



Warewashing Systems

INSTALLATION, OPERATION, AND SERVICE MANUAL



DELTA SERIES GLASSWASHER DISHMACHINES

Delta HT-E-SEER Manual • 07610-004-54-86-E

DELTA[®] HT-E-SEER

**MANUFACTURER'S LIMITED WARRANTY
(APPLICABLE ONLY IN THE UNITED STATES AND CANADA)**

WARRANTY REGISTRATION:

To register your Jackson Dishmachine's warranty go to www.jacksonwws-warranty.com or call 1-888-800-5672. Failure to register the Dishmachine will void the warranty.

ONE YEAR LIMITED PARTS AND LABOR WARRANTY

For a period of one (1) year from date of original installation of a new Jackson Dishmachine (but in no event to exceed eighteen (18) months from date of shipment from Jackson's factory), Jackson WWS, Inc. (Jackson) will repair or replace, at its discretion, any original part that proves defective in materials or workmanship at the time the Dishmachine was purchased; provided that (i) the Dishmachine has not been altered, (ii) the Dishmachine has been properly installed, maintained, and operated under normal use conditions and in accordance with the applicable installation, operation and service manual available on the Jackson website, and (iii) a warranty claim is reported to a Jackson Authorized Service Agency within the warranty period. This warranty includes replacement with Jackson 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 shall void this warranty.

THIS WARRANTY DOES NOT APPLY OUTSIDE THE UNITED STATES AND CANADA.

Jackson will pay the labor to repair or replace a defective original part as a part of the warranty, provided that a Jackson Authorized Service Agency performs the labor. Any repair or replacement work by anyone other than a Jackson Authorized Service Agency is the sole responsibility of the purchaser. Labor coverage is limited to regular hourly rates; Jackson will not pay overtime premiums or emergency service charges.

Accessory components (such as table limit switches, pressure regulators, and drain water tempering kits) that are not installed by Jackson at the factory and are shipped with the Dishmachine carry only a (1) one-year parts warranty. Labor to repair or replace these components is not included in the warranty or covered by Jackson. Booster heaters not manufactured by Jackson are not covered by this warranty but are warranted by their respective manufacturers.

This warranty is void if any defect or failure is a direct result from shipping, handling, fire, water, accident, alteration, modification, misuse, abuse, flood, acts of God, burglary, casualty, attempted repair by unauthorized persons, use of replacement parts not authorized by Jackson, improper installation, installation not in accordance with local electrical and plumbing codes, if the serial number has been removed or altered, if the Dishmachine is used for any purpose other than originally intended, or if the equipment is installed for residential use.

Jackson does not authorize any other entity or person, including, without limitation, any entity or person who deals in Jackson Dishmachines, to change this warranty or create any other obligation in connection with Jackson Dishmachines.

TRAVEL LIMITATIONS:

Jackson limits warranty travel time to the customer site within 50 miles of the Jackson authorized service agent's office and during regular business hours. Jackson will not pay for travel time and mileage that exceeds these limits, or any fees such as those for air or boat travel without prior authorization.

REPLACEMENT PARTS WARRANTY:

For a period of (90) ninety days from the date of installation by a Jackson Authorized Service Agency (but in no event to exceed (180) one-hundred-eighty days from the date of purchase from a Jackson Authorized Parts Distributor or Service Agency), Jackson will repair or replace, at its discretion, any Jackson genuine replacement parts that prove defective in materials or workmanship at the time the replacement parts were installed. This warranty does not include paying the labor to repair or replace the replacement part. This warranty is subject to all conditions, exclusions and limitations applicable to the Dishmachine.

**MANUFACTURER'S LIMITED WARRANTY (CONT.)
(APPLICABLE ONLY IN THE UNITED STATES AND CANADA)**

PRODUCT CHANGES:

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

DISCLAIMER OF WARRANTIES:

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, THAT ARE NOT SET FORTH HEREIN, OR THAT EXTEND BEYOND THE DURATION HEREOF.

LIMITATION OF REMEDIES AND LIABILITIES:

YOUR SOLE AND EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY SHALL BE PRODUCT REPAIR OR REPLACEMENT AS PROVIDED HEREIN.

UNDER NO CIRCUMSTANCES WILL JACKSON BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THE NATURE OF PENALTIES. JACKSON'S LIABILITY ON ANY CLAIM OF ANY KIND 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.

ITEMS NOT COVERED:

THIS WARRANTY DOES NOT COVER (1) ADJUSTMENTS INCLUDING, BUT NOT LIMITED TO, TIMER CAMS, THERMOSTATS, DOORS, TANK HEATER ADJUSTMENTS OR CLUTCHES; (2) AIR FREIGHT OR OVERNIGHT FREIGHT; (3) ANY AMOUNT EXCEEDING ORIGINAL PURCHASE PRICE; (4) CLEANING OF DRAIN VALVES, GAS LINES, RINSE/WASH NOZZLES, STRAINERS, SCREENS, OR SPRAY PIPES; (5) CLEANING OR DELIMING OF THE DISHMACHINE OR ANY COMPONENT INCLUDING, BUT NOT LIMITED TO, WASH ARMS, RINSE ARMS AND STRAINERS; (6) CONDITIONS CAUSED BY THE USE OF INCORRECT (NON-COMMERCIAL) GRADE DETERGENTS; (7) CORROSION FROM CHEMICALS DISPENSED IN EXCESS OF RECOMMENDED CONCENTRATIONS; (8) COSMETIC DAMAGE, INCLUDING BUT NOT LIMITED TO, SCRATCHES, DENTS, CHIPS, AND OTHER DAMAGE TO THE DISHMACHINE FINISHES, UNLESS SUCH DAMAGE RESULTS FROM DEFECTS IN MATERIALS AND WORKMANSHIP AND IS REPORTED TO JACKSON WITHIN (30) THIRTY DAYS FROM THE DATE OF INSTALLATION; (9) DAMAGE CAUSED BY LABOR DISPUTE; (10) DAMAGES RESULTING FROM IMPROPER CONNECTION TO UTILITY SERVICE; (11) DAMAGES RESULTING FROM WATER CONDITIONS, INADEQUATE OR EXCESSIVE WATER PRESSURE, ACCIDENTS, ALTERATIONS, IMPROPER USE, ABUSE, HANDLING, OVERLOADS, TAMPERING, IMPROPER INSTALLATION OR FAILURE TO FOLLOW MAINTENANCE AND OPERATING PROCEDURES; (12) DISCOLORATION, RUST OR OXIDATION OF SURFACES RESULTING FROM CAUSTIC OR CORROSIVE ENVIRONMENTS, INCLUDING, BUT NOT LIMITED TO, HIGH SALT CONCENTRATIONS, HIGH MOISTURE OR HUMIDITY, OR EXPOSURE TO CHEMICALS; (13) ELECTRIC BOOSTERS, FEED LINES, FLEX HOSE, FUSES, GARBAGE DISPOSALS, OR GAS PILOTS; (14) EXCESSIVE LIME, MINERAL, OR ALKALINE BUILDUP; (15) EXPENSES DUE TO DISCONNECTION, DELIVERY, RETURN AND REINSTALLATION; (16) FAILURE OF ELECTRICAL COMPONENTS DUE TO CONNECTION OF CHEMICAL DISPENSING EQUIPMENT INSTALLED BY OTHERS; (17) FAILURE OF FACILITY WATER HEATER TO MAKE TEMPERATURE; (18) FAILURE TO MAINTAIN WATER HARDNESS LOWER THAN 3.0 GRAINS, PH BETWEEN 7.0 AND 8.5 AND TOTAL DISSOLVED SOLIDS BELOW 250 PPM; (19) FAILURE TO COMPLY WITH LOCAL ELECTRICAL BUILDING CODES; (20) LEAKS OR DAMAGE RESULTING FROM SUCH LEAKS CAUSED BY THE INSTALLER, INCLUDING THOSE AT MACHINE TABLE CONNECTIONS, OR BY CONNECTION OF CHEMICAL DISPENSING EQUIPMENT INSTALLED BY OTHERS; (21) OPENING OR CLOSING OF UTILITY SUPPLY VALVES OR SWITCHING OF ELECTRICAL SUPPLY CURRENT; (22) PERFORMANCE OF REGULAR MAINTENANCE AND CLEANING AS OUTLINED IN THE OPERATOR'S GUIDE; (23) REMOVAL OR REINSTALLATION OF INACCESSIBLE DISHMACHINES OR BUILT-IN FIXTURES THAT INTERFERE WITH SERVICING, REMOVAL OR REPLACEMENT OF THE DISHMACHINE; (24) REPLACEMENT WEAR ITEMS INCLUDING, BUT NOT LIMITED TO, CURTAINS, DRAIN BALLS, DOOR GUIDES, GASKETS, O-RINGS, SEALS, SQUEEZE TUBES, AND BEARINGS; (25) RESIDENTIAL USE; (26) USE WITH UTILITY SERVICE OTHER THAN THAT DESIGNATED ON THE RATING PLATE.

REVISION HISTORY

| Revision Letter | Revision Date | Made by | Applicable ECNs | Details |
|-----------------|---------------|---------|--------------------------------------|--|
| A | 5-25-18 | JH | 8566 | Initial release of the manual. |
| B | 2-25-19 | JH | 8585 8619 8630 8648 8682 | Updated pgs. 2-3. Added note about hot water heaters to pg. 6. Updated references to adjustable outputs on pg. 11. Added programming instructions and fault codes to pgs. 21-25. Updated pg. 29 to show panel and membrane together. Corrected P/N of item #20 on pg. 38. Updated pg. 40. Updated SEER System, pgs. 47-48. Updated drain water tempering kit and added link to instructions on pg. 51. Updated schematic. |
| C | 4-24-19 | JH | QOF 19-553 | Updated schematic. |
| D | 6-17-20 | JH | 8664 8709 | Revised Programming Chemical Feeder Pumps section. Updated Chemical Feeder Pumps parts pages. Added wash heater gasket to pg. 51. Updated SEER System pages. |
| E | 11-18-20 | JH | N/A | Revised drain line size. Updated dimensional drawings. Added F12 in Fault Codes section. Adjusted quantities and added door spring on pg. 38. Updated Item #3 on pg. 41. |

Jackson®

Warewashing Systems

Delta HT-E-SEER-S Short Stand

Glasswasher dishmachine; high-temperature, hot-water sanitizing, with a booster tank and detergent and rinse-aid chemical feeder pumps.

Equipped with Steam Elimination and Energy Recovery (SEER) system.

6" stand clearance allows cleaning beneath the machine.

Delta HT-E-SEER-T Tall Stand

Glasswasher dishmachine; high-temperature, hot-water sanitizing, with a booster tank and detergent and rinse-aid chemical feeder pumps.

Equipped with Steam Elimination and Energy Recovery (SEER) system.

14" stand allows storage of chemicals under the machine.

The manufacturer 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 open 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.

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SCHEMATICS

| | |
|------------------------------------|----|
| 208/230 V, 50/60 Hz, 1 Phase | 54 |
|------------------------------------|----|

SYMBOLS



- Risk of Injury to Personnel



- Risk of Damage to Equipment



- Risk of Electrical Shock



- Caustic Chemicals



- Reference Data Plate



- Lockout Electrical Power

NOTICE - Important Note



- Instructions Hyperlink

ABBREVIATIONS & ACRONYMS

ANSI - American National Standards Institute

GHT - Garden Hose Thread

GPG - Grains per Gallon

GPM - Gallons per Minute

HP - Horse Power

Hz - Hertz

ID - Inside Diameter

kW - Kilowatts

NFPA - National Fire Protection Association

NPT - National Pipe Thread

OD - Outside Diameter

PRV - Pressure Regulating Valve

PSI - Pounds per Square Inch

V - Volts

SPECIFICATIONS

DIMENSIONS - SEER-S

LEGEND

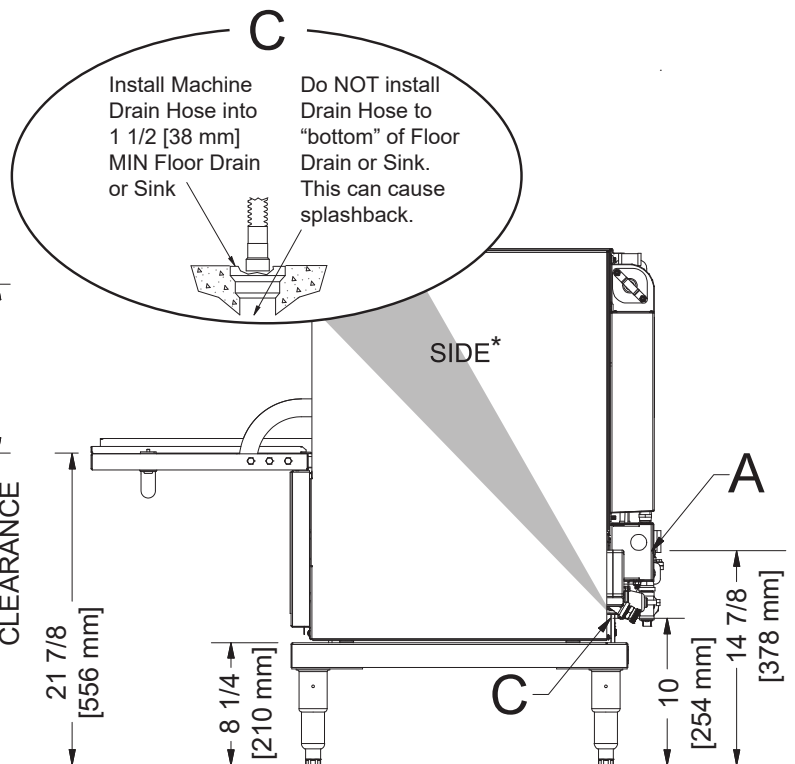
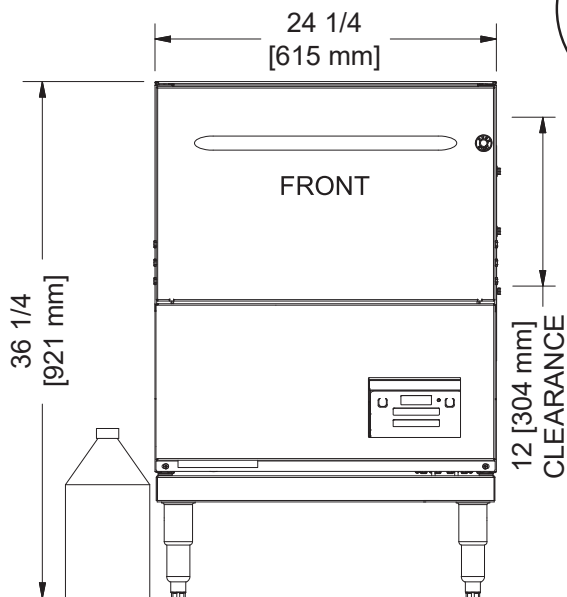
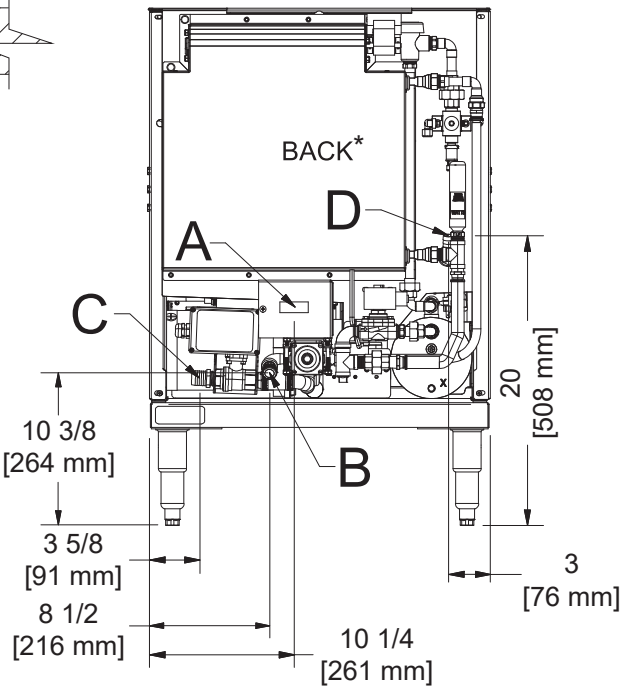
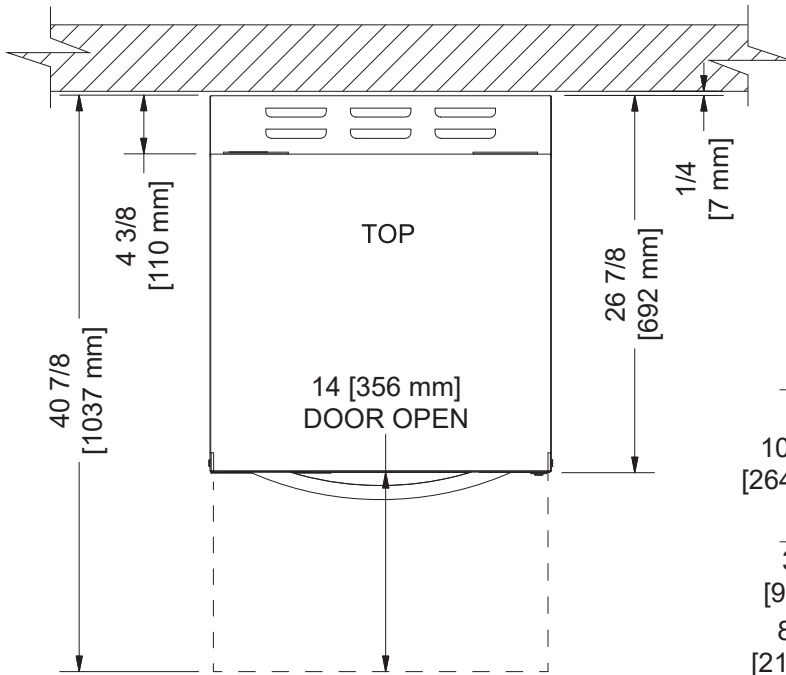
A - Electrical Connection

B - Water Inlet (with 6' Hose)
(3/4" Male GHT, connect to true
1/2" ID line, 40-90 °F)

C - Drain Connection
(5/8" ID, install into MIN
1 1/2" Drain with Air-gap)

D - Chemical Port

All dimensions from the floor
can be increased 1" using the
machine's adjustable feet.



*Back and side views shown with back panel removed.

