WAREFORCE SERIES

UNDERCOUNTER
DISHMACHINES

INSTALLATION, OPERATION, AND SERVICE MANUAL

WAREFORCE®

FOR WAREFORCE MODELS:

WAREFORCE UH30-FND
WAREFORCE UL30

REVISION HISTORY

Revision	Date	Made by	Process	Details
A	7-25-16	JH	N/A	Initial release of the manual.
B	3-6-17	JH	N/A	Added UL30 to manual. Updated pg. 42 with new motor and assembly P/Ns.
C	5-16-17	JH	8511	Updated water line connection information. Changed wording in chemical feeder pump programming section to indicate changes are lost if closed without saving. Changed steps in the Heater Contactor Wiring and Shutdown & Cleaning sections to be applicable to units with a mechanical timer. Removed item #25 from pg. 47. Changed Discharge Hose to 05700-004-43-76 in the Wash Manifold Assembly. Added 05700-004-36-95 to UH30-FND Display page and corrected the P/N for the Display Decal. Added a Plumbing Options page.
D	6-6-17	JH	N/A	Corrected draining procedure. Corrected wash motor amps for UL30 on Electrical Requirements page. Updated UL30 schematic.
E	7-10-17	JH	N/A	Added 05940-002-78-97 to the UH30-FND Control Panel page.
F	7-25-17	JH	N/A	Changed Heater Contactor Wires (UH30-FND Only) section to show current process.
G	8-23-17	JH	QOF-386	Replaced the middle 05975-003-35-21 with 05975-210-08-00 on the UH30-FND Control Panel page. Corrected items 4 and 5 on UH30-FND Chemical Feeder Pump Assembly page to 1/8" clear and added length. Added color and length to items 6 and 7 on UH30-FND Chemical Feeder Pump Assembly page. Added the 100" chemical tubes for red, white, and blue to UL30 Chemical Feeder Pump Assembly page.
H	2-20-19	JH	8585 8599	Updated pg. 2. Corrected references to flow pressure on pg. 6. Updated references to E and F outputs on pgs. 9–10. Corrected part numbers of motor assembly and motor only on pg. 40. Updated parts on pg. 42. Changed item #11 on pg. 46. Updated item #6 on pg. 50 and added link to instructions. Added links to instructions on pg. 51.
J	6-19-20	JH	8709 19-680	Revised Programming Chemical Feeder Pumps section. Updated chemical feeder pump assemblies. Revised UL30 control panel pages. Corrected drain hose P/N.
K	11-13-20	JH	8469	Revised drain line size. Updated dimensional drawing. Added mechanical timer instructions for UL30. Updated timer P/N on pg. 25.
L	6-15-21	JH	N/A	Updated amp values of UL30. Changed P/N of high limit thermostat on UL30 Heater Components page. Added UL30 float to Miscellaneous Parts page.
M	5-11-22	JH	22-1201 22-1202	Removed water hardness test strip. Updated Chemical Feeder Pumps section with black dot roller and corrected P/Ns and components. Added door magnet bracket to Door pages.
N	12-7-22	JH	8901 22-1505	Changed chemical tubing. Updated peri-pumps to black components.

WAREFORCE®

WAREFORCE UH30-FND

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

WAREFORCE UL30

Undercounter dishmachine; low-temperature with wash tank heater, chemical-sanitizing, with detergent, rinse-aid, and sanitizer chemical feeder pumps.

The manufacturer provides technical support for all of the machines 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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ABBREVIATIONS & ACRONYMS

ANSI - American National Standards Institute
Btu/Hr - British Thermal Units per Hour
CFM - Cubic Feet per Minute
GHT - Garden Hose Thread
GPH - Gallons per Hour
GPM - Gallons per Minute
GPG - Grains per Gallon
HP - Horsepower
Hz - Hertz
ID - Inside Diameter
kW - Kilowatts
MCA - Minimum Circuit Ampacity
MOP - Maximum Overcurrent Protection
NFPA - National Fire Protection Association
NPT - National Pipe Thread
OD - Outside Diameter
PRV - Pressure Regulating Valve
PSI - Pounds per Square Inch
V - Volts

MACHINE DIMENSIONS

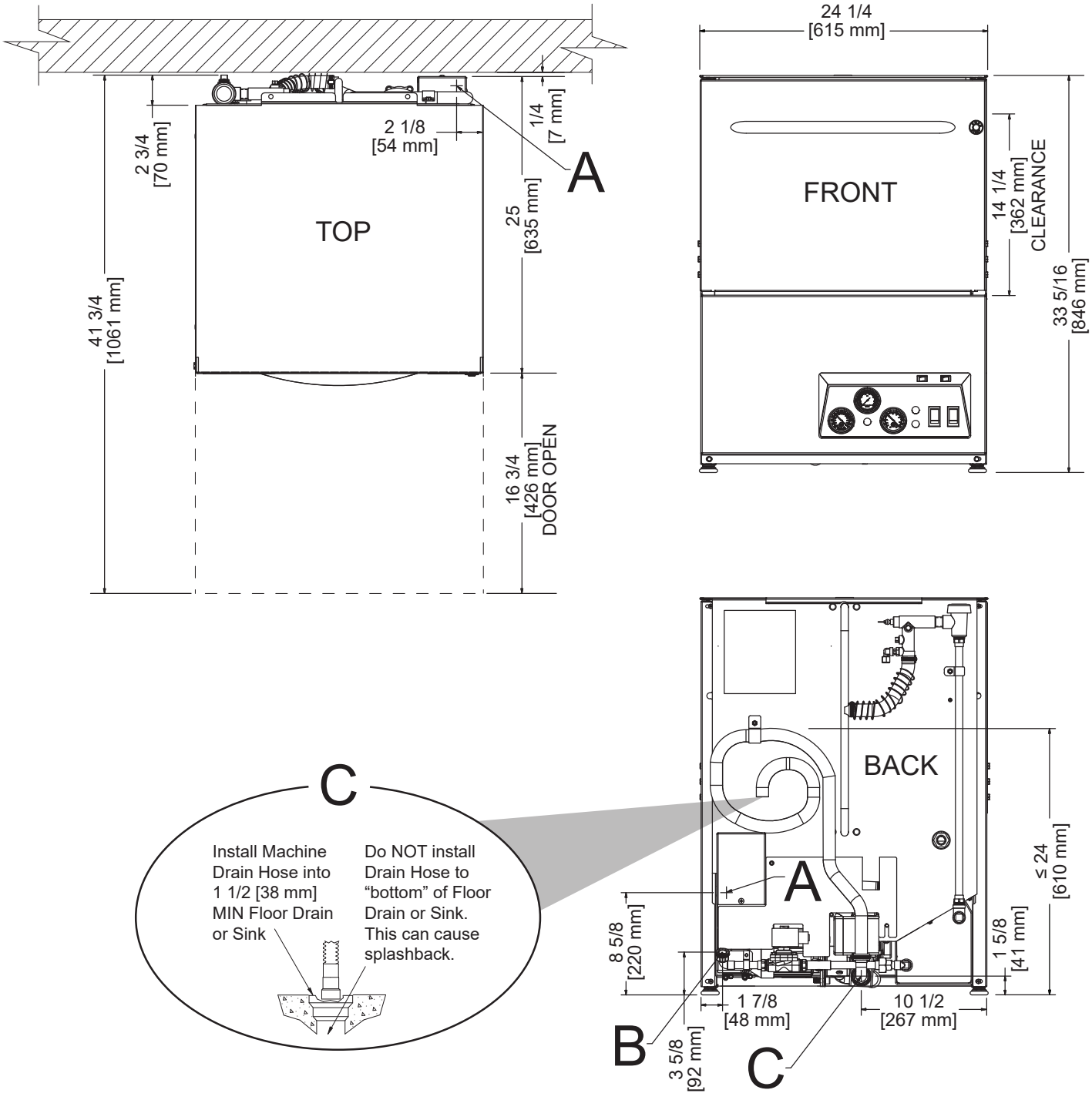
LEGEND

A - Electrical Connection

B - Water Inlet (with 6' Hose)
(3/4" Male GHT, connect to true 1/2" ID line, MIN 110 °F)

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

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



NOTICE *UH30-FND shown.*

OPERATING PARAMETERS

Operating Capacity:	UH30-FND	UL30
Racks per Hour	24	24
Dishes per Hour	600	600
Glasses per Hour	864	864
Gallons per Rack	1.1	1.2
Gallons per Hour	26.4	28.8

Tank Capacity (Gallons):		
Wash Tank	1.1	1.2
Rinse Tank	3.0	N/A

Electrical Loads (as applicable):		
Wash Motor HP	1.0	1.0
Rinse Heater kW	6.7 (208 V)/8.2 (230 V)	N/A
Wash Heater kW	N/A	1.5

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.*

HOT WATER SANITIZING

Water Temperatures (°F):		
Minimum Wash Temperature	150	N/A
Minimum Rinse Temperature	180	N/A
Minimum Incoming Water Temperature	110	N/A

CHEMICAL SANITIZING

Water Temperatures (°F):		
Minimum Wash Temperature	N/A	120
Minimum Rinse Temperature	N/A	120
Minimum Incoming Water Temperature	N/A	120

Other Water Requirements:		
Water Flow Pressure (PSI)	20 ± 5	20 ± 5
Flow Rate Minimum (GPM)	6.6	6.6
Water Line Connection Size (NPT)	3/4" GHT	3/4" GHT
Water Line Size (NPT)	1/2"	1/2"
Drain Line Size (NPT)	1" ID	1" ID

NOTICE *Install drain line into MIN 1 1/2" drain with air-gap.*

Minimum Chlorine Required (PPM)	N/A	50

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.

The electrical configurations of the machines are as follows:

Available Electrical Characteristics:

UH30-FND

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

UL30

- 115 V, 60 Hz, Single-phase

Available Wash Tank Heaters:

- 1.5 kW (UL30 Only)

**Motor and heater do not operate at same time. Total load based on motor load.*

Electrical Characteristics

UH30-FND

VOLTS	208	230
PHASE	1	1
FREQ	60	60
WASH MOTOR AMPS	5.0 A	5.0 A
RINSE HEATER AMPS	32.2 A	35.7 A
TOTAL LOAD	37.2 A	40.7 A

UL30

VOLTS	115
PHASE	1
FREQ	60
WASH MOTOR AMPS	10.0 A
WASH HEATER AMPS	13.0 A
TOTAL LOAD	10.0 A*

INSPECTION

Do not throw away container if damage is evident!

Before installing the unit, 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 dishmachine 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 unit while in transit. If this occurs, 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 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 unit.

UNPACKING

Remove the box and machine from the pallet before installing. Open the front door and remove all of the materials from inside. Once unpacked, verify there are no missing parts (reference the Parts section). 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.

A water hardness test must be performed.

A water hardness test must be performed. A hardness test kit can be found on the warning tag that is attached to the incoming plumbing connection on the back of the machine. If water hardness is higher than 3 GPG, install a water softener or install the optional Scale Prevention System (SPS). See the Plumbing Options page and the next section for more information on the SPS.

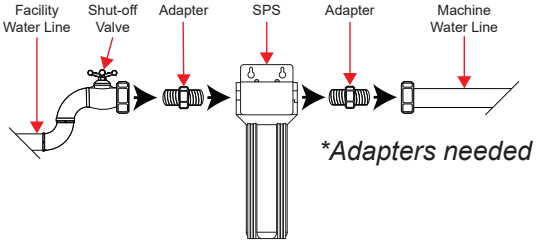
See the Machine Dimensions page and reference item "B" for water inlet connection location.

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. If water hardness is higher than 3 GPG and a water softener is not being used, install an SPS (see Plumbing Options page) into the water line between the facility water line and the machine water line (installed at the factory). 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 20 ± 5 PSI "flow" pressure at the recommended temperature indicated on the data plate.

Example



**Adapters needed will vary.*

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 20 ± 5 PSI "flow" pressure at the recommended temperature indicated on the data plate.

PRESSURE REGULATOR

Take care not to confuse static pressure with flow pressure!

The manufacturer has an optional water pressure regulator to accommodate areas where water pressure fluctuates or is higher than the recommended 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. See the Plumbing Options page.

SHOCK ABSORBER

It is suggested that a shock absorber (not supplied) be installed on the incoming water line. This prevents water hammer (hydraulic shock)—induced by the solenoid valve as it operates—from causing damage to the equipment. See the Plumbing Options page.

CONNECTING THE DRAIN LINE

The dishmachine has a pumped (pressure) drain capable of pumping waste water to a height of 24" above the floor to the kitchen's drain system. Each dishmachine is supplied with a drain hose. When installed, it will extend from the rear side of the machine. There must 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 12 GPM.

PLUMBING CHECK

After installing the incoming fill line and the drain line, slowly 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

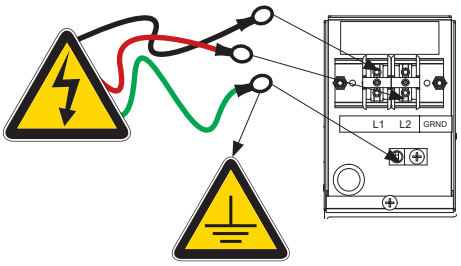
Disconnect electrical power at the breaker or disconnect switch and tag-out in accordance with procedures and codes.

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.

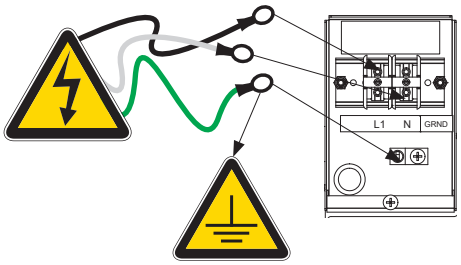
The data plate is located at the left-front side of the dishmachine. Refer to the data plate for machine operating requirements, machine voltage, total amperage, and serial number.

Remove the back panel and set aside. This will require removing the screw at the bottom of the back panel with a phillips screwdriver. Install 3/4" conduit into the pre-punched holes in the back of the control box. Route power wires and connect to power block and grounding lug. Install the service wires (L1 and L2 for UH30-FND, L1 and N for UL30) to the appropriate terminals as they are marked on the terminal block. Install the grounding wire into the lug provided. It is recommended that "DE-OX" or another similar anti-oxidation agent be used on all power connections.

UH30-FND



UL30



VOLTAGE CHECK

Ensure that the "ON/OFF" switch is in the "OFF" position and apply power to dishmachine. 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 dishmachine if voltage is too high or too low. Shut-off the service breaker and advise all proper personnel of the location of the breaker and any problems. Replace the control box cover and tighten-down the screws.

