Jackson®

Warewashing Systems

INSTALLATION, OPERATION, AND SERVICE MANUAL

DYNATEMP®

DYNATEMP® SERIES DOOR-TYPE DISHMACHINES

DynaTemp® Manual • Rev A • 07610-004-29-29 • Issued: 07-27-2016 • Revised: N/A

MANUFACTURER'S WARRANTY

ONE YEAR LIMITED PARTS AND LABOR WARRANTY

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

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

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

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

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

TRAVEL LIMITATIONS

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

WARRANTY REGISTRATION

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

REPLACEMENT PARTS WARRANTY

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

PRODUCT CHANGES AND UPDATES

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

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

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

ITEMS NOT COVERED

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

REVISION HISTORY

Revision Letter	Revision Date	Made by	Applicable ECNs	Details
A	07-27-16	JH	N/A	Initial release of the manual.

Jackson®

Warewashing Systems

DynaTemp®

Door-type dishmachine; electrically-heated, high-temp, hot-water sanitizing, with booster heater.

DynaTemp® NB

Door-type dishmachine; electrically-heated, high-temp, hot-water sanitizing, without booster heater.

DynaTemp® S

Door-type dishmachine; steam-heated, high-temp, hot-water sanitizing.

Model: _____

Serial No.: _____

Installation Date: _____

Service Rep. Name: _____

Phone Number: _____

Jackson WWS, Inc. provides technical support for all of the dishmachines detailed in this manual. We strongly recommend that you refer to this manual before making a call to our technical support staff. Please have this manual with you when you call so that our staff can refer you, if necessary, to the proper page. Technical support is not available on holidays.

Contact technical support toll free at 1-888-800-5672.

Technical support is available for service personnel only.

TABLE OF CONTENTS

SCHEMATICS

SCHEMATIC OPTIONS

ADDENDUM

SYMBOLS

- risk of injury to personnel.

- risk of damage to equipment.


- risk of electrical shock.


- reference data plate.


- lockout electrical power.

NOTICE - important note.

ABBREVIATIONS & ACRONYMS

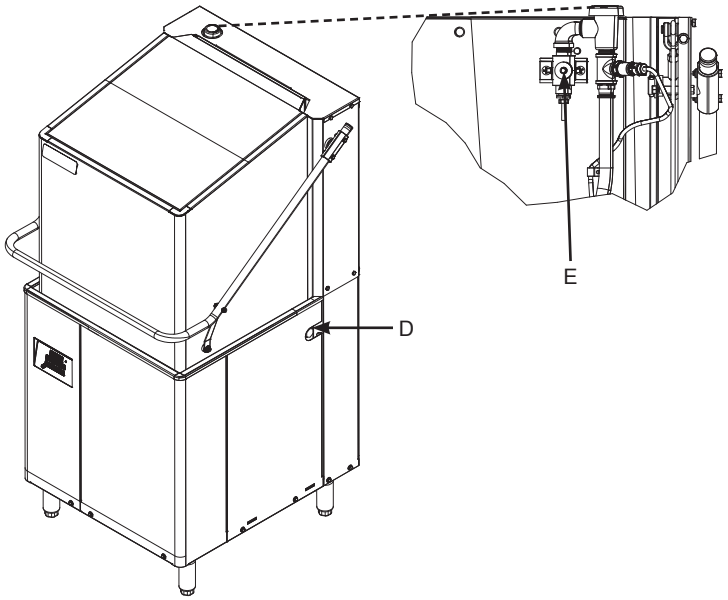
ANSI - American National Standards Institute
GHT - Garden Hose Thread
GPM - Gallons per Minute
GPG - Grains per Gallon
HP - Horse Power
Hz - Hertz
ID - Inside Diameter
kW - Kilowatts
NEC - National Electrical Code
NFPA - National Fire Protection Association
NPT - National Pipe Thread
PSI - Pounds per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

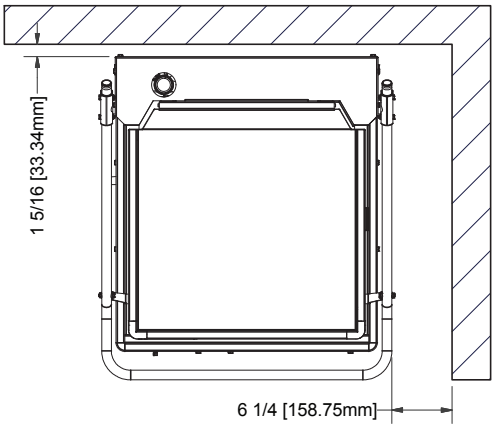
DYNATEMP MACHINE DIMENSIONS

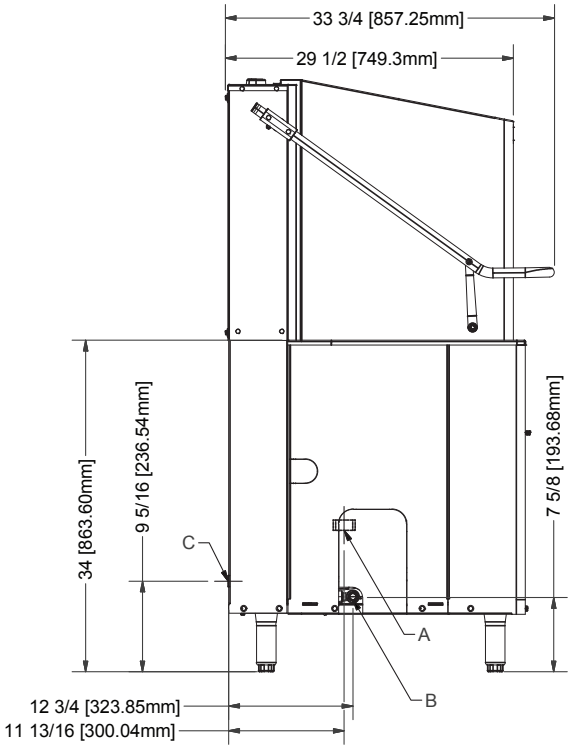
LEGEND

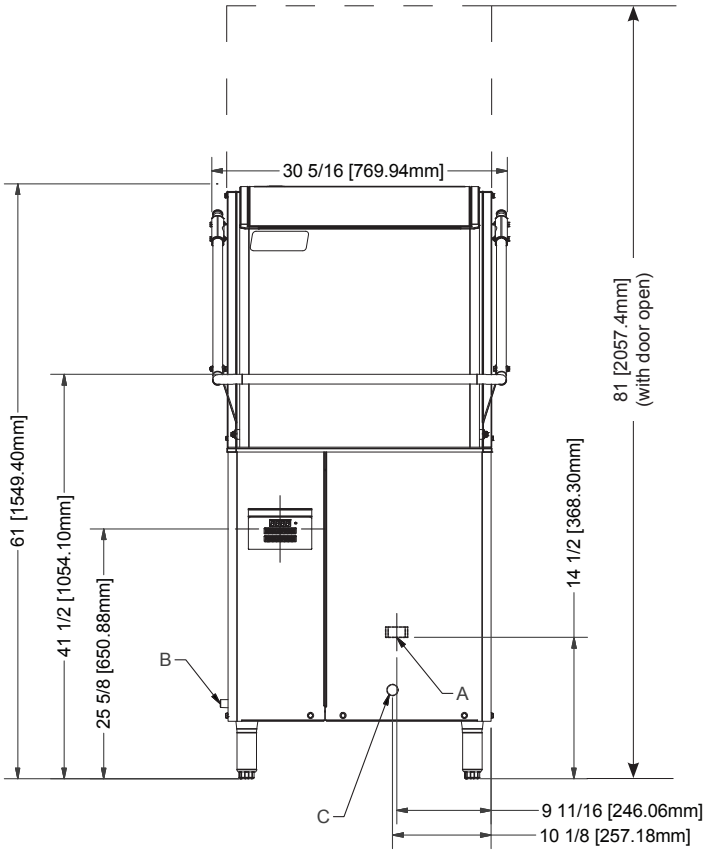
A - DRAIN 1-1/2" NPT
B - WATER INLET 1/2" NPT
C - ELECTRICAL CONNECTION
D - DETERGENT CONNECTION
E - RINSE AID CONNECTION

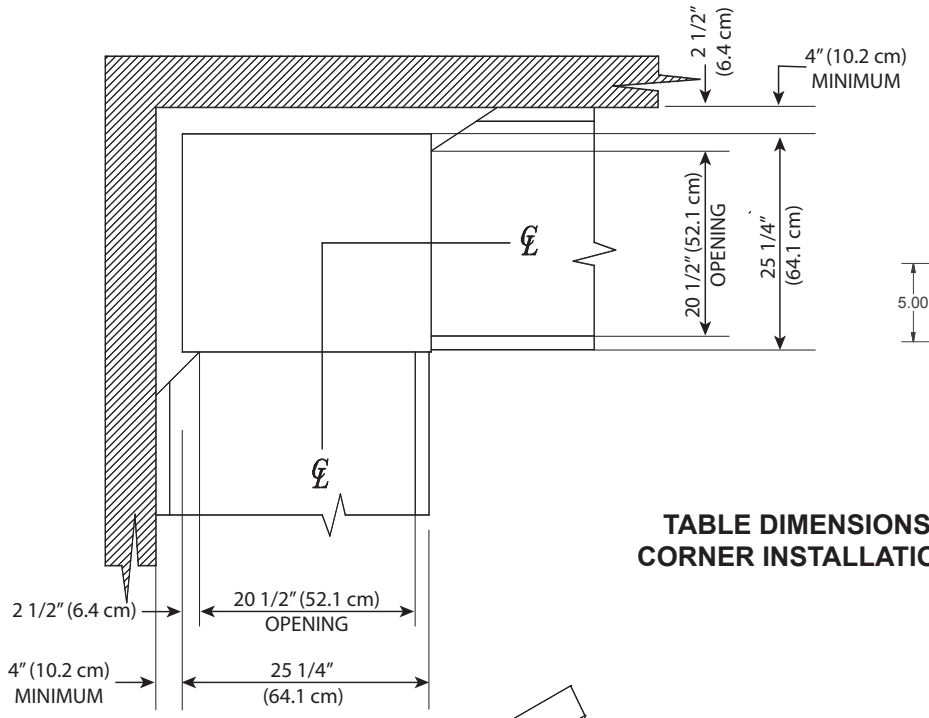
All dimensions from the floor can be increased 2" using the machine's adjustable feet.











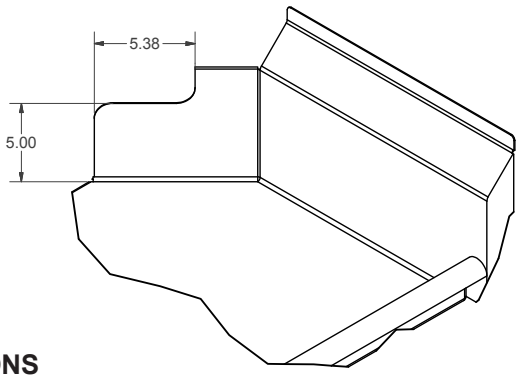


TABLE DIMENSIONS
CORNER INSTALLATION

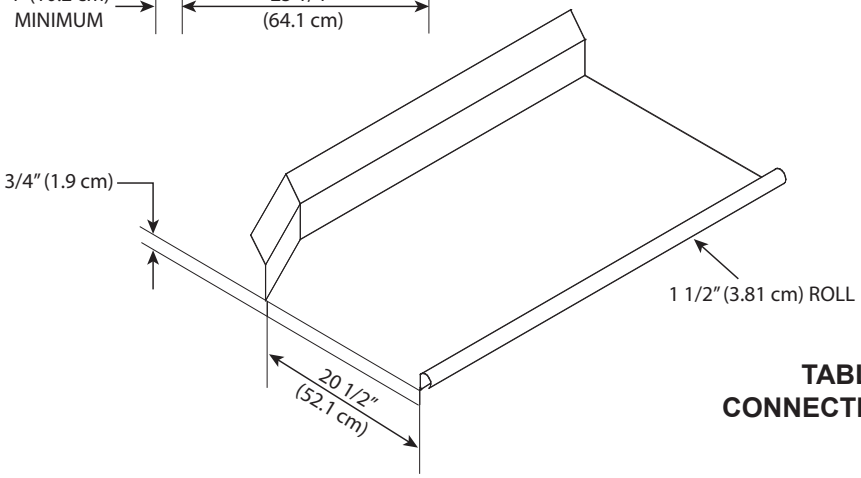


TABLE DIMENSIONS
CONNECTION TO DISHMACHINE

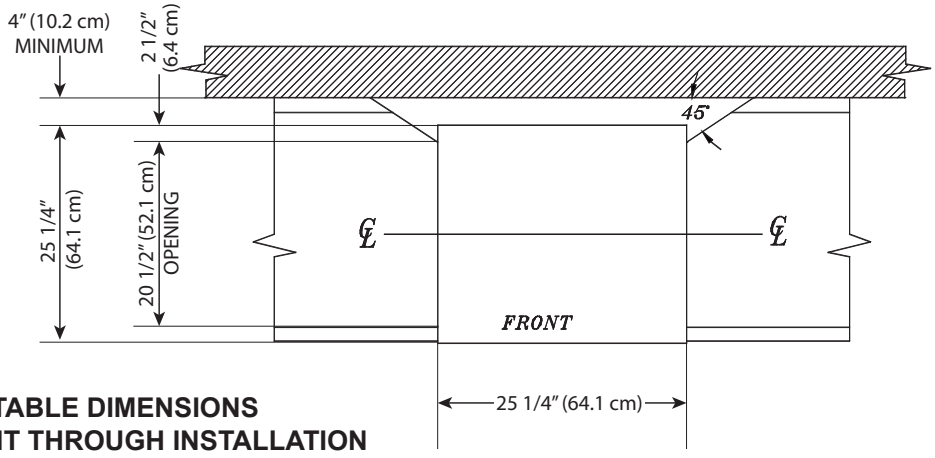


TABLE DIMENSIONS
STRAIGHT THROUGH INSTALLATION

OPERATING CAPACITIES

PERFORMANCE/CAPABILITIES

Operating Capacity:

Racks per Hour	57
Dishes per Hour	1450
Glasses per Hour	1450

Minimum Operating Cycle (seconds):

Cycle 1 Wash Time	40
Cycle 2 Wash Time	90
Cycle 3 Wash Time	220
Rinse Time	11
Dwell Time	7
Cycle 1 Total Time	58
Cycle 2 Total Time	108
Cycle 3 Total Time	238

Tank Capacity (gallons/liters):

Wash Tank	8.0/30.3
Rinse Tank	3.0/11.4

Steam Requirements:

Inlet Steam Connection (NPT)	3/4"
Steam Flow Pressure (PSI)	15-20
Consumption @ 15 PSI (lbs/hr)	45

Electrical Loads (as applicable):

Wash Motor HP	1
Wash Heater kW	5.4
Rinse Heater kW	14

WATER REQUIREMENTS

DynaTemp®

Wash Temperature (Minimum)	150 °F/66 °C
Rinse Temperature (Minimum)	180 °F/83 °C
Inlet Water Temperature:	
14 kW Rinse Heater	110 °F/44 °C
Flow Pressure (PSI)	10 ± 2
Water Line Size (NPT)	3/4”
Drain Line Size (NPT)	1 1/2”

DynaTemp® NB

Wash Temperature (Minimum)	150 °F/66 °C
Rinse Temperature (Minimum)	180 °F/83 °C
Inlet Water Temperature	180 °F/83 °C
Flow Pressure (PSI)	10 ± 2
Water Line Size (NPT)	3/4”
Drain Line Size (NPT)	1 1/2”

NOTICE **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 change without notice.**

NOTICE

NOTE: Typical Electrical Circuit is based on:

1. ***125% of the full amperage load of the machine.***
2. ***Typical fixed-trip circuit breaker sizes as listed in the NEC (Latest 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. Numbers in this manual are for reference and may change without notice.

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

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

DynaTemp NB Electrical Characteristics:

VOLTS	PHASE	Hz	RINSE HEATER RATINGS	TOTAL AMPS	TYPICAL ELECTRICAL CIRCUIT
208	1	50	N/A	28 A	35 A
230	1	50	N/A	35 A	45 A
208	3	50	N/A	20 A	25 A
230	3	50	N/A	21 A	30 A
380	3	50	N/A	10 A	15 A
415	3	50	N/A	10 A	15 A
440	3	50	N/A	8 A	15 A
208	1	60	N/A	26 A	35 A
230	1	60	N/A	28 A	35 A
208	1	60	N/A	26 A	35 A
230	1	60	N/A	28 A	35 A
208	3	60	N/A	18 A	25 A
230	3	60	N/A	28 A	35 A
460	3	60	N/A	8 A	15 A

DynaTemp S Electrical Characteristics:

VOLTS	PHASE	Hz	RINSE HEATER RATINGS	TOTAL AMPS	TYPICAL ELECTRICAL CIRCUIT
208	1	60	N/A	6 A	15 A
230	1	60	N/A	6 A	15 A
208	3	60	N/A	6 A	15 A
230	3	60	N/A	6 A	15 A

VISUAL INSPECTION

Do not throw away the container if damage is evident!

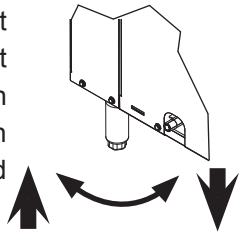
Before installing the unit, check the packaging and machine for damage. If the packaging is damaged, the machine might also be damaged. If there is damage to both the packaging and machine, do not throw away the packaging. The dishmachine has been inspected and packed at the factory and is expected to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

UNPACKING THE MACHINE

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

LEVEL THE DISHMACHINE

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



PLUMBING THE DISHMACHINE

The plumber MUST flush the incoming water line!

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

CONNECTING THE DRAIN LINE

The drains for the DynaTemp 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” NPT and must not be reduced. There must also be an air gap between the machine drain line and the floor sink or drain. If a grease trap is required by code, it should have a flow capacity of 5 gallons per minute (GPM). For units equipped with the Drain Quench Option, see the Drain Quench Assembly section of this manual.

WATER SUPPLY CONNECTIONS

NOTICE **NOTE:** Ensure that you have read the section entitled “PLUMBING THE DISHMACHINE” on the previous page before proceeding.

Install the water supply line (1/2” ID 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. For units equipped with the Drain Quench Option, see the Drain Quench Assembly section of this manual.

The water supply line is to be capable of 10 ± 2 pounds per square inch (PSI) “flow” pressure at the recommended temperature indicated on the data plate.

The manufacturer recommends the installation of a water pressure regulator* in the incoming water line of all DynaTemp models to ensure proper flowrate at all times and offers these devices as options.

Take care not to confuse static pressure with flow pressure!

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.

The manufacturer also recommends the installation of a shock absorber* in the incoming water line of all DynaTemp models and offers these devices as options. This prevents line hammer/hydraulic shock—induced by the solenoid valve as it operates—from causing damage to the equipment.

**See the Plumbing Options page and contact your dealer with any questions you might have.*

STEAM LINE CONNECTION

The steam machines come with lines to connect the source steam. Connect all steam lines to the machine as all applicable codes provide. See machine data plate for information concerning steam flow pressure.

PLUMBING CHECK

1. Slowly turn on the water supply to the machine after the incoming fill line and drain line have been installed.
2. Check for any leaks and repair as required.

CAUTION: All leaks must be repaired before placing the machine in operation.

ELECTRICAL POWER CONNECTIONS

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

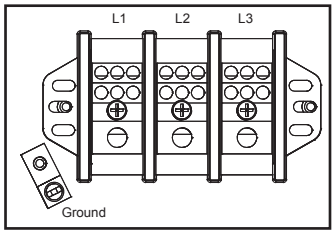
Disconnect electrical power supplies and place a tag at the disconnect switch to indicate that you are working on the circuit.

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.

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

To install the incoming power lines:

1. Open the control box. This will require taking a phillipshead screwdriver and removing the four screws on the front cover of the control box.
2. Install 3/4” conduit into the pre-punched holes in the back of the control box.
3. Route power wires and connect to power block and grounding lug.
4. Install the service wires (L3 for 3-Phase only) to the appropriate terminals as they are marked on the terminal block.



See the Addendum of this manual for Exhaust Fan Wiring instructions.