SPECIFICATIONS

DIMENSIONS - SEER-T

LEGEND

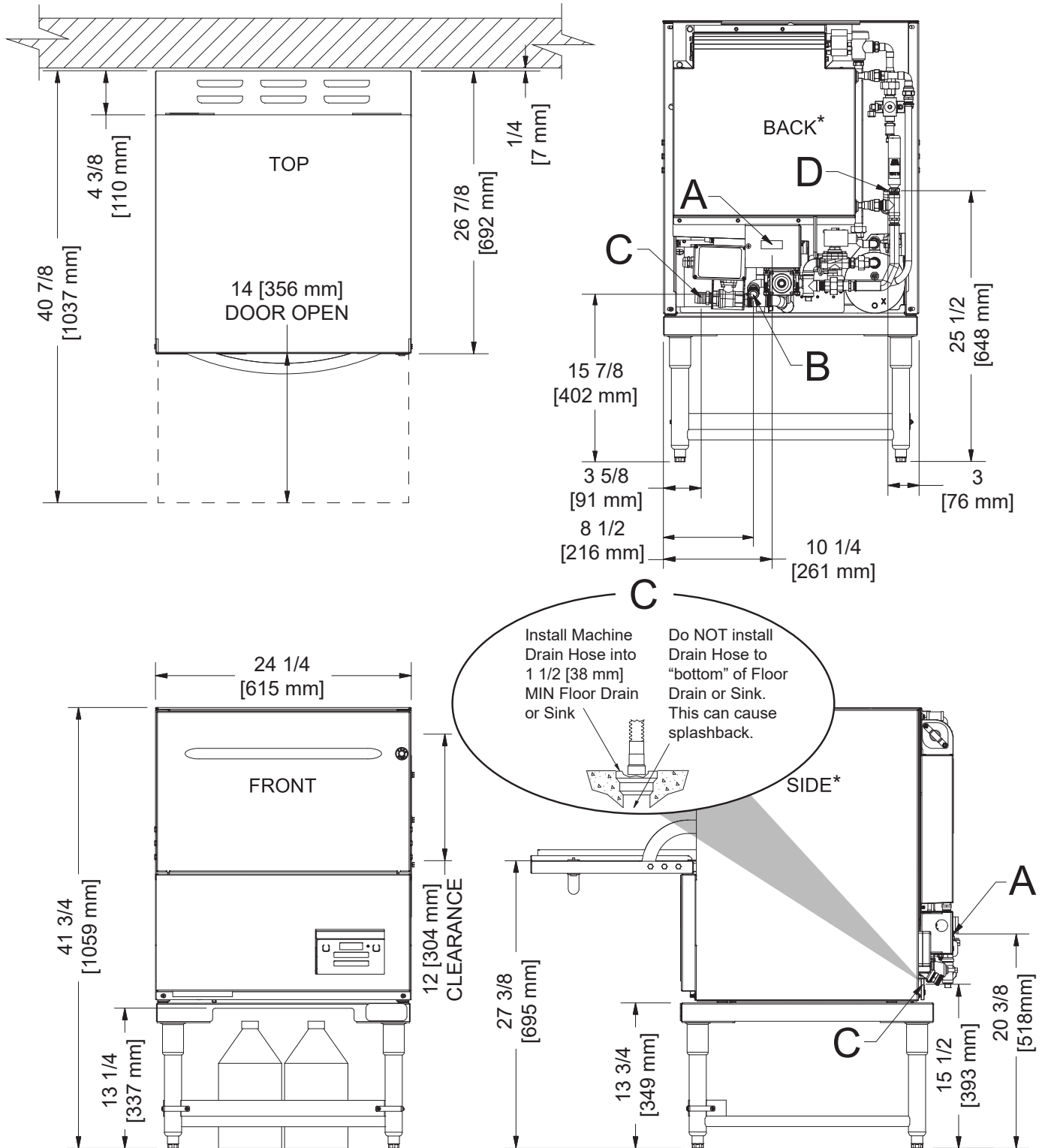
A - Electrical Connection

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(3/4" Male GHT, connect to true
1/2" ID line, 40-90 °F)

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D - Chemical Port

All dimensions from the floor
can be increased 1" using the
machine's adjustable feet.



*Back and side views shown with back panel removed.

Delta HT-E-SEER

Operating Capacity:

| | |
|------------------|-----|
| Racks per Hour | 20 |
| Dishes per Hour | 500 |
| Glasses per Hour | 720 |

Tank Capacity (Gallons):

| | |
|------------|------|
| Wash Tank | 3 |
| Rinse Tank | 1.66 |



NOTICE Always refer to the machine data plate for specific electrical and water requirements. The material provided on this page is for reference only and is subject to change without notice.

Cycle Times (Seconds):

| Cycle I | | Cycle II | | Cycle III | |
|---------|-----|----------|-----|-----------|-----|
| Wash | 80 | Wash | 148 | Wash | 248 |
| Rinse | 9 | Rinse | 9 | Rinse | 9 |
| Dwell | 11 | Dwell | 11 | Dwell | 11 |
| SEER | 45 | SEER | 45 | SEER | 45 |
| Total | 145 | Total | 213 | Total | 313 |

Water Temperatures (°F):

| | |
|------------------------------------|-----|
| Minimum Wash Temperature | 155 |
| Minimum Rinse Temperature | 180 |
| Minimum Incoming Water Temperature | 40 |
| Maximum Incoming Water Temperature | 90 |

Incoming water is from a "cold" water line.

Other Water Requirements:

| | |
|---------------------------|---|
| Water Flow Pressure (PSI) | 10 |
| Flow Rate Minimum (GPM) | 4.33 |
| Water Line Size (NPT) | 3/4" Male GHT Connect to true 1/2" ID Line |
| Drain Line Size (NPT) | 5/8" ID Connect to MIN 1 1/2" Drain with Air-gap |
| Gallons per Hour (GPH) | 13 |
| Gallons per Rack (GPR) | 0.65 |

NOTICE



All electrical ratings provided in this manual are for reference only. Always refer to the machine data plate to get exact electrical information for this machine. All electrical work performed on machines should be done in accordance with applicable local, state, territorial, and national codes. Work should only be performed by qualified electricians and authorized service agents.

Amperage loads for motors and heaters are indicated on the machine data plate.

The electrical configurations are as follows:

Available Electrical Characteristics:

- 208 V, 60 Hz, Single-phase
- 230 V, 60 Hz, Single-phase

Available Wash Motors:

- 1 HP

Available Wash Tank Heaters:

- 3.3 kW (208 V)/4 kW (230 V)

Available Rinse Tank Heaters:

- 4.1 kW (208 V)/5.45 kW (230 V)

**Delta HT-E-SEER
Electrical Characteristics**

| | | |
|--------------------------|---------|---------|
| VOLTS | 208 | 230 |
| PHASE | 1 | 1 |
| FREQ | 60 | 60 |
| WASH MOTOR AMPS | 5.0 A | 5.0 A |
| WASH HEATER AMPS | 15.9 A | 17.4 A |
| RINSE HEATER AMPS | 19.7 A | 21.7 A |
| TOTAL LOAD | 24.7 A* | 26.7 A* |

*The Delta® HT-E-SEER is designed so the heaters never run simultaneously. Total Load is based on the higher of the two loads.

INSPECTION

Do not throw away packaging if damage is evident!

Before installing the machine, check packaging and machine for damage. Damaged packaging might be an indication of damage to the machine. If there is any type of damage to both packaging and unit, do not throw away the packaging. The machine has been inspected at the factory before shipping and is expected to arrive in new, undamaged condition. However, rough handling by carriers or others might result in damage to the machine while in transit. If this occurs, do not return the machine to the manufacturer. Instead, contact the carrier and ask them to send a representative to the site to inspect the damage and request that an inspection report be completed. Contact the carrier within 48 hours of receiving the machine as well as the dealer that sold you the machine.

UNPACKING

The machine should be unpacked and removed from the pallet before installing. Open the front door and remove all materials from inside. Once unpacked, verify there are no missing parts. If a part is missing, contact the manufacturer immediately.

PLUMBING

The plumber must flush the incoming water line!

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

See the Dimensions page and reference item "B" for water inlet connection location.

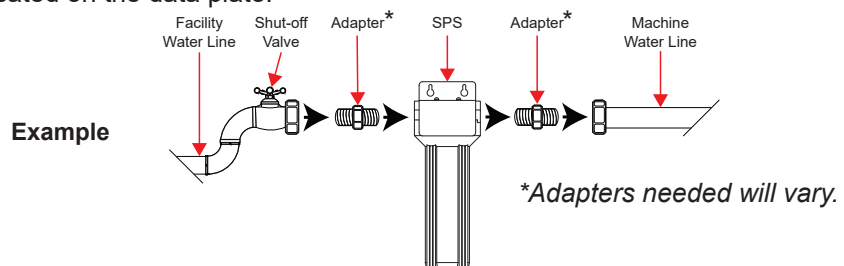
NOTICE

The manufacturer does NOT endorse "Tankless On-demand" water heaters for use with their dishmachines. The manufacturer DOES endorse, and highly recommends, the standard "Tank" style water heaters, sized to properly handle the water heating requirements of the facility.

WATER SUPPLY CONNECTIONS: WATER HARDNESS HIGHER THAN 3 GPG

A water hardness test must be performed.

A hardness test kit can be found on the warning tag attached to the incoming plumbing connection on the back of the machine. If water hardness is higher than 3 GPG and a water softener is not being used, install the optional Scale Prevention System (SPS) into the water line between the facility water line and the machine water line (installed at the factory). See the Scale Prevention System page for more information on the SPS. Observe proper inlet/outlet water directions. A water shut-off valve should be installed before installing the SPS to allow access for service. The water supply must be capable of a minimum of 10 PSI "flow" pressure at the recommended temperature indicated on the data plate.



WATER SUPPLY CONNECTIONS: WATER HARDNESS LOWER THAN 3 GPG

If water hardness tests at 3 GPG or lower, connect the machine water line (installed at the factory) to the facility water line. A water shut-off valve should be installed in the water line between the facility supply and the machine to allow access for service. The water supply line must be capable of a minimum of 10 PSI “flow” pressure at the recommended temperature indicated on the data plate.

PRESSURE REGULATOR

The Delta HT-E-SEER has a pressure regulating valve (PRV) installed at the factory to accommodate areas where water pressure fluctuates or is higher than the recommended pressure. This machine operates at 10 PSI flow pressure. Take care not to confuse static pressure with flow pressure: static pressure is line pressure in a “no flow” condition (all valves and services are closed); flow pressure is the pressure in the fill line when the valve is opened during the cycle.

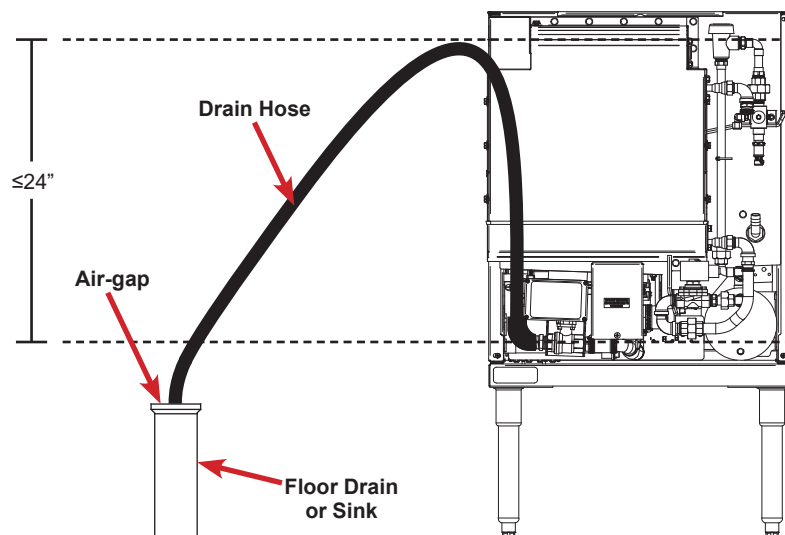
Take care not to confuse static pressure with flow pressure!

SHOCK ABSORBER

A shock absorber comes standard on the Delta HT-E-SEER. This prevents water hammer or hydraulic shock—induced by the solenoid valve as it operates—from causing damage to the equipment.

CONNECTING THE DRAIN LINE

The machine has a pumped (pressure) drain capable of pumping waste water to a height of 24” above the machine's drain pump and is supplied with a drain hose. There must be an air-gap between/around the machine drain hose and the floor drain or sink. The floor drain or sink must be at least 1.5 times larger than the machine drain hose. If a grease trap is required by code, it should have a flow capacity of 12 GPM.



PLUMBING CHECK

After installing the incoming fill line and drain hose, turn on the water supply to the machine. Check for any leaks and repair as required. All leaks must be repaired before operating the machine.

ELECTRICAL POWER CONNECTIONS

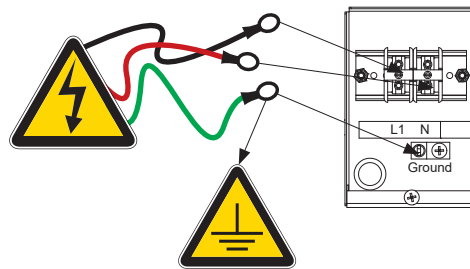


Disconnect electrical power at the breaker or disconnect switch and tag-out in accordance with procedures and codes.

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

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

Remove the rear dress panel and set aside. Remove the terminal block box cover. Install 3/4" conduit into the hole in the bottom of the terminal block box. Route power wires and connect to terminal block. Install the grounding wire onto the lug provided. "DE-OX" or another similar anti-oxidation agent should be used on all power connections.



VOLTAGE CHECK



Apply power to machine. Check the incoming power at the terminal block and ensure it corresponds with the voltage listed on the data plate. If not, contact a qualified service agency to examine the problem. Do not run the machine if voltage is too high or too low. Advise all proper personnel of the location of the breaker and any problems. Replace the terminal block box cover and tighten-down the screws.

SURROUNDING AREA

This is a commercial machine and reaches temperatures that can exceed those generated by a residential machine. Surrounding countertops, cabinets, flooring material, and subflooring material must be designed and/or selected with these higher temperatures in mind.



CAUTION! *Damage to materials not recommended for higher temperatures will not be covered under warranty or by the manufacturer.*

TEMPERATURE SETPOINTS

The temperature setpoints on this unit have been set at the factory. They should only be adjusted by an authorized service agent.

LEVELING

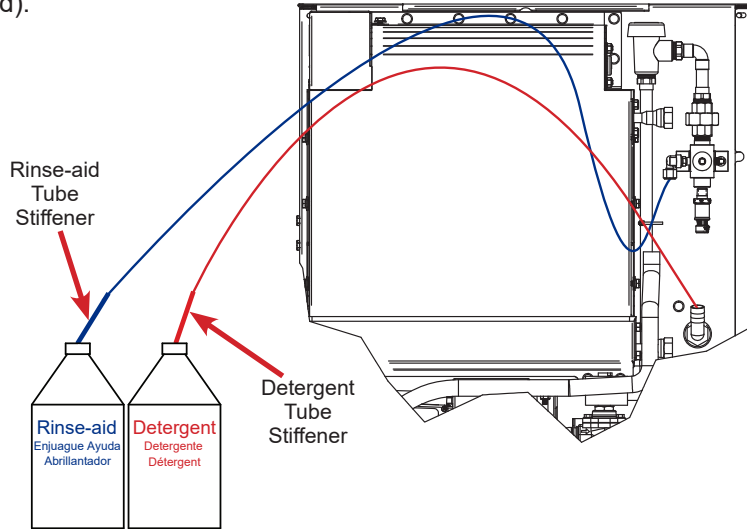
A level machine is important to prevent any damage to the machine during operation and to ensure the best possible results. The machine comes equipped with adjustable bullet feet which can be turned using a pair of pliers. Since this machine is a glasswasher unit, it should be leveled as close as possible to the unit's location before it is pushed under the counter or into place.

CHEMICAL CONNECTIONS



CAUTION! Using deionized water or other aggressive fluids will result in corrosion and failure of components and will void the warranty.

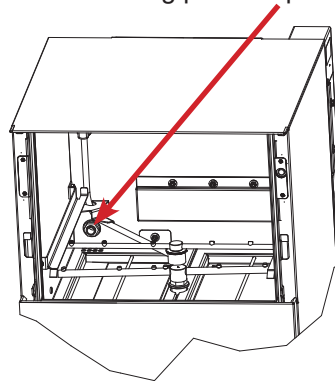
This machine is supplied with detergent and rinse-aid pumps and all necessary tubing. To connect, simply locate the chemical tubes and place the ends (with tube stiffeners) in the appropriate chemical containers (red for detergent and blue for rinse-aid).



Ensure the detergent tube isn't extending past the port and into the wash chamber.



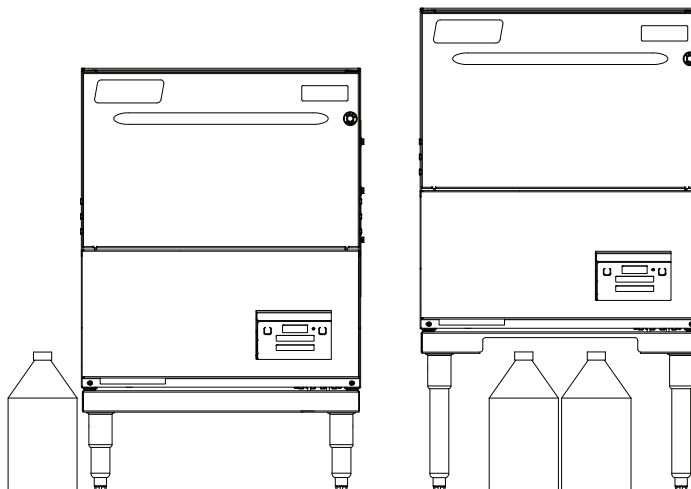
CAUTION! Detergent tube must not extend past port into the wash chamber.



Chemical containers can be stored under the machine for the Delta HT-E-SEER-T and nearby for the Delta HT-E-SEER-S. The bottoms of chemical containers cannot be located any higher than 14" from the floor.

Delta HT-E-SEER-S

Delta HT-E-SEER-T



PRIMING CHEMICAL FEEDER PUMPS

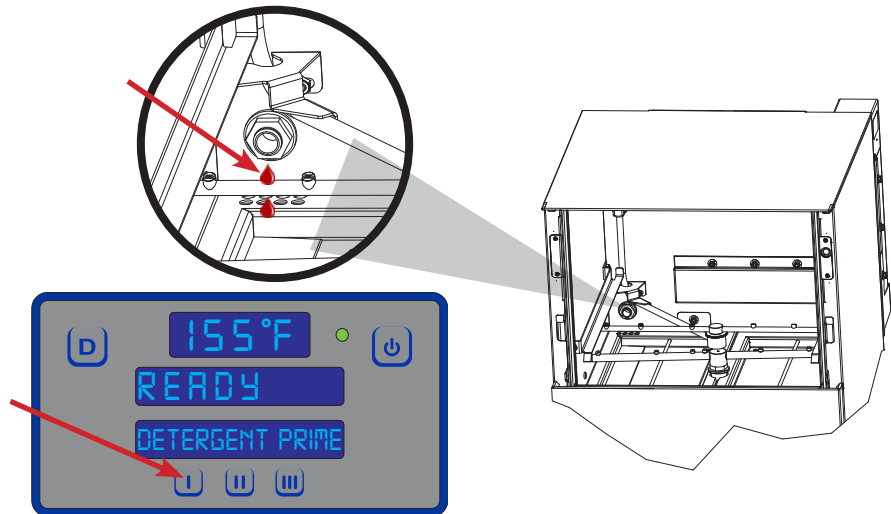


WARNING! Some of the chemicals used in dishwashing may cause chemical burns if they come in contact with skin. Wear protective gear when handling these chemicals. If any skin comes in contact with these chemicals, immediately follow the instructions provided with the chemicals for treatment.