SURROUNDING AREA

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

NOTICE *Any damage to surrounding area that is caused by heat and/or moisture to materials that are not recommended for higher temperatures will not be covered under warranty or by the manufacturer.*

THERMOSTATS

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

CHEMICAL FEEDER EQUIPMENT

CAUTION! *Chlorine-based sanitizers can be detrimental to this machine if the chemical solution is too strong. See a chemical professional to ensure the dispenser is set-up correctly.*

The bottom of the chemical container cannot be located any higher than 8” from the floor. If the unit is equipped with the 6” or 18” table stand, the highest position will be 14” or 26” from the floor, respectively. It is important to remember that if you decide to operate the unit in chemical-sanitizing mode, you must ensure an appropriate chlorine-based sanitizer is used in the final rinse line.

PREPARING CHEMICAL FEEDER PUMPS

The UH30-FND dishmachine is supplied with detergent and rinse-aid chemical feeder pumps.

The UL30 dishmachine is supplied with detergent, rinse-aid, and sanitizer chemical feeder pumps.

Locate the open ends of the chemical tubes with the tube stiffeners and place each one in the appropriate container.

- Red Tubing = Detergent
- Blue Tubing = Rinse-Aid
- White Tubing = Sanitizer

PRIMING CHEMICAL FEEDER PUMPS

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

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

CAUTION! *Water must be in the sump and wash tank before chemicals are dispensed.*

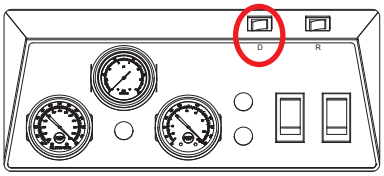
1. Verify proper chemical tube stiffener inlet is in proper container.

2. Use prime switches located on control panel at the bottom of the unit to prime each pump. The switches are clearly marked, "D" for detergent and "R" for Rinse-aid.

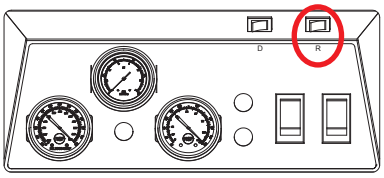
3. To prime the pumps:

UH30-FND

- Detergent - hold the "D" switch in the momentary position until detergent is seen entering the wash tank.



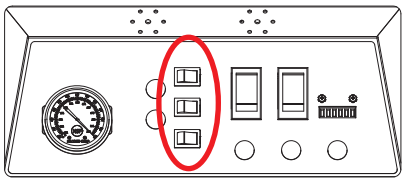
- Rinse-aid - hold the "R" switch in the momentary position for one minute.



PRIMING CHEMICAL FEEDER PUMPS

UL30

- Detergent, Rinse-aid, and Sanitizer - hold each priming switch until the respective chemical can be seen entering the wash tank.



4. Detergent is dispensed as required during the wash cycle by the timer. The amount of detergent might need to be increased or decreased depending upon water quality and type of detergent.

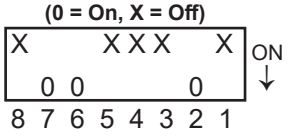
5. Rinse-aid is dispensed as required into the final rinse. The amount of rinse-aid might need to be adjusted depending upon water hardness and results.

6. Sanitizer is dispensed proportionally into the final rinse water line. The amount of sanitizer might need to be adjusted depending on concentration.

7. For UH30-FND, follow instructions in section below to adjust chemical amounts using universal timer. For UL30, follow instructions in CAM Timer Operation section to adjust chemical amounts using mechanical timer.

PROGRAMMING CHEMICAL FEEDER PUMPS (UH30-FND)

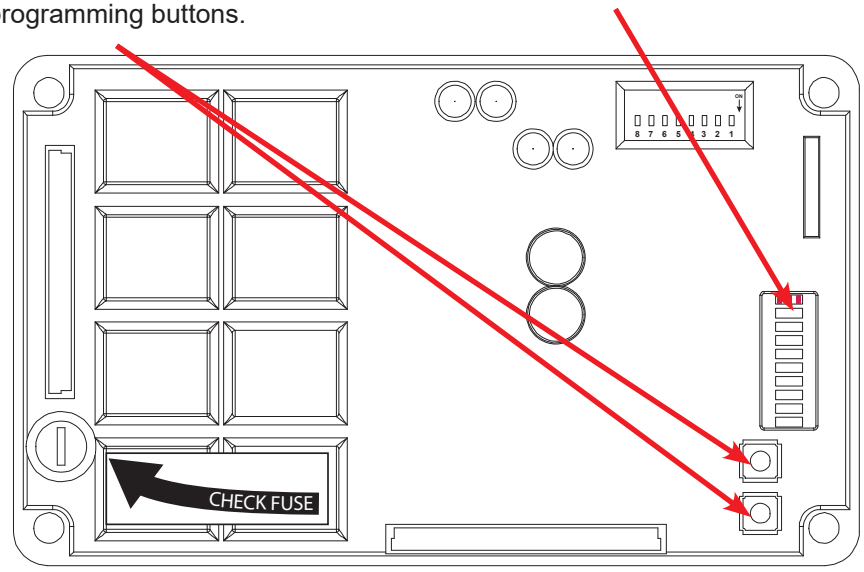
UH30-FND DIP-switch Settings
(0 = On, X = Off)



Universal timer is located on control panel. Use Parts section of this manual for reference.

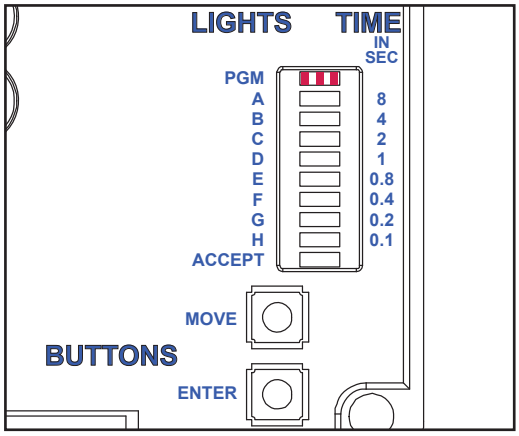
To access programming mode, machine must be ON and between cycles. The PROGRAM (PGM) light will be flashing.

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

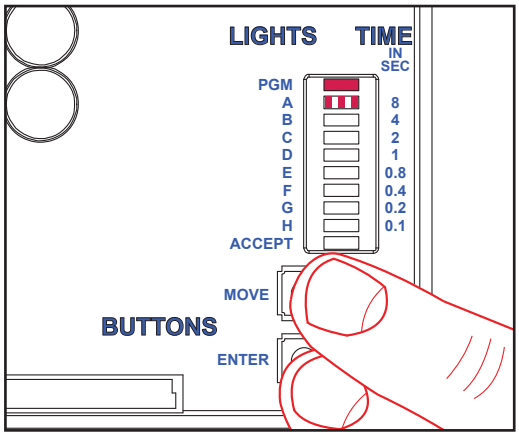


PROGRAMMING CHEMICAL FEEDER PUMPS (UH30-FND)

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

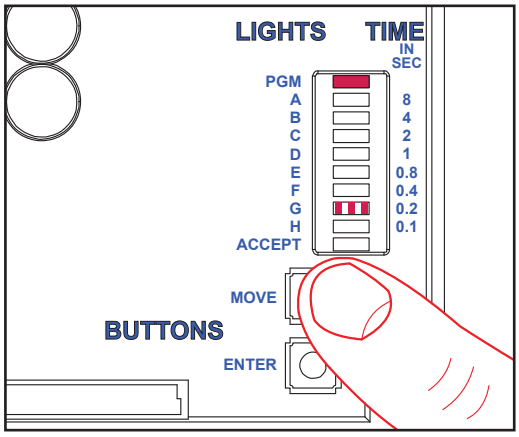


3. Press and hold both the MOVE and ENTER buttons simultaneously for two seconds then release. PGM light will go steady and light A will start flashing.



= *Light Steady*
= *Light Flashing*

4. Press MOVE button to move the flashing light to G or H. Options A–F are not adjustable.



Example here shows option G (detergent) being selected.

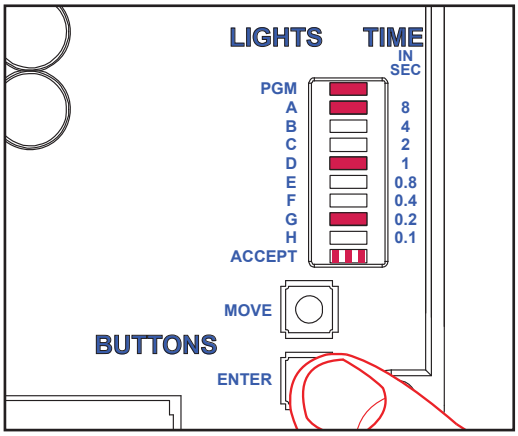
PGM	UH30-FND
E	Not adjustable
F	Not adjustable
G	Detergent
H	Rinse-Aid

PROGRAMMING CHEMICAL FEEDER PUMPS (UH30-FND)

= *Light Steady*

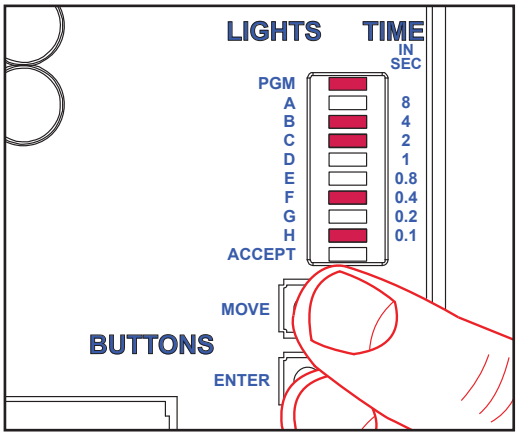
= *Light Flashing*

5. 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 G at 9.2 seconds (each selected time option is added to get the total).

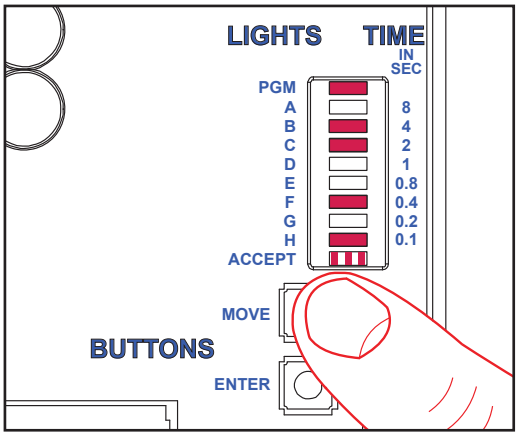
6. Press MOVE button to cycle through the different time options. To choose a time option, press ENTER while the light is flashing on that option. To deselect the option, press ENTER again.



Example here shows setting for G 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.***

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).

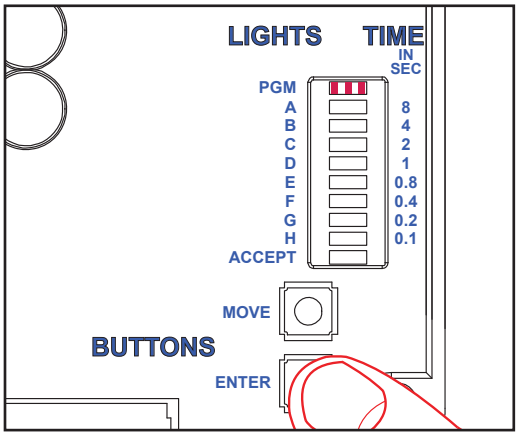


= *Light Steady*

= *Light Flashing*

PROGRAMMING CHEMICAL FEEDER PUMPS (UH30-FND)

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.

CAM TIMER OPERATION (UL30)

The CAM timer is a 2-minute, 8-CAM timer with an off/drain function that controls the operation of the machine. The following is a description of the setpoints for each CAM and the function of each switch.

CAM 1 is a cut CAM that serves as the cycle control.

FUNCTION: When the machine is in operation mode the notch is in the home position. The machine will remain idle until the door is opened, then CAM 1 moves to the start position and holds until the door is closed. The closing of the door will start the next cycle. The CAM will rotate a complete cycle and return to the home position and hold.

CAM 2 is a cut CAM that provides the off/drain function.

FUNCTION: The function of the off/drain CAM is controlled by the power switch. When the power switch is in the ON position the off/drain function is disabled. To use the off/drain, start a cycle and place the power switch in the OFF position. The machine will run a wash cycle, drain, and stop. The machine will hold this state of operation until the power switch is turned on. When turned on, the machine will fill, run a rinse cycle, and stop at the home position.

The off/drain cam works off the normally-open contacts of CAM 2. This requires the switch to be held closed by the CAM. The off/drain CAM switch will pick up just after the cycle CAM switch and drop back down just after the wash cycle CAM switch.

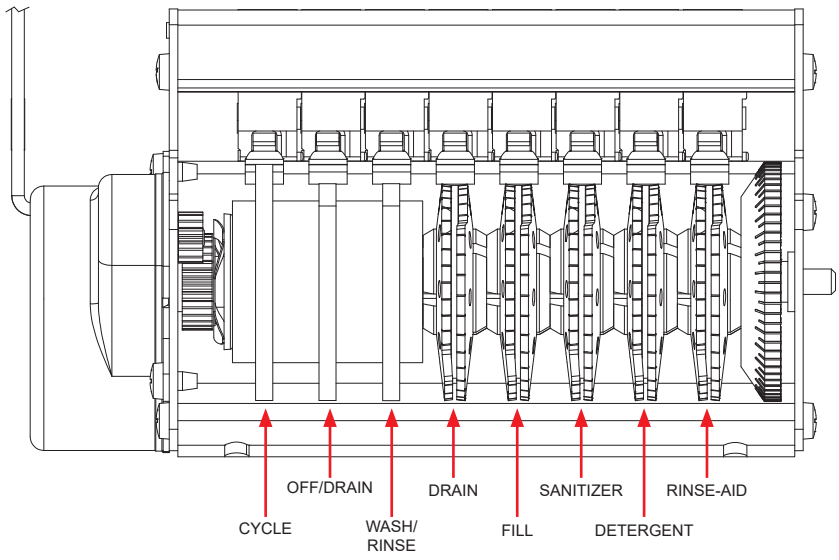
CAM 3 is a cut CAM that provides wash and rinse cycle timing.