5. Install the grounding wire into the lug provided.
6. Tighten the connections.

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

VOLTAGE CHECK

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

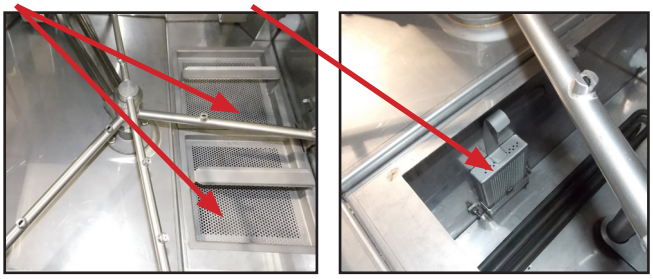
CAUTION: Do not run the dishmachine if the voltage is too high or too low (refer to applicable electrical codes).

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

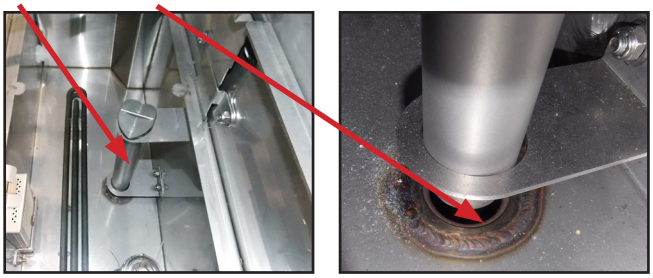
PREPARATION

Before operating the unit, verify the following:

1. The pan strainers and suction strainer are in place and are clean.



2. The standpipe and o-ring are installed.



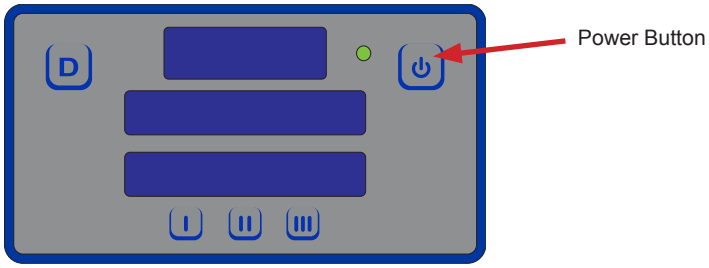
3. The wash and rinse arms are screwed securely into place and the end-caps are tight. The wash and rinse arms should rotate freely.

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

Press the Power Button and the display will come on. The DynaTemp machine should fill with water automatically until the appropriate water level is reached (just below the pan strainers). 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 fewer re-washes. If not done properly, ware might not come out clean and the efficiency of the dishmachine will be reduced. Putting unscraped dishes into the machine affects its performance, so scraps should always be removed from ware before 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 they don't hold water during the cycle. The dishmachine sanitizes as well as cleans. To do this, ware must be properly prepared before being placed in the machine.

DAILY MACHINE PREPARATION

Refer to the “Preparation” section and follow the instructions there. Afterward, ensure that chemicals are supplied to the machine. If not, contact your chemical supplier.

WARM-UP CYCLES

For a typical daily start-up, it might be necessary to run the machine through three 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:

1. Ensure that the power is on and that the tub has filled to the correct level.
2. Lift the door and then close it. The cycle light will illuminate.
3. The unit will start, run through the cycle, and shut off automatically.
4. Repeat this two more times.

The unit should now be ready to proceed with washing.

WASHING A RACK OF WARE

To wash a rack:

1. Open the door completely (avoiding hot water that may drip from the door).
2. Slide the rack into the unit.
3. Close the door and the unit will start automatically.
4. The cycle light will go out once the cycle is complete. When complete, open the door (again watching for dripping hot water) and remove the rack of clean ware.
5. Replace with a rack of soiled ware and close the doors.
6. Repeat the process as needed.

OPERATIONAL INSPECTION

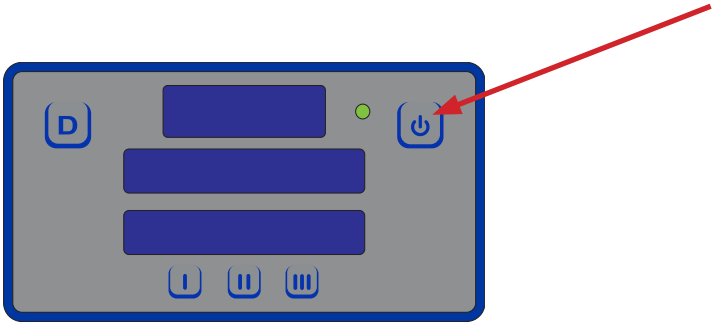
Based upon usage, the pan strainers might become clogged with soil and debris as the workday progresses. Operators should regularly inspect the pan strainers to ensure they have not become clogged. If clogged, it will reduce the washing capability of the machine. Instruct operators to clean out the pan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

SHUTDOWN AND CLEANING

At the end of the workday/shift:

1. Close the door.

2. When the unit completes the cycle, turn the unit off by pressing the Power Button.



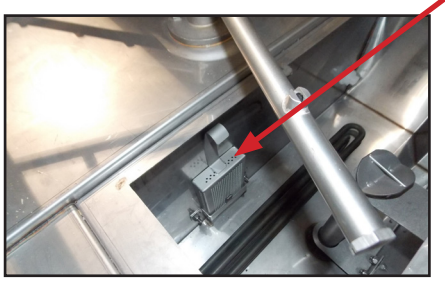
3. Open the door.

4. Remove and clean the pan strainers and set aside.

5. Pull the drain handle to the open position and allow the water to drain.

WARNING: The wash tank water will be hot!

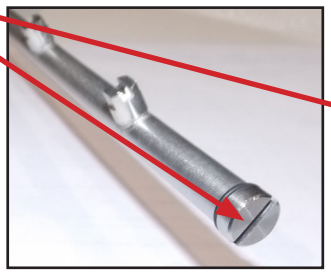
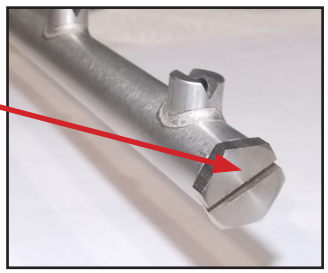
6. Once the wash tub is drained, remove the suction strainer, clean, and set aside.



SHUTDOWN AND CLEANING

7. Unscrew the wash and rinse arms from their manifolds.


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

9. Wipe the inside of the unit out, removing all soil and scraps.

10. Reassemble the wash and rinse arms.

11. Replace the wash and rinse arms in the unit. Ensure the end-caps have been tightened.

12. Push the drain handle to the closed position.

13. Replace the pan strainers and suction strainer.

14. Leave the door open so the unit can dry.

DETERGENT CONTROL

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

1. Hard water greatly affects the performance of the dishmachine, causing the amount of detergent required for washing to increase. If the machine is installed in an area with hard water, the manufacturer recommends the installation of water treatment equipment.

2. Deposited solids from hard water can cause spotting that will not be removed with a drying agent. Treated water will reduce this occurence.

3. Treated water may not be suitable for use in other areas of operation and it may be necessary to install a water treatment unit for the water going to the dishmachine only. Discuss this option with a qualified water treatment specialist.

4. Dishmachine operators should be properly trained on how much detergent is to be used per cycle. Meet with a water treatment specialist and detergent vendor to discuss a complete training program for operators.

5. DynaTemp dishmachines require that chemicals be provided for proper operation and sanitization and require the installation of third-party chemical feeders to introduce these chemicals to the machine. Contact a chemical supplier with any questions.

6. Water temperature is an important factor in ensuring that the dishmachine functions properly, and the machine's data plate details what the minimum temperatures must be for the incoming water supply, the wash tank, and the rinse tank. If minimum requirements are not met, there is a possibility that dishes will not be clean or sanitized.

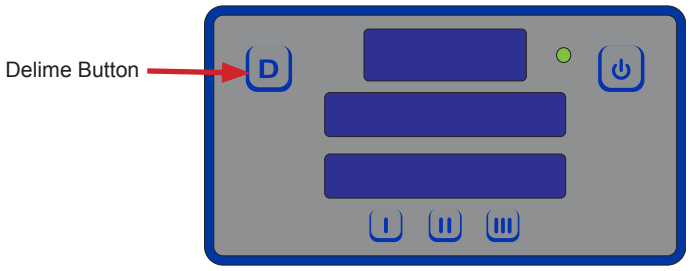
7. Instruct dishmachine operators to observe the required temperatures and to report when they fall below the minimum allowed. A loss of temperature can indicate a larger problem.

DELIMING

In order to maintain the dishmachine at its optimum performance level, lime and corrosion deposits must be removed. The frequency for deliming will be based on water conditions. A deliming solution is available from your chemical supplier. Read and follow all instructions on the label.

To delime the dishmachine:

1. Disconnect or turn off all chemical feeder equipment.
2. Verify the drain handle is in the closed position, turn the unit on, and allow the unit to complete a fill cycle.
3. Open the door and verify water level is above standpipe. Add deliming solution per the solution manufacturer's recommendation (the water capacity of the tank can be verified on the specification page of this manual).
4. Close the door and push the Delime Button on the display.



5. Run the machine for the period of time recommended by the chemical supplier.
6. Press the Delime Button again and the pump will stop.
7. Open the door and remove the standpipe.
8. Wait five minutes, then inspect the inside of the machine. If the machine is not delimed, run again.
10. When clean, drain and refill the machine.
11. Open and close the door to run an auto cycle to remove residual deliming solution.
12. Drain and refill the machine.

SETTING CYCLES

Press and release the I Button to set cycle 1.

Press and release the II Button to set cycle 2.

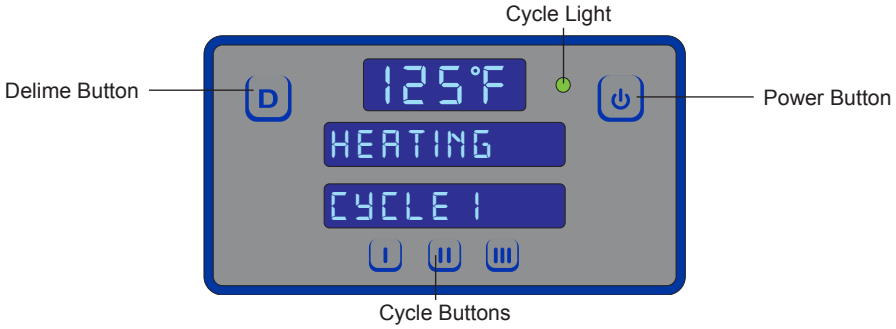
Press and release the III Button to set cycle 3.

CHECKING CYCLE COUNT

While the unit is powered off, press and hold the Power Button. The total cycle count will display for several seconds, followed by a “power-on” condition.

GENERAL

1. When the unit is first powered on, it will go through a sequence to show all LEDs are working.
2. The unit will then go into standby mode.
3. Press the Power Button.
4. The display will show “Heating” until the wash tank reaches the set temperature.



5. The display will show “Ready” when the unit is ready to use.

OPERATIONAL MESSAGES

DISPLAY	INDICATOR
"Check for open door"	The door is open when the unit needs to fill (float switch is down).
"Filling"	Indicates the initial fill after the unit is first powered on.
"Heating"	The wash tank and booster have not reached operating temperature during the unit’s initial heating phase.
"Delime"	The Delime Button has been pressed.
"Ready"	The dish machine is not in a cycle and ready for the next load.
"Washing"	The unit is in the *wash* phase of a cycle with power to the wash pump.
"Rinsing"	The unit is in the *rinse* phase of a cycle with power to the rinse valve; wash pump is turned off.
"Dwelling"	The unit is in the *dwelling* phase of a cycle. Neither wash pump nor rinse valve are turned on.

PREVENTATIVE MAINTENANCE

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

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

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

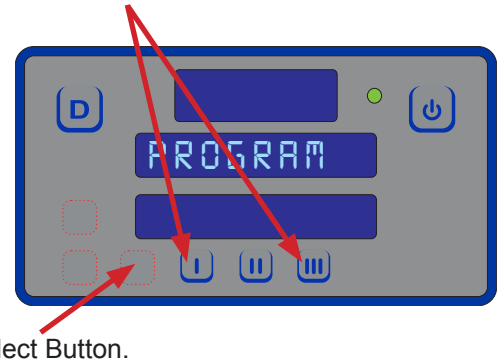
PROGRAMMING

To access programming, the unit should be on and not in cycle.

The programming buttons (Up-arrow, Down-arrow, and Select) are hidden on the display and are shown below outlined with red dots. There is a full-size display template at the end of the manual to help locate the programming buttons.

Factory Setup (Model Selection)

1. Press and hold the I and III Buttons until “Program” starts flashing (2 - 3 seconds).



2. Press the Select Button.
3. Use the Up-arrow or Down-arrow Button to change the program number to “4.”

4. Press the Select Button.
5. “Program” will flash.
6. Press the Delime Button to exit.

PROGRAMMING

To access programming, the unit should be on and not in cycle.

The programming buttons (Up-arrow, Down-arrow, and Select) are hidden on the display and are shown below outlined with red dots. There is a full-size display template at the end of the manual to help locate the programming buttons.

User Setup

1. Press and hold the Up-arrow and Down-arrow Buttons until “Setup” starts flashing (2 - 3 seconds).

2. The display will then change to “Version” and show the firmware versions of the IO module and UI boards.
3. Use the Up-arrow Button to cycle through the categories (will be flashing).
   - Language
   - Temperature Scale
   - Wash Temperature
   - Boost Temperature
   - Wash Offset
   - Rinse Offset
   - Boost Offset
   - Spare Offset

4. Press the Select Button to choose the category you want to change.
   - Regardless of the category, steps 5 - 7 remain the same.
5. Use the Up-arrow Button to change the options (will be flashing). Numerical options are shown in the top window.

6. Press the Select Button to accept the changes.
7. Press the Delime Button to exit.

DISPLAY SHOWS	POSSIBLE CAUSES	REMEDY
"F1 Service needed," "No water in Booster"	1. Low or no water pressure. 2. Faulty inlet valve or fill relay. 3. Contactor to booster heater not turning off. 4. Faulty temperature input (P12) on IO module. 5. Faulty temperature probe (T3). 6. Faulty float switch allows heaters to operate with no water in tub.	1. Verify incoming water pressure is 8–12 PSI. 2. Verify that fill relay is supplying voltage to fill solenoid. Replace faulty component. 3. Check for welded contacts. Verify that output from IO module turns off when above the set temperature. 4. Substitute a 1.2 kΩ resistor for T3, and verify that booster heater turns off. If not, replace IO module. 5. Verify that the booster-probe resistance is correct with respect to temperature. (See Table 1.) If not, replace T3. 6. Replace float switch.
"F2 Service needed," "Check booster thermostat"	1. Contactor to booster heater not turning off. 2. Faulty temperature input (P12) on IO module. 3. Faulty temperature probe (T3).	1. Check for welded contacts. Verify that output from IO module turns off when above the set temperature. 2. Substitute a 1.2 kΩ resistor for T3, and verify that booster heater turns off. If not, replace IO module. 3. Verify that the booster probe resistance is correct with respect to temperature. (See Table 1.) If not, replace T3.
"F3 No water in wash tank," "Check inlet water and door"	1. Malfunction of fill solenoid or fill relay. 2. Door is open, which inhibits fill mode. 3. Faulty door switch.	1. Replace faulty component. 2. Close door to activate door switch. 3. Replace or adjust door switch.
"F4 Service needed," "Check incoming power"	1. Incoming power not properly connected. 2. L3 is missing (3-phase units only).	1. Check connections to heater. 2. Verify that L3 is present and connected properly.
"F5 Service needed," "Check booster thermo-stat and high limit"	1. Faulty temperature input (P12) on IO module. 2. Faulty temperature probe (T3). 3. Faulty high-limit switch. 4. Faulty booster heater. 5. Booster-heater contactor not energizing.	1. Substitute a 1.8 kΩ resistor for T3, and verify that booster heater turns on. If not, replace IO module. 2. Verify that T3 resistance is consistent with Table 1. If not, replace T3. 3. Replace high-limit switch. 4. Check booster heater for proper resistance. Replace if incorrect. 5. Verify that drive voltage to contactor coil is present during a call for heat and that contactor closes. If voltage is present, replace contactor. If voltage is not present, check wiring.

DISPLAY SHOWS	POSSIBLE CAUSES	REMEDY
"F6 Service needed," "No water in wash tank"	1. Low or no water pressure. 2. Faulty inlet valve or fill relay. 3. Contactor to wash heater not turning off. 4. Faulty temperature input (T1) on IO module. 5. Faulty temperature probe (T1). 6. Faulty float switch allows heaters to operate with no water in tub.	1. Verify incoming water pressure is 8–12 PSI. 2. Verify that fill relay is supplying voltage to fill solenoid. Replace faulty component. 3. Check for welded contacts. Verify that output from IO module turns off when above the set temperature. 4. Substitute a 1.2 kΩ resistor for T1, and verify that wash heater turns off. If not, replace IO module. 5. Verify that T1 resistance is correct with respect to temperature. (See Table 1.) If not, replace T1. 6. Replace float switch.
"F7 Service needed," "Check wash tank thermostat"	1. Contactor to wash heater not turning off. 2. Faulty temperature input (P10) on IO module. 3. Faulty temperature probe (T1).	1. Check for welded contacts. Verify that output from IO module turns off when above the set temperature. 2. Substitute a 1.2 kΩ resistor for T1, and verify that wash heater turns off. If not, replace IO module. 3. Verify that T1 resistance is correct with respect to temperature. (See Table 1.) If not, replace T1.
"F8 No water in wash tank," "Check inlet water and door"	1. Malfunction of fill solenoid or fill relay. 2. Door is open, which inhibits fill mode. 3. Faulty door switch.	1. Replace faulty solenoid or fill relay. 2. Close door to activate door switch. 3. Replace or adjust door switch.
"F9 Service needed," "Check incoming power"	1. Incoming power not properly connected. 2. L3 is missing (3-phase units only).	1. Check connections to heater. 2. Verify that L3 is present and connected properly.
"F10 Service needed," "Check wash tank thermostat and high limit"	1. Faulty temperature input (T1) on IO module. 2. Faulty temperature probe (T1). 3. Faulty high-limit switch. 4. Faulty wash heater. 5. Wash-heater contactor not energizing.	1. Substitute a 1.8 kΩ resistor for T1, and verify that wash heater turns on. If not, replace IO module. 2. Verify that T1 resistance is correct with respect to temperature. (See Table 1.) If not, replace T1. 3. Replace high-limit switch. 4. Check wash heater for proper resistance. Replace if incorrect. 5. Verify that drive voltage to contactor coil is present during a call for heat and that contactor closes. If voltage present, replace contactor. If voltage not present, check wiring.
F11 Service needed –check wash tank thermostat	Faulty temperature probe (T1).	Replace probe that connects to P10.

DISPLAY SHOWS	POSSIBLE CAUSES	REMEDY
F12 Service needed – check booster thermostat	Faulty temperature probe (T3).	Replace probe that connects to P13.
F13 Communication error. Check 6-pin cable	1. Loose connection in 6-pin cable between display board and IO module. 2. Faulty 6-pin cable between display board and IO module. 3. Faulty communication port on IO module or display board.	1. Fully disconnect 6-pin cable at each end, and reconnect each end until a click is heard. 2. Inspect for broken wire or unseated terminal by gently pulling on each wire at each end of the cable. Reseat any loose terminals by inserting it fully into the housing using long-nosed pliers. Replace cable if broken wire is found. 3. Temporarily substitute a verified good display board, and check if F13 message recurs. If so, repeat substitution with a good IO module.

