box 1060 Barbourville, KY. 40906 (606) 523-9795 09905-003-69-11D			

Tempstar units that are manufactured with the above referenced data plate are able to be field converted to different phases and voltages. To accomplish this, your unit should have shipped with the Tempstar Phase Conversion Kit, part number 06401-003-71-71. This kit contains the appropriate decals and schematics to apply to your unit once the conversion is complete.

All work should be performed only by Authorized Jackson Service Agents. A listing of your local agents is in the back of your installation manual.

Steps:

1. Perform the appropriate wiring and component changes as necessary to achieve the desired result. Reference Jackson technical manuals or contact technical service for assistance.
2. Verify the Schematic is correct. If not, replace with the correct one from the kit.
3. At the power inlet, remove the "Wired For" decal and replace with the one that matches the configuration of your machine.