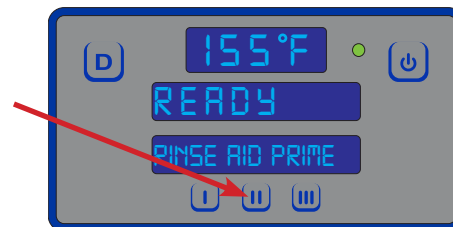
Chemical feeder pumps need priming when the machine is first installed or if the chemical lines have been removed and air was allowed to enter.

CAUTION! Water must be in the sump and wash tank before dispensing chemicals.

1. Verify that the proper chemical tube stiffener inlet is in the proper container.
2. To prime the detergent pump, press the I button until the chemical is seen entering the wash tank. The amount of detergent might need to be adjusted depending on water quality and type of detergent.



3. To prime the rinse-aid pump, press the II button and hold for one minute. The amount of rinse-aid might need to be adjusted depending on water hardness and results.



4. Please refer to the next page for instructions on adjusting the amount of chemicals being dispensed.

PROGRAMMING CHEMICAL FEEDER PUMPS

To access programming mode, machine must be ON and "READY" (between cycles).
The PROGRAM (PGM) light will be flashing.

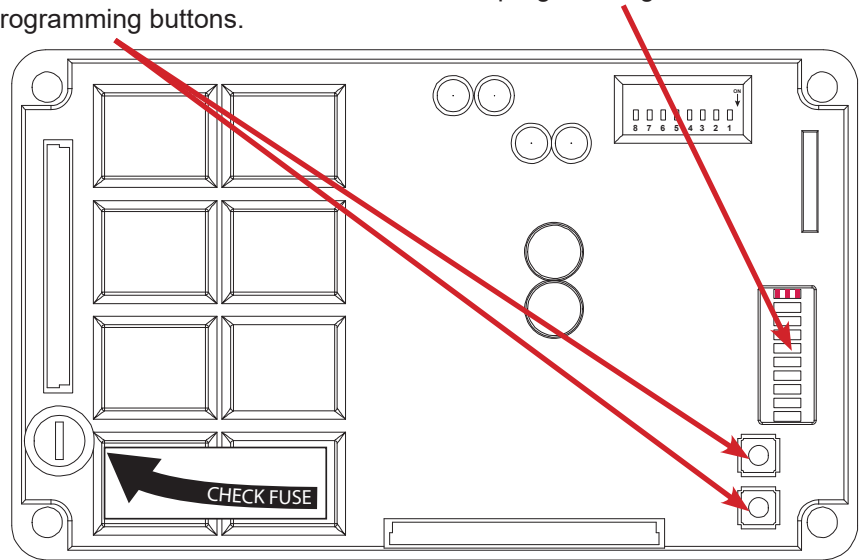
1. Locate universal timer. On the timer, locate programming board and programming buttons.

DIP-switch Settings
(0 = On, X = Off)

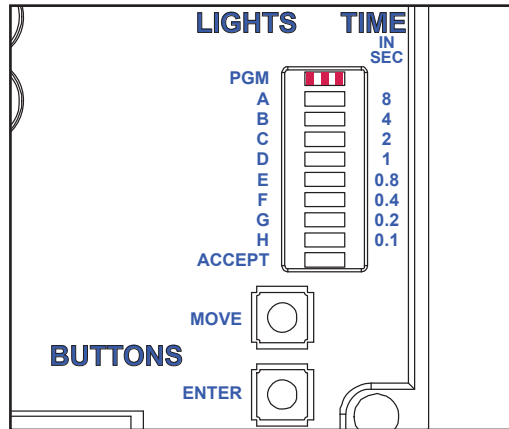
| | | | | | | |
|---|---|---|---|---|---|---|
| X | X | | | | | X |
| 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 |

ON
↓

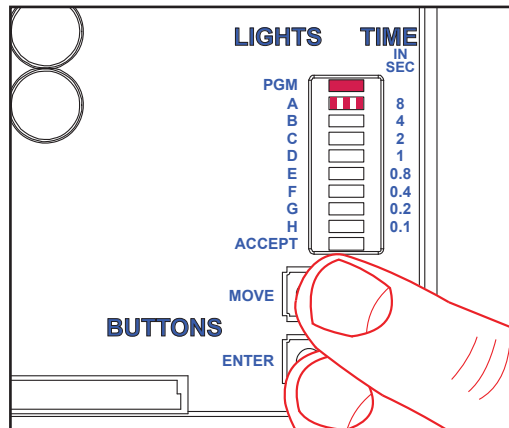
Universal timer is located above chemical feeder pumps. Use Parts section of this manual for reference.



2. Programming board and buttons are not labeled on the timer. Use the graphic below for reference.



3. Press and hold both the MOVE and ENTER buttons simultaneously for two seconds then release. PGM light will go steady and light A will start flashing.

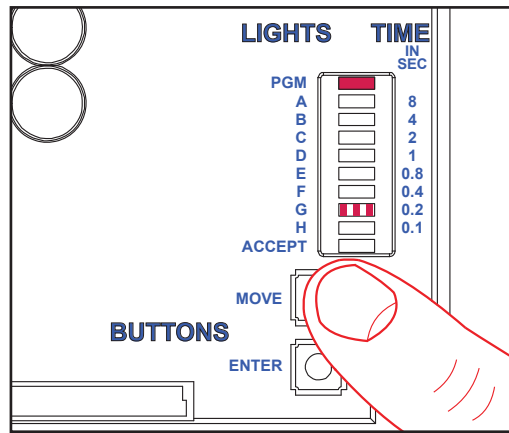


 = Light Steady
 = Light Flashing

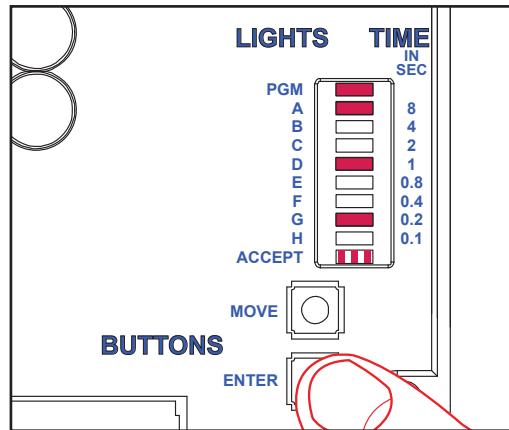
PROGRAMMING CHEMICAL FEEDER PUMPS

G = Detergent
H = Rinse-aid
*In this example,
detergent is selected.*

- Press MOVE button to move the flashing light to G or H (options A–F are not adjustable).

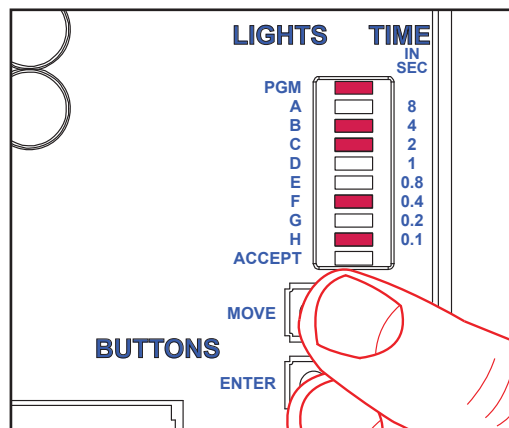


- Press ENTER button. PGM light will stay steady, lights for the current time setting will come on, and ACCEPT light will start flashing.



Example here shows current setting for detergent dispensing time at 9.2 seconds (each selected time option is added to get the total).

- Press MOVE button to cycle through the different time options. To choose a time option, press ENTER while the light is flashing on that option. To deselect the option, press ENTER again.



Example here shows setting for detergent dispensing time changed to 6.5 seconds (each selected time option is added to get the total).

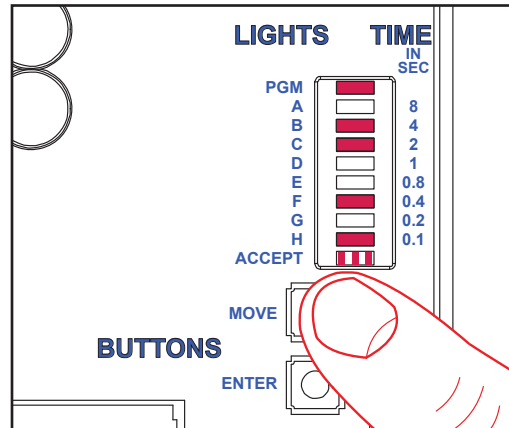


CAUTION! Light for each desired option must be steady before moving on.

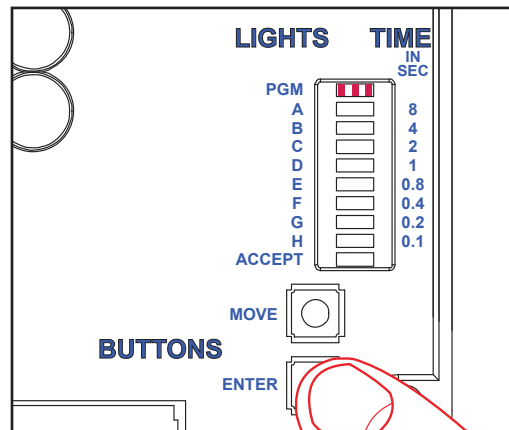
PROGRAMMING CHEMICAL FEEDER PUMPS

 = Light Steady
 = Light Flashing

7. Once all desired time options are selected, press MOVE button until ACCEPT light is flashing (lights for selected time options should still be steady).



8. Press ENTER button. This saves the changed parameters and exits the programming mode. PGM light will go from steady to flashing.



9. To change any other values, repeat the process above. To revert back to a previous setting, repeat the process above and change parameters back to previous settings.

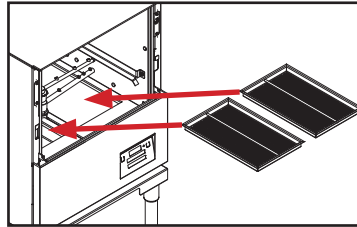
In programming mode, if there have been no keypad inputs for approximately two minutes, the system will automatically exit out of programming mode. Any changes to parameters will be lost when programming mode is automatically exited.

PREPARATION

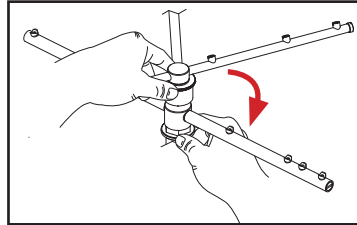


CAUTION! *The Preparation section must be followed before operating machine!*

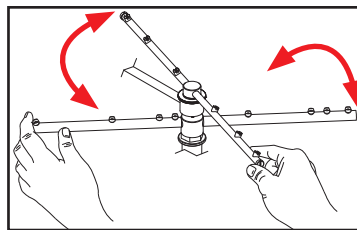
1. Verify strainers are in place and clean.



2. Ensure wash and rinse arms are screwed securely in place and end-caps are tight.



3. Verify wash and rinse arms rotate freely.



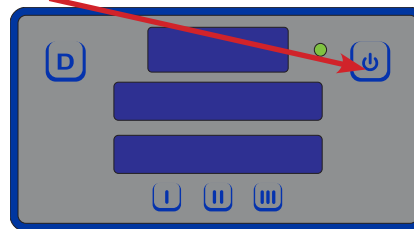
4. Confirm chemical levels are correct.

POWER UP

To energize the machine, turn on the power at the service breaker. The voltage should have been previously verified as correct. If not, the voltage must be verified before energizing the machine.

FILLING THE WASH TUB

1. Press the Power button.



2. The machine will automatically begin the fill cycle.
3. Once the wash tub is filled, the machine displays "HEATING."
4. Wait for wash temperature to display at least 155 °F and for the status to display "READY" before operating the machine.



WARE PREPARATION

Proper ware preparation helps 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. 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.

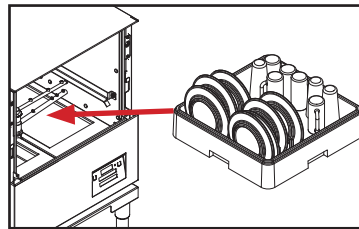
Place cups and glasses upside-down in racks so they don't hold water during the cycle. The machine sanitizes as well as cleans. To do this, ware must be properly prepared before being placed in the machine.

WASHING A RACK OF WARE

1. Follow the Filling the Wash Tub section, ensuring temperature is at least 155 °F and the status displays "READY."



2. Open the door completely.
3. Slide the rack into the machine.



4. Close the door.
5. Choose the cycle (the default is cycle I).



Cycle I is the default cycle.

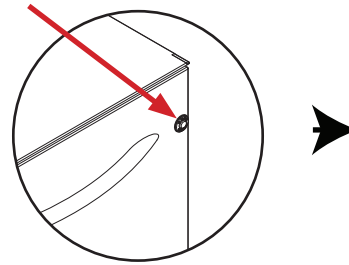
| | | |
|----------------------|---------------------|-----------------------|
| Cycle I | Cycle II | Cycle III |
| 145 Seconds | 213 Seconds | 313 Seconds |
| Normally-soiled Ware | Heavily-soiled Ware | Extremely-soiled Ware |

NOTICE If Cycle II or Cycle III is chosen, the machine will stay in that cycle until another is chosen.

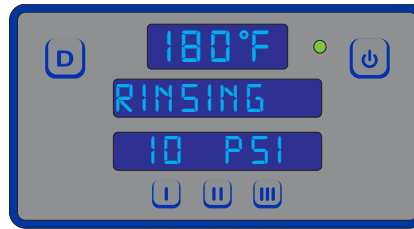
WASHING A RACK OF WARE

Temperature shown is the minimum required temperature.

6. Press the Start button and the machine will begin the wash cycle.



7. After the wash cycle is complete, the machine will automatically enter the rinse cycle.

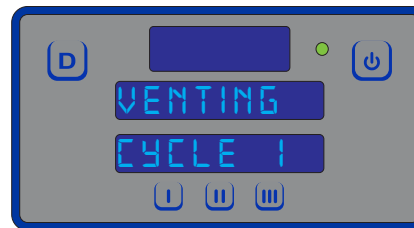


Temperature shown is the minimum required temperature.

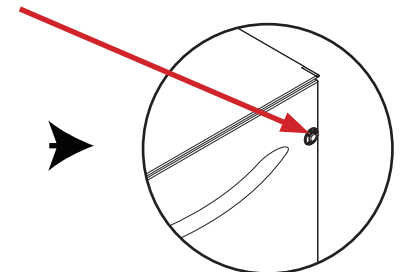
8. Once the rinse cycle is complete, the machine will automatically enter the sanitize cycle.



9. After the sanitize cycle is complete, the machine will automatically enter the venting cycle.



10. After the venting cycle is complete, the machine will automatically go back to being "READY." Open door and remove rack of ware. To start another cycle, load another rack of ware, close door, and push the Start button.



OPERATIONAL INSPECTION

Based on use, the strainers might become clogged with soil and debris as the workday progresses. Operators should regularly inspect the strainers to ensure they have not become clogged. Clogged strainers will reduce the washing capability of the machine. Instruct operators to clean out the strainers at regular intervals or as required by workload. Do NOT beat strainers to remove soil and debris!

SHUTDOWN & CLEANING

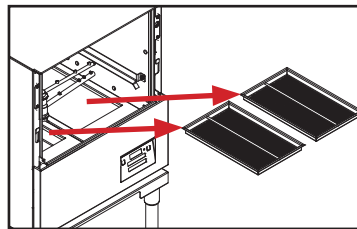
1. Close the door and turn the machine off by pushing the Power button.



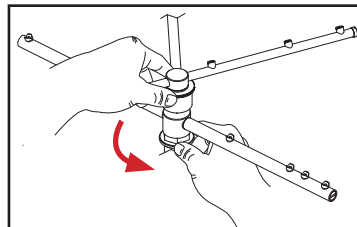
2. The drain valve will activate and empty the machine of water.
3. When draining stops, remove and clean the strainers and set aside.



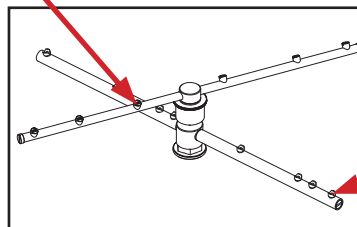
CAUTION! Do NOT beat strainers to remove soil and debris!



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



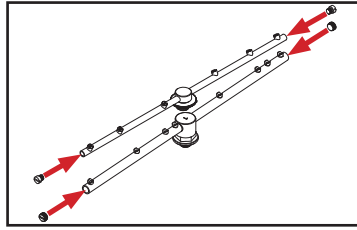
5. Verify the nozzles and arms are free from obstruction. If clogged, remove end-caps, clean nozzles with a brush, and flush with fresh water.



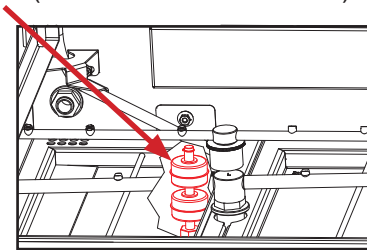
SHUTDOWN & CLEANING

Use a screwdriver to ensure end-caps are tight.

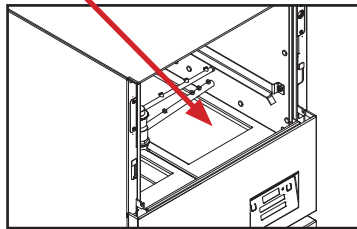
6. Replace end-caps and use a screwdriver to ensure they are tight.



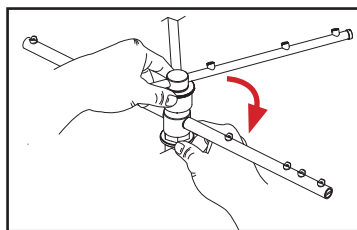
7. Ensure the float (located under left strainer) is free of debris.



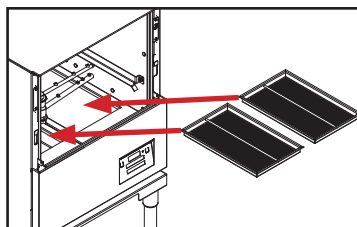
8. Spray or wipe out interior of machine.



9. Replace wash and rinse arms.



10. Replace the strainers and ensure they are laying flat.



11. Use stainless steel polish to clean and protect outside of machine.

DELIMING In order to maintain the machine 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.