TABLE 1: RESISTANCE-TO-TEMPERATURE VALUES

R (kΩ)	°F
11.58	69.8
10.37	75.2
9.30	80.6
7.78	89.6
3.05	140.0
2.54	150.8
2.18	159.8
1.58	179.6
1.45	185.0
1.33	190.4
1.16	199.4
0.96	212.0

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.**

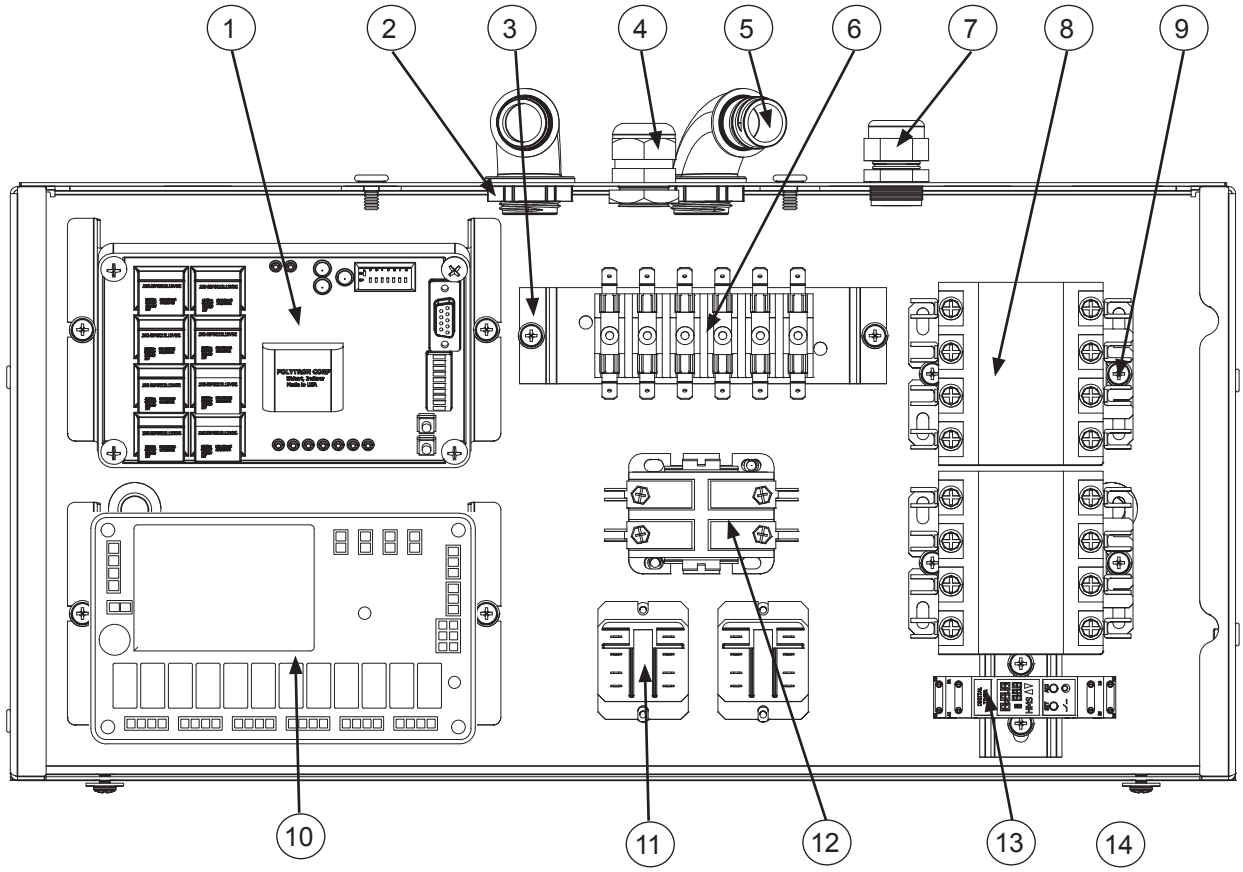
PROBLEM	POSSIBLE CAUSES	REMEDY
Digital display does not illuminate after power button is pressed.	1. Service breaker tripped. 2. Machine not connected to power source. 3. Faulty power source.	1. Reset breaker. If it trips, again, contact an electrician to verify the amp draw of the machine. 2. Verify that the machine has been properly connected to the power source. 3. Verify the wiring to the breaker switch.
Dishmachine does not fill when unit is powered on (door must be closed.)	1. Tank already full 2. Faulty rinse solenoid valve. 3. Faulty door switch. 4. Faulty float switch.	1. N/A 2. Repair or replace valve as required. 3. Verify the wiring of the switch; if correct, replace switch. 4. Verify the wiring of both float switches; if correct, replace switch.
Dishmachine will not begin wash cycle upon closing the door.	1. IO Module is faulty. 2. Timer Module is faulty. 3. Wash motor faulty/damaged. 4. Wash motor contactor faulty.	1. Verify that module is receiving power (green LEDs are on); if so, replace it. 2. Verify that module is receiving power (red LED is on); if so, replace it. 3. Verify that the wash motor is receiving power; if so, replace the motor. 4. Verify that contactor energizes; if so, then, with contactor energized, verify continuity across poles; if contacts are open, then replace the contactor.
Dishmachine continuously washes.	1. Machine is in Delime mode, which will be indicated in the display. 2. Timer Module is faulty.	1. Turn off Delime mode by pressing Delime key. 2. Verify that module is receiving power (green LEDs are on); if so, replace it.
Wash or rinse heater does not work.	1. Faulty heater element. 2. Faulty heater contactor. 3. Faulty temperature probe (T1-wash tank, T3-rinse tank).	1. Verify that element has very low resistance (< 20 Ω) across terminals. If high resistance or open, replace the heater. 2. Verify that contactor energizes; if so, then, with contactor energized, verify continuity across poles; if contacts are open, then replace the contactor. 3. Measure probe's resistance with ohmmeter, which should be ~10 kΩ at 77°F. Replace probe is much different than this value. Reference: resistances at 70°F & 85°F are ~11.9 kΩ & 7.4 kΩ, respectively.
Dishmachine fills slowly and/or the rinse is weak.	1. Clogged or obstructed rinse arms. 2. Low incoming water pressure. 3. Y-strainer is clogged	1. Remove and clean the rinse arms. 2. Adjust water-pressure regulator to 10 PSI. 3. Clean Y-strainer.

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	POSSIBLE CAUSES	REMEDY
Rinse water is heated, but not reaching required temperature.	1. Faulty rinse heater. 2. Faulty temperature probe (T2- rinse injector, T3-rinse tank). 3. IO Module is faulty.	1. Verify that element has very low resistance (< 20 Ω) across terminals. If high resistance or open, replace the heater. 2. Measure probe's resistance with ohmmeter, which should be ~10 kΩ at 77°F. Replace probe is much different than this value. Reference: resistances at 70°F & 85°F are ~11.9 kΩ & 7.4 kΩ, respectively. 3. Verify that module is receiving power (green LEDs are on); if so, replace it.
Machine doesn't drain when drain handle is pulled.	1. Water turned off or disconnected. 2. Pressure sensor disconnected. 3. Pressure sensor defective.	1. Ensure water is connected & turn on valve. 2. Verify connection to IO Module at P9. 3. Verify output (P9, WHT wire to BLK wire) to be ~1 VDC at 10 PSI. If not, then replace pressure sensor.
Wash water is not reaching required temperature.	1. Faulty wash heater. 2. Faulty temperature probe (T1). 3. IO Module is faulty.	1. Verify that element has very low resistance (< 20 Ω) across terminals. If high resistance or open, replace the heater. 2. Measure probe's resistance with ohmmeter, which should be ~10 kΩ at 77°F. Replace probe is much different than this value. Reference: resistances at 70°F & 85°F are ~11.9 kΩ & 7.4 kΩ, respectively. 3. Verify that module is receiving power (green LEDs are on); if so, replace it.
Doors will not close completely.	1. Improper spring tension. 2. Obstruction in door roller channel.	1. Adjust spring tension to desired stiffness by loosening (not removing) spring bolt nuts near bottom of unit, and adjusting the tension. Tighten nuts back when done. 2. Remove the obstruction.
Water leaks at the wash pump.	1. Wash pump seal defective. 2. Petcock or pump drain (if equipped) not shut/tight. 3. Loose hoses (hose clamps) on the wash pump.	1. Replace the seal. 2. Close or tighten. 3. Tighten the hose clamps.
Will not rinse during the cycle.	1. Defective rinse solenoid. 2. Timer Module is faulty. 3. No incoming water pressure. 4. Machine temperatures are below minimum requirements.	1. Repair or replace the rinse solenoid. 2. Verify that module is receiving power (green LEDs are on); if so, replace it. 3. Verify 10 PSI water pressure to the machine. 4. Verify that incoming water, rinse water, and wash water match the required temperatures as listed on the machine data plate.
Dishes are not coming clean.	1. Machine temperatures are below minimum requirements. 2. No detergent or too much detergent. 3. Solid dispenser canister is empty.	1. Verify that incoming water, rinse water, and wash water match the required temperatures as listed on the machine data plate. 2. Adjust detergent concentration as required for the amount of water held by the machine. 3. Replace the canister.

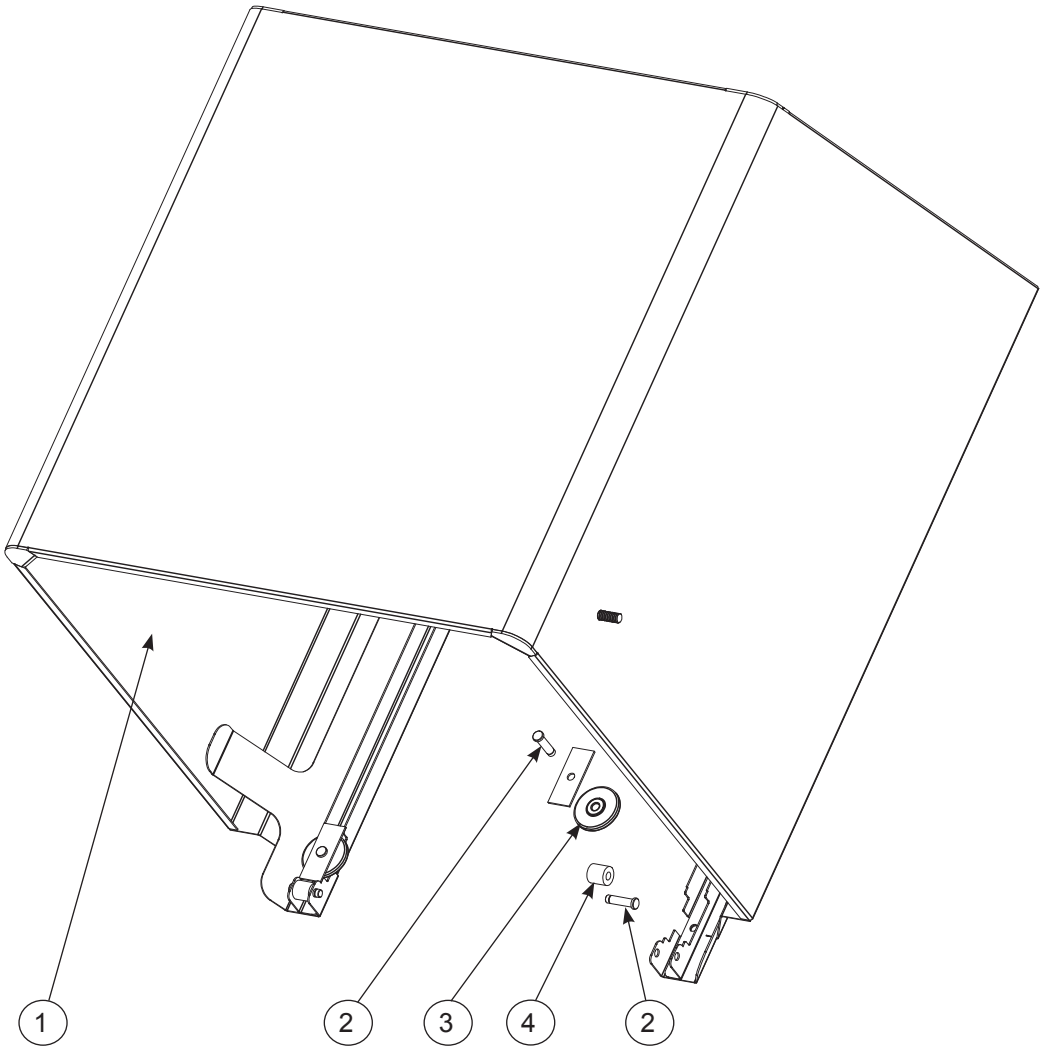
CONTROL BOX ASSEMBLY

Control Box shown with cover (05700-004-27-52) removed.

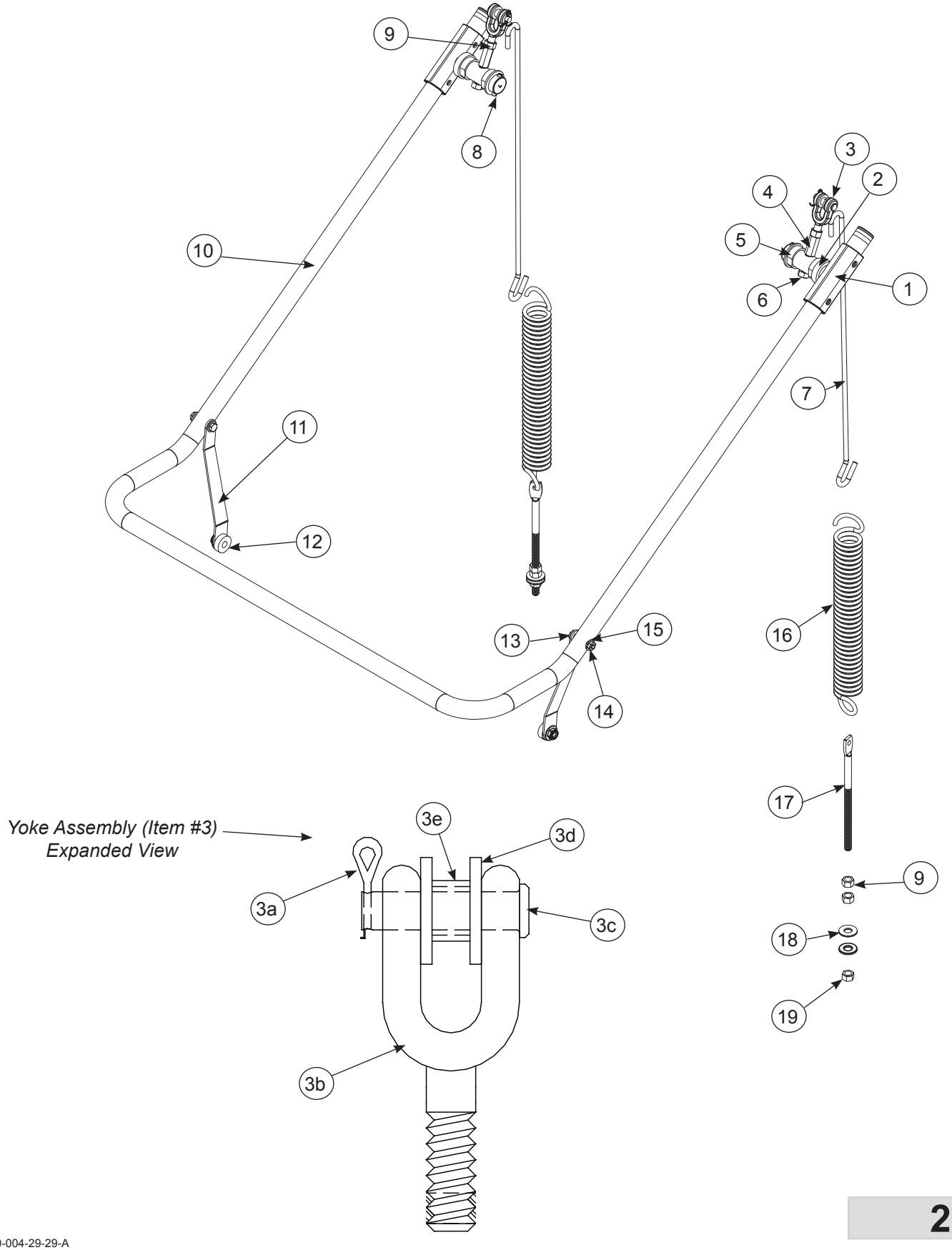


ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Timer, Universal	05945-003-75-23
2	2	Nut, Conduit Black Nylon 3/4"	05975-003-81-29
3	1	Bracket, Fuse Strip	05700-002-42-03
4	1	Fitting	05975-011-65-51
5	2	Fitting, 3/4 90° Twist HFC	05975-004-19-42
6	1	Fuse Holder, 6 Pole	05920-002-42-13
7	1	Fitting	05975-011-59-50
8	2	Contactor, 4 Pole	05945-109-01-69
9	12	Screw, 10-32 x 1/2	05305-011-44-52
10	1	Board, I/O	05945-004-26-34
11	2	Relay	05945-111-47-51
12	1	Contactor, 30A 240V	05945-002-74-20
13	1	Timer, Universal Digital Multi-timer	05945-004-22-78
14	1	Transformer (not shown), 460V Machine Only	05950-111-65-93

HOOD ASSEMBLY



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Hood	05700-004-20-68
2	4	Pin, Clevis 5/16 x 1-1/4	05315-004-07-24
3	2	Roller, Bottom Hood Lateral	09330-004-07-30
4	2	Roller, Bottom Rear	09330-004-07-29
	1	Hood Top (not shown)	05700-004-20-62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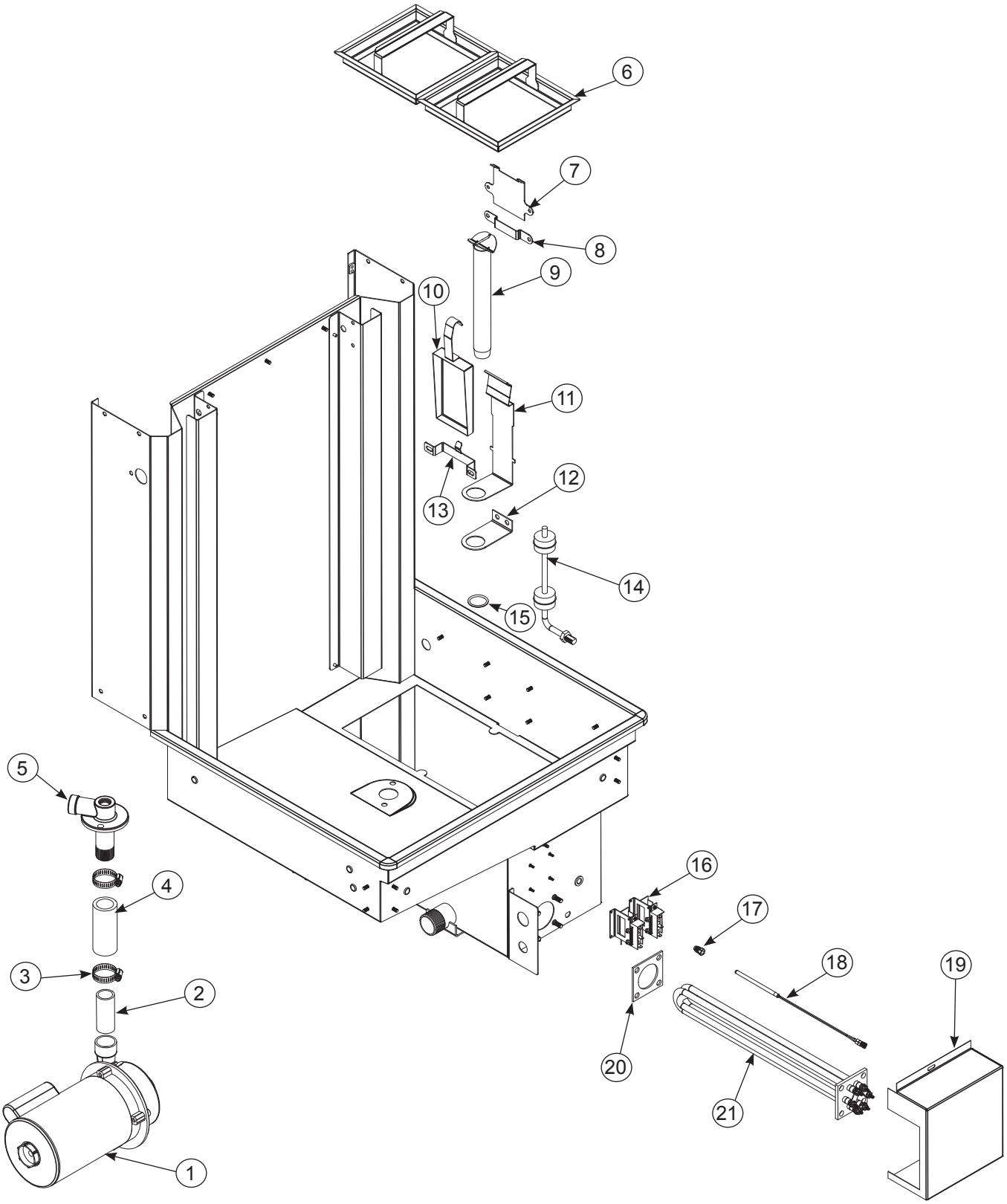
Yoke Assembly (Item #3)
Expanded View
3e
3d
3a
3c
3b