FUNCTION: The wash/rinse cam works off the normally-open contacts of CAM 3. This requires the switch to be held closed by the CAM. The wash/rinse CAM switch will pick up just after the cycle CAM switch and drop back down just before the off/drain cycle CAM switch. Wash pump will run approximately 58 seconds. The machine will drain and fill. The rinse cycle will start after fill, at approximately the 82 second mark, and will last 35 seconds. The machine will then return to the home position.

CAM TIMER OPERATION (UL30)

The last 5 CAMs are adjustable. The following instructions require the timer position to have CAMs to the front and motor to the left as shown below.

CAMs



CAM 4 is an adjustable CAM that controls the drain valve.

FUNCTION: The drain valve CAM works off the normally-closed contacts of CAM 4. This requires the switch to be held open by the CAM and allowed to drop into the notch to operate the drain valve. The pumped drain and fill CAMs require adjustment due to varying water pressure. The drain must be adjusted to remove whatever water the fill brings into the machine.

SETTINGS: The right side of CAM 4 must be set to pick up the switch arm just before the wash cycle CAM switch drops. If the drain valve does not close first, water in the drain hose will back up into the pump housing and wash tank. Any adjustment made to the drain should be made with the left side of CAM 4. The adjustment must be moved back into the wash time until all water is drained from the wash tank.

CAM 5 is an adjustable CAM that controls the fill valve and the amount of water used.

FUNCTION: The fill valve CAM works off the normally-closed contacts of CAM 5. This requires the switch to be held open by the CAM and allowed to drop into the notch to operate the fill valve. The pumped drain and fill cams require adjustment due to varying water pressure. CAM 5 must be adjusted to fill the wash tank to the proper operating water level. Remember, the drain cycle must remove what the fill cycle brings into the machine.

SETTINGS: The left side of CAM 5 must be set to drop in just past the stop point of the off/drain CAM. There must be a dwell between the off/drain and the fill, so the fill will not run while the machine is in the off state. Any adjustment made to the fill should be made with the right side of CAM 5. Proper water level is achieved when the water touches the bottom of strainer pan.

CAM TIMER OPERATION (UL30)

CAM 6 is an adjustable CAM that controls the sanitizer pump.

FUNCTION: The sanitizer pump CAM works off the normally-closed contacts of CAM 6. The switch is held open by the CAM until it drops into the notch of the CAM. This energizes the sanitizer pump. The time the pump remains energized must be determined in the field to suit water conditions and the chemical used.

SETTINGS: The left side of CAM 6 must be set to allow the switch to drop in past the starting point of the fill CAM. Adjustments to sanitizer time are made with the right side of CAM 6. To increase the sanitizer time, open the notch of the CAM. To decrease, close the notch in small increments until the correct level is reached.

CAM 7 is an adjustable CAM that controls the detergent pump.

FUNCTION: The detergent pump CAM works off the normally-closed contacts of CAM 7. The switch is held open by the CAM until it drops into the notch of the CAM. This energizes the detergent pump. The time the pump remains energized must be determined in the field to suit water conditions and the chemical used.

SETTINGS: The left side of CAM 7 must be set to drop in past the starting point of the wash pump CAM. Adjustments to detergent time are made with the right side of CAM 7. To increase the detergent time, open the notch of the CAM. To decrease, close the notch in small increments until the correct level is reached.

CAM 8 is an adjustable CAM that controls the rinse-aid pump.

FUNCTION: The rinse-aid pump CAM works off the normally-closed contacts of CAM 8. The switch is held open by the CAM until it drops into the notch of the CAM. This energizes the rinse-aid pump. The time the pump remains energized must be determined in the field to suit water conditions and the chemical used.

SETTINGS: The left side of CAM 8 must be set to drop in past the starting point of the fill CAM. Adjustments to rinse-aid time are made with the right side of CAM 8. To increase the rinse-aid time, open the notch of the CAM. To decrease, close the notch in small increments until the correct level is reached.

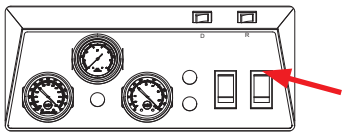
LEVELING

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

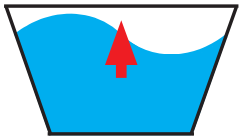
HEATER CONTACTOR WIRES (UH30-FND ONLY)

CAUTION! ***Heater contactor wires must NOT be connected before water fills the unit the first time!***

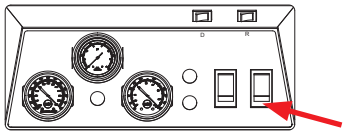
1. Flip "ON/OFF" switch to "ON."



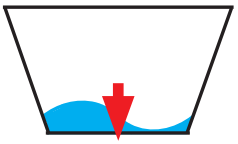
2. Listen for water to stop filling.



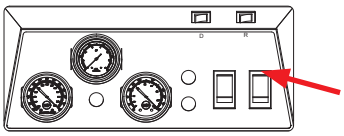
3. Flip "ON/OFF" switch to "OFF."



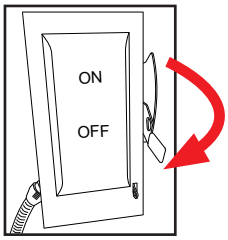
4. Listen for water to stop draining.



5. Flip "ON/OFF" switch back to "ON."



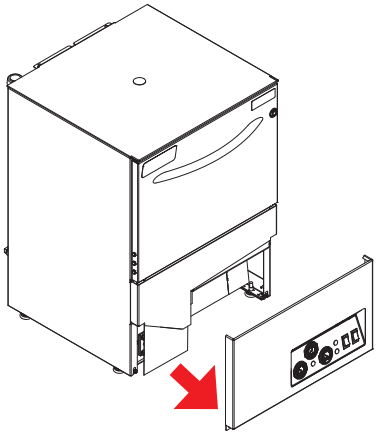
6. Listen for water to stop filling.
7. Flip "ON/OFF" switch back to "OFF."
8. Listen for water to stop draining.
9. Flip "ON/OFF" switch back to "ON."
10. Listen for water to stop filling. This time water should begin to splash into cavity of machine.
11. Once you hear water splashing, flip "ON/OFF" switch back to "OFF."
12. Listen for water to stop draining.
13. Disconnect electrical power at breaker or disconnect switch and tag-out in accordance with procedures and codes.



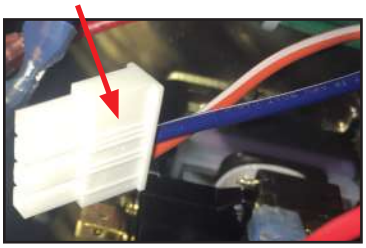
HEATER CONTACTOR WIRES (UH30-FND ONLY)

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

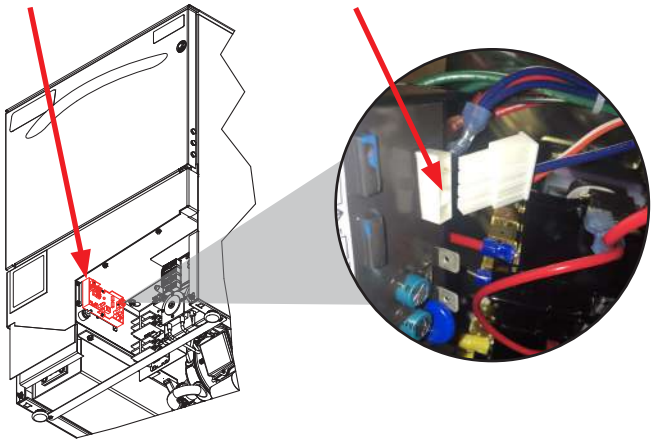
14. Remove front panel of machine.



15. Locate loose connector with orange/white and blue/black wires.



16. Plug loose connector into empty connector on right side of thermostat board.

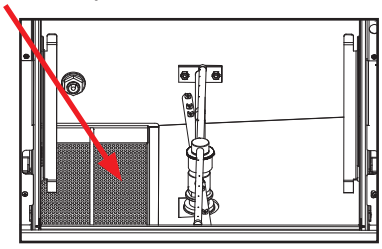


17. Replace front panel of machine.
18. Reconnect electrical power at breaker or disconnect switch in accordance with procedures and codes.
19. Machine is now ready for operation.

PREPARATION

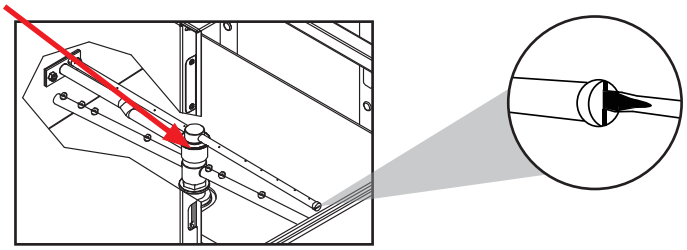
Before operating the unit, verify:

1. Strainer is in place and clean.

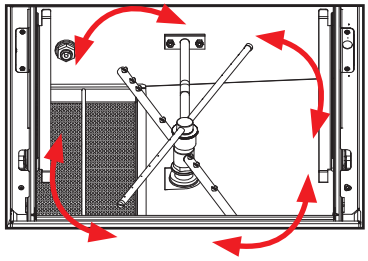


2. Wash and rinse arms are screwed securely into place and end-caps are tight.

UL30 has combined wash/rinse arms.



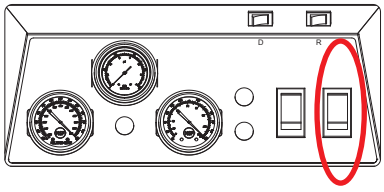
3. Wash and rinse arms rotate freely.



4. Chemical levels in chemical containers are correct.

FILLING THE WASH TUB

1. Close door.
2. Flip “ON/OFF” switch to “ON” position.



(UH30-FND Controls Shown.)

3. Machine will automatically begin to fill.
4. Once wash tub is filled, wait five minutes.
5. Flip “ON/OFF” switch to “OFF” position and wait for machine to drain.
6. Flip “ON/OFF” switch to “ON” position and wait for machine to fill.
7. Ensure wash temperature is at least 150 °F before operating machine.

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.

WASHING A RACK OF WARE

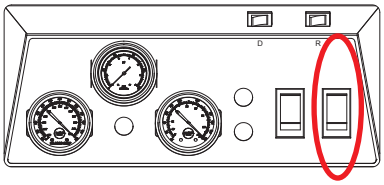
To wash a rack, open the door completely and slide the rack into the unit. Close the door, ensure the "WASH/DELIME" switch is on "WASH," press the "Start" button, and the unit will start. After the cycle light turns off, the cycle is complete. When the flush light is on (steady, not flashing), tank water should be drained and refilled.

OPERATIONAL INSPECTION

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

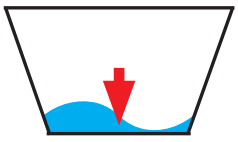
SHUTDOWN & CLEANING

1. At end of workday, close door. Flip “ON/OFF” switch to “OFF” position.



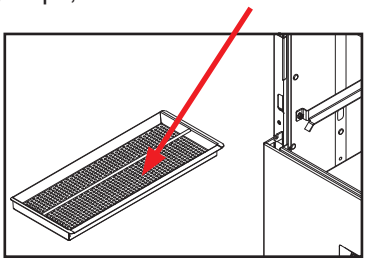
(UH30-FND Controls Shown.)

2. Drain pump will activate and empty unit of water.

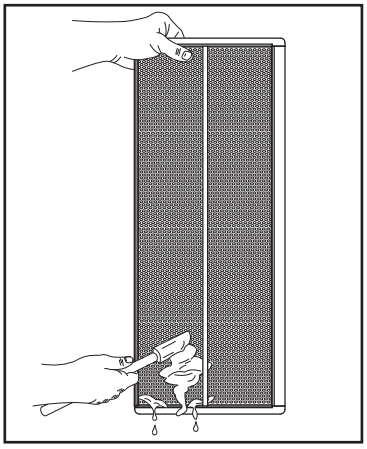


SHUTDOWN & CLEANING

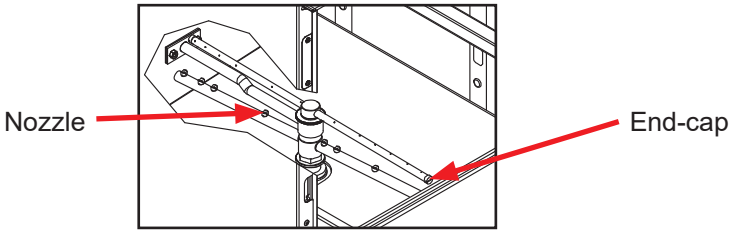
3. When draining stops, remove strainer.



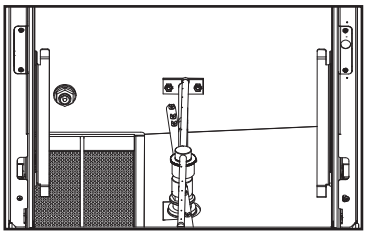
4. Remove soil and debris from strainer and set aside.



5. Unscrew wash and rinse arms from manifolds. Remove end-caps and flush arms with water. Use a brush to clean inside of the arms. If nozzles appear to be clogged, use a toothpick to remove debris.



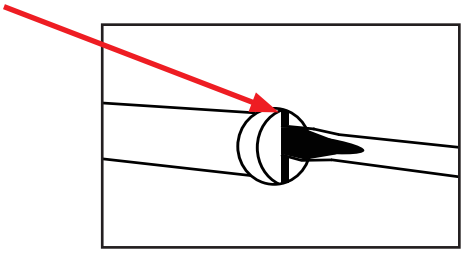
6. Wipe inside of machine out, removing all soil and scraps.



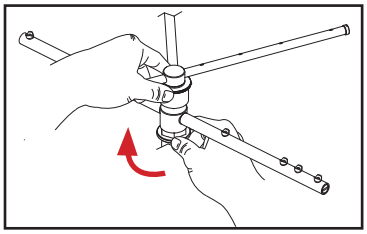
SHUTDOWN & CLEANING

UL30 has combined wash/rinse arms.

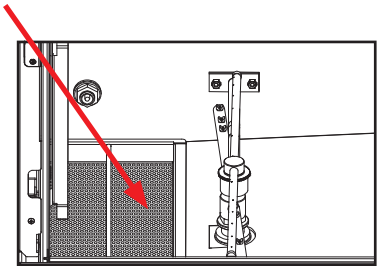
7. Reassemble wash and rinse arms.