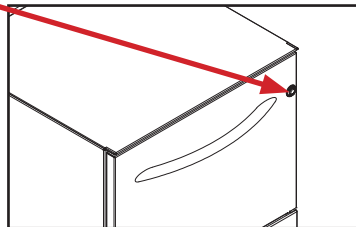
If the machine is equipped with an SPS and lime is becoming a frequent problem, the cartridge needs to be replaced. To order a replacement cartridge, see the Scale Prevention System page.

To delime machine:

1. Remove the rinse arms and place in sink with deliming solution (leave for the amount of time recommended by the chemical supplier).
2. Replace the rinse arms.
3. If machine is full of water, close door, press the Power button, and allow machine to drain and shut-off.
4. Follow the Filling the Wash Tub section of this manual.
5. Open the door and add the amount of deliming solution recommended by the chemical supplier.
6. Close the door and press the Delime button on the display. The status will display "DELIME."



7. Press the Start button.



8. The machine will delime, drain, and refill.
9. Wait five minutes, then inspect the machine. If the machine is not delimed, run again.
10. When clean, press the Delime button. The status will display "READY."
11. Run the machine through two regular cycles to remove residual deliming solution.
12. The machine is now ready for normal operation.

DETERGENT CONTROL

Detergent usage and water hardness are two factors that greatly contribute to the machine's operating efficiency. Using the proper amount of detergent can become a source of substantial savings. A qualified water-treatment specialist can determine what is needed for maximum efficiency from the detergent.

- Hard water greatly affects the performance of the machine, 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.
- Deposited solids from hard water can cause spotting that will not be removed with a drying agent. Treated water will reduce this occurrence.
- Treated water might not be suitable for use in other areas of operation and it might be necessary to install a water treatment system for the water going to the machine only. Discuss this option with a qualified water treatment specialist.
- Properly train operators on how much detergent is to be used per cycle. Meet with a water treatment specialist and chemical supplier to discuss a complete training program for operators.
- Water temperature is an important factor in ensuring the machine 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, it's possible that dishes will not be clean or sanitized.
- Instruct 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.



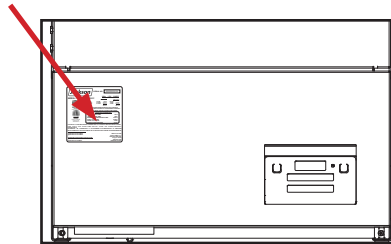
PREVENTATIVE MAINTENANCE

The manufacturer highly recommends that any maintenance and repairs not specifically discussed in this manual only be performed by qualified service personnel. Performing maintenance on the machine may void a warranty.

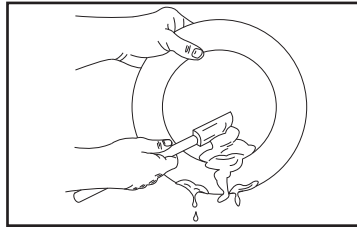
By following the operating and cleaning instructions in this manual, users should get the most efficient results from the machine. As a reminder, here are some steps to ensure that the machine is used properly:



1. Ensure that the water temperatures match those listed on the machine data plate (on the front-left of machine).



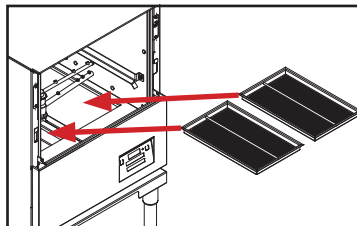
2. Remove as much soil as possible from ware before loading into racks.



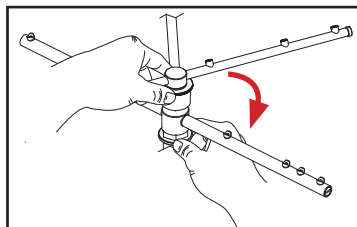
3. Ensure that strainers are in place, laying flat in the tub, and free of soil and debris before operating the machine. To clean strainers, wipe them out with a rag and rinse under a faucet. For stubborn debris, a toothpick can be used. Do not beat strainers on waste cans; once bent, they will not work properly.



CAUTION! Do NOT beat strainers to remove soil and debris!

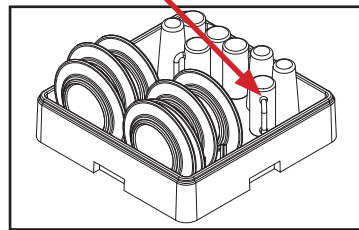


4. Ensure that all wash and rinse arms are secure in the machine before operating.



**PREVENTATIVE
MAINTENANCE**

5. Do not overfill racks.
6. Ensure that glasses are placed upside-down in the rack.



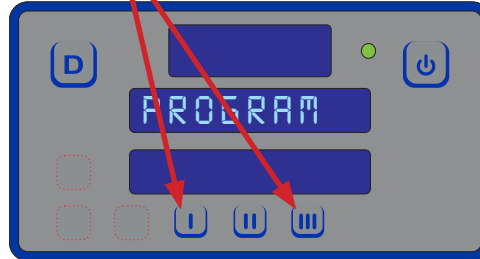
7. Ensure that all chemicals being injected into the machine have been verified at the correct concentrations.
8. Clean the machine at the end of every workday (see Shutdown and Cleaning section).
9. If hard water is present, install an SPS into the water line connecting to the machine (see the Water Supply Connections section).
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.

MODEL CONFIRMATION

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

The machine's program number must be correct to ensure the machine works properly. To confirm the program number:

1. Press and hold the I and III Buttons until "Program" flashes (2–3 seconds).



2. Confirm bottom display shows "8." If not, contact a qualified service agency.



3. Press the Delime Button to exit.



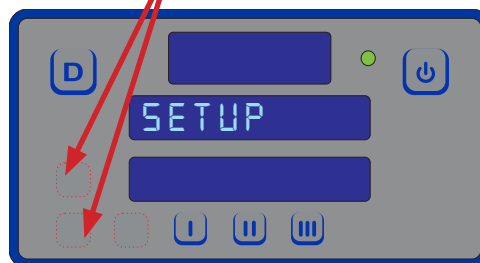
USER SETUP

A transparent guide to locating the programming buttons is included with the machine, behind the control kick panel. Lay the guide over the display and press where indicated.

To access programming mode, the machine 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.

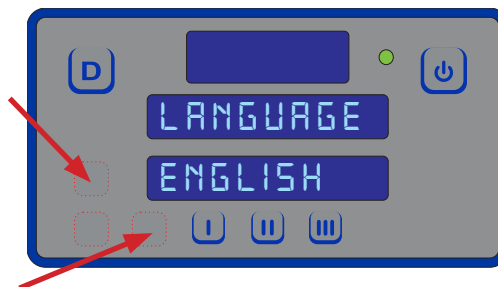
1. Press and hold the Up-arrow and Down-arrow Buttons until "Setup" flashes (2–3 seconds).



2. The display will then change to "Version" and show the firmware versions of the IO module and PCB, Digital Display.
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" | <ol style="list-style-type: none"> 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. | <ol style="list-style-type: none"> 1. Verify incoming water pressure is 10 ± 2 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 on pg. 24). If not, replace T3. 6. Replace float switch. |
| "F2 Service needed," "Check booster thermostat" | <ol style="list-style-type: none"> 1. Contactor to booster heater not turning off. 2. Faulty temperature input (P12) on IO module. 3. Faulty temperature probe (T3). | <ol style="list-style-type: none"> 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 on pg. 24). If not, replace T3. |
| "F3 No water in wash tank," "Check inlet water and door" | <ol style="list-style-type: none"> 1. Malfunction of fill solenoid or fill relay. 2. Door is open, which inhibits fill mode. 3. Faulty door switch. | <ol style="list-style-type: none"> 1. Replace faulty component. 2. Close door to activate door switch. 3. Replace or adjust door switch. |
| "F4 Service needed," "Check incoming power" | <ol style="list-style-type: none"> 1. Incoming power not properly connected. 2. L3 is missing (3-phase machines only). | <ol style="list-style-type: none"> 1. Check connections to heater. 2. Verify that L3 is present and connected properly. |
| "F5 Service needed," "Check booster thermostat and high limit" | <ol style="list-style-type: none"> 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. | <ol style="list-style-type: none"> 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 the table on pg. 24. 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" | <ol style="list-style-type: none"> 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. | <ol style="list-style-type: none"> 1. Verify incoming water pressure is 10 ± 2 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 on pg. 24). If not, replace T1. 6. Replace float switch. |
| "F7 Service needed," "Check wash tank thermostat" | <ol style="list-style-type: none"> 1. Contactor to wash heater not turning off. 2. Faulty temperature input (P10) on IO module. 3. Faulty temperature probe (T1). | <ol style="list-style-type: none"> 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 on pg. 24). If not, replace T1. |
| "F8 No water in wash tank," "Check inlet water and door" | <ol style="list-style-type: none"> 1. Malfunction of fill solenoid or fill relay. 2. Door is open, which inhibits fill mode. 3. Faulty door switch. | <ol style="list-style-type: none"> 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" | <ol style="list-style-type: none"> 1. Incoming power not properly connected. 2. L3 is missing (3-phase machines only). | <ol style="list-style-type: none"> 1. Check connections to heater. 2. Verify that L3 is present and connected properly. |
| "F10 Service needed," "Check wash tank thermostat and high limit" | <ol style="list-style-type: none"> 1. Faulty temperature input (T1) on I/O module. 2. Faulty temperature probe (T1). 3. Faulty high-limit switch. 4. Faulty wash heater. 5. Wash-heater contactor not energizing. | <ol style="list-style-type: none"> 1. Substitute a 1.8 kΩ resistor for T1, and verify that wash heater turns on. If not, replace I/O module. 2. Verify that T1 resistance is correct with respect to temperature (see table on pg. 24). 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 | 1. Faulty temperature probe (T3). | 1. Replace probe that connects to P13. |
| F13 Communication error. Check 6-pin cable | <ol style="list-style-type: none"> Loose connection in 6-pin cable between display board and I/O module. Faulty 6-pin cable between display board and I/O module. Faulty communication port on I/O module or display board. | <ol style="list-style-type: none"> Fully disconnect 6-pin cable at each end, and reconnect each end until a click is heard. 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. Temporarily substitute a verified good display board, and check if F13 message recurs. If so, repeat substitution with a good I/O module. |

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 |




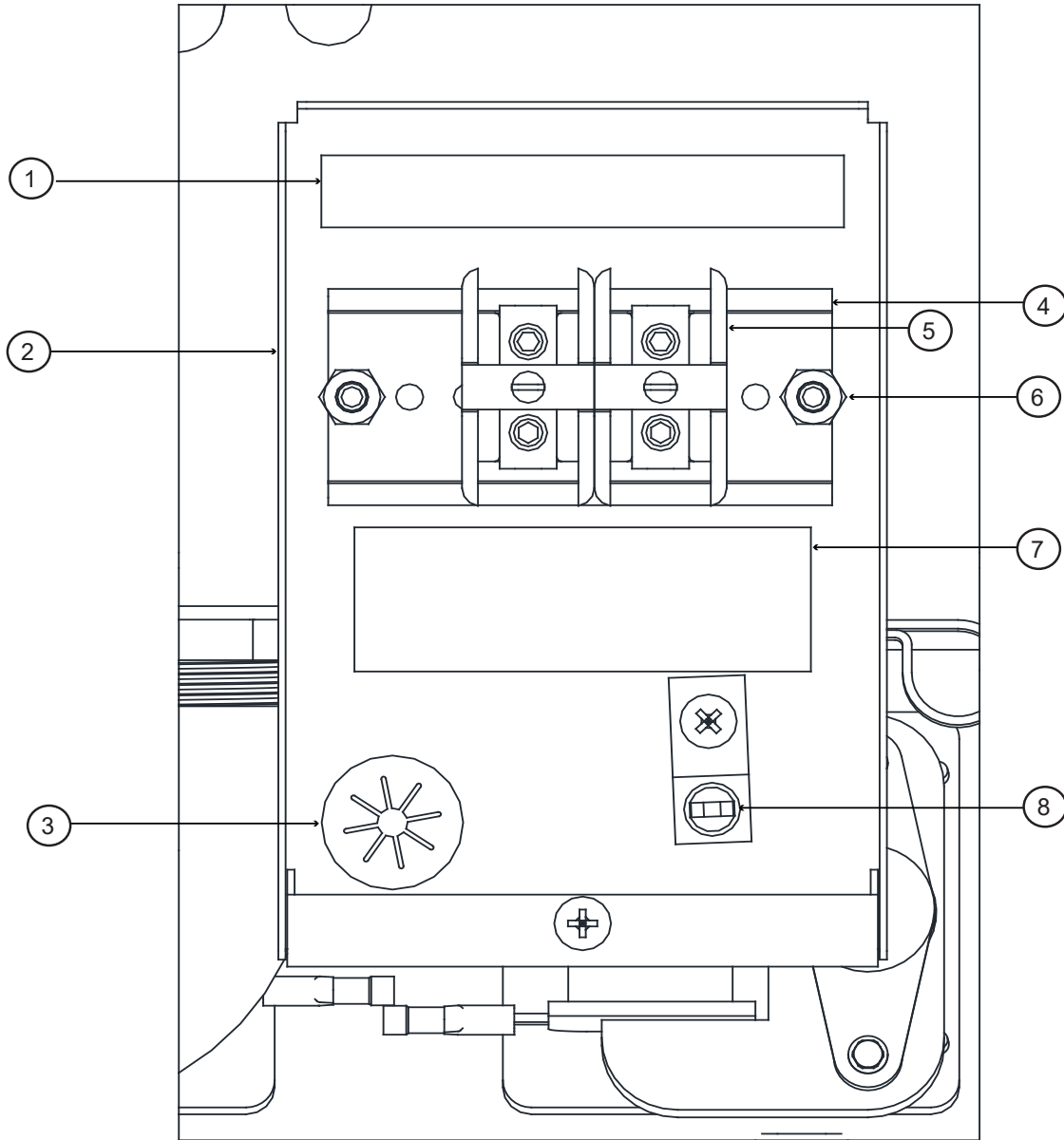
WARNING! Inspection, testing, and repair of electrical equipment should only be performed by qualified service personnel. Certain procedures in this section require electrical tests or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily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

| OBSERVATION | POSSIBLE CAUSE | REMEDY |
|--|--|--|
| Water overflow from bottom of door.  | <ol style="list-style-type: none"> 1. Clogged drain. 2. Machine not level. 3. Excessive inlet pressure. 4. Detergent foaming. 5. Wash or rinse arm end-cap missing. | <ol style="list-style-type: none"> 1. Remove obstruction. 2. Level machine or increase height to the front. 3. Install pressure regulating valve or adjust if one is present. Ensure flow meets data plate specification. 4. Reduce detergent quantity. 5. Replace end-cap. |
| Wash motor doesn't operate on wash. | <ol style="list-style-type: none"> 1. Loose or broken wires. 2. Defective Start button. 3. Defective motor contactor. | <ol style="list-style-type: none"> 1. Reconnect or replace wires in motor. 2. Adjust button or replace. 3. Replace. |
| Little or no water coming through the rinse assemblies. | <ol style="list-style-type: none"> 1. Limed-up rinse heads or piping. 2. Low water pressure. | <ol style="list-style-type: none"> 1. Delime rinse heads. 2. Increase pipe size to machine. Adjust pressure regulating valve. |
| Rinse water runs continuously with breaker turned off. | <ol style="list-style-type: none"> 1. Defective plunger in solenoid valve. 2. Defective diaphragm in solenoid valve. | <ol style="list-style-type: none"> 1. Replace plunger. 2. Replace diaphragm. |



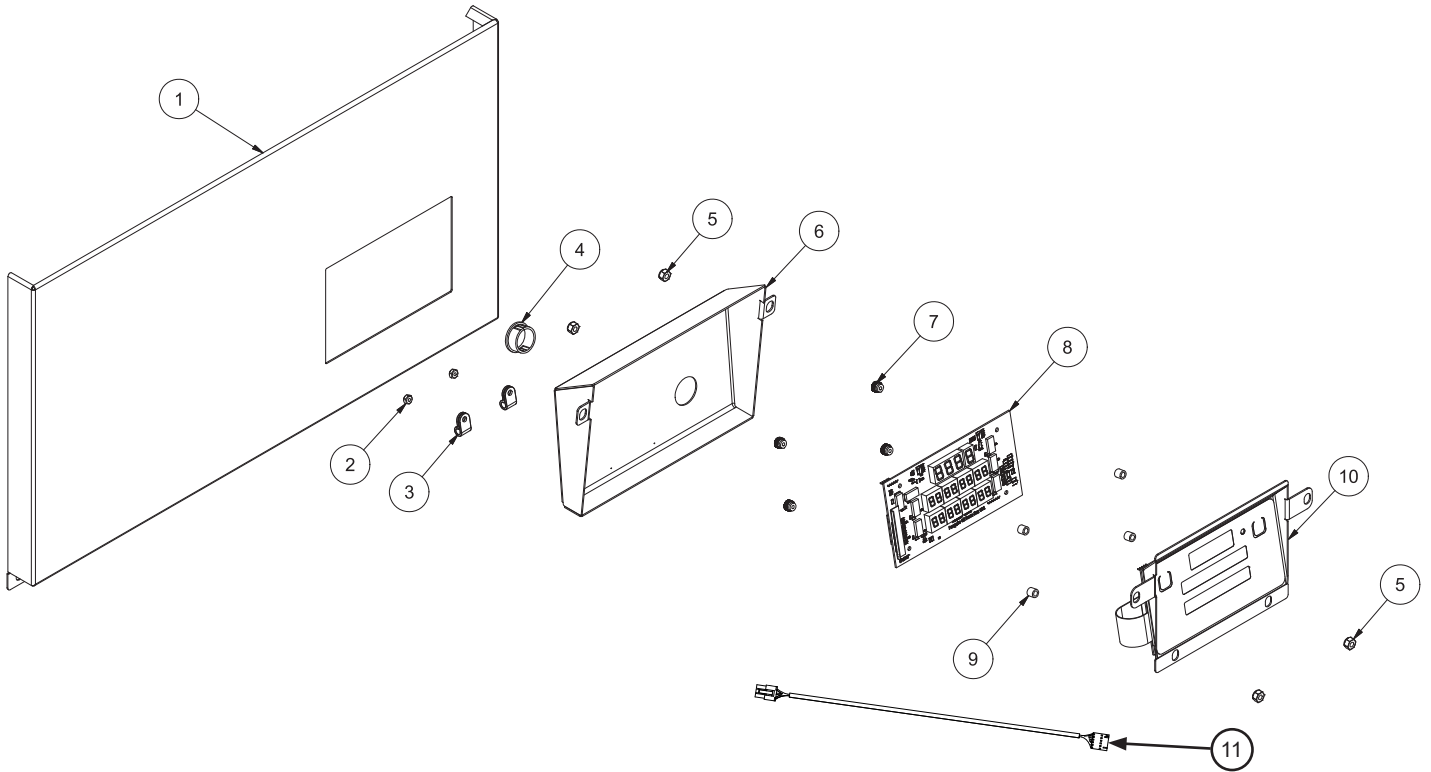
WARNING! Inspection, testing, and repair of electrical equipment should only be performed by qualified service personnel. Certain procedures in this section require electrical tests or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily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

| OBSERVATION | POSSIBLE CAUSE | REMEDY |
|--|--|---|
| Wash temperature not within range. | <ol style="list-style-type: none"> 1. Water level low. 2. RTD setpoint too low. 3. Defective RTD. 4. Wash heater defective. 5. Defective heater contactor. | <ol style="list-style-type: none"> 1. Check water level. If low, run new fill cycle. 2. Adjust setpoint. 3. Replace RTD. 4. Replace heater element. 5. Replace contactor. |
| Rinse temperature not within range.  | <ol style="list-style-type: none"> 1. RTD is defective. 2. Incoming rinse water does not meet minimum temperature on machine data plate. 3. Rinse heater damaged. 4. Setpoint screens set low. 5. Defective heater contactor. | <ol style="list-style-type: none"> 1. Replace if necessary. 2. Adjust as required. 3. Check amperage. Replace if necessary. 4. Adjust rinse tank setpoint. 5. Replace contactor. |
| Machine doesn't drain when power button is pressed. | <ol style="list-style-type: none"> 1. Drain clogged. 2. Defective drain valve. 3. Defective wash pump. 4. Defective motor contactor. 5. Defective timer. | <ol style="list-style-type: none"> 1. Remove obstruction. 2. Replace drain valve. 3. Replace wash pump. 4. Replace contactor. 5. Replace timer. |
| Incorrect water pressure displayed during Fill or Rinse. | <ol style="list-style-type: none"> 1. Water turned off. 2. Transducer disconnected. 3. Pressure transducer defective. | <ol style="list-style-type: none"> 1. Turn water on. 2. Verify wiring. 3. Replace pressure transducer. |