CANTILEVER ARM ASSEMBLY

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Pivot, Cantilever Arm Right	09515-004-25-38
	1	Pivot, Cantilever Arm Left	09515-004-25-91
2	2	Bushing, Door Pivot Outer	09330-004-26-71
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
4	2	Nut, Hex Coupling 3/8-16	05310-004-26-85
5	2	Bushing, Door Pivot Inner	09330-004-25-63
6	2	Bolt, Hex 3/8-16 x 1-1/4	05305-276-10-00
7	2	Spring Link	05700-004-26-81
8	2	Spring Pin, 1/4 DIA x 1-1/4 Long	05315-407-06-00
9	6	Nut, Hex 3/8-16 S/S	05310-276-01-00
10	1	Cantilever Arm	05700-004-20-70
11	2	Link, Hood to Handle	05700-004-20-69
12	2	Standoff, Door Pivot	05700-004-22-75
13	2	Screw, 1/4-20 x 1-1/2 Hex Head	05305-274-23-00
14	2	Locknut, 1/4-20 Low Profile w/Nylon	05310-374-02-00
15	4	Washer, S/S 1/4-20 I.D.	05311-174-01-00
16	2	Springs, Cantilever	05340-004-33-86
17	2	Bolt, Cantilever Hang Eye	05306-956-05-00
18	4	Washer, Impeller 3/8 Flat S/S	05311-176-02-00
19	2	Locknut, 3/8-16 w/Nylon Insert	05310-011-72-55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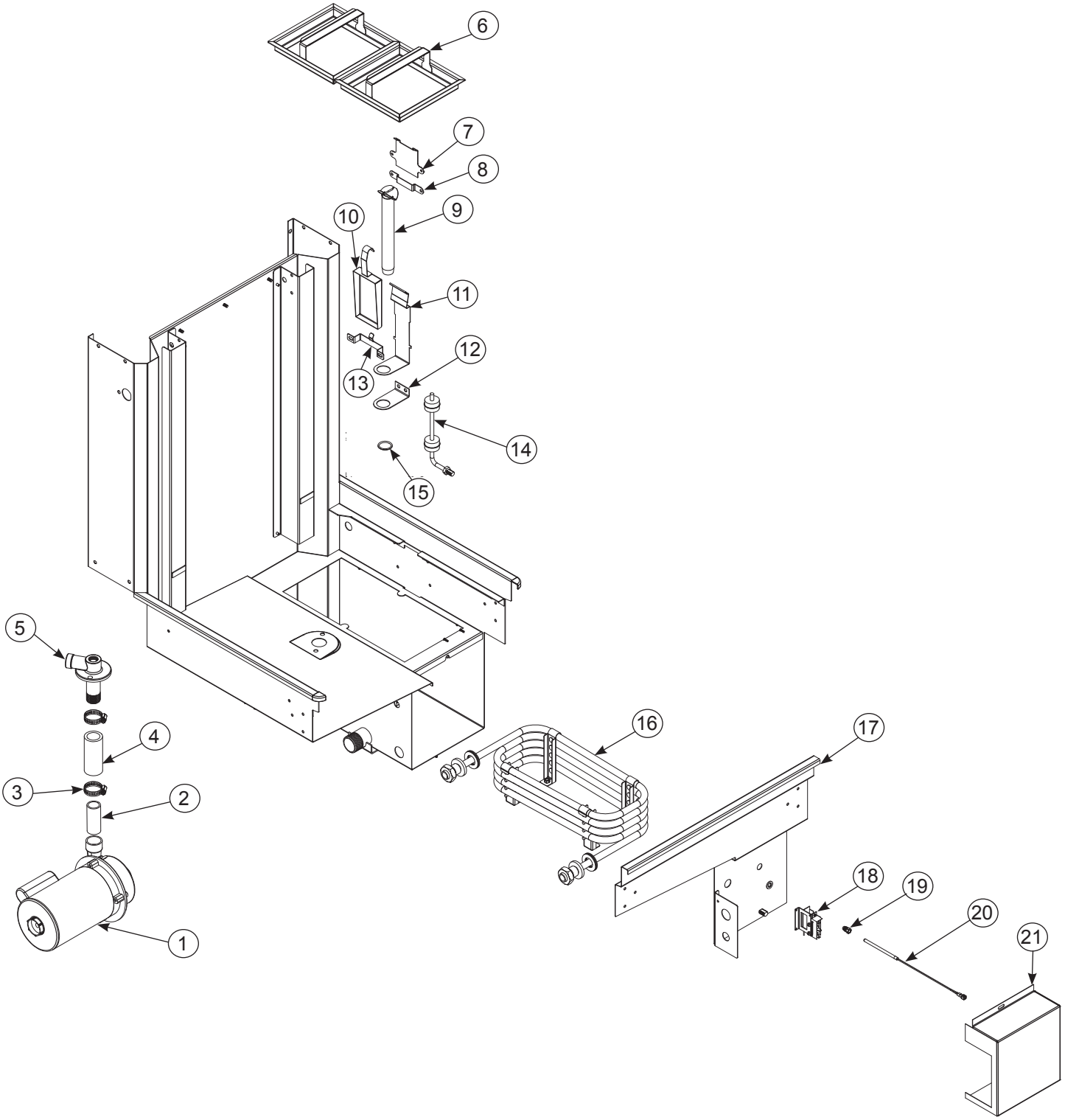
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Wash Motor	See page 39
2	1	Wash Lower Manifold Nipple	05700-021-34-84
3	2	Clamp	04730-719-01-37
4	1	Discharge Hose	05700-011-88-24
5	1	Lower Wash Manifold	05700-031-46-00
6	2	Strainer	05700-004-26-21
7	1	Standpipe Lift Support	05700-004-27-94
8	1	Standpipe Bracket	05700-004-26-24
9	1	Standpipe	05700-001-25-69
10	1	Suction Strainer	05700-001-22-23
11	1	Standpipe Lift Handle	05700-004-26-23
12	1	Standpipe Support	05700-001-27-55
13	1	Suction Strainer Bracket	05700-001-22-24
14	1	Dual Float Switch	06680-121-70-71
15	1	O-ring	05330-400-05-00
16	2	Hi-limit Thermostat (Wash and Booster)	05930-011-49-43
17	1	Probe Fitting	05310-924-02-05
18	1	Thermister Probe	06685-004-17-26
19	1	Wash Tank Heater Cover	05700-031-47-57
20	1	Wash Heater Gasket	05330-011-47-79
21	1	Wash Heater	04540-121-47-39

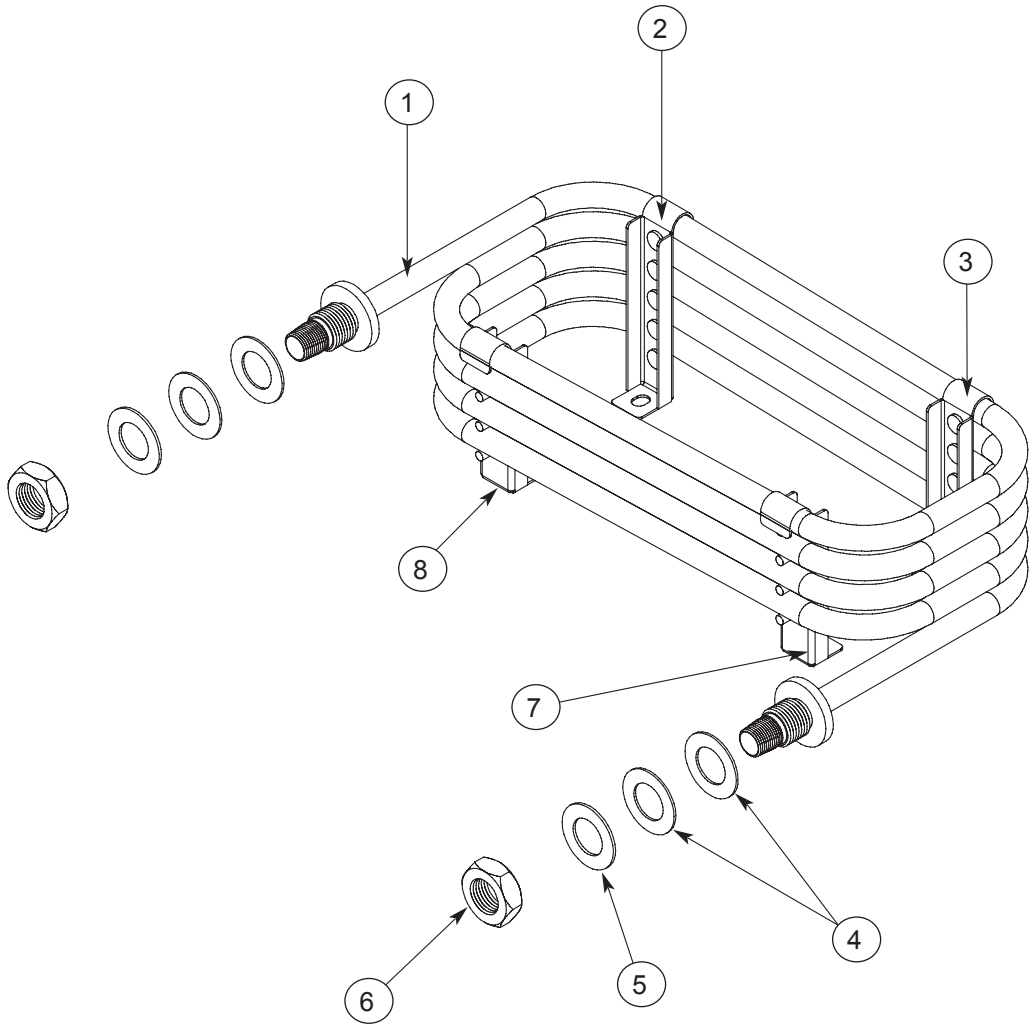
STEAM TUB ASSEMBLY



STEAM TUB ASSEMBLY

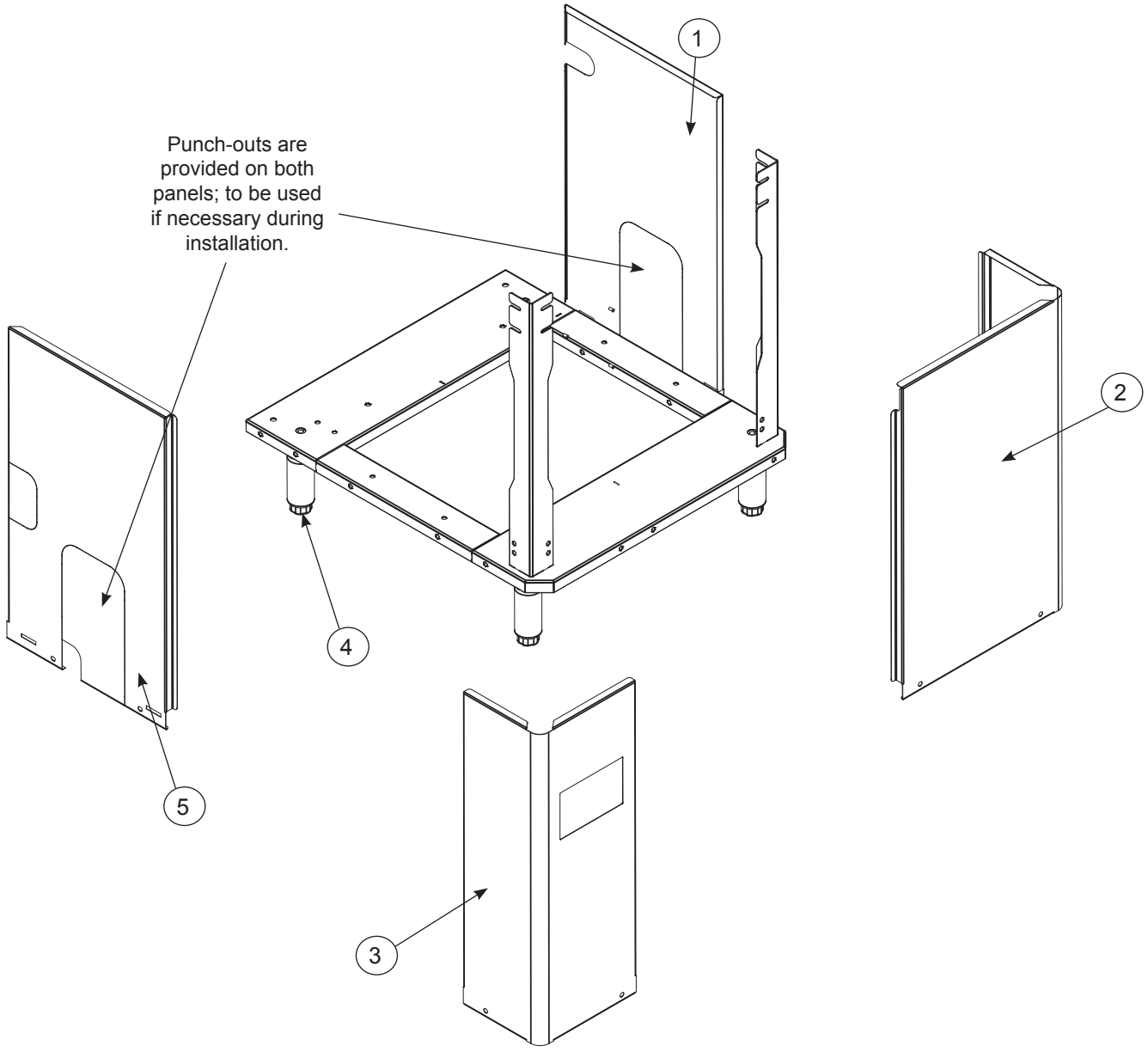
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Wash Motor	See page 39
2	1	Wash Lower Manifold Nipple	05700-021-34-84
3	2	Clamp	04730-719-01-37
4	1	Discharge Hose	05700-011-88-24
5	1	Lower Wash Manifold	05700-031-46-00
6	2	Strainer	05700-004-26-21
7	1	Standpipe Lift Support	05700-004-27-94
8	1	Standpipe Bracket	05700-004-26-24
9	1	Standpipe	05700-001-25-69
10	1	Suction Strainer	05700-001-22-23
11	1	Standpipe Lift Handle	05700-004-26-23
12	1	Standpipe Support	05700-001-27-55
13	1	Suction Strainer Bracket	05700-001-22-24
14	1	Dual Float Switch	06680-121-70-71
15	1	O-ring	05330-400-05-00
16	1	Steam Coil	See page 30
17	1	Tub Front, DynaTemp Steam	05700-004-32-87
18	1	Hi-limit Thermostat	05930-011-49-43
19	1	Probe Fitting	05310-924-02-05
20	1	Thermister Probe	06685-004-17-26
21	1	Wash Tank Heater Cover	05700-031-47-57

STEAM COIL ASSEMBLY



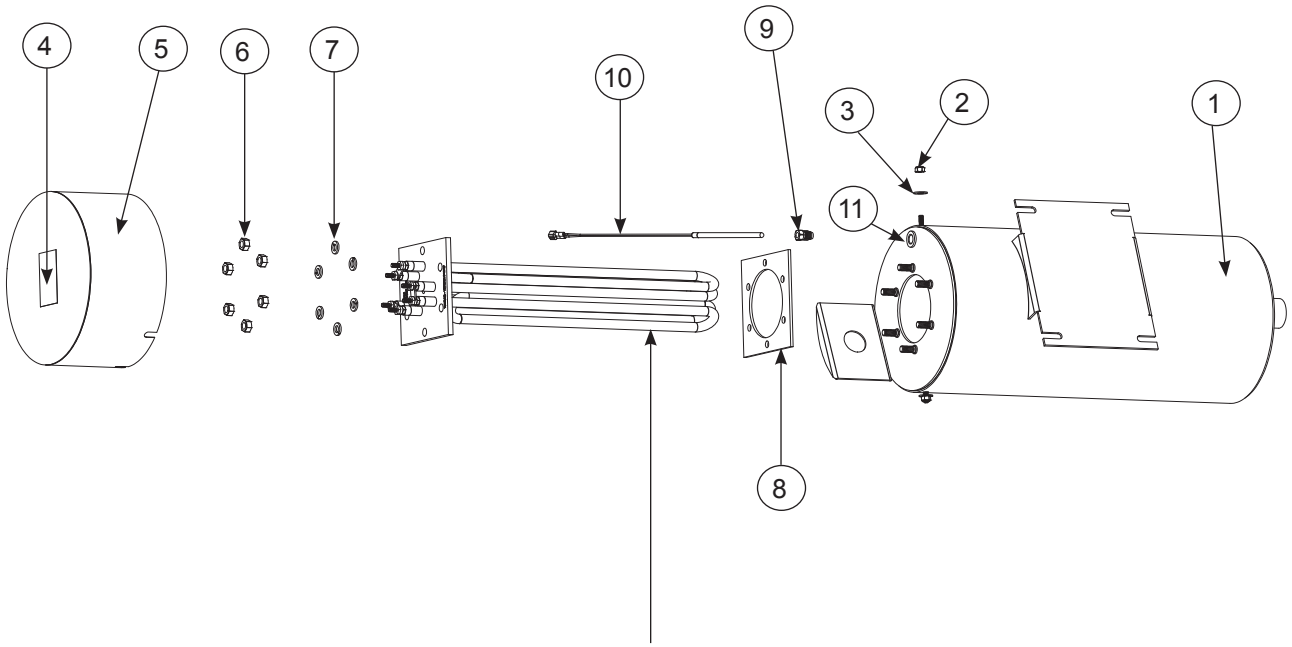
ITEM	QTY	DESCRIPTION	PART NUMBER
		Complete Steam Coil Assembly	05700-002-08-62
1	1	Steam Coil Weldment	05700-021-41-38
2	1	Stand C, Steam Coil Support	05700-002-08-52
3	1	Stand D, Steam Coil Support	05700-002-08-53
4	4	Gasket, Steam Coil	05700-001-17-86
5	2	Washer, Steam Coil	05700-001-17-87
6	2	Adapter, Steam Coil Nut	05310-011-17-85
7	1	Stand A, Steam Coil Support	05700-002-08-50
8	1	Stand B, Steam Coil Support	05700-002-08-51

FRAME ASSEMBLY



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Panel, Right	05700-004-20-80
2	1	Panel, Front	05700-004-10-02
3	1	Panel, Control	05700-004-27-88
4	4	Bullet Foot	05340-004-14-99
5	1	Panel, Left	05700-004-20-83

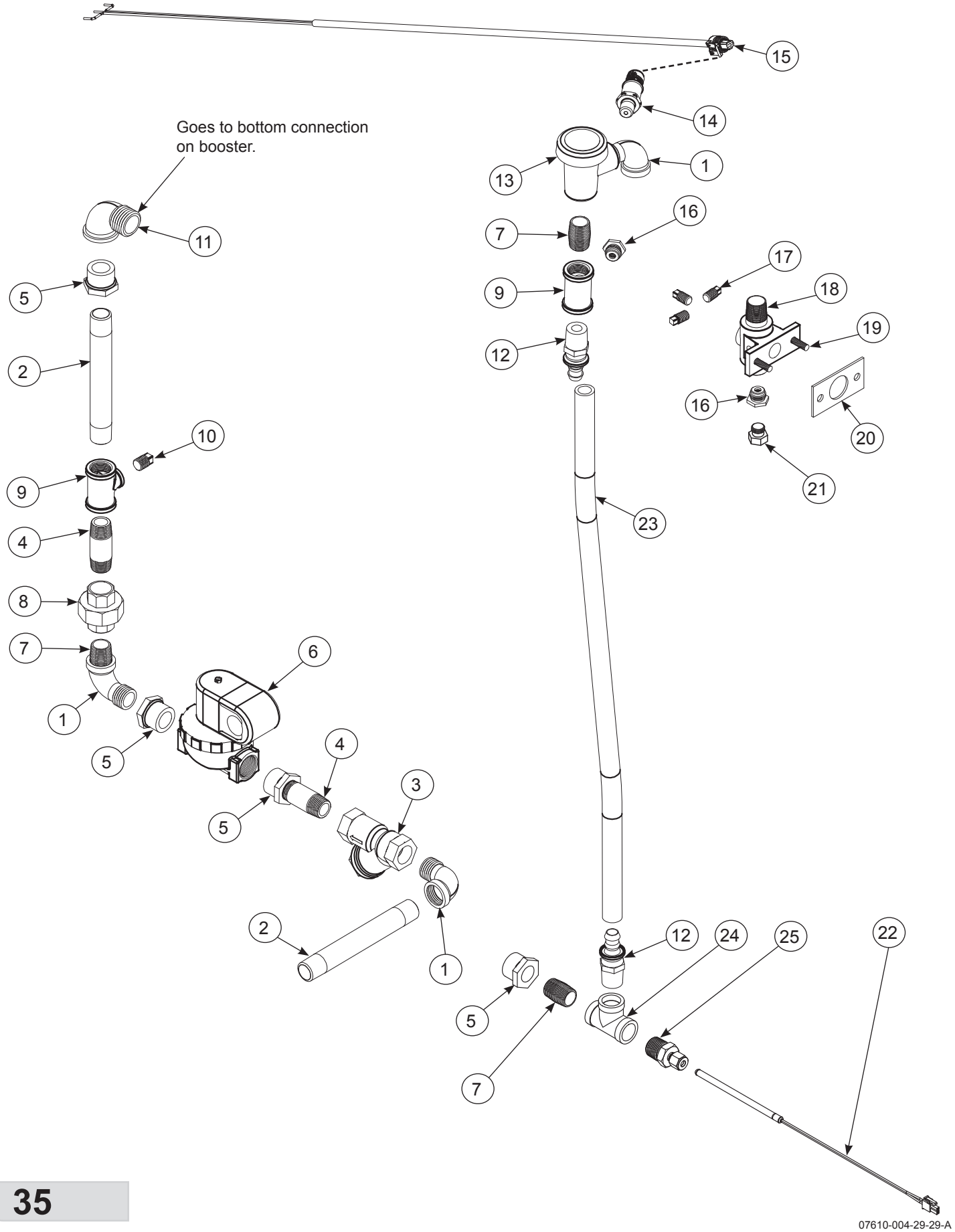
RINSE TANK ASSEMBLY



See page entitled
“WASH HEATERS/RINSE HEATERS.”