8. Replace wash and rinse arms in machine. Arms only need to be hand-tight, do not use tools to tighten.



9. Reinstall strainer and close door.



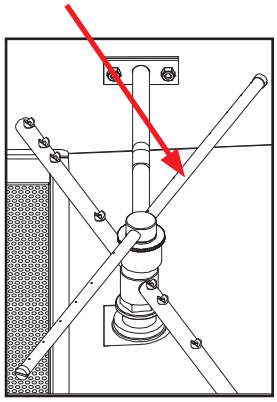
DELIMING

To proceed with the delime operation, follow the steps below. The tank capacities of the machine can be found in the Specifications section of this manual.

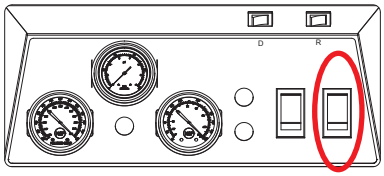
NOTICE

If this machine is equipped with an SPS and lime is becoming a frequent problem, the cartridge needs to be replaced. To order a replacement cartridge, call the manufacturer.

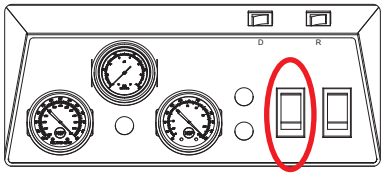
1. UH30-FND Only - Remove rinse arms (top and bottom) and place in sink with deliming solution.



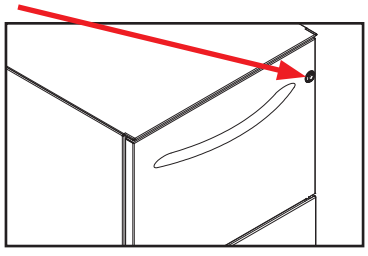
2. Flip "ON/OFF" switch to "ON" position.



3. Flip "WASH/DELIME" switch to "DELIME" position.



4. Add deliming solution per chemical supplier's instructions.
5. Close door.
6. Push "START" button.



7. Wait until cycle is complete and inspect inside of machine. If machine is not delimed, run again.

NOTICE *This equipment is not recommended for use with deionized water or other aggressive fluids. Use of deionized water or other aggressive fluids will result in corrosion and failure of materials and components. Use of deionized water or other aggressive fluids will void the manufacturer's warranty.*

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 occurence.
- 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 only qualified service personnel perform any maintenance and repairs not specifically discussed in this manual.

WARNING! *Unqualified personnel performing maintenance on the machine may void the warranty, lead to larger problems, or cause harm to the operator.*

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:

CAUTION!
Do NOT beat strainers to remove debris!

1. Ensure water temperatures match those listed on machine data plate.
2. Ensure all strainers are clean and securely in place before operating 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 all wash and rinse arms are secure in machine before operating.
4. Remove as much soil from dishes by hand as possible before loading into racks.
5. Do not overfill racks.
6. Ensure glasses are placed upside-down in rack.
7. Ensure all chemicals being injected into machine have been verified at correct concentrations.
8. Clean out machine at end of every workday per Shutdown and Cleaning section of this manual.
9. Follow all safety procedures, whether listed in this manual or put forth by local, state, or national codes/regulations.

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

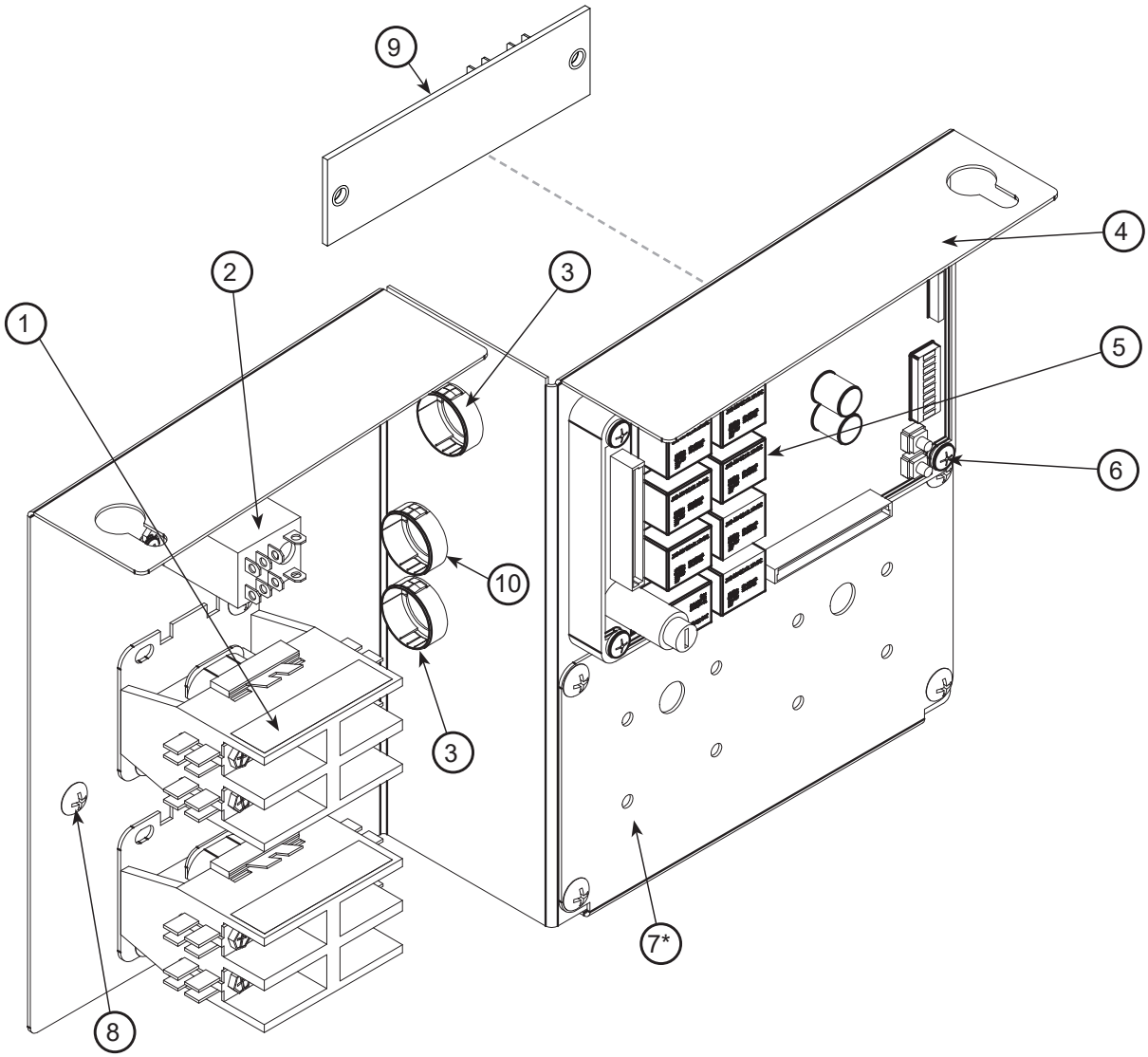
WARNING! *Inspection, testing, and repair of electrical equipment should only be performed by qualified service personnel. Certain procedures in this section require electrical tests or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily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

OBSERVATION	POSSIBLE CAUSE	REMEDY
Water overflow from bottom of door.	1. Clogged drain. 2. Machine not level. 3. Excessive inlet pressure. 4. Detergent foaming. 5. Wash/rinse arm end-cap missing.	1. Remove obstruction. 2. Level machine or increase height to the front. 3. Install pressure regulator or adjust if one is present. Ensure flow meets data plate specification. 4. Reduce detergent quantity. 5. Replace.
Wash motor doesn't operate on delime wash.	1. Loose or broken wires. 2. Defective "WASH/DELIME" switch. 3. Defective motor starting relay. 4. Machine in FAULT mode and locked out.	1. Reconnect or replace wires in motor. 2. Verify "WASH/DELIME" switch triggers input on PLC. If not, check wiring/replace membrane. 3. Replace. 4. Review fault screen for active faults.
No water comes through the arms when the "WASH/ DELIME" switch is depressed.	1. Water not turned on. 2. Defective solenoid valve	1. Turn water on. 2. Replace solenoid valve.
Little or no water coming through the wash/rinse assemblies.	1. Limed-up heads or piping. 2. Low water pressure.	1. Delime heads. 2. Adjust pressure regulator (not supplied) or increase pipe size to machine.
Rinse water runs continuously with breaker turned off.	1. Defective plunger in solenoid valve. 2. Defective diaphragm in solenoid valve.	1. Replace. 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 source circuit breaker.*

OBSERVATION	POSSIBLE CAUSE	REMEDY
Wash temperature not at required temperature range.	1. Water level low. 2. RTD setpoint too slow. 3. Defective RTD. 4. Wash heater defective. 5. Defective heater contactor R1.	1. Check water level. If low, run new fill cycle. 2. Check fault screen. Adjust wash temperature setpoint 3. Replace. 4. Replace heater element. 5. Replace.
Rinse water not at required temperature range.	1. Incoming rinse water does not meet minimum criteria indicated on machine data plate. 2. RTD is defective. 3. Rinse heaters damaged. 4. Setpoint screens set low.	1. Adjust as required. 2. Replace if necessary. 3. Check amperages. Replace if necessary. 4. Adjust rinse tank setpoint.
Machine doesn't drain when Power button is pressed.	1. Drain clogged. 2. Defective drain valve.	1. Remove obstruction. 2. Replace.
No indication of pressure.	1. Water turned off. 2. Pressure gauge failure.	1. Turn water on. 2. Replace pressure gauge.

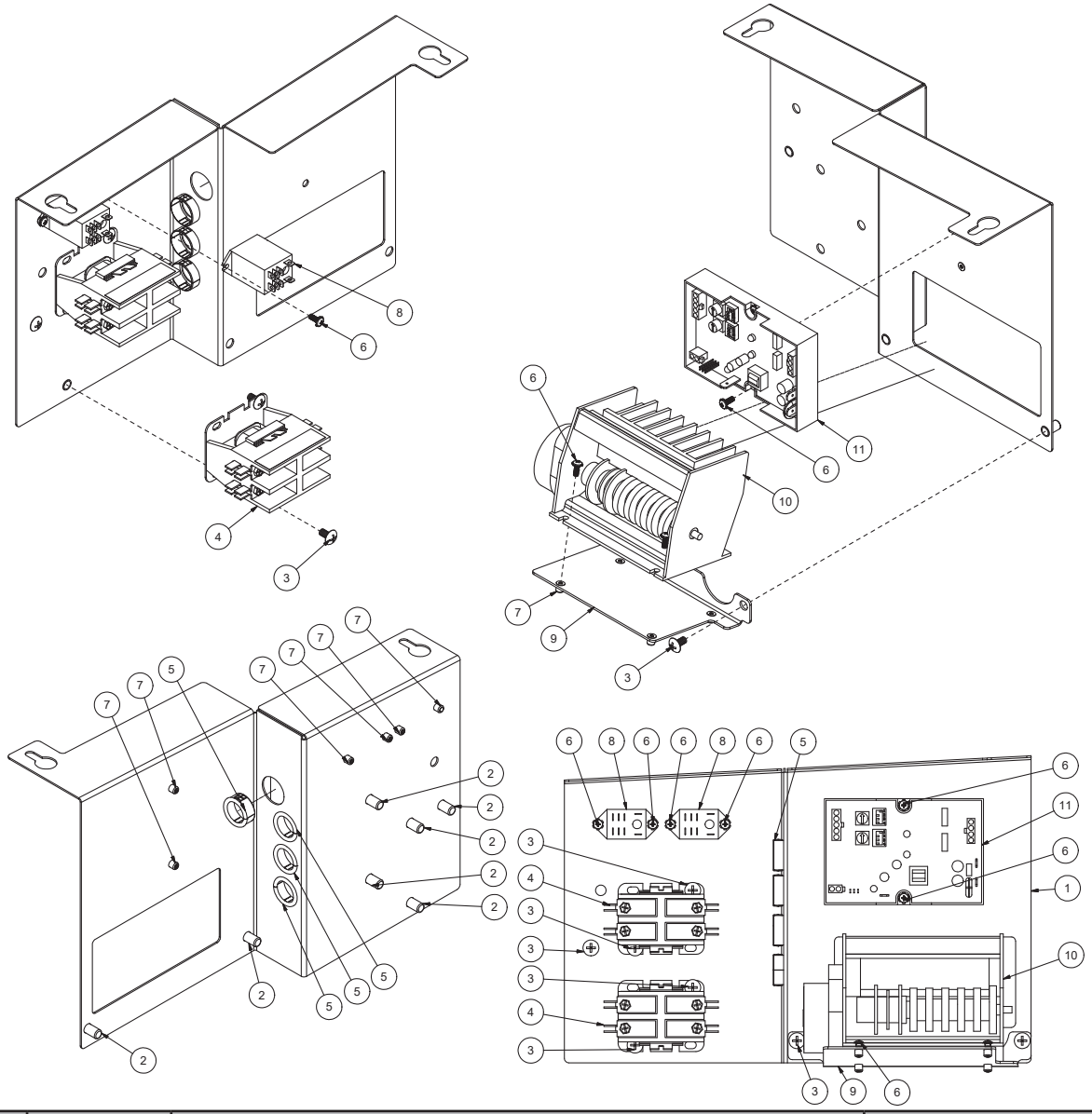
UH30-FND CONTROL PANEL



ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	Contactor, 30 A, 240 V	05945-002-74-20
2	1	Relay, Omron	05945-111-89-75
3	2	Open/Closed Bushing	05975-003-35-21
4	1	Control Panel Weldment	05700-004-35-76
5	1	Universal Timer	05945-003-75-23
6	4	Screw, 10-32 x 1"	05305-002-19-42
7*	1	Peri-pump Plate	05700-004-35-78
8	9	Screw, 10-32 x 3/8"	05305-173-12-00
9	1	Terminal Board	05940-002-78-97
10	1	Snap Bushing, 1 1/8"	05975-210-08-00