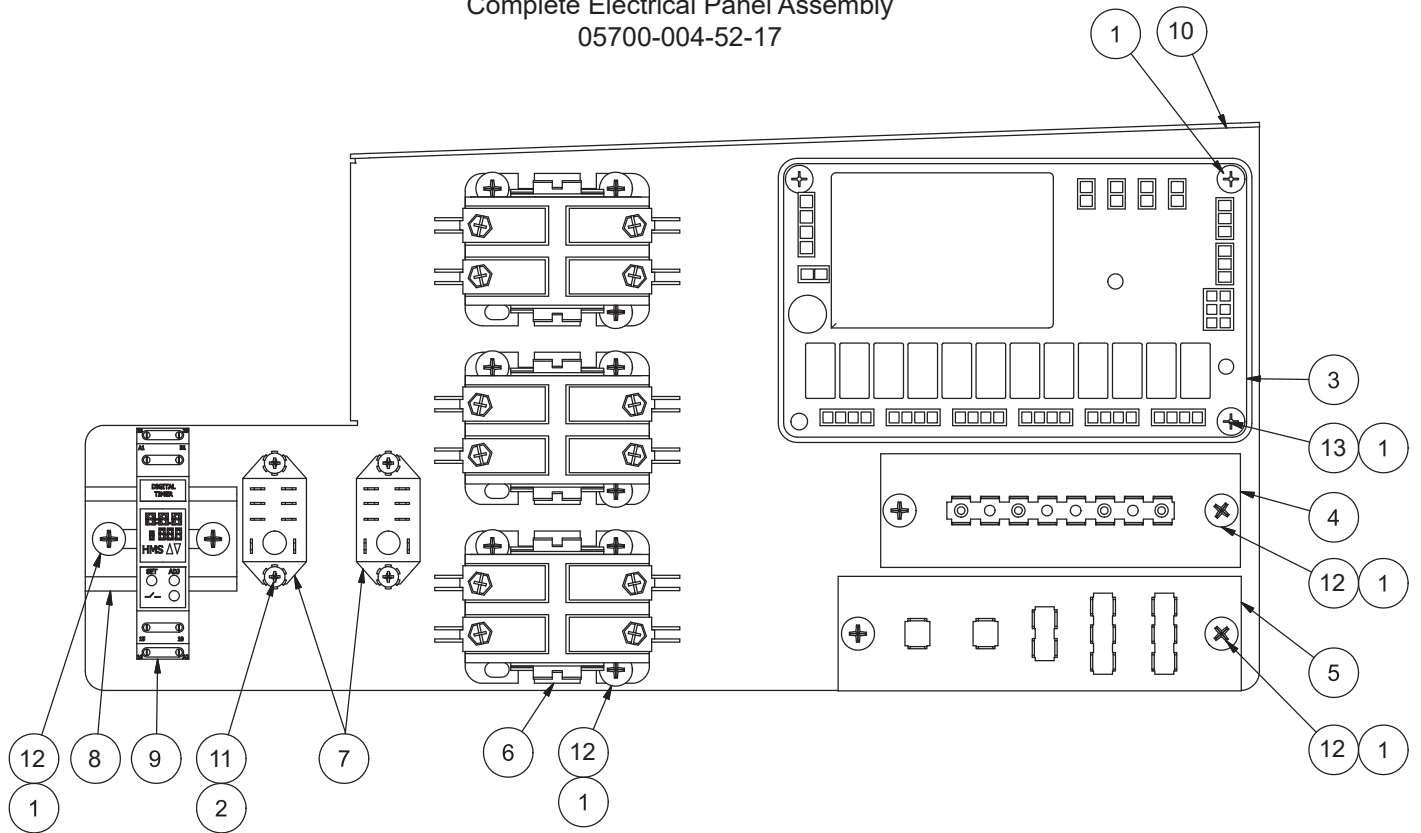
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|--------------------------------------|-----------------|
| 1 | 1 | Power Connection Decal | 09905-011-47-35 |
| 2 | 1 | Terminal Block Box | 05700-004-36-47 |
| | 1 | Terminal Box Cover (not shown) | 05700-003-27-70 |
| 3 | 1 | Strain Relief | 05975-003-37-56 |
| 4 | 1 | Terminal Block Track | 05700-000-43-60 |
| 5 | 2 | Terminal Block | 05940-500-02-19 |
| 6 | 2 | Locknut, 10-24 Hex with Nylon Insert | 05310-373-01-00 |
| 7 | 1 | Decal, L1, N | 09905-011-62-72 |
| 8 | 1 | Ground Lug | 05940-200-76-00 |

Complete Control Kick Panel Assembly
05700-004-52-41



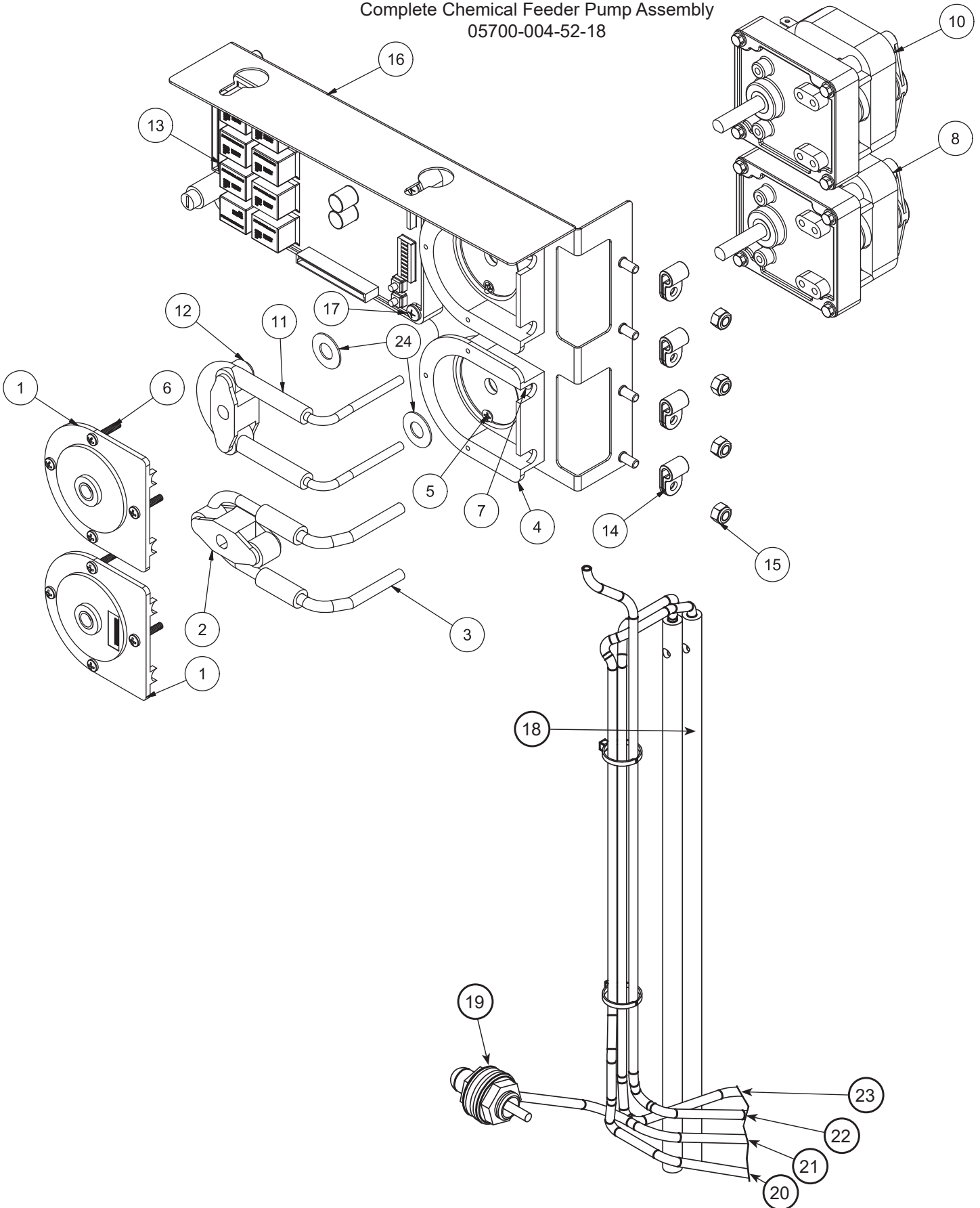
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|--------------------------------------|-----------------|
| 1 | 1 | Control Kick Panel | 05700-004-52-40 |
| 2 | 2 | Locknut, 6-32 Hex with Nylon Insert | 05310-373-03-00 |
| 3 | 2 | P-clamp, 1/4" ID | 05975-002-61-42 |
| 4 | 1 | Bushing, Snap | 05975-210-09-00 |
| 5 | 4 | Locknut, 10-24 Hex with Nylon Insert | 05310-373-01-00 |
| 6 | 1 | Cover, Display | 05700-004-52-43 |
| 7 | 4 | Nut, Thumb 6-32 Nylon | 05310-002-83-12 |
| 8 | 1 | PCB, Digital Display | 05945-004-46-18 |
| 9 | 4 | Spacer, Unthreaded, 9/32" Nylon | 05975-004-47-89 |
| 10 | 1 | Panel & Membrane Switch Assembly | 05700-004-68-71 |
| 11 | 1 | Communication Cable | 05700-004-33-64 |

Complete Electrical Panel Assembly
05700-004-52-17



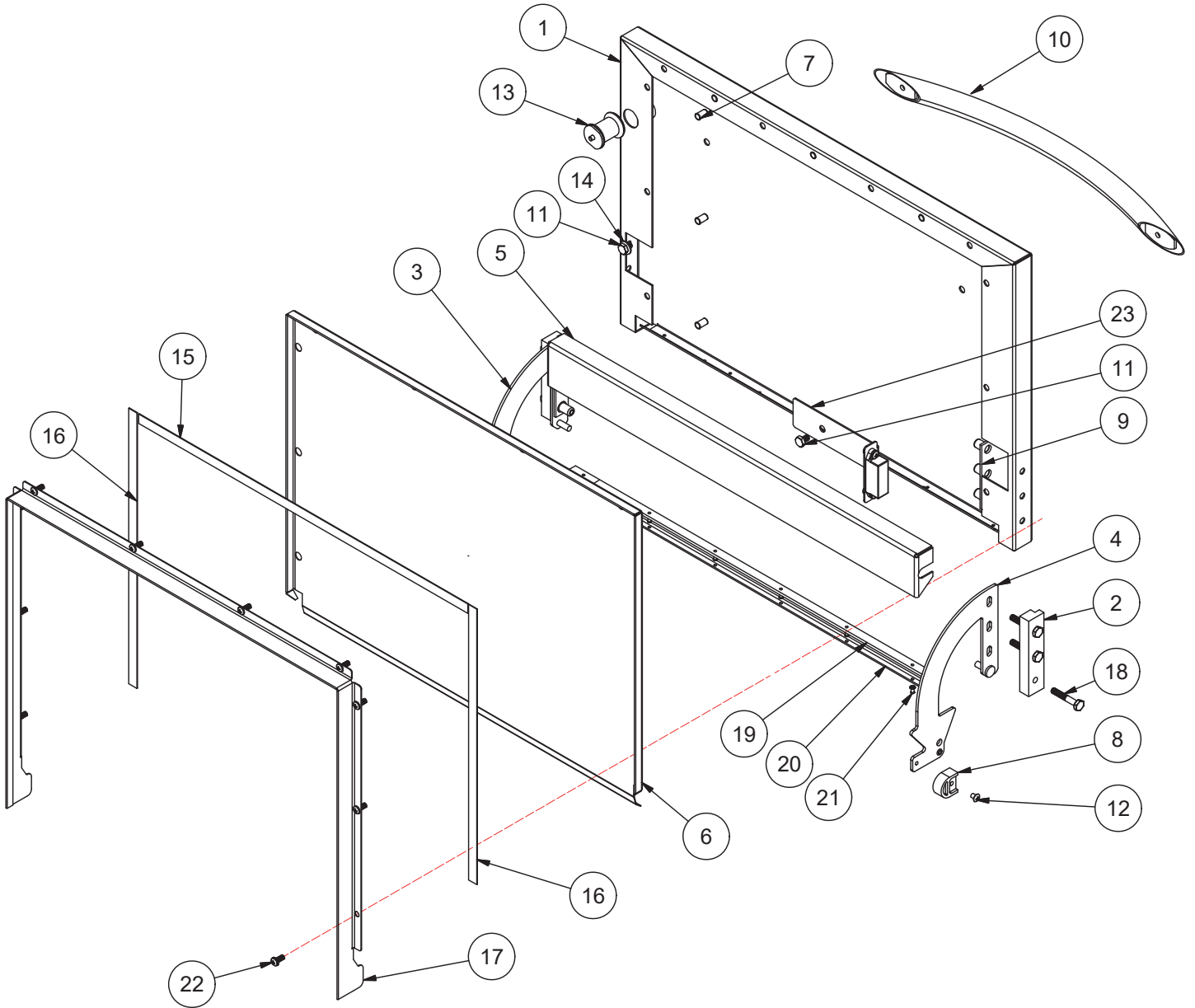
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|--------------------------|-----------------|
| 1 | 18 | Fastener | 05340-111-58-10 |
| 2 | 4 | Nut, Plated | 05340-118-04-00 |
| 3 | 1 | I/O Module | 06401-004-76-15 |
| 4 | 1 | Terminal Board | 05940-004-21-34 |
| 5 | 1 | Terminal Board | 05940-002-78-97 |
| 6 | 3 | Contactor, 30 A 240 V | 05945-002-74-20 |
| 7 | 2 | Relay | 05945-111-89-75 |
| 8 | 1 | Dinrail, 2" | 05700-002-36-09 |
| 9 | 1 | Timer, Universal Digital | 05945-004-22-78 |
| 10 | 1 | Electrical Panel | 05700-004-52-15 |
| 11 | 4 | Screw, 6-32 x 3/8" | 05305-002-25-91 |
| 12 | 15 | Screw, 10-32 x 5/8" | 05305-003-02-12 |
| 13 | 3 | Screw, 10-32 x 1" | 05305-002-19-42 |

Complete Chemical Feeder Pump Assembly
05700-004-52-18



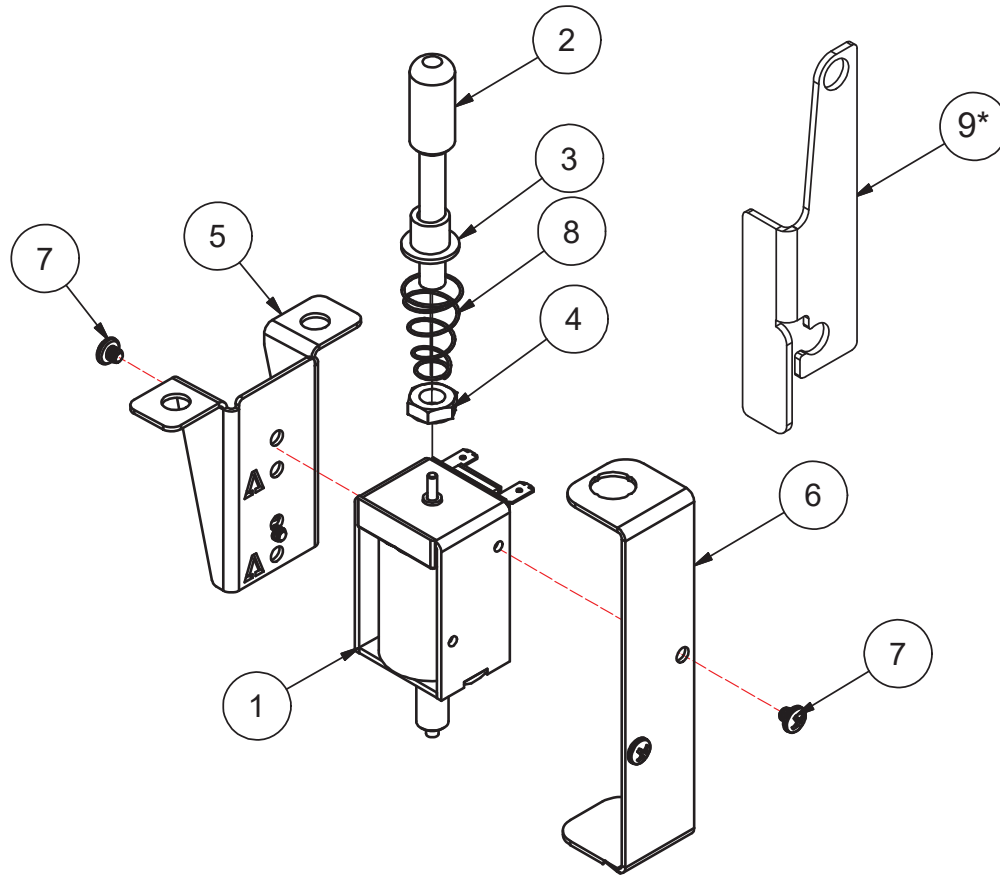
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|--|------------------------------------|
| 1 | 2 | Pump Cover, Clear | 04320-004-59-45 |
| 2 | 1 | Roller, Purple Dot | 04320-004-59-43 |
| 3 | 1 | Tube, 8" | 04320-004-59-44 |
| 4 | 2 | Pump Housing, Clear | 04320-004-59-41 |
| 5 | 4 | Screw, 8-32 x 3/8" | 05305-011-37-07 |
| 6 | 8 | Screw, 6-32 x 3/4" | 05305-011-37-05 |
| 7 | 4 | Screw, 8-32 x 1/2" | 05305-011-37-06 |
| 8 | 1 | Complete Peri-pump Assembly, 14 RPM Motor Only, Peri-pump, 14 RPM | 05700-004-71-52 04320-111-47-46 |
| 9 | 3 | Fastener, 10-32 | 05340-111-58-10 |
| 10 | 1 | Complete Peri-pump Assembly, 36 RPM Motor Only, Peri-pump, 36 RPM | 05700-004-71-53 04320-111-47-47 |
| 11 | 1 | Tube, 8" | 04320-004-92-38 |
| 12 | 1 | Roller, Red Plastic | 04320-111-36-70 |
| 13 | 1 | Timer, Universal | 05945-003-75-23 |
| 14 | 4 | P-clamp, 1/4" ID | 05975-002-61-42 |
| 15 | 4 | Locknut, 10-24 Hex with Nylon Insert | 05310-373-01-00 |
| 16 | 1 | Panel, Outer Control | 05700-004-52-16 |
| 17 | 3 | Screw, 10-32 x 1" | 05305-002-19-42 |
| 18 | 2 | Stiffener, Chemical Tube | 05700-002-66-49 |
| 19 | 1 | Chemical Port Assembly | 05700-004-30-86 |
| 20 | 1 | Tubing, Red, 1/4" x 120" | 05700-011-37-15 |
| 21 | 1 | Tubing, Red, 1/4" x 80" | 05700-011-37-14 |
| 22 | 1 | Tubing, Clear, 1/8" x 120" | 05700-002-76-14 |
| 23 | 1 | Tubing, Clear, 1/8" x 48" | 05700-002-76-15 |
| 24 | 2 | Washer, Thrust | 04320-004-75-85 |