ITEM	QTY	DESCRIPTION	PART NUMBER
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	6	Washer, 5/16” I.D.	05311-175-01-00
8	1	Gasket, Rinse Heater	05330-200-02-70
9	1	Fitting, 1/4" Imperial Brass	05310-924-02-05
10	1	Probe, Thermistor 4" LG	06685-004-17-26
11	1	Fitting, Thermostat	05700-001-23-96

INCOMING/OUTLET PLUMBING ASSEMBLY



07610-004-29-29-A

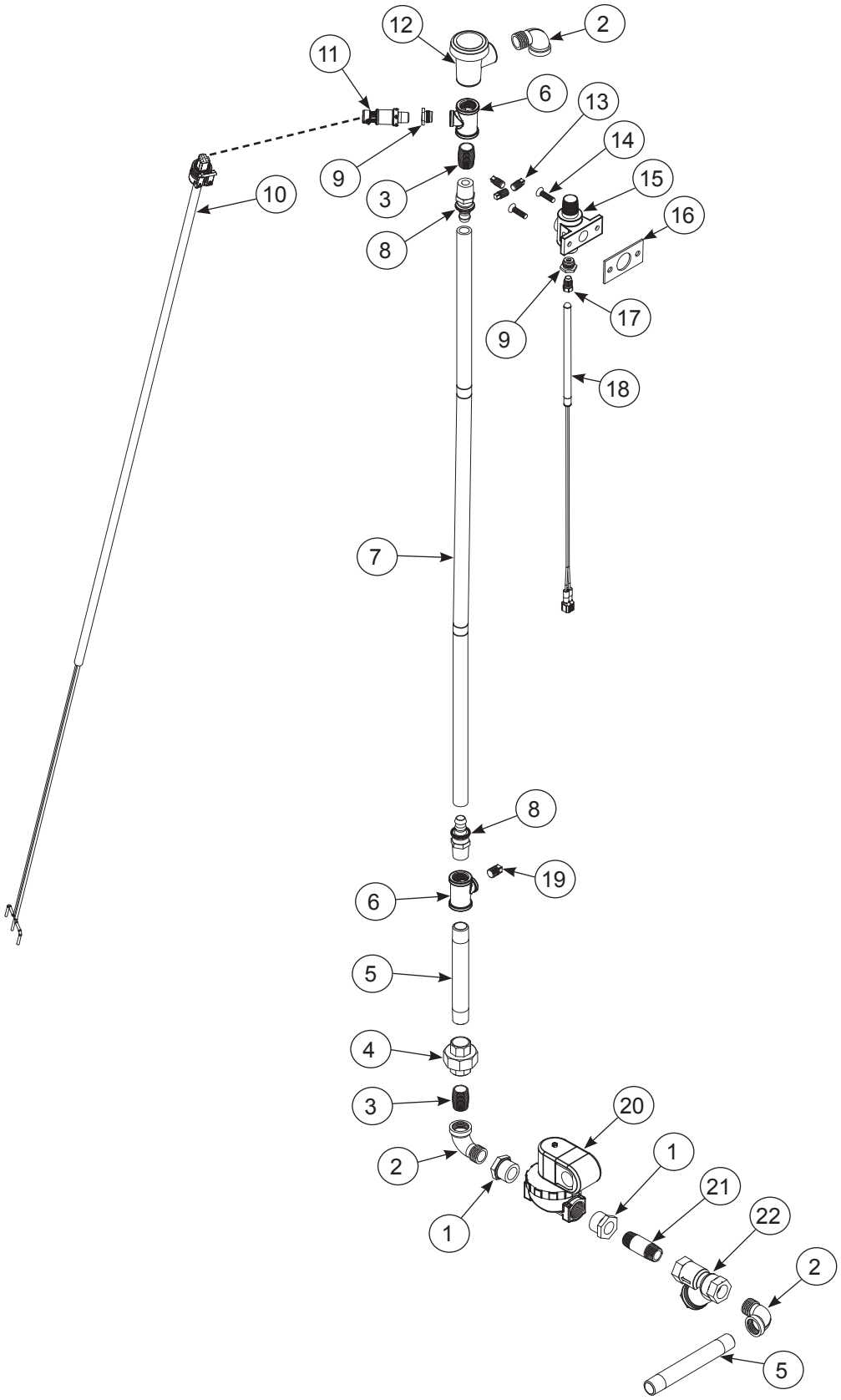
INCOMING/OUTLET PLUMBING ASSEMBLY

ITEM	QTY	DESCRIPTION	PART NUMBER
1	3	Elbow, 90 Degree 1/2 Street Brass	04730-206-08-00
2	2	Nipple, 1/2" x 6" Long Brass	04730-003-62-38
3	1	Y-Strainer	04730-217-01-10
4	2	Nipple, 1/2" x 2" Long	04730-207-19-00
5	3	Bushing, Hex 3/4"M to 1/2"F Brass	04730-002-56-27
6	1	Solenoid Valve, 3/4"	04810-100-03-18
7	3	Nipple, 1/2 Close Brass	04730-207-15-00
8	1	Union, 1/2" x 1/2" Brass	04730-003-62-44
9	2	Tee	04730-002-22-56
10	1	Plug	04730-209-01-00
11	1	Elbow, 3/4 Street Brass 90 Degrees	04730-206-04-34
12	2	Fitting, 1/2" Male Swivel Brass	04730-004-19-62
13	1	VAC BRKR 1/2 Brass	04820-003-06-13
14	1	Pressure Transducer	05945-004-17-01
15	1	Harness	05999-004-21-58
16	2	Adapter, Omega HT	05700-002-29-75
17	3	Plug, 1/8 NPT Brass	04730-209-07-37
18	1	Injector, Rinse Manifold	09515-004-22-73
19	2	Screw, 1/4-20 x 1	05305-011-81-58
20	1	Gasket, Rinse Manifold	05330-003-75-91
21	1	Fitting, Thermostat Brass	05700-011-73-73
22	1	Probe, Thermister	06685-004-34-58
23	1	Red Hose, 1/2" x 28"	05700-004-31-55
24	1	Tee, 1/2 Brass	04730-211-27-00
25	1	Fitting, Comp. 1/2" NPT x 1/4" Tube OD	04730-004-36-38

NOTICE

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 affect the performance of the DynaTemp 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, rendering them useless, including solenoid valves and pressure gauge isolation ball valves.

DYNATEMP NB INLET PLUMBING

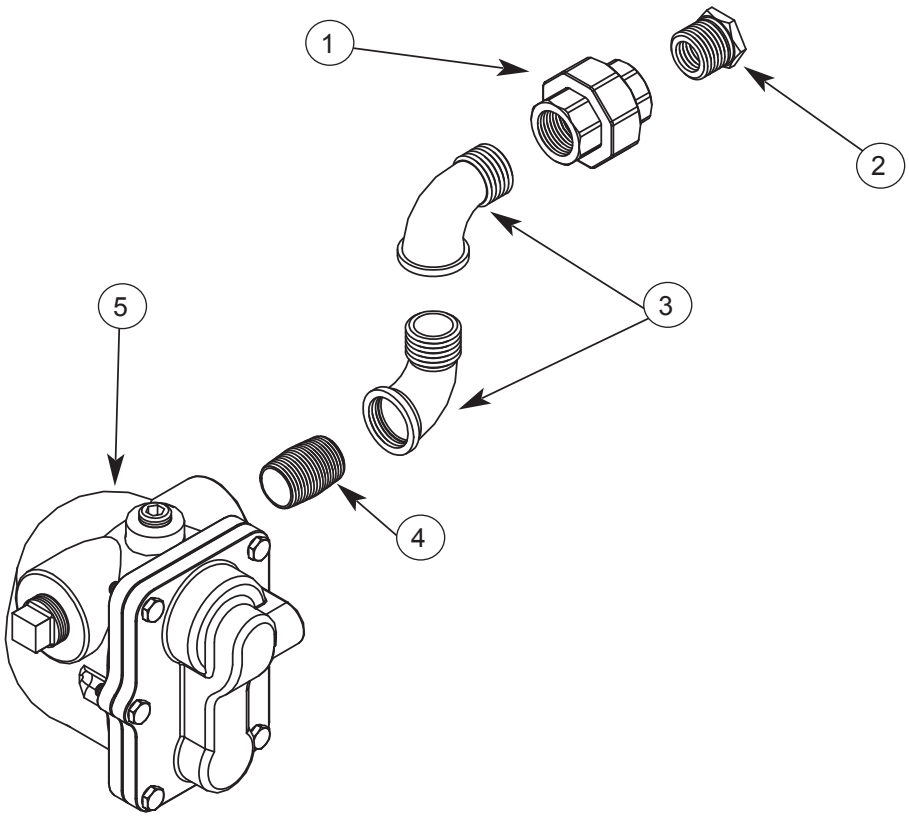


ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	Bushing, Hex 3/4"M to 1/2"F Brass	04730-002-56-27
2	3	Elbow, 90 Degree 1/2 Street Brass	04730-206-08-00
3	2	Nipple, 1/2 Close Brass	04730-207-15-00
4	1	Union, 1/2" x 1/2" Brass	04730-003-62-44
5	2	Nipple, 1/2" x 6" Long Brass	04730-003-62-38
6	2	Tee	04730-002-22-56
7	1	Red Hose, 1/2" x 38"	05700-004-31-53
8	2	Fitting, 1/2" Male Swivel Brass	04730-004-19-62
9	2	Adapter, Omega HT	05700-002-29-75
10	1	Harness	05999-004-21-58
11	1	Pressure Transducer	05945-004-17-01
12	1	VAC BRKR 1/2 Brass	04820-003-06-13
13	3	Plug, 1/8 NPT Brass	04730-209-07-37
14	2	Screw, 1/4-20 x 1	05305-011-81-58
15	1	Injector, Rinse Manifold	09515-004-22-73
16	1	Gasket, Rinse Manifold	05330-003-75-91
17	1	Probe Fitting	05310-924-02-05
18	1	Probe, Thermister	06685-004-17-26
19	1	Plug	04730-209-01-00
20	1	Solenoid Valve, 3/4"	04810-100-03-18
21	1	Nipple, 1/2" x 2" Long	04730-207-19-00
22	1	Y-Strainer	04730-217-01-10

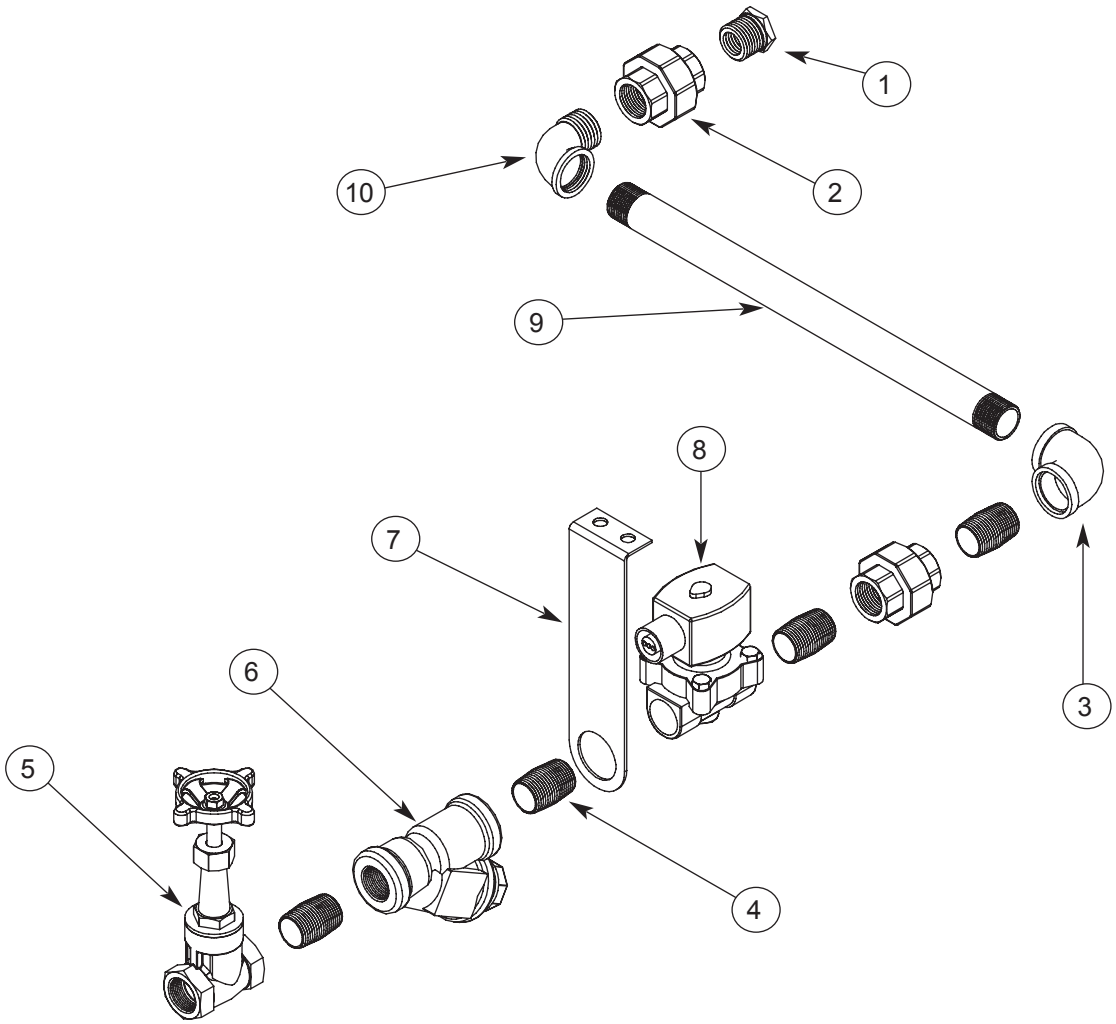
NOTICE

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 affect the performance of the DynaTemp 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, rendering them useless, including solenoid valves and pressure gauge isolation ball valves.

INCOMING STEAM PLUMBING ASSEMBLIES



ITEM	QTY	DESCRIPTION	PART NUMBER
		Complete Assembly	05700-002-01-55
1	1	Union, 3/4'' NPT, Black Iron	04730-912-01-00
2	1	Bushing, Reducing, 3/4'' to 1/2''	04730-911-02-34
3	2	Elbow, 3/4" 90° Street	04730-011-87-37
4	1	Nipple, Close, 3/4'' NPT, Black Iron	04730-907-01-00
5	1	Steam Trap, 3/4" NPT F&T	06680-500-02-77



ITEM	QTY	DESCRIPTION	PART NUMBER
		Complete Assembly	05700-002-01-60
1	1	Bushing, Reducing, 3/4'' to 1/2''	04730-911-02-34
2	2	Union, 3/4'' NPT, Black Iron	04730-912-01-01
3	1	Elbow, 90B 3/4" NPT Black Iron	04730-906-10-34
4	4	Nipple, Close, 3/4'' NPT, Black Iron	04730-907-01-00
5	1	Gate Valve, 3/4" NPT	04820-100-19-00
6	1	Y-Strainer, 3/4" NPT Black Iron	04730-217-01-32
7	1	Bracket, Steam Plumbing Support	05700-002-01-63
8	1	Solenoid Valve, Steam Plumbing, 220V	04820-002-01-56
9	1	3/4" NPT Black Iron Pipe	05700-002-20-83
10	1	Elbow, 3/4" 90° Street	04730-011-87-37

WASH MOTORS

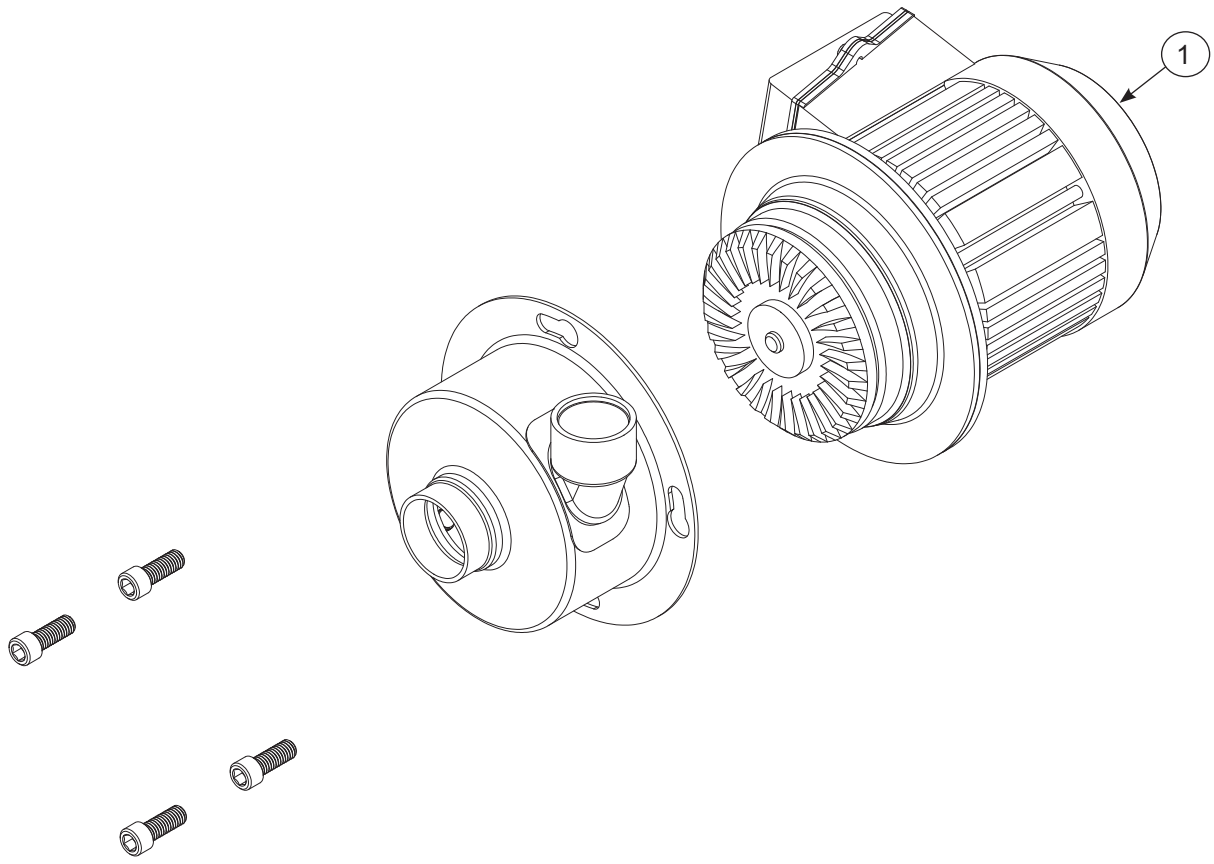
The DynaTemp models covered in this manual come supplied with various wash motor assemblies (a wash motor assembly includes the wash motor and the pump end), depending on the characteristics of the machine. To ensure that you order the correct wash motor assembly for the model you are servicing, please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

MODEL	VOLTS	HZ	PHASE	WASH MOTOR ASSEMBLY
DynaTemp/DynaTemp NB	208	50	1	06105-002-19-87
DynaTemp/DynaTemp NB	208	50	3	06105-002-19-87
DynaTemp/DynaTemp NB	208	60	1	06105-002-69-78
DynaTemp/DynaTemp NB	208	60	3	06105-002-69-78
DynaTemp/DynaTemp NB	230	50	1	06105-002-19-87
DynaTemp/DynaTemp NB	230	50	3	06105-002-19-87
DynaTemp/DynaTemp NB	230	60	1	06105-002-69-78
DynaTemp/DynaTemp NB	230	60	3	06105-002-69-78
DynaTemp/DynaTemp NB	380	50	3	06105-002-41-24
DynaTemp/DynaTemp NB	415	50	3	06105-002-41-24
DynaTemp/DynaTemp NB	440	50	3	06105-002-41-24
DynaTemp/DynaTemp NB	460	60	3	06105-121-64-21

NOTICE

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 your new motor might 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.