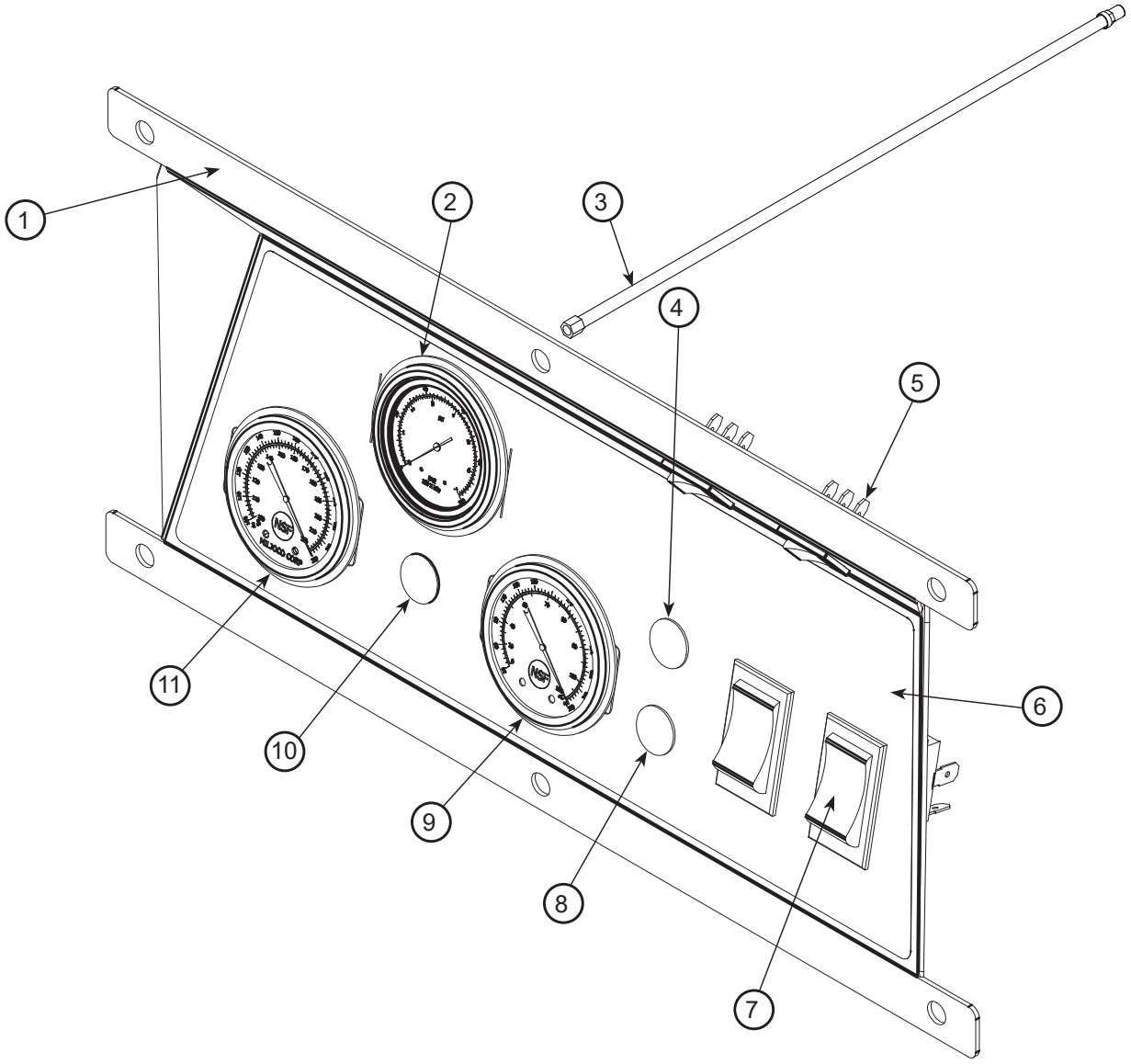
**See Chemical Feeder Pump Assembly page for Peri-pumps.*

UL30 CONTROL PANEL



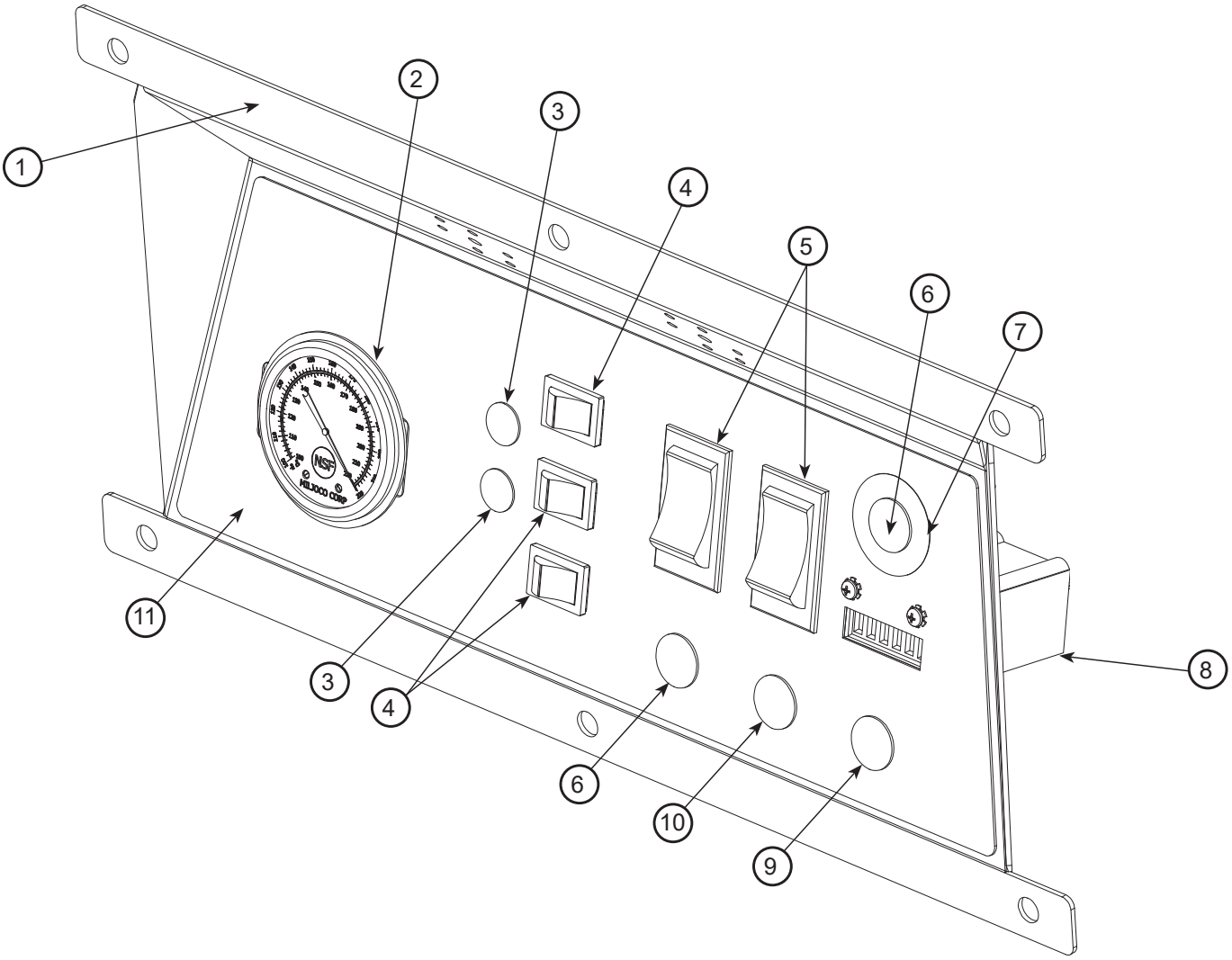
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Control Panel, Mechanical Timer	05700-004-38-18
2	7	Fastener, 10-32	05340-111-58-10
3	7	Screw, 10-32 x 3/8"	05305-173-12-00
4	2	Contactor	05945-109-05-69
5	4	Bushing	05975-003-35-21
6	10	Screw, 6-32 x 3/8"	05305-002-25-91
7	10	Nut, 6-32 Plated	05340-118-04-00
8	2	Relay, 10 A, 120 VAC Coil	05945-002-47-41
9	1	Bracket, Timer	05700-004-38-20
10	1	Timer, Mechanical	06401-004-92-10
11	1	Thermostat, Electric	06685-004-17-27

UH30-FND DISPLAY PANEL



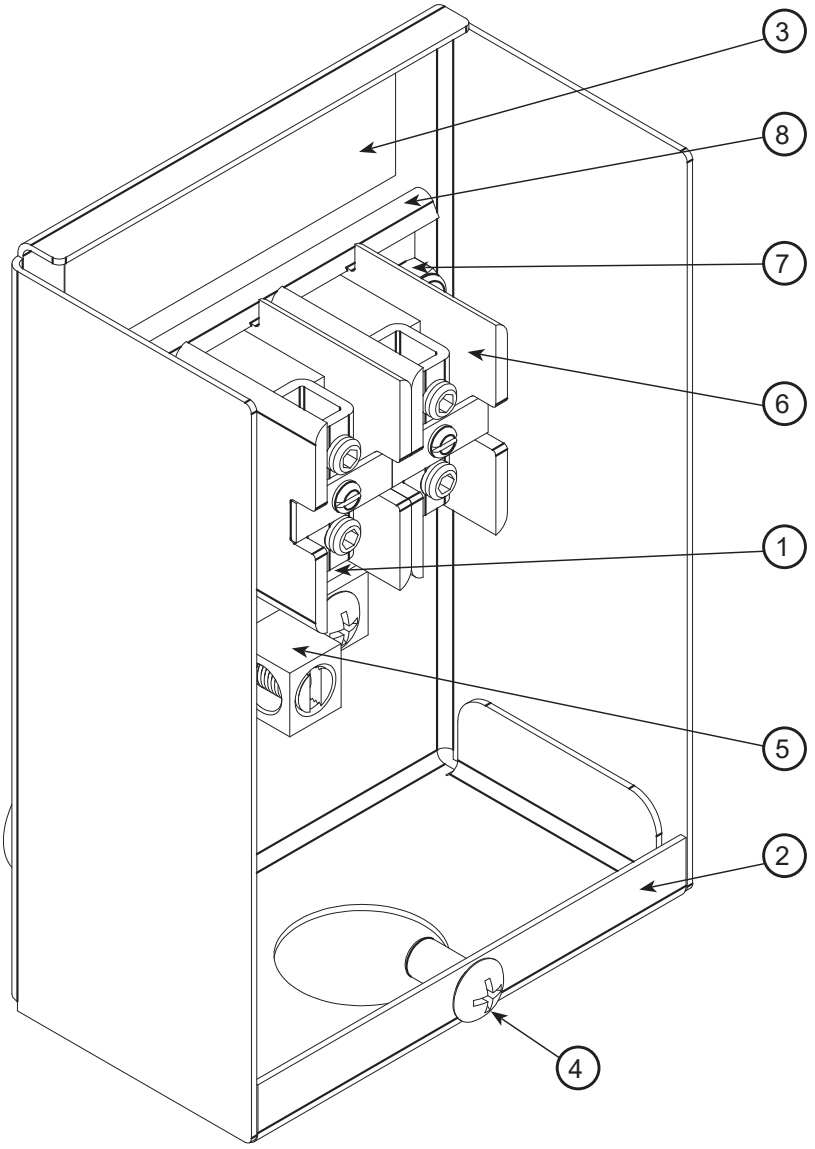
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Bracket, Control Panel	05700-004-35-82
2	1	Gauge, with Green Zone	06680-011-86-42
3	1	Hose, Pressure Gauge	05700-004-36-95
4	1	Light, Green	05945-111-44-43
5	2	Prime Switch	05930-011-49-54
6	1	Decal, Display Panel	09905-004-35-30
7	2	Switch	05930-011-49-55
8	1	Light, Red	05945-111-44-45
9	1	Rinse Gauge, 96"	06685-004-31-46
10	1	Light, Amber	05945-111-44-44
11	1	Wash Gauge, 48"	06685-004-31-47

UL30 DISPLAY PANEL



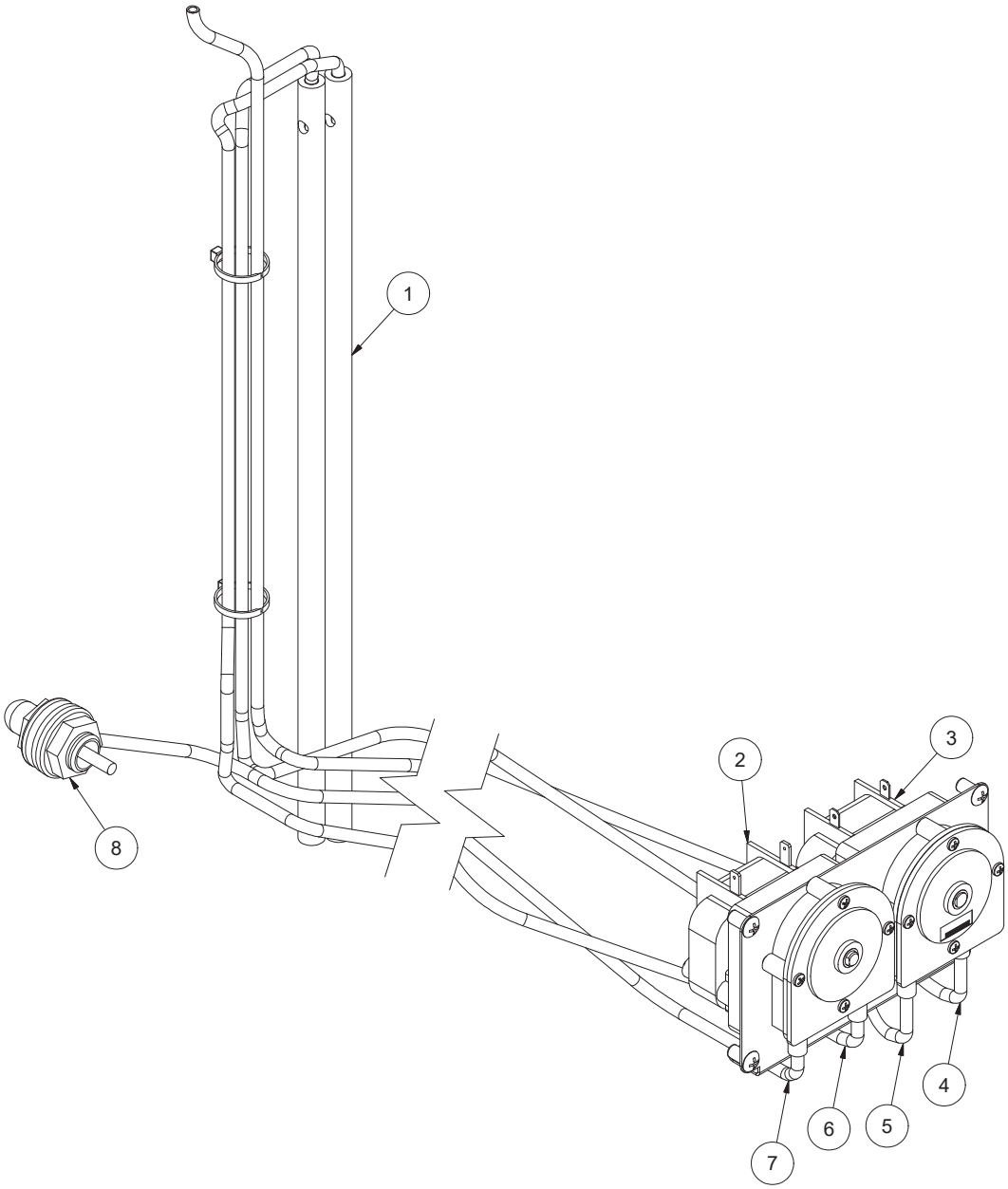
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Bracket, Control Panel	05700-004-37-73
2	1	Thermometer, 48" Rinse	06685-004-31-47
3	2	Light, Red	05945-504-07-18
4	3	Prime Switch	05930-011-49-54
5	2	Switch	05930-011-49-55
6	2	Light, Red	05945-111-44-45
7	1	Decal, Hi-Limit Ring	09905-004-37-89
8	1	Counter	05990-111-35-38
9	1	Light, Amber	05945-111-44-44
10	1	Light, Green	05945-111-44-43
11	1	Decal, Display Panel	09905-004-39-18