Complete Door Assembly
05700-004-54-05



| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---------------------------------|-----------------|
| 1 | 1 | Outer Door Weldment | 05700-004-54-06 |
| 2 | 2 | Hinge Spacer | 05700-003-33-42 |
| 3 | 1 | Hinge, Right | 05700-003-32-72 |
| 4 | 1 | Hinge, Left | 05700-003-32-71 |
| 5 | 1 | Baffle, Door | 05700-003-33-38 |
| 6 | 1 | Inner Door | 05700-004-54-08 |
| 7 | 10 | Fastener, 10-32 | 05340-111-58-10 |
| 8 | 2 | Stop, Door Hinge | 05700-003-32-55 |
| 9 | 2 | Retaining Plate | 05700-011-44-37 |
| 10 | 1 | Door Handle | 05700-003-26-62 |
| 11 | 2 | Bolt, 1/4-20 x 3/8" Hex | 05305-274-20-00 |
| 12 | 2 | Screw, 10-32 x 1/4" | 05305-173-01-00 |
| 13 | 1 | Switch Assembly | 05700-003-34-80 |
| 14 | 1 | Washer, 1/4-20 ID | 05311-174-01-00 |
| 15 | 1 | Gasket, Door 20" | 05330-003-58-35 |
| 16 | 2 | Gasket, Door 14 1/2" | 05700-004-54-09 |
| 17 | 1 | Channel, Door Seal | 05700-004-54-11 |
| 18 | 6 | Screw, 1/4-20 x 1 1/2" Hex Head | 05305-274-23-00 |
| 19 | 1 | Gasket, Door L | 05330-004-36-05 |
| 20 | 1 | Gasket Clamp | 05700-004-36-56 |
| 21 | 6 | Pop Rivet, 1/8" x 3/8" | 05320-003-06-98 |
| 22 | 10 | Screw, 10-32 x 1/2" with Washer | 05305-002-32-37 |
| 23 | 1 | Bracket, Door Magnet | 05700-004-52-73 |

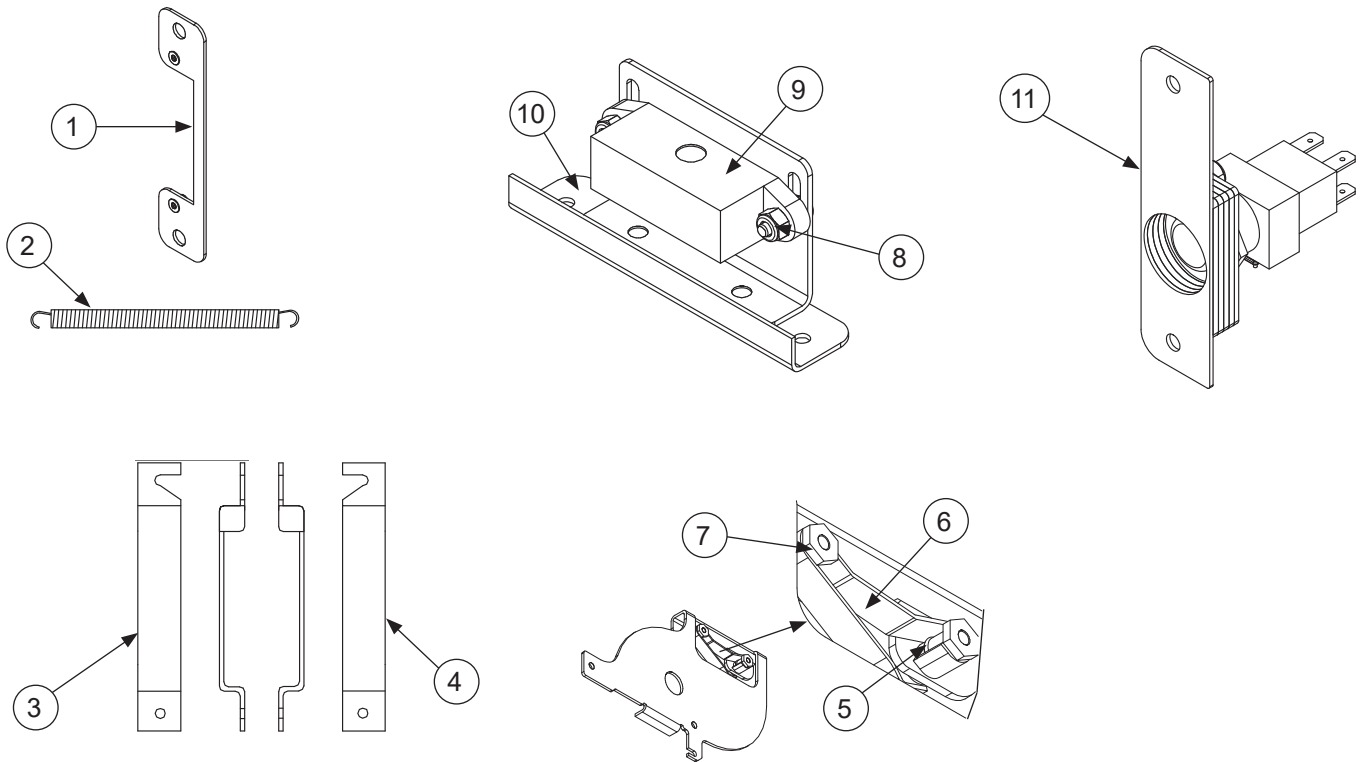
Complete Door Interlock Assembly
05700-004-47-47



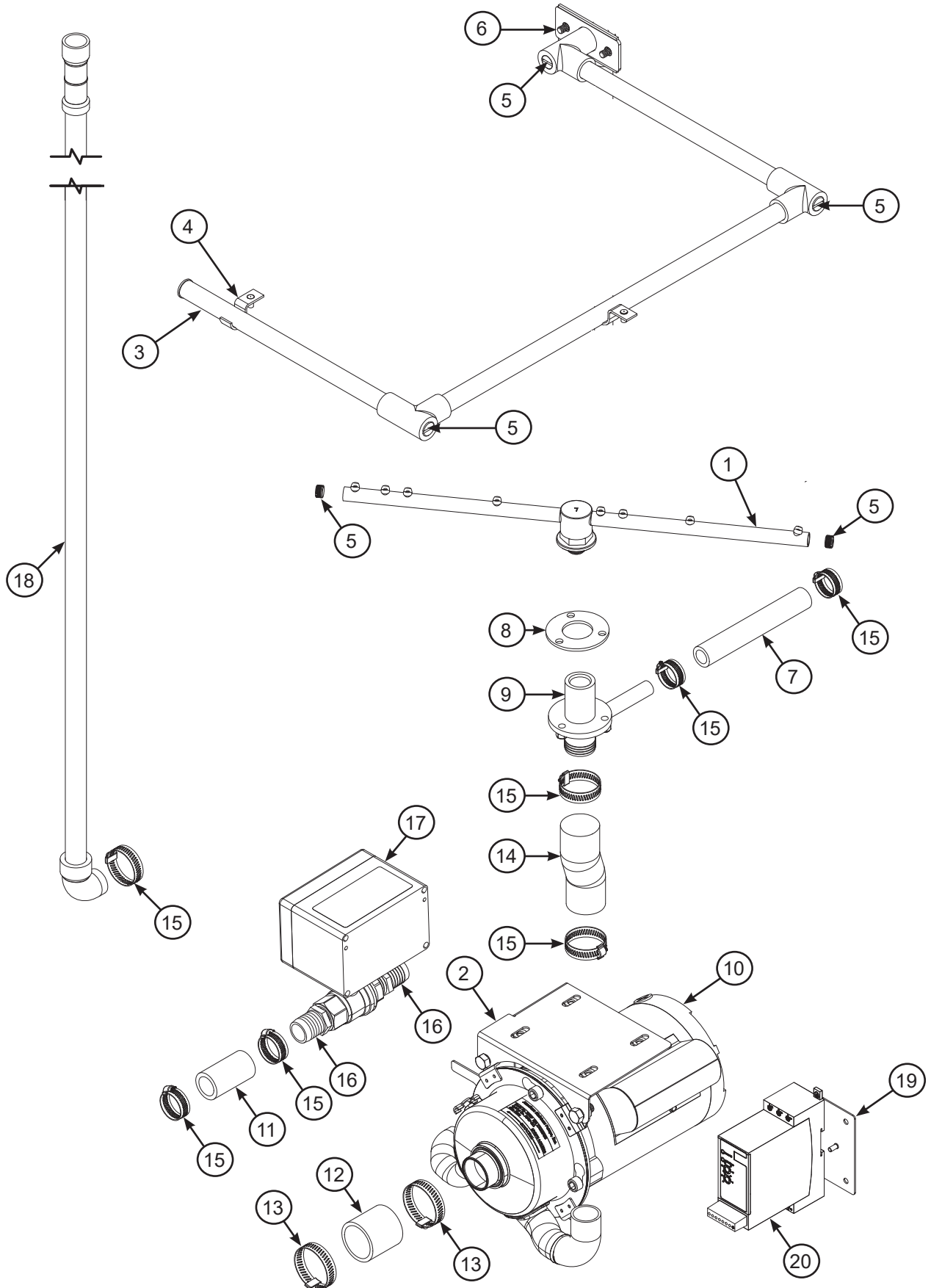
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---|-----------------|
| 1 | 1 | Solenoid, Door Interlock | 05999-004-47-49 |
| 2 | 1 | Solenoid Stop | 05700-004-47-51 |
| 3 | 1 | Bearing, Dry Running Sleeve, 1/4" ID | 03120-004-47-52 |
| 4 | 1 | Locknut, 1/4-20 Low Profile with Nylon Insert | 05310-374-02-00 |
| 5 | 1 | Bracket, Solenoid | 05700-004-50-99 |
| 6 | 1 | Bracket, Solenoid Guide | 05700-004-51-00 |
| 7 | 4 | Screw, 6-32 x 1/8", Pan Head Phillips | 05305-004-51-01 |
| 8 | 1 | Spring, Conical Compression | 05340-004-47-53 |
| 9* | 1 | Guide Plate, Door Interlock | 05700-004-47-40 |

*Item not included in complete door interlock assembly and must be ordered separately.

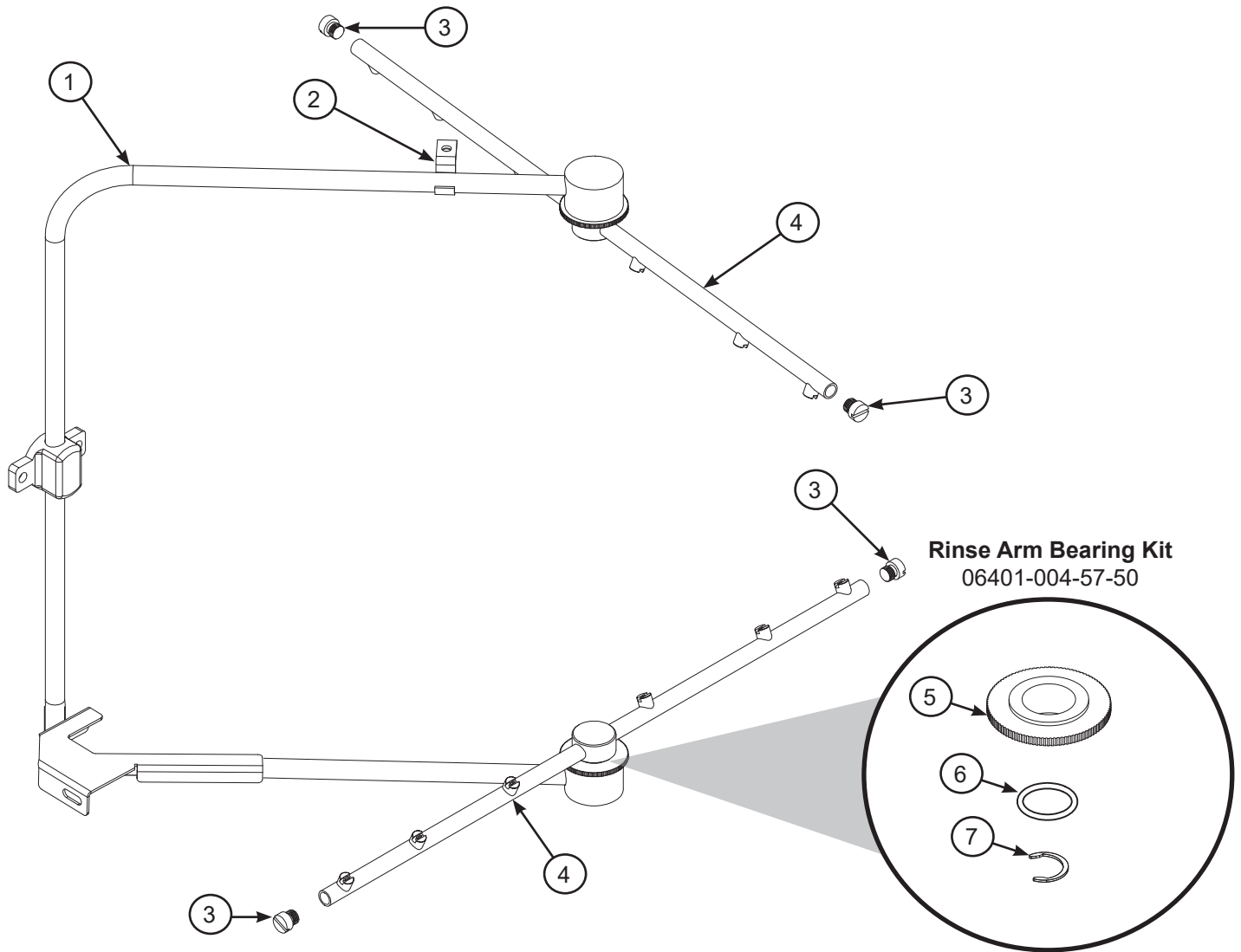
Parts are not shown to scale in relation to each other.



| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---|-----------------|
| 1 | 1 | Switch Mounting Plate Assembly | 05700-003-33-54 |
| 2 | 2 | Door Spring | 05700-003-32-85 |
| 3 | 1 | Cover, Left Hinge Weldment | 05700-004-36-80 |
| 4 | 1 | Cover, Right Hinge Weldment | 05700-004-36-81 |
| | | Hinges secured with Locknut, 1/4-20 Hex with Nylon Insert | 05310-374-01-00 |
| 5 | 2 | O-ring | 05330-003-32-34 |
| 6 | 2 | Latch Spring | 05340-004-67-82 |
| 7 | 4 | Latch Nut | 05700-003-32-33 |
| 8 | 2 | Locknut, 6-32 Hex with Nylon Insert | 05310-373-03-00 |
| | 2 | Screw, 6-32 x 1/4" | 05305-171-01-00 |
| 9 | 1 | Door Switch | 05930-003-31-44 |
| 10 | 1 | Door Switch Bracket | 05700-003-31-43 |
| | 1 | Door Switch & Bracket Assembly | 05700-003-32-21 |
| 11 | 1 | Complete Switch Mount Assembly | 06401-004-47-76 |