MOTOR & PUMP ASSEMBLY



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Motor, 1HP/115-230V/60HZ	06105-004-24-80
1	1	Motor, 2HP/480V/60HZ 3PH	06105-121-64-21

WASH HEATERS/RINSE HEATERS

Model	Volts	HZ	PHASE	Wash Heater	Rinse Heater (12 kW)	Rinse Heater (14 kW)
DynaTemp	208	50/60	1	04540-121-47-39	04540-121-47-40	04540-121-63-38
DynaTemp	208	50/60	3	04540-121-47-39	04540-121-47-40	04540-121-63-38
DynaTemp	230	50/60	1	04540-121-47-39	04540-121-47-40	04540-121-63-38
DynaTemp	230	50/60	3	04540-121-47-39	04540-121-47-40	04540-121-63-38
DynaTemp	380	50	3	04540-002-44-31	04540-002-44-32	04540-002-89-28
DynaTemp	415	50	3	04540-002-43-09	04540-002-43-10	04540-002-77-24
DynaTemp	440/460	50/60	3	04540-121-65-99	04540-100-01-15	04540-121-63-39

Model	Volts	HZ	PHASE	Wash Heater
DynaTemp NB	208	50/60	1	04540-121-47-39
DynaTemp NB	208	50/60	3	04540-121-47-39
DynaTemp NB	230	50/60	1	04540-121-47-39
DynaTemp NB	230	50/60	3	04540-121-47-39
DynaTemp NB	380	50	3	04540-002-44-31
DynaTemp NB	415	50	3	04540-002-43-09
DynaTemp NB	440	50/60	3	04540-121-65-99

HEATER CONVERSION KITS

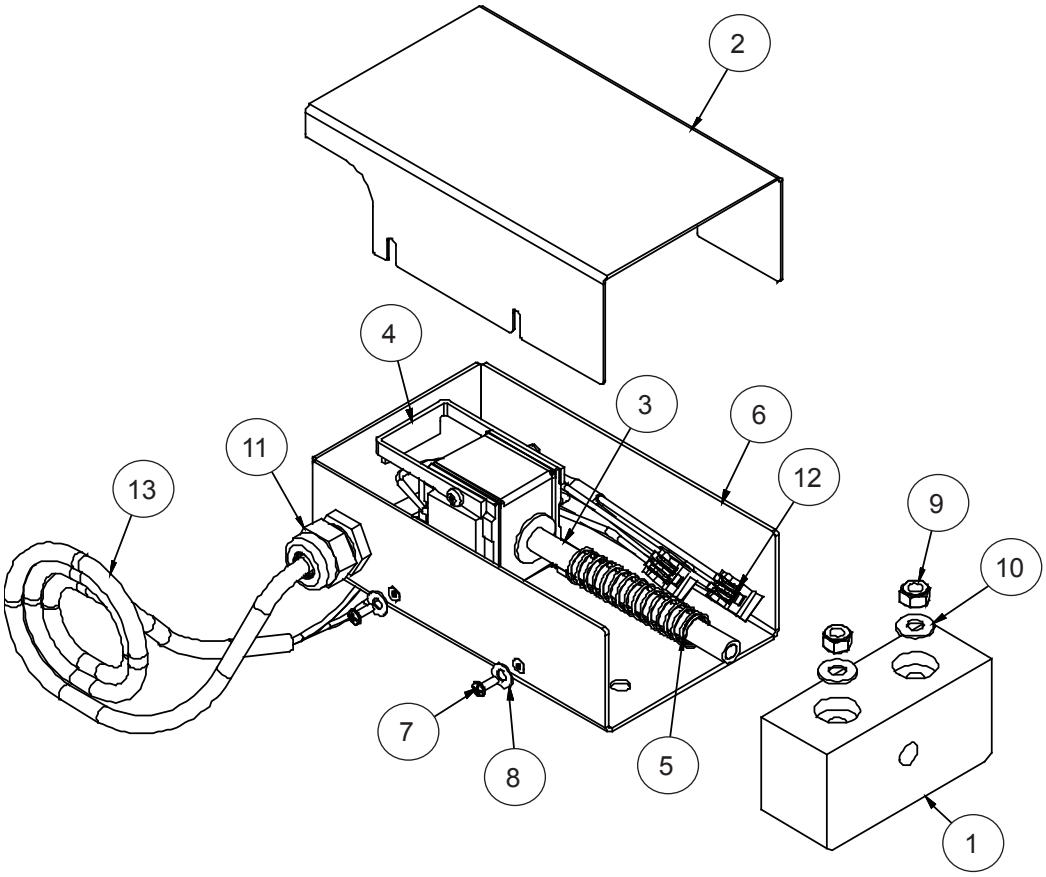
1 to 3 Phase, 208-230V/50hz
Conversion Kit: 06401-003-15-59

3 to 1 Phase, 208-230V/50hz
Conversion Kit: 06401-003-16-60

1 to 3 Phase, 208-230V/60hz
Conversion Kit: 06401-003-16-61

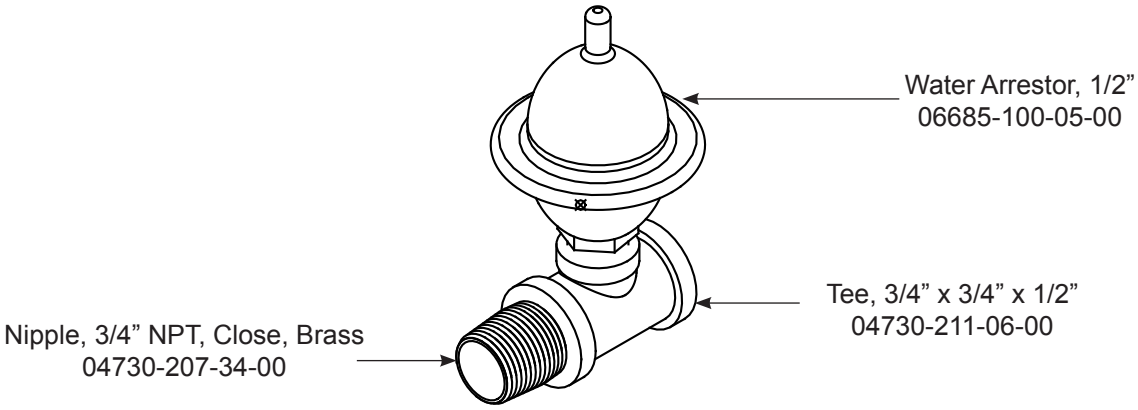
3 to 1 Phase, 208-230V/60hz
Conversion Kit: 06401-003-16-62

DOOR INTERLOCK

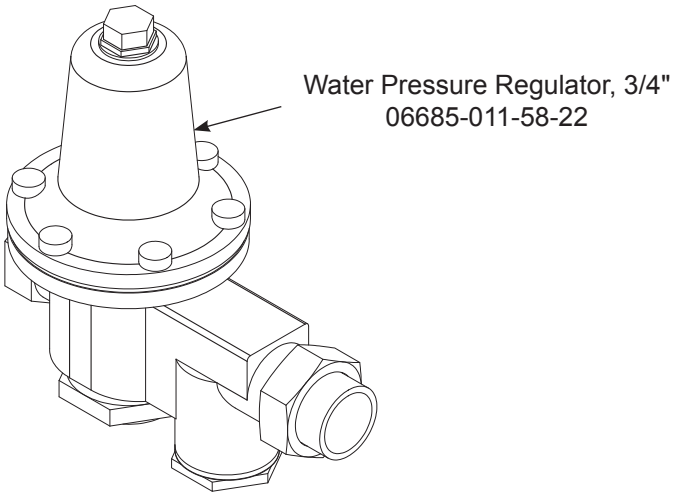


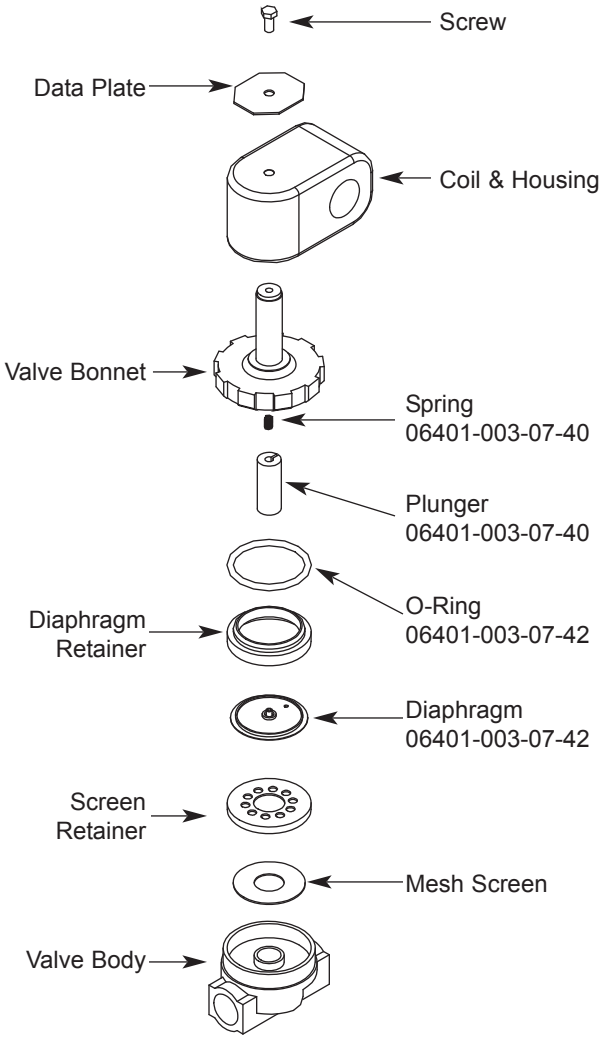
ITEM	QTY	DESCRIPTION	PART NUMBER
		Door Interlock Assembly	05700-004-23-06
1	1	Guide Block, Door Lock	09330-004-22-72
2	1	F-Cover, Door Lock Mounting	05700-004-22-80
3	1	W-Rod, Interlock Weldment	05700-004-23-15
4	1	Soleniod, Horizontal 1" Push	04820-004-24-11
5	1	Spring, Comp.	05935-004-24-10
6	1	W-Base, Door Interlock Box	05700-004-24-25
7	8	Screw 3/8 Pan Head	05305-171-02-00
8	8	Washer, Flat #10	05311-173-02-00
9	2	Locknut, 1/4-20	05310-374-01-00
10	2	Washer, S/S 1/4-20 I.D.	05311-174-01-00
11	1	Fitg, 3216 Liqtite Blk	05975-011-59-50
12	2	Connector, 2-Conductor	05935-004-03-49
13	1	Cord, SJ 55" LG	05700-004-24-31

SHOCK ABSORBER (WATER ARRESTOR) OPTION



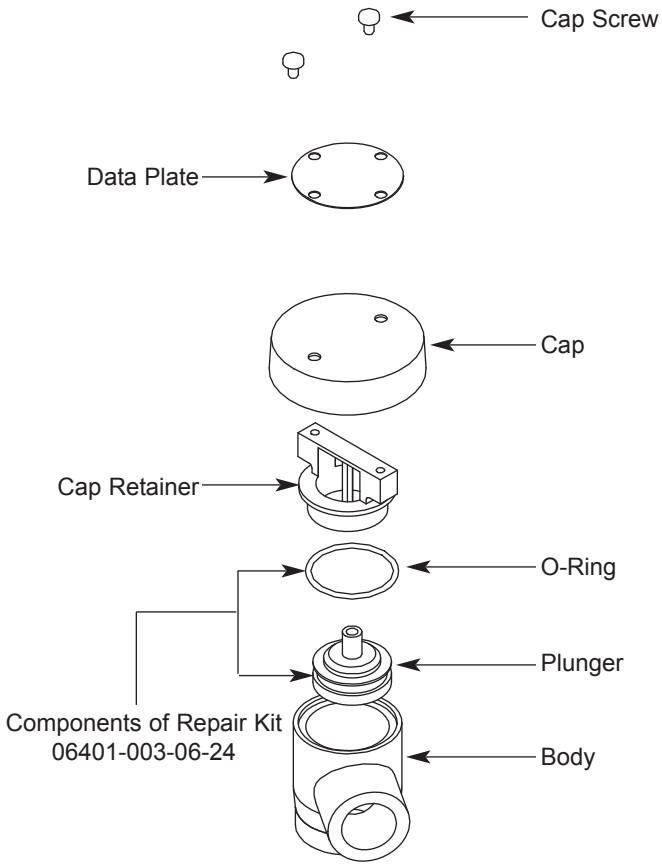
PRESSURE REGULATOR OPTION





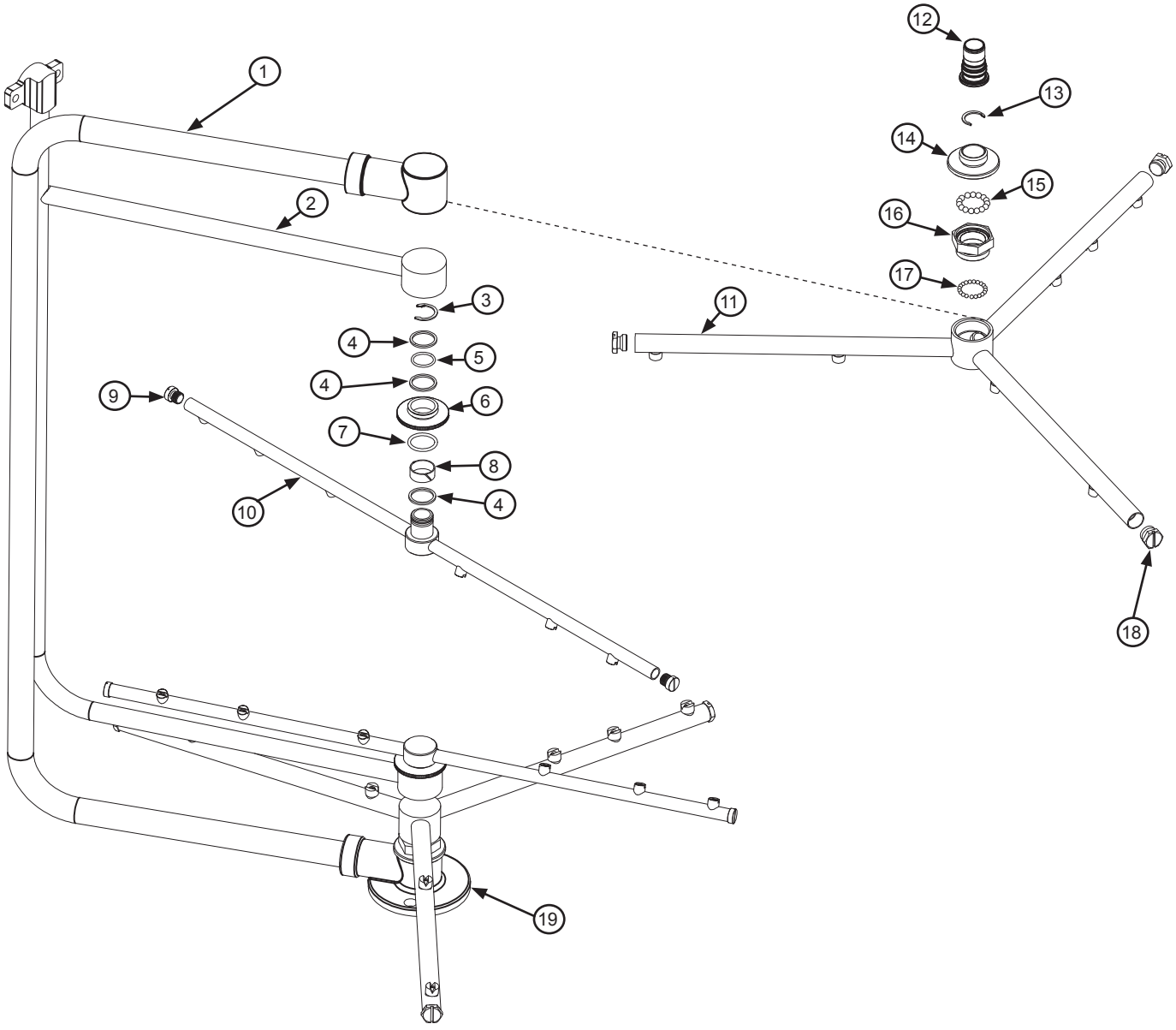
Complete 240 Volt Solenoid Valve Assembly
04810-100-03-18

Coil & Housing only
06401-003-07-44



Complete Vacuum Breaker Assembly
04820-002-53-77

WASH & RINSE ARM ASSEMBLIES



WASH & RINSE ARM ASSEMBLIES

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Wash Manifold	05700-004-28-58
2	1	Rinse Manifold	05700-004-26-07
3	2	Clip, Retaining, Rinse Head Bushing	05340-112-01-11
4	6	Washer, Rinse Arm	05330-011-42-10
5	2	O-Ring, Rinse Arm	05330-004-32-57
6	2	Bushing, Rinse Head	05700-021-33-84
7	2	O-Ring, 117-S70 Silicon	05330-002-60-69
8	2	Bearing, Rinse Arm	03120-004-12-13
9	4	End-cap, Rinse Arm	05700-004-34-62
10	2	Rinse Arm	05700-004-27-62
11	2	Wash Arm	05700-004-24-81
12	2	Hub Spindle	05700-011-35-95
13	2	Retainer Ring	05340-011-37-81
14	2	Hub Bushing	05700-011-35-96
15	30	Ball Bearing 3/16 Stainless Steel	03120-100-02-00
16	2	Hub Nut	05700-011-35-94
17	40	Ball Bearing 1/8 Stainless Steel	03120-011-37-82
18	1	End-cap, Wash Arm	05700-011-35-92
19	1	Lower Wash Manifold	05700-031-46-01

Rinse Arm - Entire Assembly
05700-004-32-58

Wash Arm - Entire Assembly
05700-004-32-59

Rinse Arm Bearing Kit
(Includes items 3, 4, 5, 7, and 8)
06401-004-33-52

GO*BOX COMPONENTS

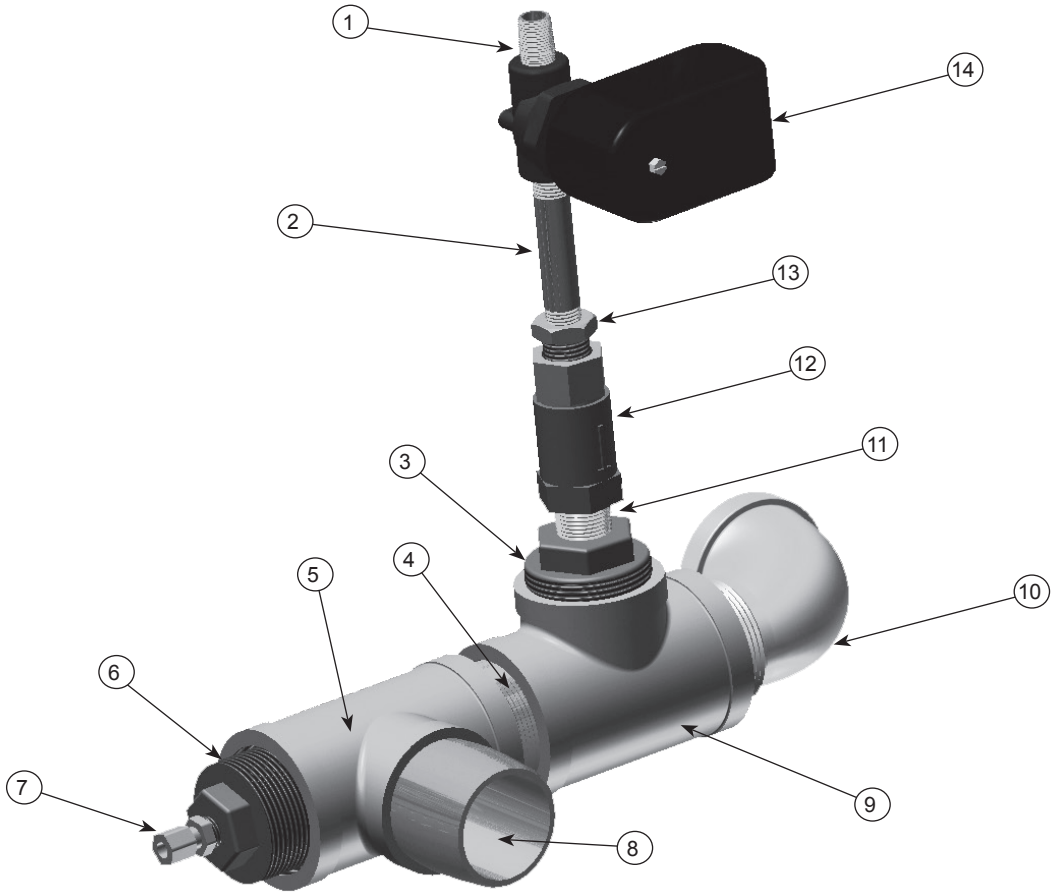
A GO*BOX is a kit of the most-needed parts for a particular model or model family to successfully effect a repair in the first call, 90% or more of the time.