TERMINAL BLOCK BOX



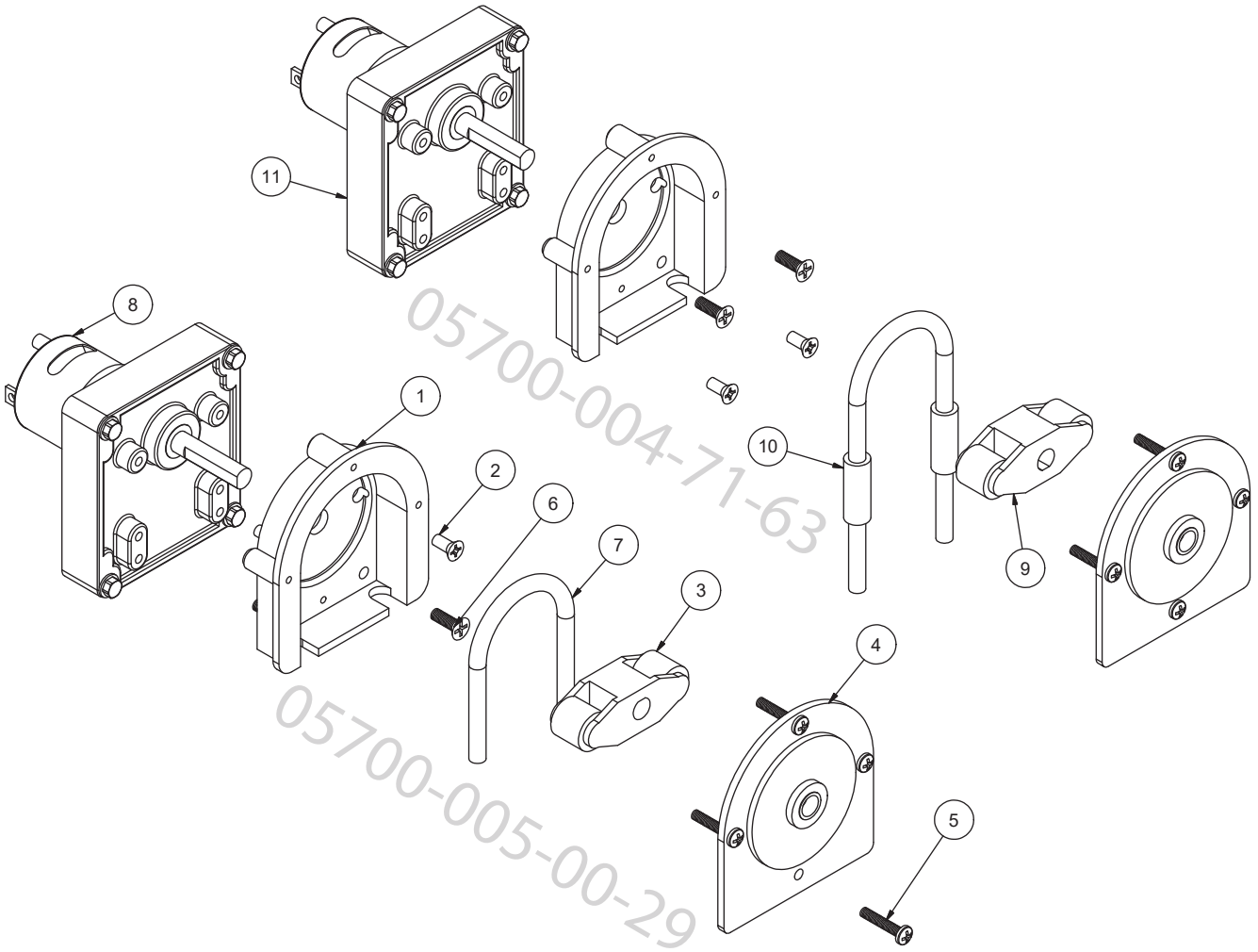
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Decal, Power Connections, UH30-FND	09905-011-62-72
		Decal, Power Connections, UL30	09905-011-47-64
2	1	Terminal Block Box	05700-003-27-69
	1	Terminal Box Cover (Not Shown)	05700-003-27-70
3	1	Decal, Copper Conductors	09905-011-47-35
4	2	Screw, 10-32 x 1/2"	05305-011-39-36
5	1	Ground Lug	05940-200-76-00
6	2	Terminal Block	05940-500-02-19
7	1	Locknut, 10-24 SS Hex with Nylon Insert	05310-373-01-00
8	1	Terminal Block Track	05700-000-43-60

UH30-FND CHEMICAL FEEDER ASSEMBLY



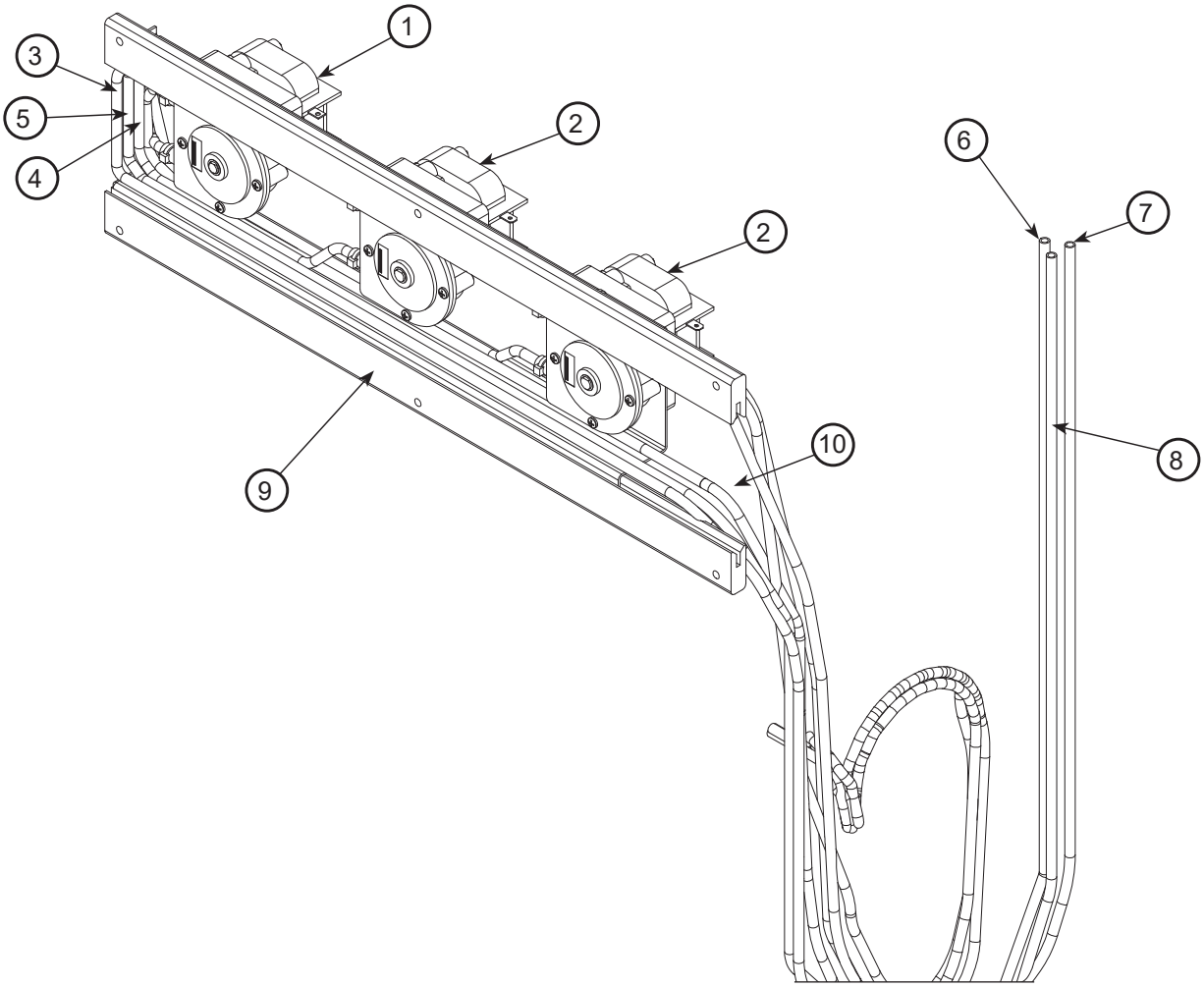
ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	Stiffener, Chemical Tube	05700-002-66-49
2	1	Complete Peri-pump Assembly, 38 RPM*	05700-005-00-29
3	1	Complete Peri-pump Assembly, 14 RPM*	05700-004-71-63
4	1	Tubing, Blue, 1/4" x 18"	04720-601-11-00
5	1	Tubing, Clear, 1/8" x 120"	05700-002-76-14
6	1	Tubing, Red, 1/4" x 48"	05700-002-62-12
7	1	Tubing, Red, 1/4" x 120"	05700-011-37-15
8	1	Bulkhead to 1/2" Hose Barb Assembly	05700-004-30-86

**Components on next page.*



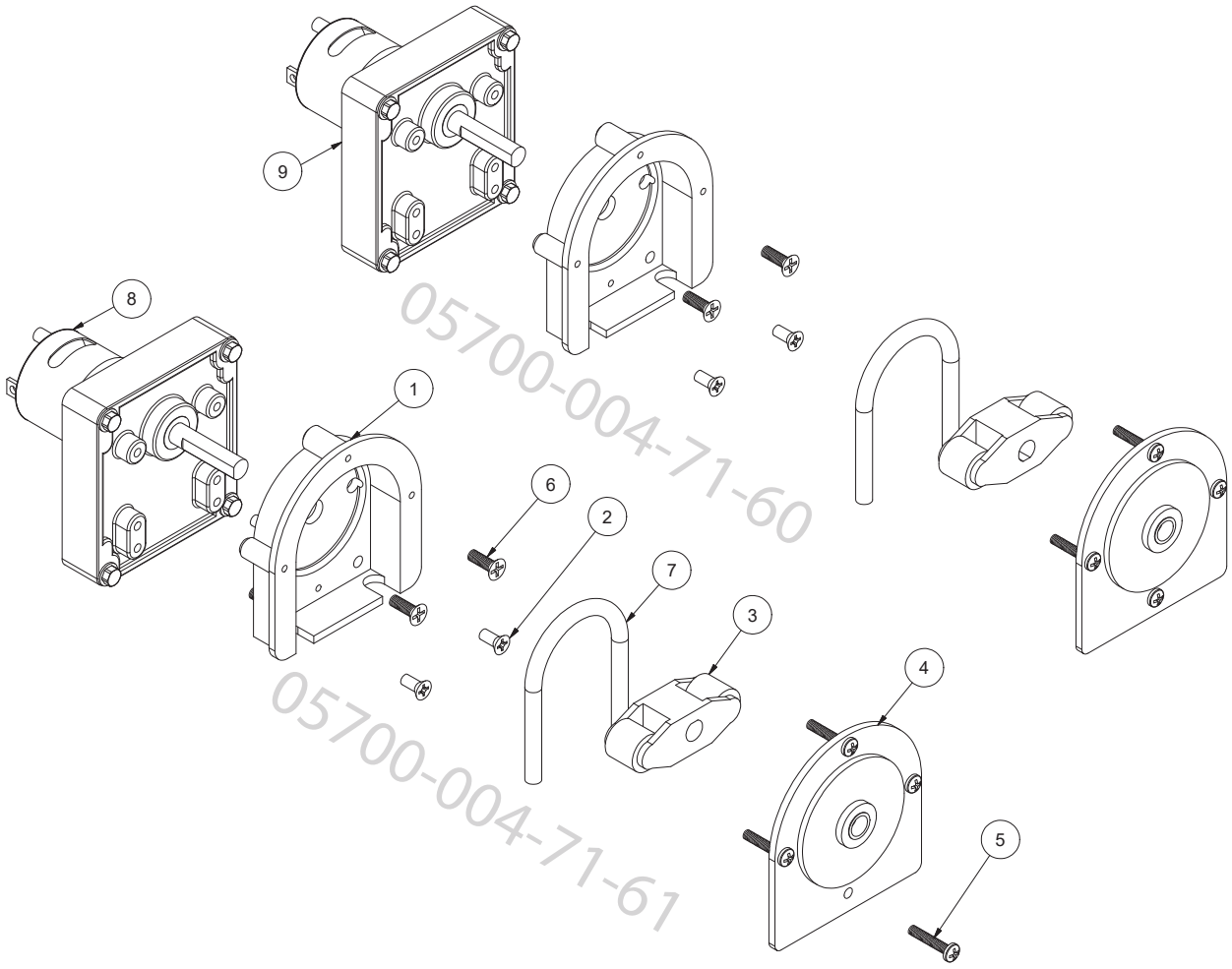
ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	Pump Housing	04320-111-37-09
2	4	Screw, 8-32 x 3/8" Phillips	05305-011-37-07
3	1	Roller, Plastic	04320-002-82-28
4	2	Pump Cover	04320-111-37-08
5	8	Screw, 6-32 x 3/4" Phillips	05305-011-37-05
6	4	Screw, 8-32 x 1/2" Phillips	05305-011-37-06
7	1	Tube, Squeeze, 8"	05700-003-22-89
8	2	Motor, 38 RPM	04320-004-99-36
9	1	Roller, Plastic	04320-111-65-27
10	1	Tube, Squeeze, 9"	05700-011-65-21
11	1	Motor, 14 RPM	04320-011-63-33