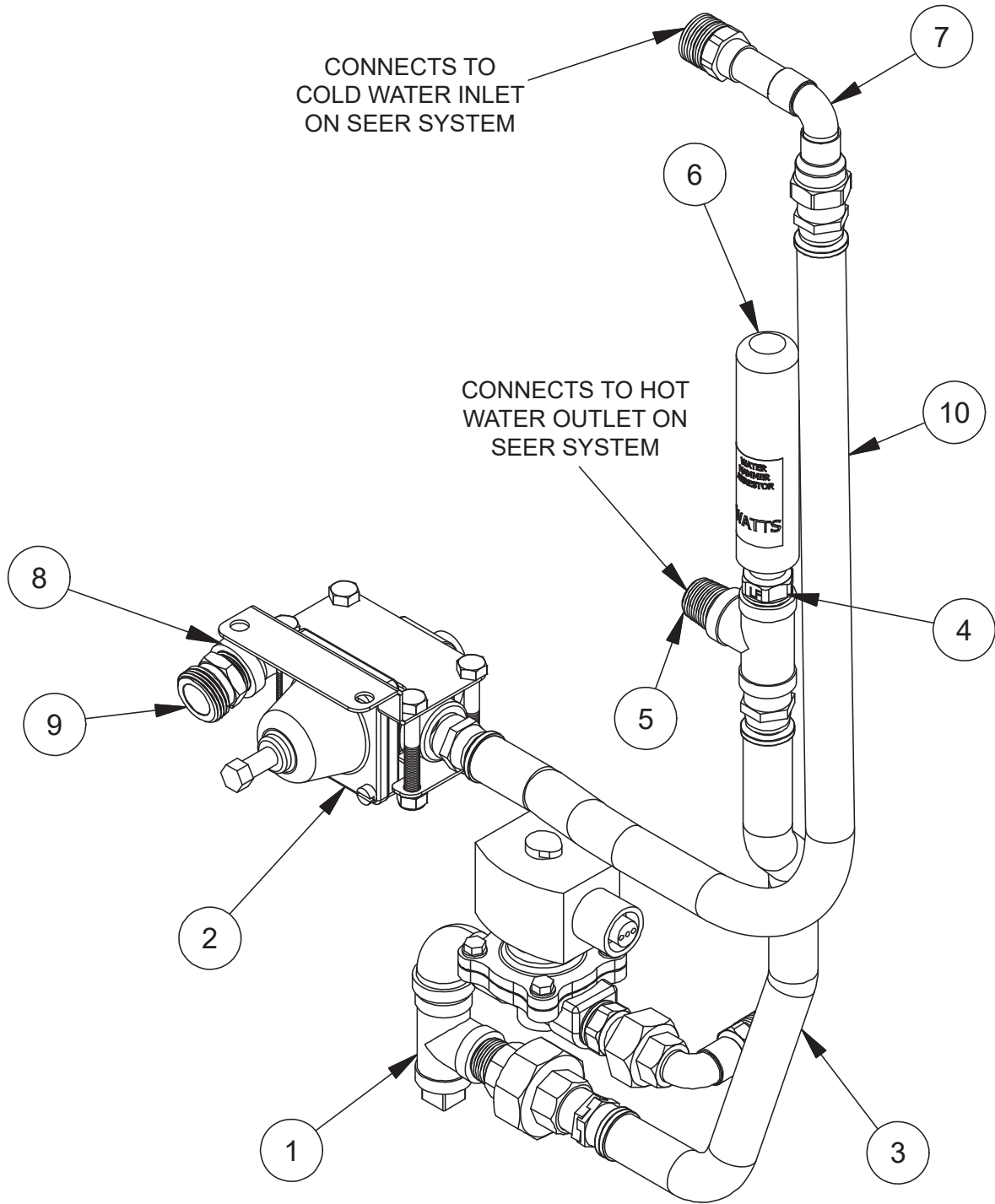


| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|-------------------------------------|-----------------|
| 1 | 1 | Wash Arm Assembly | 05700-021-39-23 |
| 2 | 1 | Motor Support | 05700-004-53-96 |
| 3 | 1 | Wash Halo | 05700-004-42-21 |
| 4 | 2 | Pipe Clamp | 05700-000-35-06 |
| 5 | 5 | Wash Arm End-cap | 05700-003-31-59 |
| 6 | 1 | Gasket, Manifold | 05330-003-75-91 |
| 7 | 1 | Hose, 5/8" ID, Blue Silicone | 05700-004-53-99 |
| 8 | 1 | Gasket, Wash Hub | 05330-002-34-77 |
| 9 | 1 | Wash Hub | 05700-004-43-04 |
| 10 | 1 | Pump and Motor | 06105-004-50-75 |
| 11 | 1 | Hose, 7/8" ID x 8", Blue Silicone | 05700-004-43-76 |
| 12 | 1 | Hose, Bottom Manifold Pump | 05700-001-22-92 |
| 13 | 2 | Clamp, 1 1/16" to 2" | 04730-719-18-00 |
| 14 | 1 | Hose, 1 1/4" ID x 4", Blue Silicone | 05700-004-54-00 |
| 15 | 7 | Clamp, 13/16" to 1 1/2" | 04730-719-06-09 |
| 16 | 2 | Hosebarb, 1 3/4" | 04730-011-65-86 |
| 17 | 1 | Drain Valve Assembly | 04730-003-33-64 |
| 18 | 1 | Drain Hose | 04720-004-32-00 |
| 19 | 1 | Bracket, Soft Starter | 05700-004-55-94 |
| 20 | 1 | Soft Starter | 05945-004-55-75 |

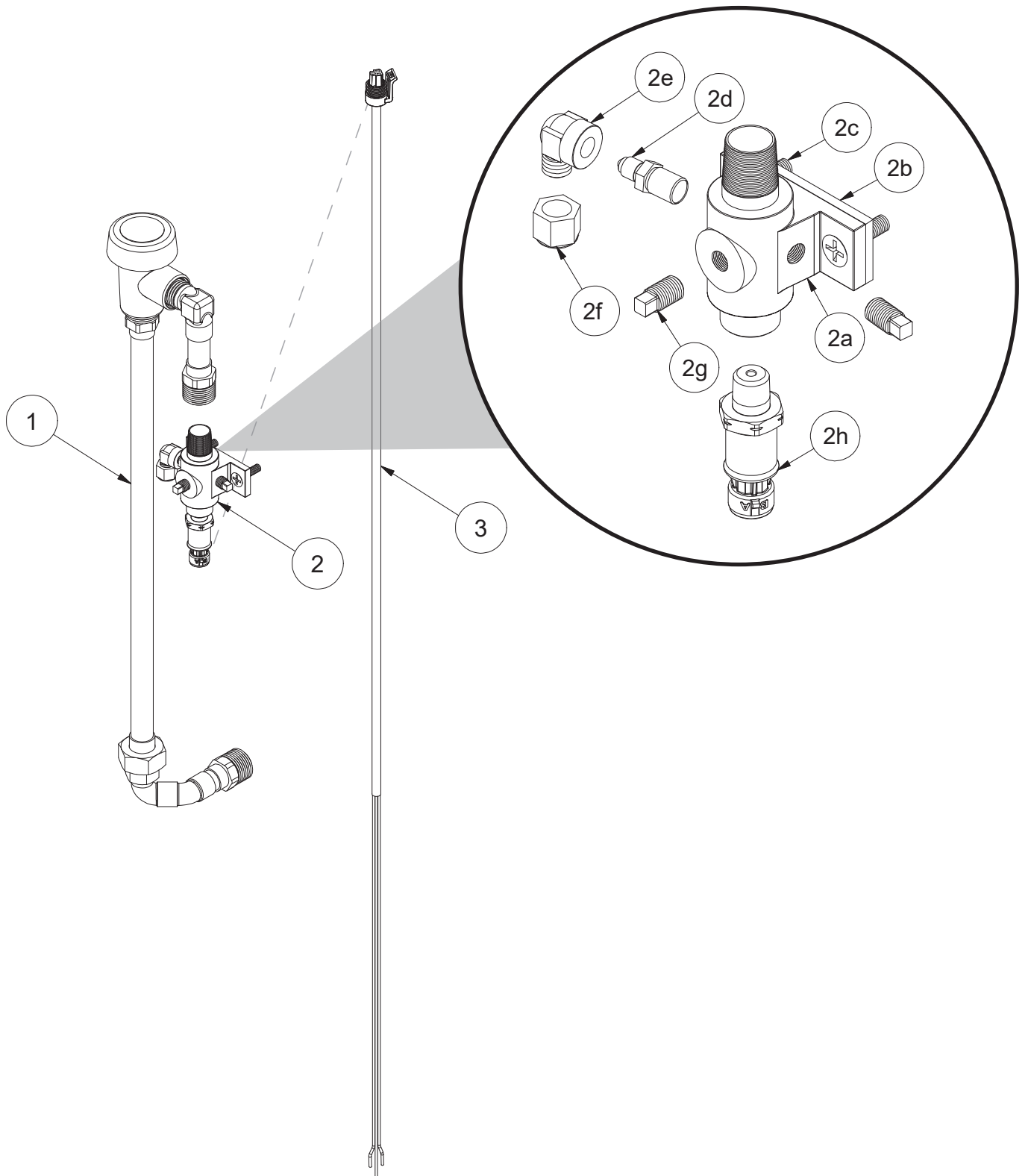


| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|-------------------------------------|-----------------|
| 1 | 1 | Complete Rinse Manifold Assembly | 05700-004-52-44 |
| 2 | 1 | Pipe Clamp | 05700-000-35-06 |
| 3 | 4 | Rinse Arm End-cap (includes o-ring) | 05700-004-34-62 |
| 4 | 2 | Complete Rinse Arm Assembly | 05700-004-39-39 |
| | 2 | Rinse Arm | 05700-004-38-75 |
| 5 | 2 | Bearing Assembly, Rinse Arm | 05700-004-54-71 |
| 6 | 2 | O-ring (included in item #5) | 05330-002-60-69 |
| 7 | 2 | Retaining Ring | 05340-112-01-11 |

Complete SEER Plumbing Assembly
05700-004-63-78

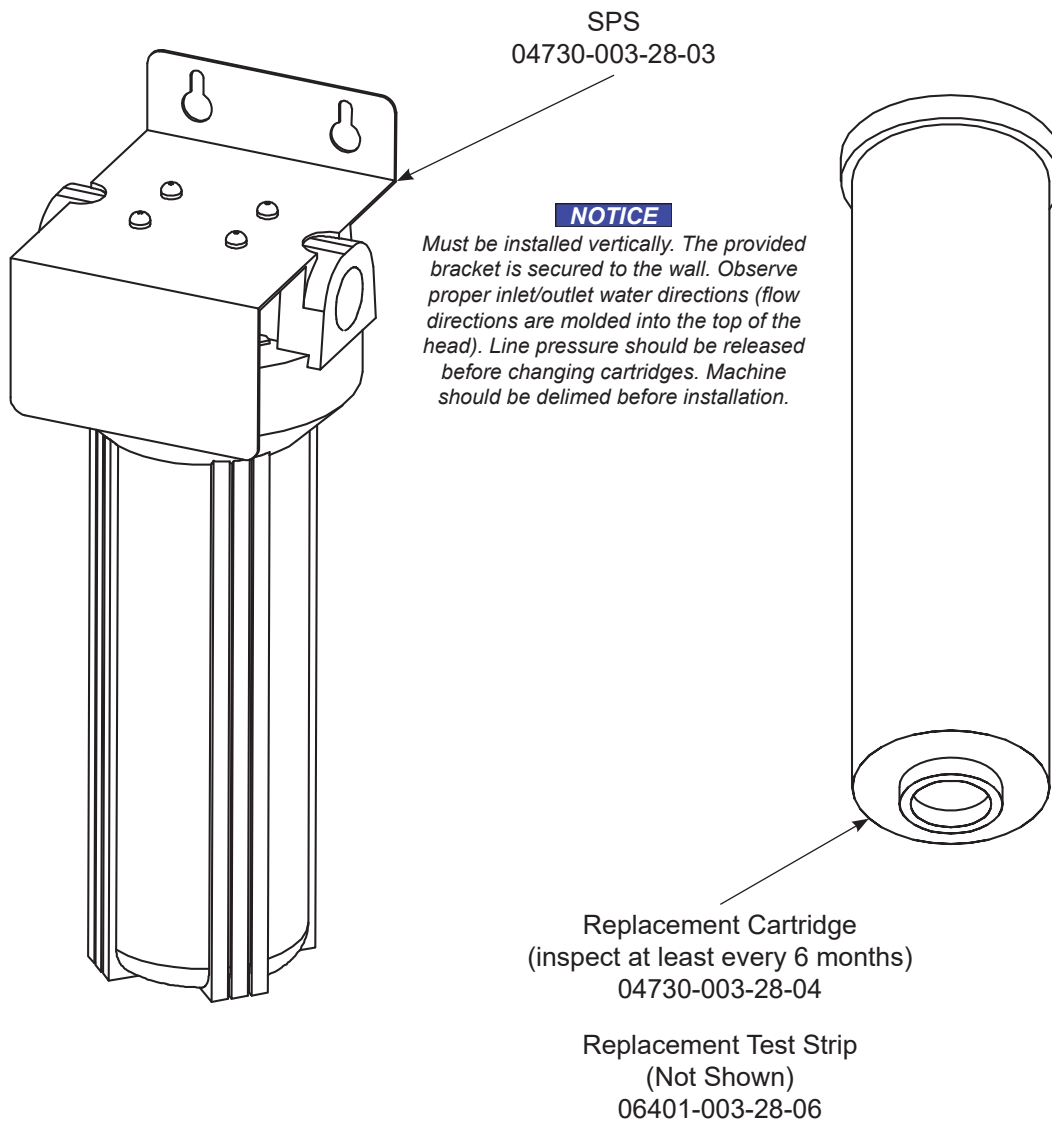


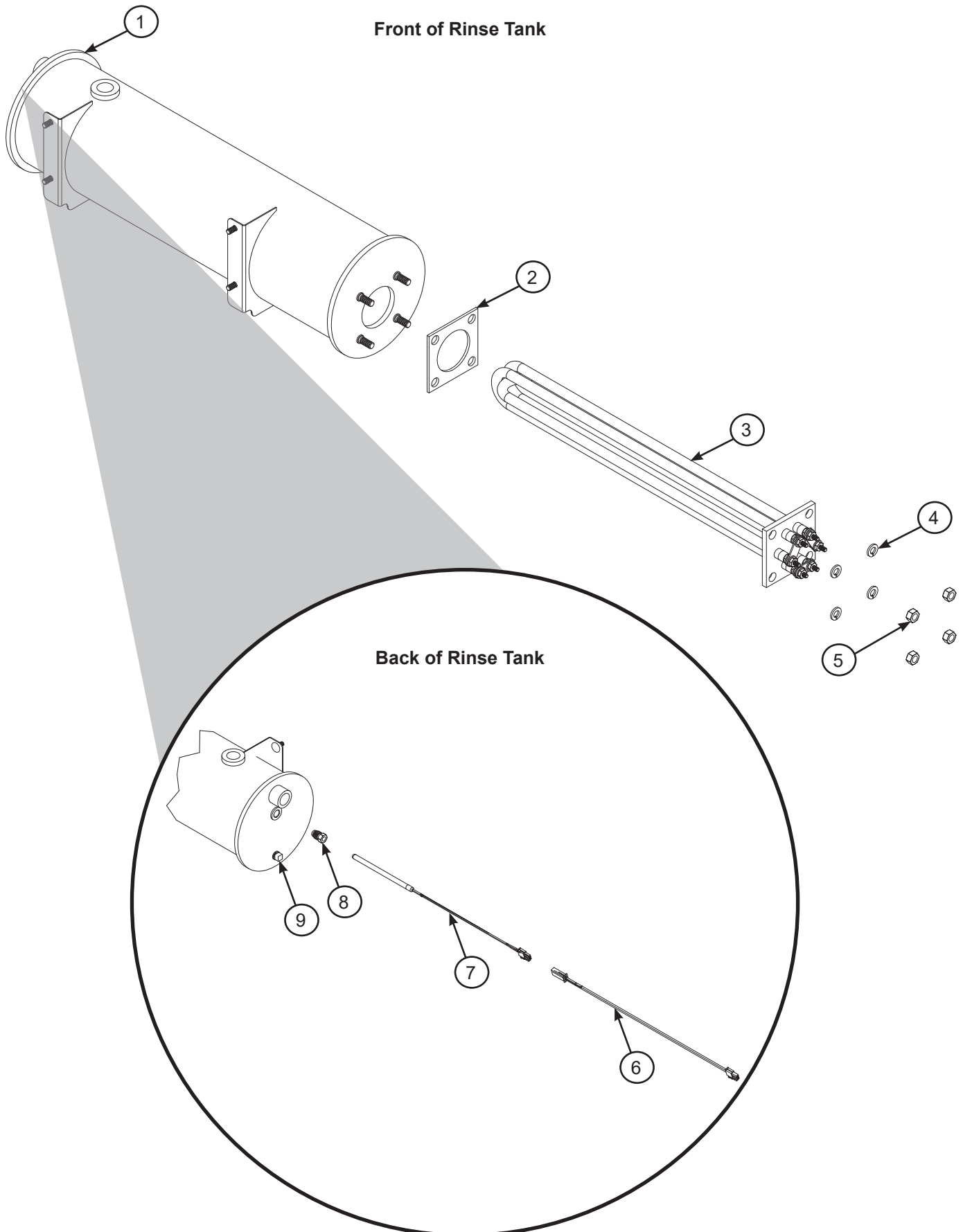
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|--|-----------------|
| 1 | 1 | Inlet Plumbing Assembly | 05700-004-53-98 |
| 2 | 1 | Pressure Regulating Valve Assembly, 1/2-13 | 05700-004-59-76 |
| 3 | 1 | Booster Tank Discharge Assembly | 05700-004-55-97 |
| 4 | 1 | Tee, 1/2" Brass | 04730-211-27-00 |
| 5 | 1 | Nipple, 1/2" Close Brass | 04730-207-15-00 |
| 6 | 1 | Water Hammer Arrestor, 1/2" | 04730-004-58-56 |
| 7 | 1 | SEER Inlet Plumbing Assembly | 05700-004-60-46 |
| 8 | 1 | Elbow, 90-degree, 1/2" Street Brass | 04730-206-08-00 |
| 9 | 1 | Adapter, Double Male, 3/4-11.5 x 1/2-14 | 04720-004-51-55 |
| 10 | 1 | Inlet Hose Assembly | 05700-004-71-03 |



| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|--|------------------------------------|
| 1 | 1 | Complete Vacuum Breaker Plumbing Assembly Vacuum Breaker Only, 1/2" Brass | 05700-004-43-02 04820-003-06-13 |
| 2 | 1 | Complete Rinse Injector Assembly | 05700-004-43-86 |
| 2a | 1 | Rinse Injector Only | 09515-004-22-73 |
| 2b | 1 | Gasket, Rinse Injector | 05330-003-75-91 |
| 2c | 2 | Screw, 1/4-20 x 1" | 05305-011-81-58 |
| 2d | 1 | Check Valve | 04820-111-51-14 |
| 2e | 1 | Fitting, Outlet Elbow | 04820-111-51-18 |
| 2f | 1 | Nut, Tube, 1/8" | 04730-011-59-45 |
| 2g | 2 | Plug, 1/8" Brass | 04730-209-07-37 |
| 2h | 1 | Pressure Transducer | 05945-004-17-01 |
| 3 | 1 | Harness, Transducer | 05700-004-33-62 |