The following components can be ordered together using part number 06401-004-34-17

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Contactor, Rinse/Wash Heater	05945-109-01-69
2	1	Contactor, Wash Motor	05945-002-74-20
5	2	Thermostat, Hi-Limit	05930-011-49-43
6	1	Magnet, Door	05930-111-51-68
7	2	O-Ring Wash Manifold	05330-111-35-15
8	2	Relay, Control 240V 50/60Hz	05945-111-47-51
9	1	Seal, Mechanical Pump (S/S Pumps)	05330-002-34-22
10	1	O-Ring, Wash Pump Gasket	05330-002-81-83
11	1	Switch, Door, Magnetic Reed	05930-111-51-69
12	2	Snap Ring, Retaining, Rinse Arm	05340-112-01-11
13	1	Bearing Assembly, Wash Arm	05700-021-35-97
14	1	Timer, Universal	05945-003-75-23
15	4	Washer, Rinse Arm Nylatron	05330-011-42-10
16	1	Vacuum Breaker 1/2" Brass	04820-003-06-13
17	1	Valve, Solenoid, 3/4", 208-220V	04820-100-03-18
18	1	PCB, Electronic WW CTRL 3636	05945-004-26-34
19	1	Cable, Pressure Sensor	05700-004-33-24
20	1	Harness, PSI/Transducer	05700-004-33-62
21	1	Cable, RS-232 Communication	05700-004-33-22
22	1	Spring, Extension, Cantilever Arm	05340-004-33-86
23	1	Transducer, Pressure 3100 Series	05945-004-17-01
24	1	Harness, Pressure Transducer	05999-004-21-58
25	1	Switch, Lead Dual Float	06680-121-70-71

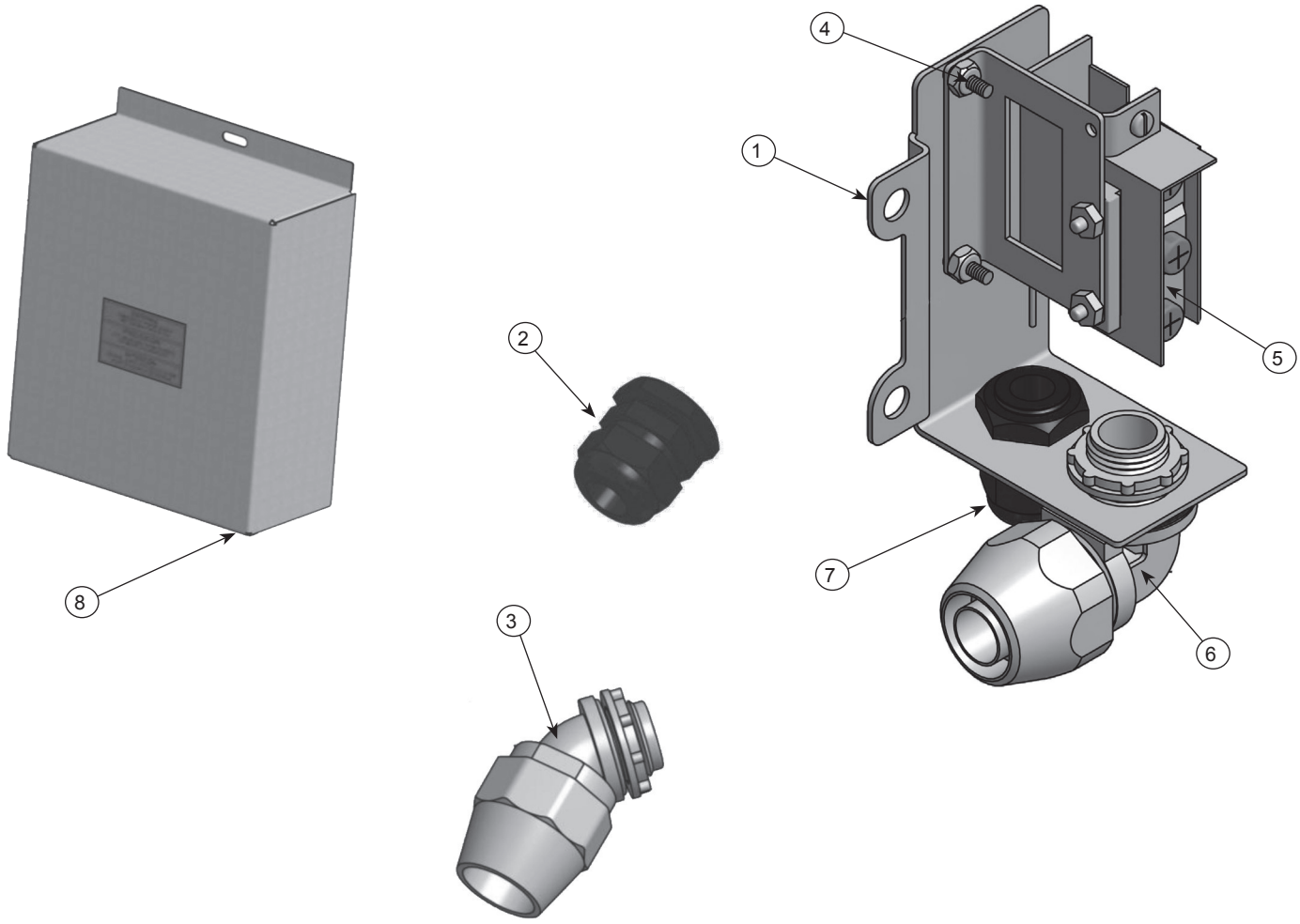
*	1	Pump & Motor Assembly, S/S Special pricing available when purchased with the GO*BOX. Call for details.	06105-002-69-78

DRAIN QUENCH ASSEMBLY



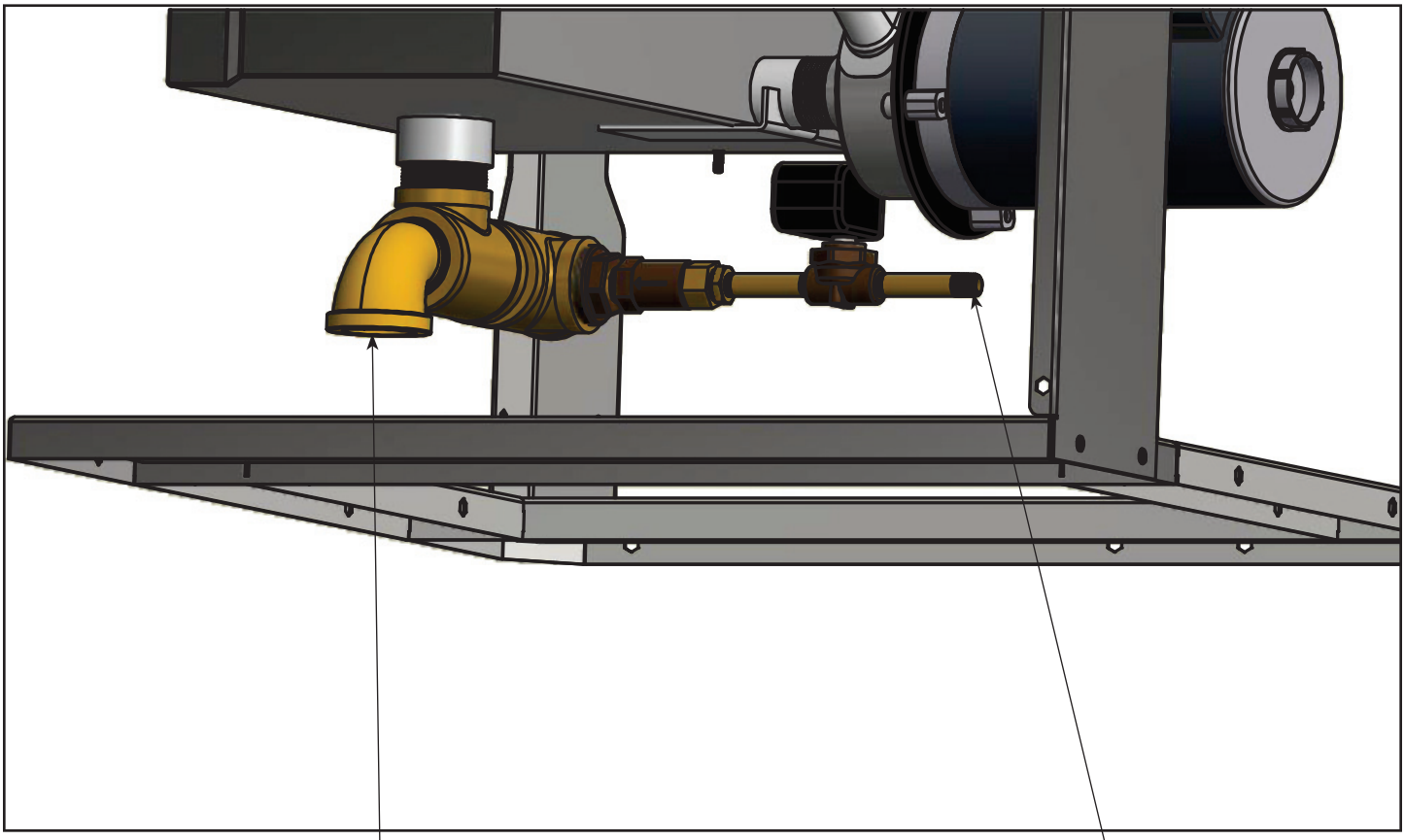
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Nipple, 1/4 NPT x 3 Brass	04730-004-08-07
2	1	Nipple, 1/4 NPT x 3 Brass	04730-004-08-07
3	1	Reducer, 1-1/2 x 1/2 Hex Brass	04730-002-55-75
4	1	Nipple, 1-1/12 Brass Close	04730-207-40-00
5	1	Tee, 1-1/2 Brass	04730-011-69-93
6	1	Reducer, 1-1/2 x 1/4 Hex Brass	04730-002-55-76
7	1	Union,1/4 Modified	05700-001-16-52
8	1	Nipple, 1-1/12 Brass Close	04730-207-40-00
9	1	Tee, 1-1/2 Brass	04730-011-69-93
10	1	Elbow, 1-1/2 NPT, Female	04730-206-32-00
11	1	Nipple, 1/2 Close Brass	04730-207-15-00
12	1	Valve, Check 1/2	04820-002-55-77
13	1	Reducer, 1/2 x 1/4 Brass	04730-003-62-16
14	1	Solenoid Valve, 1/4, 240V	04810-002-31-09

DRAIN QUENCH ASSEMBLY



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Bracket, Drain Quench	05700-004-07-92
2	1	Liquid Tight Fitting (Large)	05975-011-65-51
3	1	Conduit Fitting, 45°-1/2"	05975-011-45-23
4	2	Lock Nut, 6-32 Hex	05310-373-03-00
5	1	Thermostat	05930-011-49-43
6	1	Conduit Fitting, 90°-1/2"	05975-011-45-14
7	1	Liquid Tight Fitting (Small)	05975-011-49-03
8	1	Wash Heater Cover	05700-031-47-57

DRAIN QUENCH ASSEMBLY



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

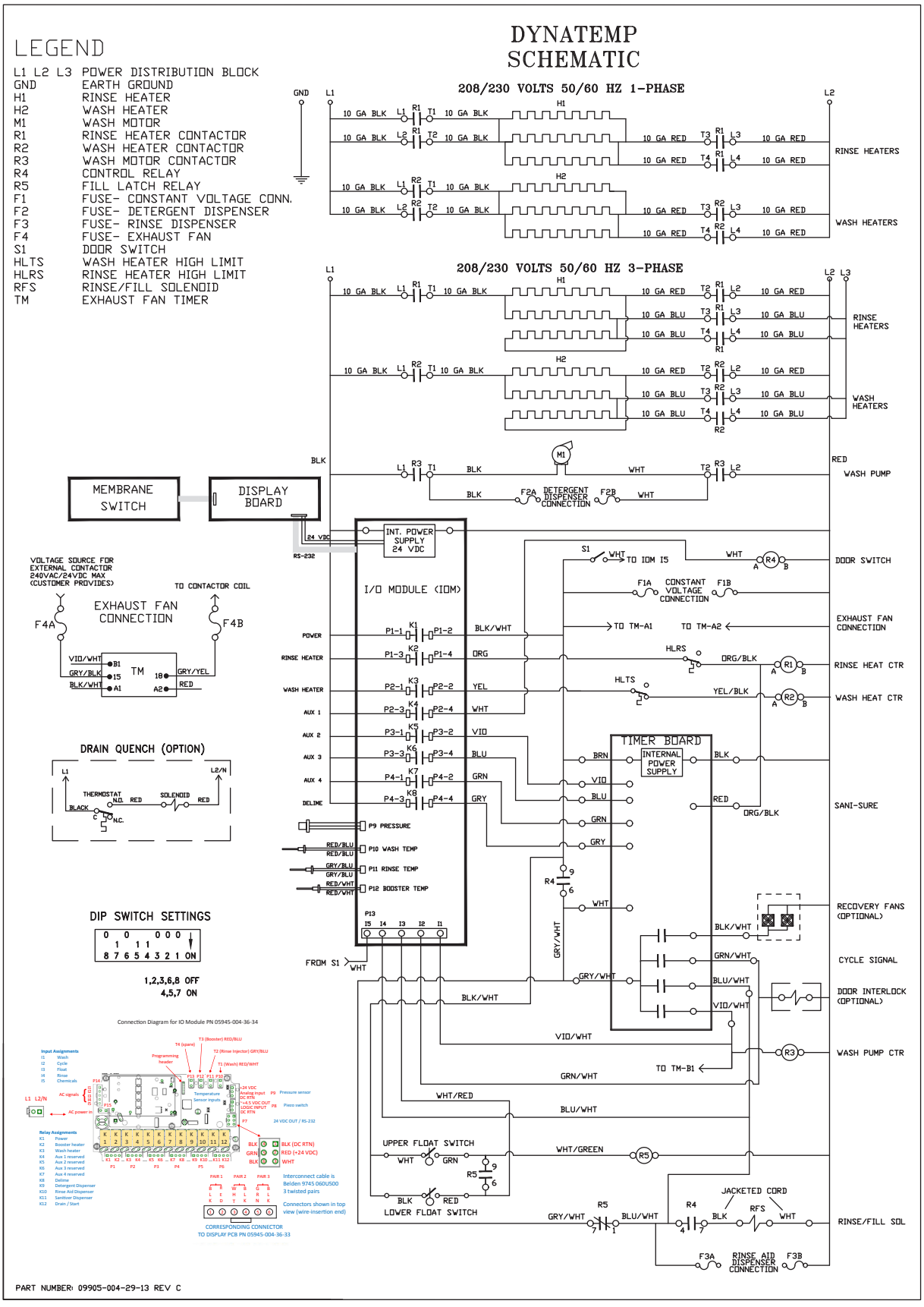
Connect 1/4” cold-water line.

DYNATEMP 208/230V, 50/60 HZ, 1/3 PHASE

LEGEND

L1 L2 L3	POWER DISTRIBUTION BLOCK
GND	EARTH 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
R5	FILL LATCH RELAY
F1	FUSE- CONSTANT VOLTAGE CONN.
F2	FUSE- DETERGENT DISPENSER
F3	FUSE- RINSE DISPENSER
F4	FUSE- EXHAUST FAN
S1	DOOR SWITCH
HLTS	WASH HEATER HIGH LIMIT
HLRS	RINSE HEATER HIGH LIMIT
RFS	RINSE/FILL SOLENOID
TM	EXHAUST FAN TIMER