UL30 CHEMICAL FEEDER ASSEMBLY

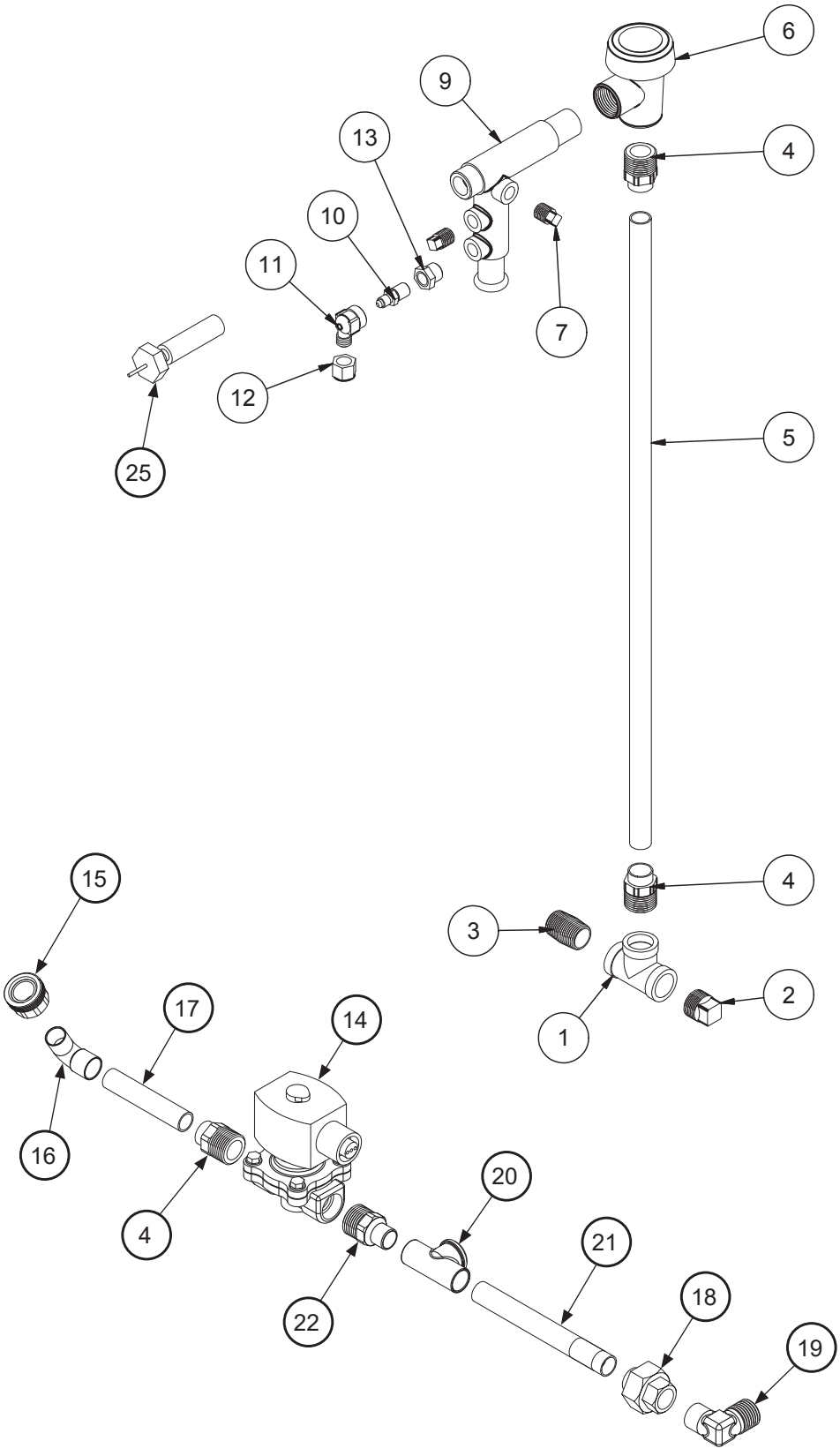


ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Complete Peri-pump Assembly, 14 RPM*	05700-004-71-61
2	2	Complete Peri-pump Assembly, 36 RPM*	05700-004-71-60
3	1	Tubing, White, 1/4" x 48"	05700-002-62-13
4	1	Tubing, Blue, 1/4" x 48"	05700-002-62-11
5	1	Tubing, Red, 1/4" x 48"	05700-002-62-12
6	1	Tubing, White, 1/4" x 100"	05700-003-20-67
7	1	Tubing, Blue, 1/4" x 100"	05700-003-20-68
8	1	Tubing, Red, 1/4" x 100"	05700-003-03-45
9	1	Track Mount Assembly	05700-004-37-94
10	1	Peri-pump Channel	05700-003-53-25

**Components on next page.*



ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	Pump Housing	04320-111-37-09
2	4	Screw, 8-32 x 3/8" Phillips	05305-011-37-07
3	1	Roller, Plastic	04320-002-82-28
4	2	Pump Cover	04320-111-37-08
5	8	Screw, 6-32 x 3/4" Phillips	05305-011-37-05
6	4	Screw, 8-32 x 1/2" Phillips	05305-011-37-06
7	1	Tube, Squeeze, 8"	05700-003-22-89
8	1	Motor, 14 RPM	04320-111-35-13
9	1	Motor, 36 RPM	04320-111-35-14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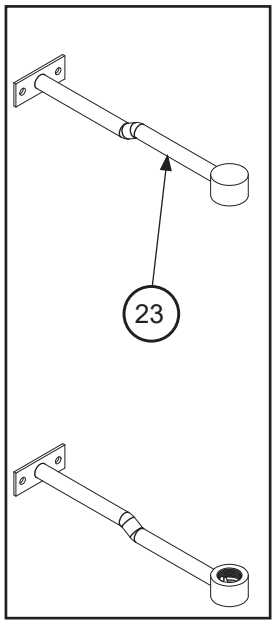
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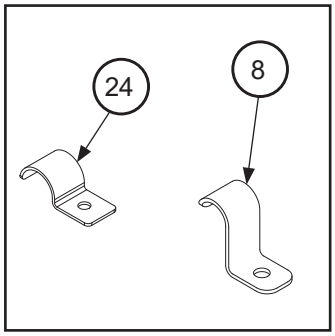
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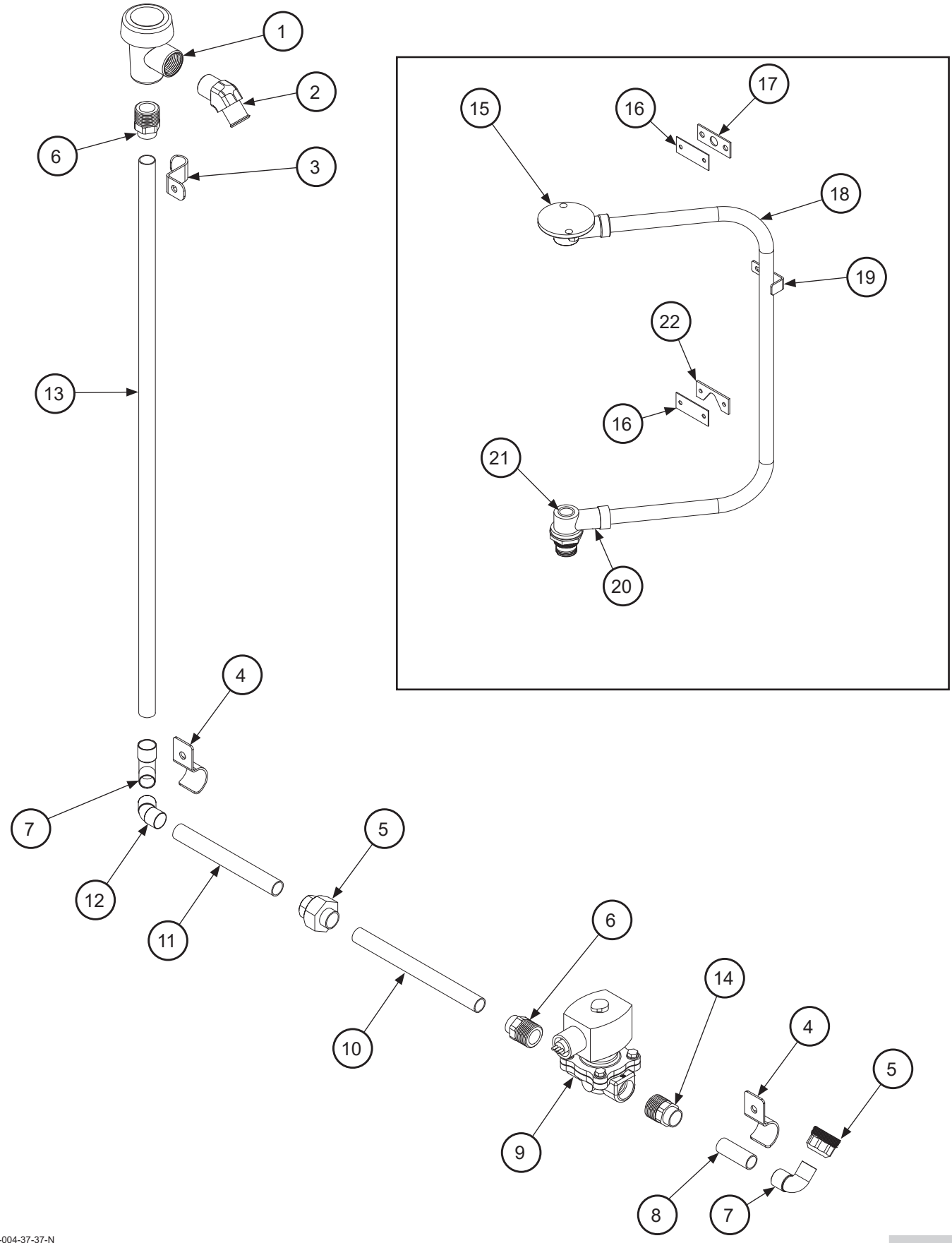
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Tee, 1/2" Brass	04730-211-27-00
2	1	Plug, 1/2" Brass Pipe	04730-209-03-00
3	1	Nipple, 1/2" Close Brass	04730-207-15-00
4	3	Adapter, Male	04730-401-03-01
5	1	Tube, Copper 1/2" x 22"	05700-003-32-16
6	1	Vacuum Breaker	04820-003-06-13
7	2	Plug, 1/4" Brass	04730-209-01-00
8	1	Pipe Clamp	05700-011-38-62
9	1	Injector Adapter	05700-031-40-44
10	1	Check Valve	04820-111-51-14
11	1	Fitting, Outlet Elbow	04820-111-51-18
12	1	Nut, Tube	04730-011-59-45
13	1	Bushing, 1/4" x 1/8"	04730-003-05-61
14	1	Valve, 1/2" 208/60	04810-003-71-56
15	1	Hose Adapter	04720-004-24-68
16	1	Elbow, 1/2"	04730-406-31-01
17	1	Copper Tube 1/2" x 3"	05700-003-36-25
18	1	Union, 1/2"	04730-412-05-01
19	1	Elbow, 1/2" 90-Degree	04730-406-32-01
20	1	Tee, 1/2" x 1/2" x 1/4" Female	04730-411-25-01
21	1	Copper Pipe, 4 3/4" Long	05700-002-91-02
22	1	Adapter, 1/2" Male	04730-011-59-53
23	2	Rinse Hub Weldment	05700-021-38-31
24	2	Pipe Clamp (Side of Unit)	05700-000-35-05
25	1	Thermometer,100-220 Degrees 48" SS	06685-004-31-47

NOTICE *Use teflon tape on threads. Do NOT use "pipe dope."*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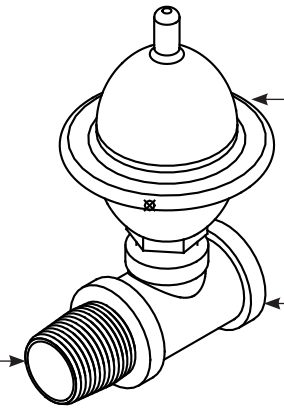
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Vacuum Breaker	04820-003-06-13
2	1	Elbow, 1/2" NPT x 3/4" Hose, 45-Degree	04730-003-29-22
3	1	Pipe Clamp	05700-011-38-62
4	2	Pipe Clamp (Side of Unit)	05700-000-35-05
5	1	Hose Union, 1/2"	04720-004-24-68
6	1	Male Adapter	04730-401-03-01
7	2	Elbow, 1/2"	04730-406-31-01
8	1	Copper Pipe, 1/2" x 1 3/8"	05700-004-69-44
9	1	Valve, 1/2"	04810-003-71-55
10	1	Copper Pipe, 1/2" x 6 1/2"	05700-002-60-71
11	1	Copper Pipe, 1/2" x 5 1/4"	05700-002-04-92
12	1	Elbow, 1/2", 45-Degree	04730-011-67-77
13	1	Copper Pipe, 1/2" x 25 1/2"	05700-011-59-85
14	1	Male Adapter	04730-011-59-53
15	1	Upper Manifold	05700-031-34-82
16	2	Rinse Plumbing Plate	05700-011-82-86
17	1	Rinse Plumbing Gasket	05330-111-42-81
18	1	Manifold	05700-002-13-75
19	1	Manifold Tube Position Bracket	05700-011-34-63
20	1	Lower Manifold	05700-021-52-80
21	1	O-ring	05330-002-60-69
22	1	Deflector Plate	05700-002-62-49

NOTICE *Use teflon tape on threads. Do NOT use "pipe dope."*

SHOCK ABSORBER (WATER ARRESTOR) OPTION



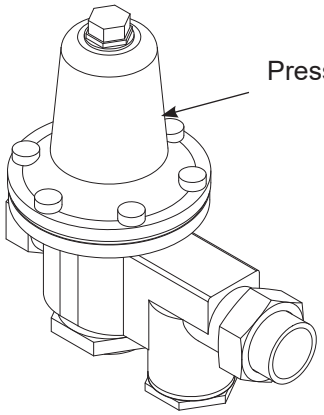
Water Arrestor, 1/2”
06685-100-05-00

Tee, 1/2” x 1/2” x 1/2”
04730-211-27-00

Nipple, 1/2” NPT, Brass
04730-207-15-00

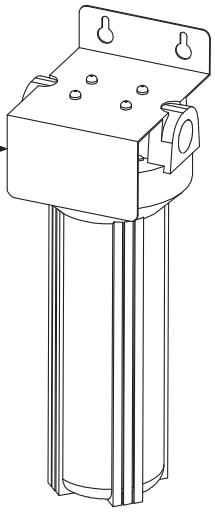
Water Arrestor Repair Kit
(Plunger & O-ring)
06401-003-06-23