SCALE PREVENTION SYSTEM (SPS) OPTION

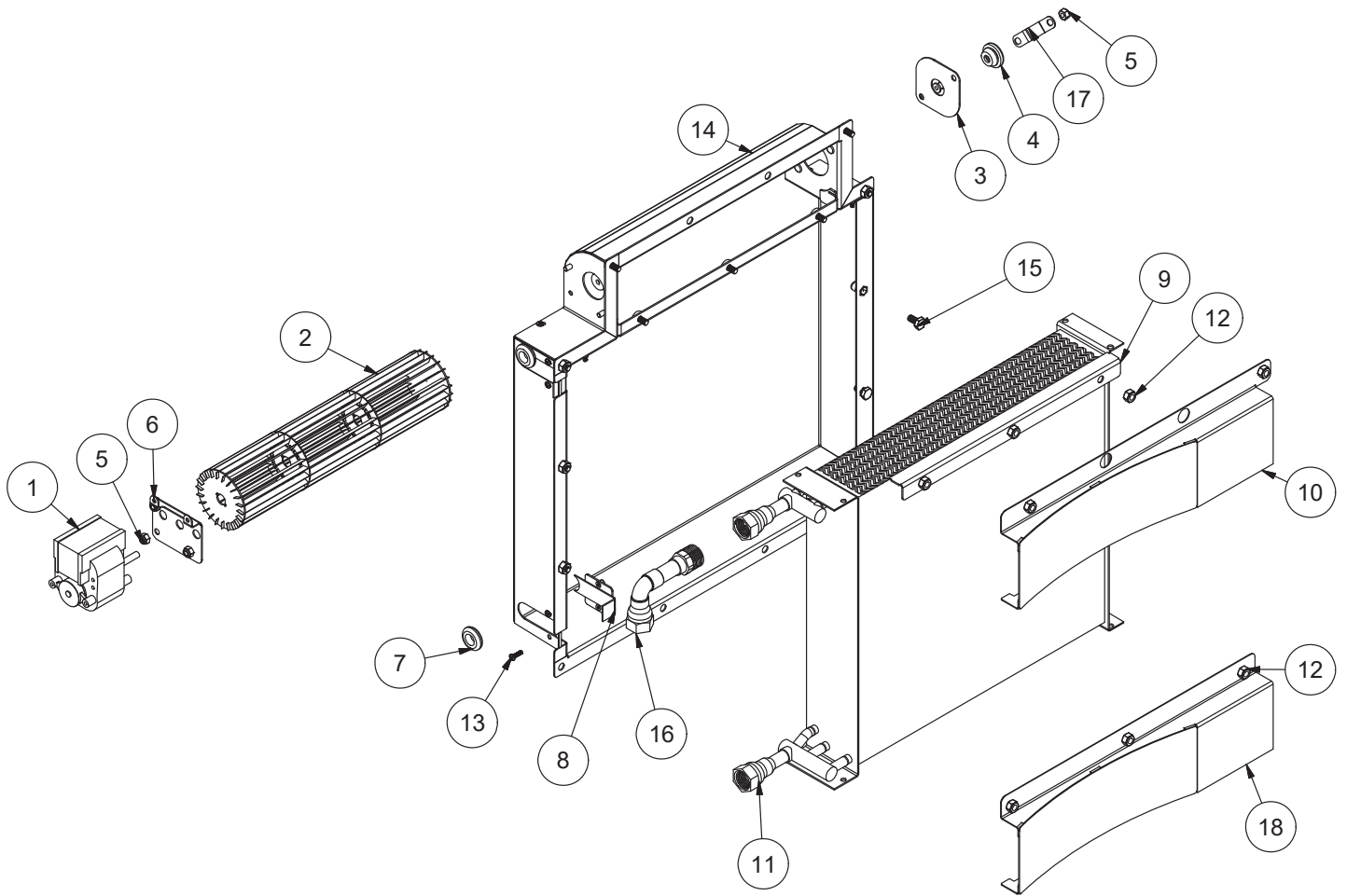




| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---|-----------------|
| 1 | 1 | Rinse Tank | 05700-004-41-88 |
| 2 | 1 | Heater Gasket | 05330-011-47-79 |
| 3 | 1 | Rinse Heater, 5.45 kW, 208-230 V | 04540-004-45-12 |
| 4 | 4 | Lockwasher, Split 5/16" | 05311-275-01-00 |
| 5 | 4 | Nut, Hex 5/16-18 | 05310-275-01-00 |
| 6 | 1 | Cable, Temperature Probe | 05700-004-33-23 |
| 7 | 1 | Thermistor Probe, 4" with 18" Cable | 06685-004-34-58 |
| 8 | 1 | Fitting, 1/4", Brass Nut/Sleeve | 05310-924-02-05 |
| 9 | 1 | Plug, 1/4" Brass | 04730-209-01-00 |
| 10 | 1 | Thermostat, Rinse Tank High-limit (Not Shown) | 05930-004-33-12 |

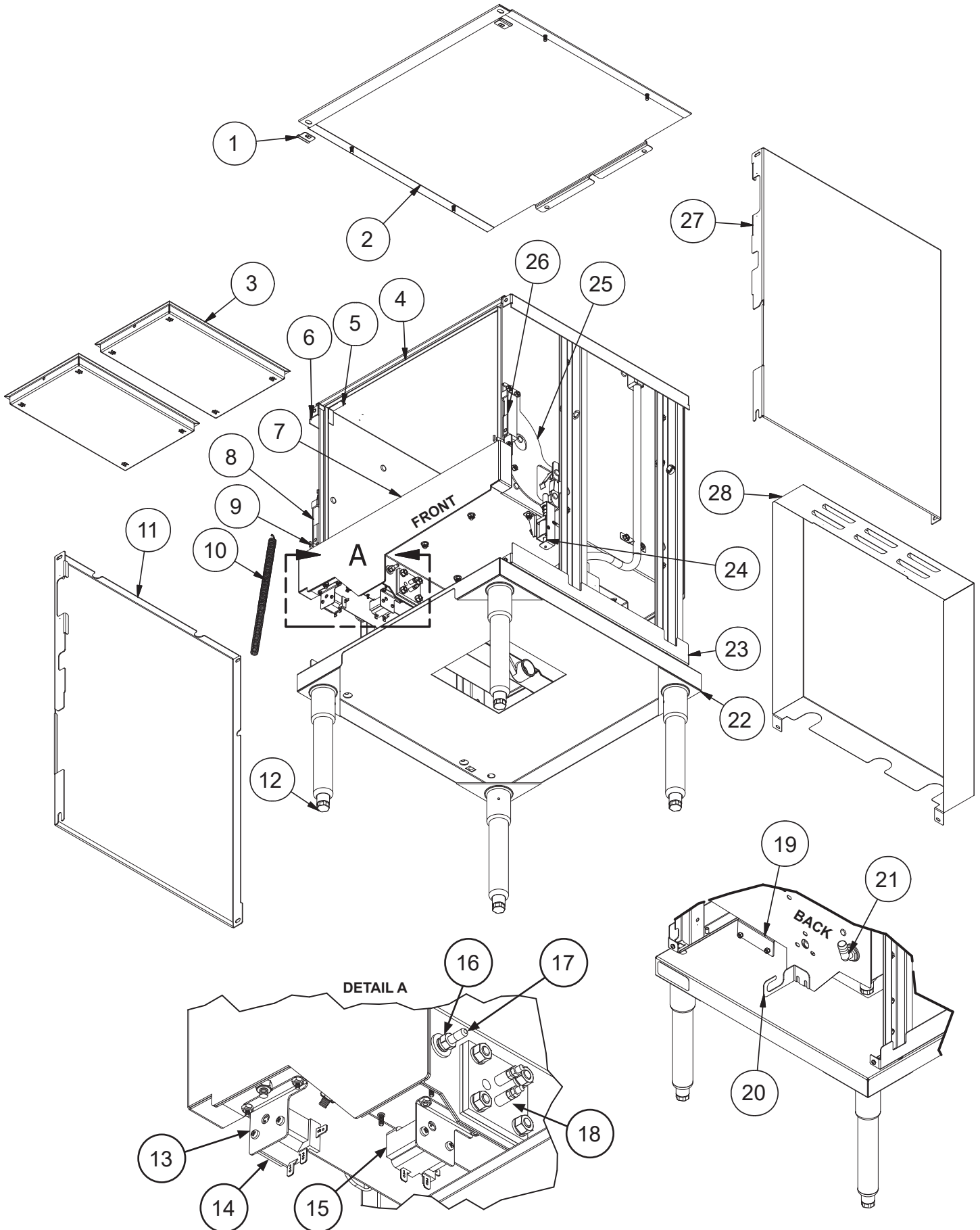
Complete SEER System Assembly
05700-004-63-06

NOTICE Before ordering SEER System parts, see note on the next page.



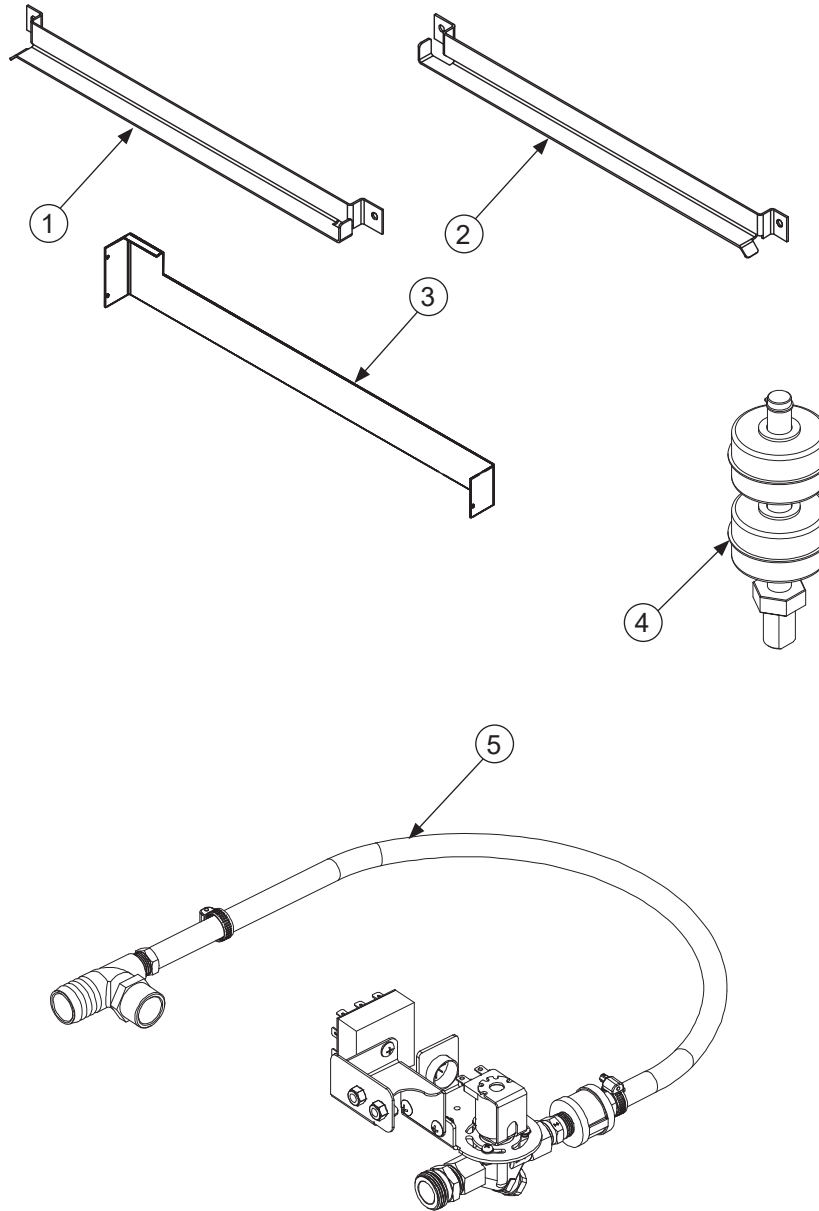
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---------------------------------------|-----------------|
| 1 | 1 | Motor, Fan | 05999-004-63-31 |
| 2 | 1 | Wheel, Blower | 05999-004-50-85 |
| 3 | 1 | Bracket, Bearing Boot | 05700-004-50-94 |
| 4 | 1 | Bushing and Housing Assembly | 03120-004-50-88 |
| 5 | 5 | Locknut, 10-24 Hex with Nylon Insert | 05310-373-01-00 |
| 6 | 1 | Bracket, Motor Adjustment | 05700-004-58-81 |
| 7 | 2 | Grommet, Push-in, 3/4" ID | 05330-004-59-14 |
| 8 | 2 | Bracket, Enclosure Filler Plate | 05700-004-58-93 |
| 9 | 1 | Diversion Plate | 05700-004-59-04 |
| 10 | 1 | Upper Shield | 05700-004-58-98 |
| 11 | 1 | Heat Exchanger, 3/8" Tubes | 04420-004-58-96 |
| 12 | 12 | Locknut, 1/4-20 Hex with Nylon Insert | 05310-374-01-00 |
| 13 | 8 | Screw, 6-32 x 1/2" | 05305-004-23-63 |
| 14 | 1 | Condenser Assembly | 05700-004-58-94 |
| 15 | 2 | Bolt, 1/4-20 x 1/2" | 05305-274-02-00 |
| 16 | 1 | Plumbing, SEER Inlet | 05700-004-60-46 |
| 17 | 1 | Bracket, Bearing Hard Stop | 05700-004-67-53 |
| 18 | 1 | Lower Shield | 05700-004-63-04 |

NOTICE Machines with serial numbers before 19G376587 have an older version of the SEER System. Click [here](#) to open manual which contains the older version.



| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|--------|--|------------------------------------|
| 1 | 2 | Plug, Shroud | 05700-003-32-50 |
| 2 | 1 | Top Shroud | 05700-003-37-06 |
| 3 | 2 | Strainer | 05700-004-09-43 |
| 4 | 1 | Tub Back | 05700-004-55-03 |
| 5 | 2 | Channel Back | 05700-004-04-24 |
| 6 | 1 | Left Frame Assembly | 05700-004-52-33 |
| 7 | 1 | Tub Front | 05700-004-51-79 |
| 8 | 1 | Hinge Cover, Left | 05700-002-18-41 |
| 9 | 1 | Hinge Stop, Left | 05700-003-32-61 |
| 10 | 2 | Door Spring | 05700-003-32-85 |
| 11 | 1 | Left Shroud | 05700-004-55-00 |
| 12 | 4 | Foot, Adjustable | 05340-108-01-03 |
| 13 | 2 | Bracket, High-limit | 05700-004-36-37 |
| 14 | 1 | Thermostat, High-limit | 05930-004-33-12 |
| 15 | 1 | Thermostat, High-limit | 05930-004-33-15 |
| 16 | 2 | Fitting, Brass Sleeve | 05310-924-02-05 |
| 17 | 1 | Thermistor Probe, 4" with 18" Cable | 06685-004-34-58 |
| 18 | 1 1 | Wash Heater, 4 kW Gasket, Wash Heater (Not Shown) | 04540-003-99-44 05330-011-61-34 |
| 19 | 1 | Bracket, Terminal Box | 05700-004-55-90 |
| 20 | 1 | Bracket, Rinse Tank Plumbing Support | 05700-004-56-19 |
| 21 | 1 | Fitting, Bulkhead to 1/2" Hosebarb | 04730-011-45-21 |
| 22 | 1 | Stand Assembly | 05700-004-54-13 |
| 23 | 1 | Right Frame Assembly | 05700-004-52-32 |
| 24 | 1 | Door Interlock Assembly | See next page. |
| 25 | 1 | Hinge Stop, Right | 05700-003-32-60 |
| 26 | 1 | Hinge Cover, Right | 05700-004-22-66 |
| 27 | 1 | Right Shroud | 05700-004-54-49 |
| 28 | 1 | Rear Dress Panel | 05700-004-56-20 |

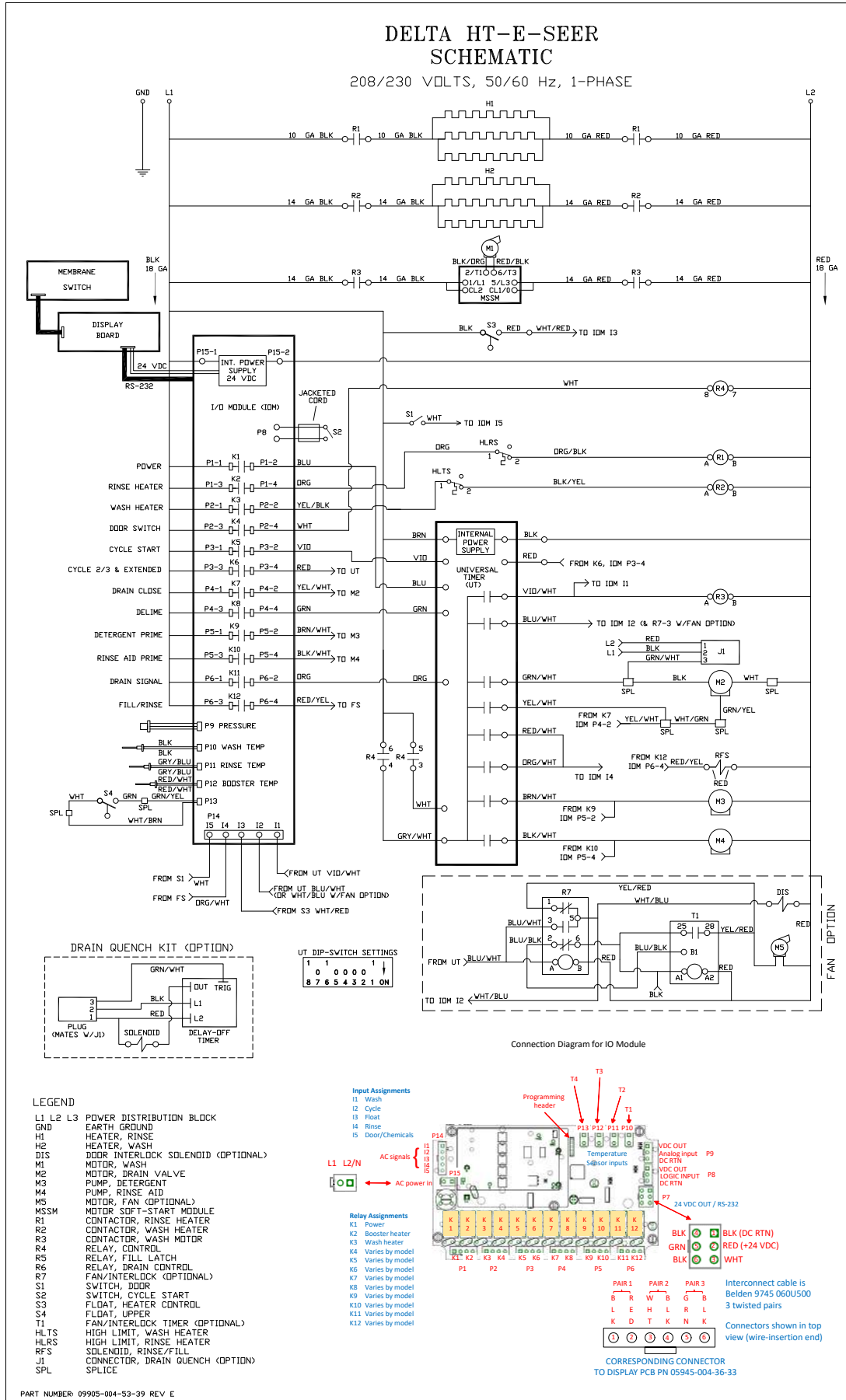
Parts are not shown to scale in relation to each other.



Drain Water Tempering
Kit Install Instructions



| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---------------------------|-----------------|
| 1 | 1 | Rail, Left Rack | 05700-031-37-88 |
| 2 | 1 | Rail, Right Rack | 05700-031-37-88 |
| 3 | 1 | Splash Shield | 05700-003-33-51 |
| 4 | 1 | Dual Float Switch | 06680-004-48-53 |
| 5 | 1 | Drain Water Tempering Kit | 06401-004-59-11 |





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