DYNATEMP SCHEMATIC

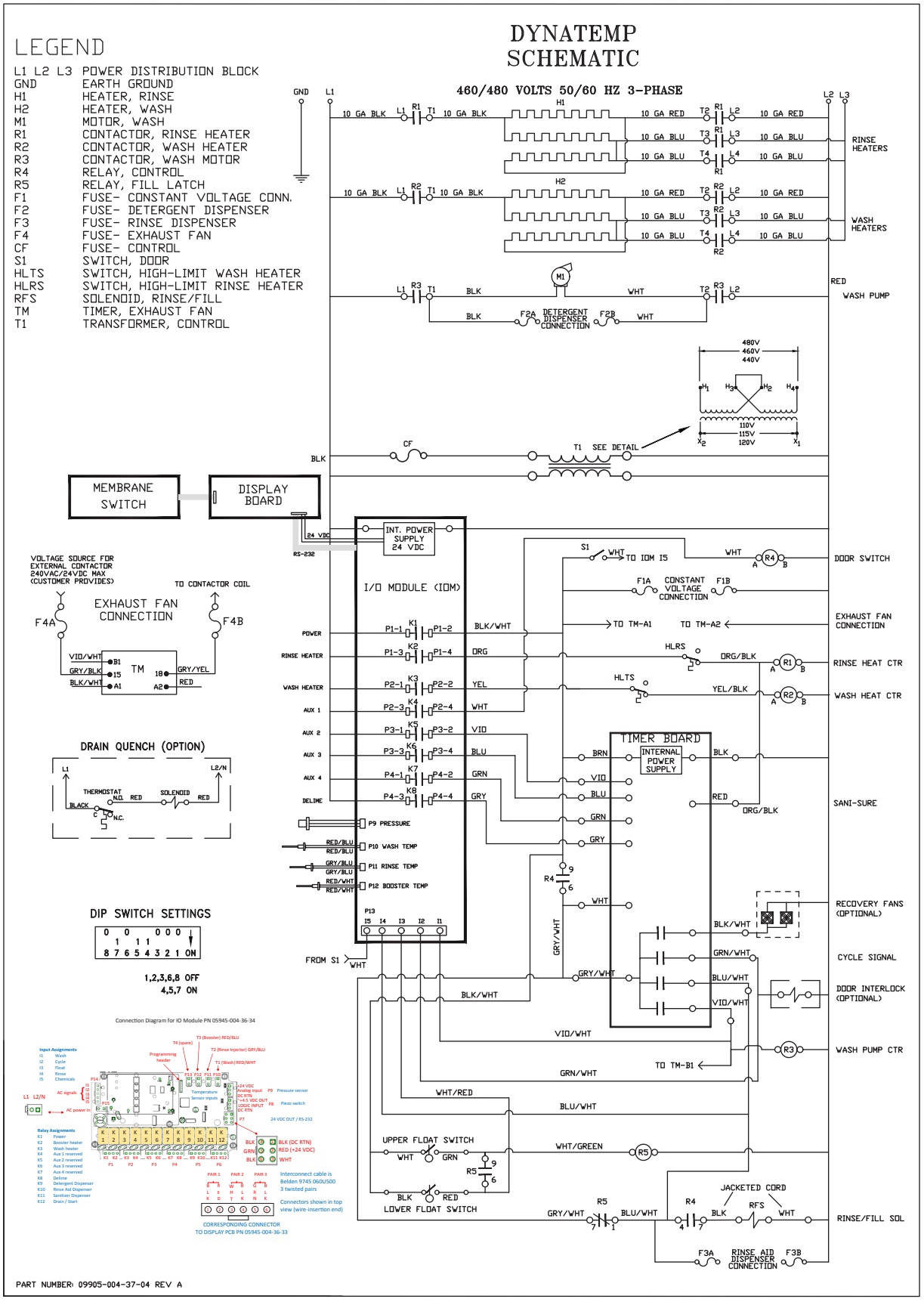


PART NUMBER: 09905-004-29-13 REV C

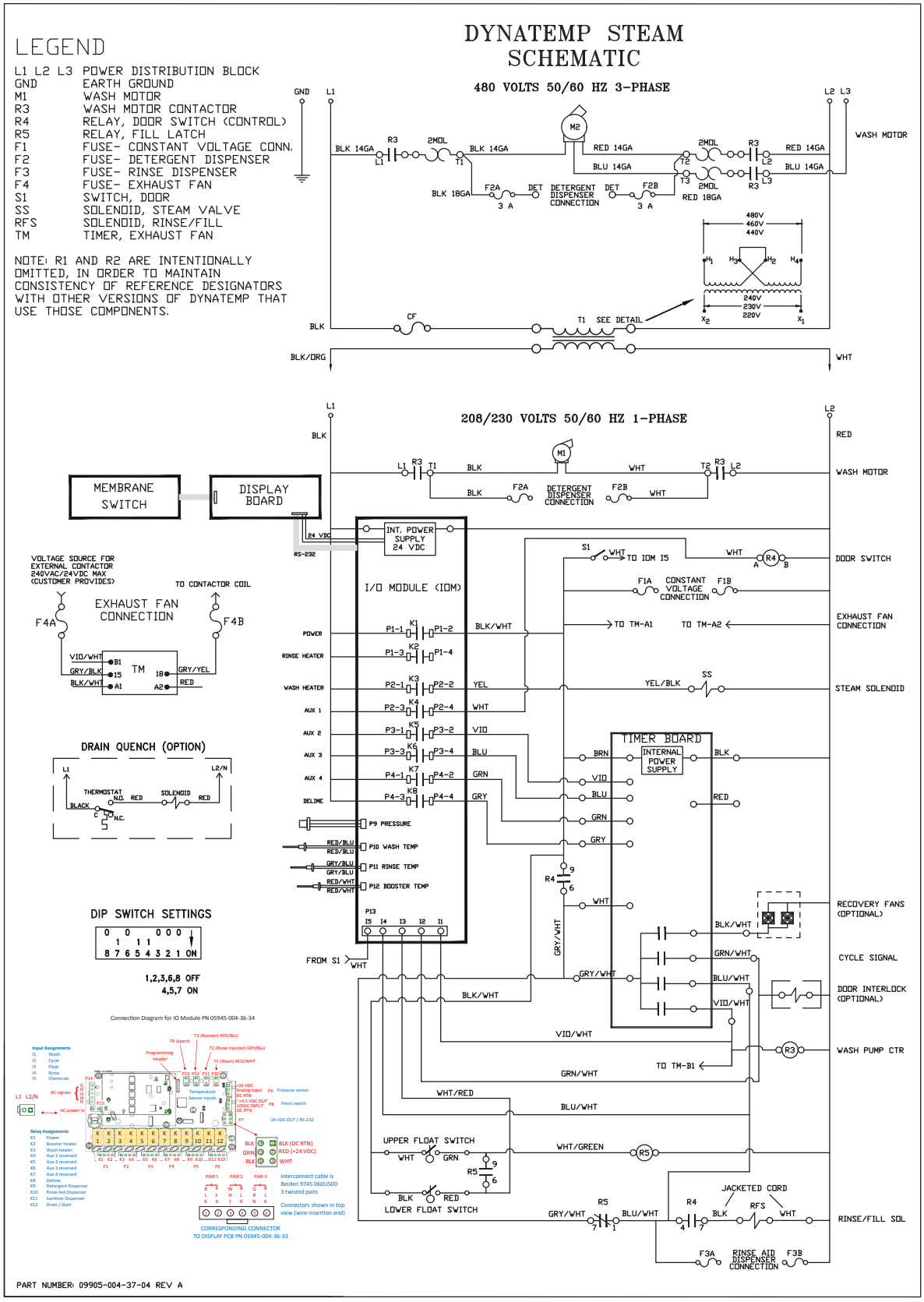
LEGEND

L1 L2 L3	POWER DISTRIBUTION BLOCK
GND	EARTH GROUND
H1	HEATER, RINSE
H2	HEATER, WASH
M1	MOTOR, WASH
R1	CONTACTOR, RINSE HEATER
R2	CONTACTOR, WASH HEATER
R3	CONTACTOR, WASH MOTOR
R4	RELAY, CONTROL
R5	RELAY, FILL LATCH
F1	FUSE- CONSTANT VOLTAGE CONN.
F2	FUSE- DETERGENT DISPENSER
F3	FUSE- RINSE DISPENSER
F4	FUSE- EXHAUST FAN
CF	FUSE- CONTROL
S1	SWITCH, DOOR
HLTS	SWITCH, HIGH-LIMIT WASH HEATER
HLRS	SWITCH, HIGH-LIMIT RINSE HEATER
RFS	SOLENOID, RINSE/FILL
TM	TIMER, EXHAUST FAN
T1	TRANSFORMER, CONTROL

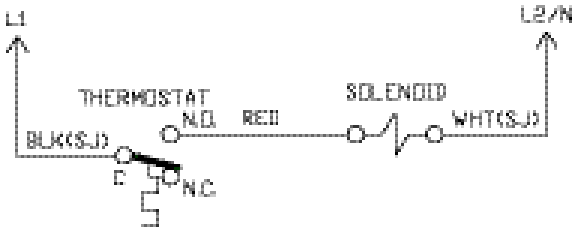
DYNATEMP SCHEMATIC



PART NUMBER: 09905-004-37-04 REV A


LEGEND
L1 L2 L3 POWER DISTRIBUTION BLOCK
GND EARTH GROUND
M1 WASH MOTOR
R3 WASH MOTOR CONTACTOR
R4 RELAY, DOOR SWITCH (CONTROL)
R5 RELAY, FILL LATCH
F1 FUSE- CONSTANT VOLTAGE CONN.
F2 FUSE- DETERGENT DISPENSER
F3 FUSE- RINSE DISPENSER
F4 FUSE- EXHAUST FAN
S1 SWITCH, DOOR
SS SOLENOID, STEAM VALVE
RFS SOLENOID, RINSE/FILL
TM TIMER, EXHAUST FAN
NOTE: R1 AND R2 ARE INTENTIONALLY OMITTED, IN ORDER TO MAINTAIN CONSISTENCY OF REFERENCE DESIGNATORS WITH OTHER VERSIONS OF DYNATEMP THAT USE THOSE COMPONENTS.
DYNATEMP STEAM SCHEMATIC
480 VOLTS 50/60 HZ 3-PHASE
208/230 VOLTS 50/60 HZ 1-PHASE
MEMBRANE SWITCH
DISPLAY BOARD
I/O MODULE (IOM)
INT. POWER SUPPLY 24 VDC
TIMER BOARD
EXHAUST FAN CONNECTION
TO CONTACTOR COIL
VOLTAGE SOURCE FOR EXTERNAL CONTACTOR 240VAC/24VDC MAX (CUSTOMER PROVIDES)
DRAIN QUENCH (OPTION)
DIP SWITCH SETTINGS
1,2,3,6,8 OFF
4,5,7 ON
WASH MOTOR
DOOR SWITCH
EXHAUST FAN CONNECTION
STEAM SOLENOID
RECOVERY FANS (OPTIONAL)
CYCLE SIGNAL
DOOR INTERLOCK (OPTIONAL)
WASH PUMP CTR
RINSE/FILL SOL
UPPER FLOAT SWITCH
LOWER FLOAT SWITCH
JACKETED CORD
DETERGENT DISPENSER CONNECTION
RINSE AID DISPENSER CONNECTION
CONSTANT VOLTAGE CONNECTION
PART NUMBER: 09905-004-37-04 REV A

DRAIN QUENCH SYSTEM



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

SERIAL NUMBER: XXXXXXXXX

MODEL: DYNATEMP

208-230-460 Volt/60 Hz/3 Phase

70°F RISE BOOSTER	208V		230V		460V	
WASH MOTOR	3/4 HP	6.6 A	3/4 HP	6.6 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		47.1 A		51.6 A		24.3 A

208-230 Volt/60 Hz/1 Phase

70°F RISE BOOSTER	208V		230V	
WASH MOTOR	3/4 HP	6.6 A	3/4 HP	6.6 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		76.7 A		84.4 A

OPERATING PARAMETERS

MINIMUM WASH TEMPERATURE	150°F
MINIMUM RINSE TEMPERATURE	180°F
MINIMUM INCOMING WATER TEMPERATURE	
70°F RISE BOOSTER	110°F
WASH CYCLE TIME	40 SEC
RINSE CYCLE TIME	11 SEC
FLOW PRESSURE	8-12 PSI

Made in the USA
Jackson WWS, Inc.
P.O. Box 1060
Barbourville, KY. 40906
(606) 523-9795
09905-004-29-08

NSF

DynaTemp units that are manufactured with the data plate above are able to be field-converted to different phases and voltages. To accomplish this, your unit should have shipped with the DynaTemp 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.

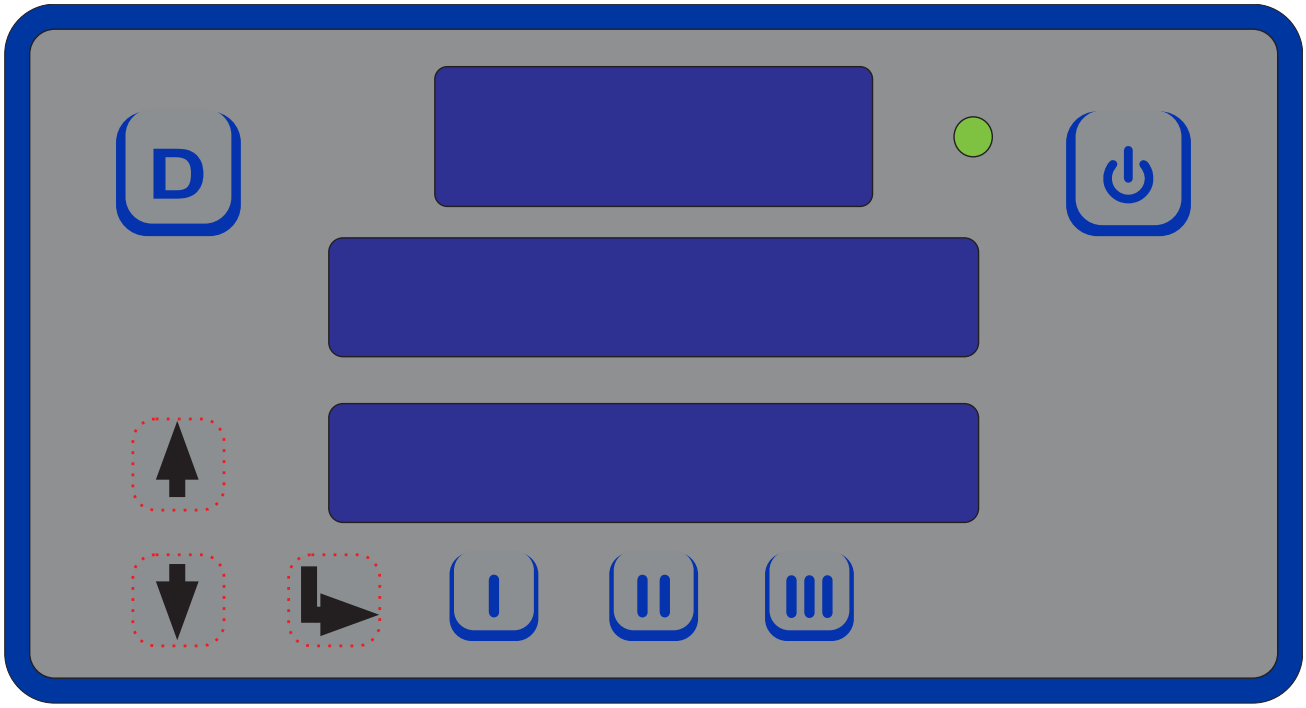
Steps:

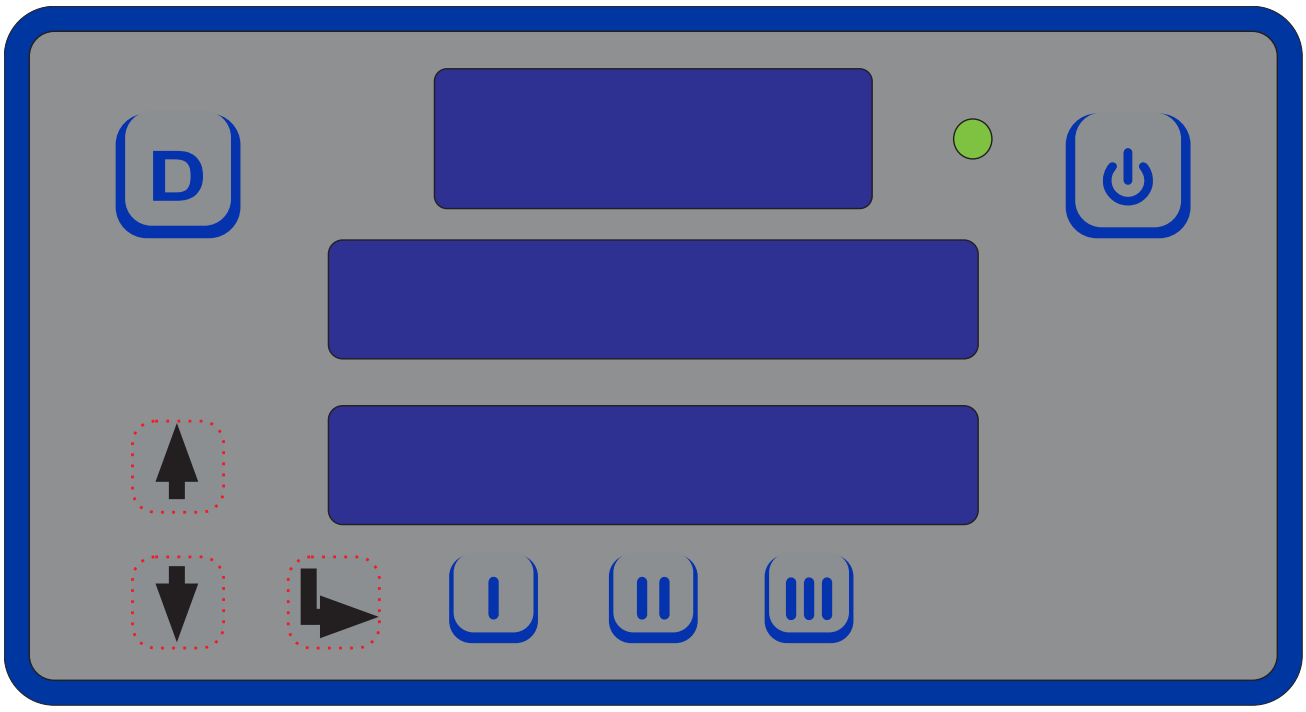
1. **Perform the appropriate wiring and component changes as necessary to achieve the desired result. Reference Jackson technical manuals or contact technical service for assistance.**

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.**

This page can be copied and the display templates cut-out. Lay the cut-out over the display and use the Up-arrow, Down-arrow, and Select Buttons to locate the hidden programming buttons.

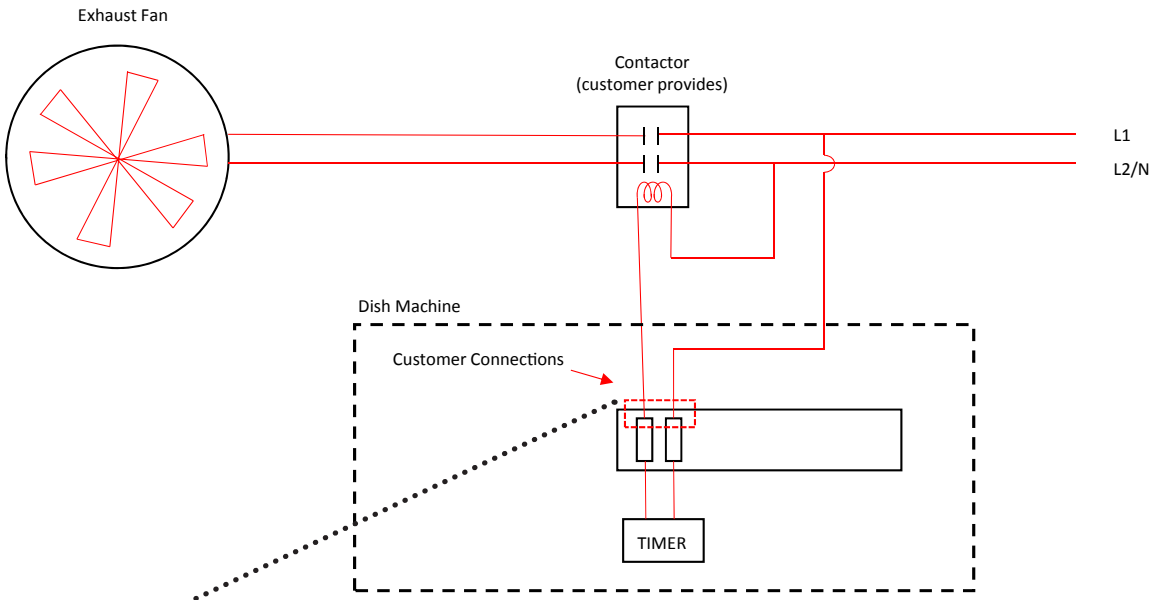




Wiring Diagram

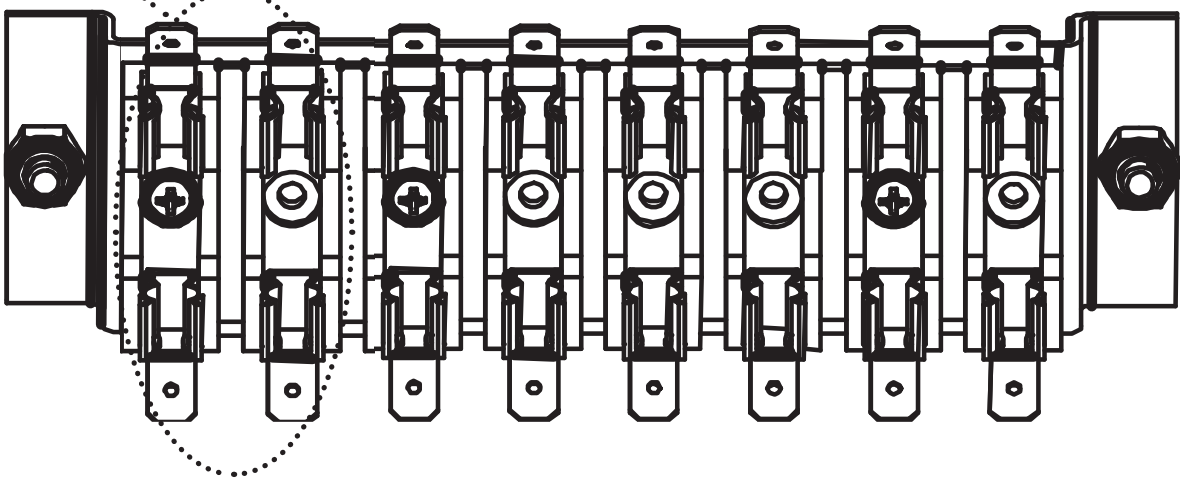
CAUTION

Do NOT connect primary load directly to Terminal Board!



Terminal Board

WARNING: DISCONNECT POWER TO MACHINE BEFORE SERVICING			
EXHAUST FAN CONNECTION	CONSTANT VOLTAGE CONNECTION	RINSE AID DISPENSER CONNECTION	~~DETERGENT~~ DISPENSER CONNECTION
MAXIMUM LOAD 1 AMP, 240/120 VAC	LIVE WHEN MACHINE POWER SWITCH IS ON	LIVE WHEN RINSE VALVE IS OPEN	LIVE WHEN WASH PUMP MOTOR IS ON
INPUT L1 (EXTERNAL) OUTPUT TO EXT. RELAY	FUSE: 3 AMP SLOW-ACTING L1 OUT L2 OUT	FUSE: 3 AMP SLOW-ACTING L1 OUT L2 OUT	FUSE: 3 AMP SLOW-ACTING L1 OUT L2 OUT



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1.888.800.5672 • www.jacksonwws.com