PRESSURE REGULATING VALVE (PRV) OPTION



Pressure Regulating Valve, 1/2”
04820-100-04-07

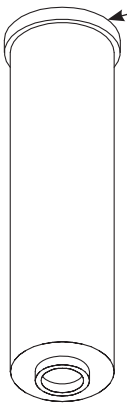
SCALE PREVENTION SYSTEM (SPS) OPTION



SPS System
04730-003-28-03

NOTICE

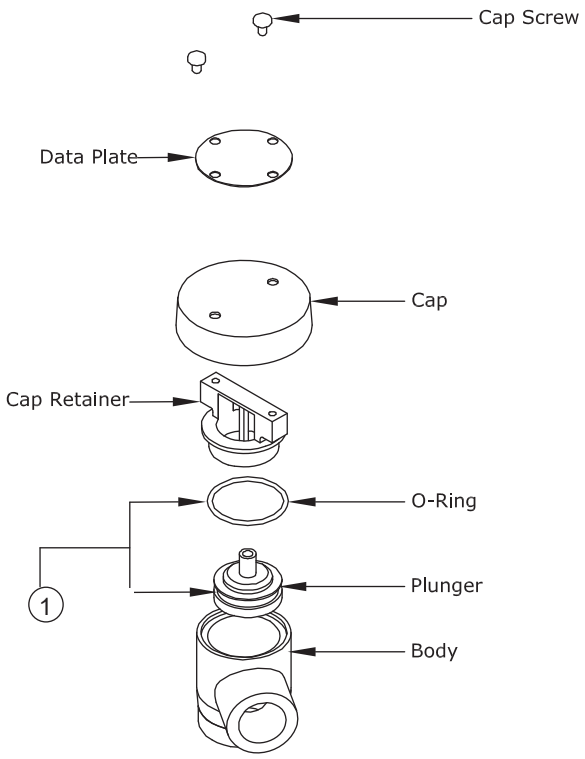
Must be installed vertically. The provided bracket is secured to the wall. Observe proper inlet/outlet water directions (flow directions are molded into the top of the head). Line pressure should be released before changing cartridges. Machine should be delimed before installation.



Replacement Cartridge
(inspect at least every 6 months)
04730-003-28-04

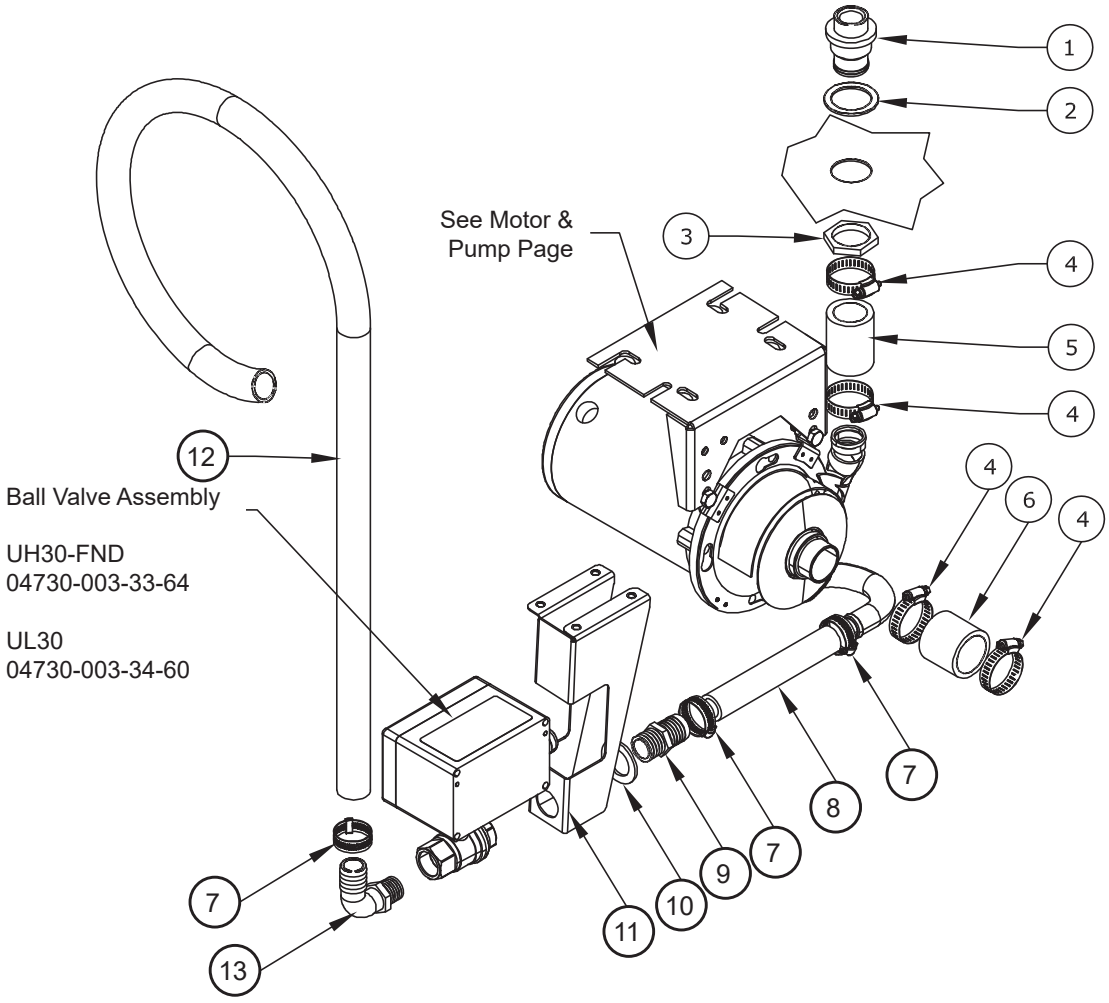
Replacement Test Strip
(Not Shown)
06401-003-28-06

VACUUM BREAKER ASSEMBLY



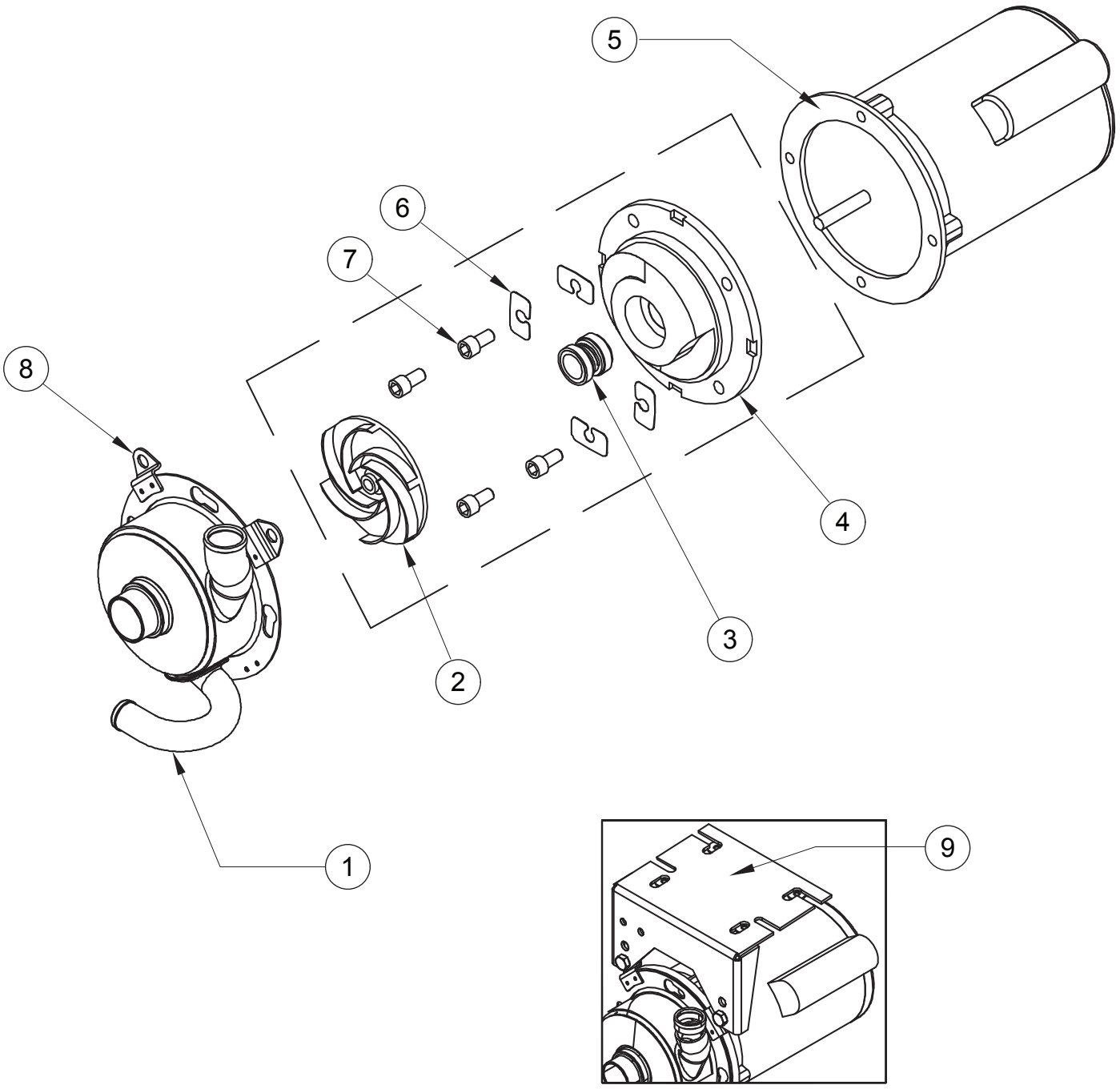
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Components of Repair Kit	06401-003-06-23
		Complete Vacuum Breaker Assembly 1/2” NPT	04820-003-06-13

WASH MANIFOLD



WASH MANIFOLD

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Hub, Discharge Machine	05700-021-37-90
2	1	Gasket, Manifold	05330-200-23-00
3	1	Nut, Jam 1 1/2-12	05700-000-86-23
4	4	Hose Clamp, 1 5/16” - 2 1/4” #28	04730-719-01-37
5	1	Hose, 1 1/4” x 2 1/4” Reinforced	05700-011-44-48
6	1	Hose, Bottom Manifold Pump	05700-001-22-92
7	3	Clamp, 3/16” to 1 1/2”	04730-719-06-09
8	1	Discharge Hose	05700-004-43-76
9	1	Hosebarb, 1” x 3/4” NPT Polypropylene	04730-011-65-86
10	1	Spacer, Drain Valve	05700-003-31-93
11	1	Bracket, Drain Valve Support	05700-004-35-85
12	1	Drain Hose, 1” ID x 6' Long	04720-004-50-76
13	1	Hose-barb, 90-Degree 1” x 3/4” NPT	04730-011-65-87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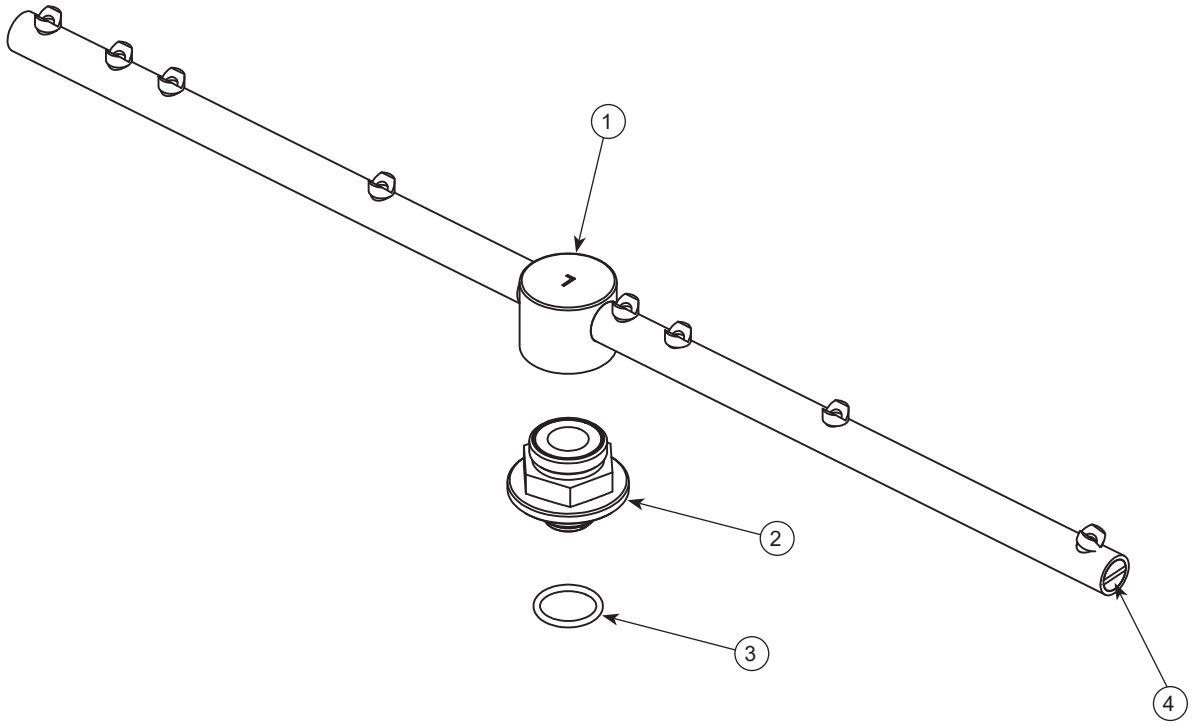
Complete Pump & Motor Assembly
06105-004-35-22

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Pump Casing SS, 60 Hz	05700-002-85-00
2	1	Impeller, 60 Hz	05700-002-81-86
3	1	Mechanical Seal, 60 Hz	05330-002-34-22
4	1	Seal Plate, 60 Hz	05700-002-81-87
	1	Case O-ring, 60 Hz	05330-002-81-83
	1	Drain Plug (Not Shown)	04730-002-81-89
5	1	Motor Only	06105-004-32-04
6	1	Shim Kit	05700-002-82-58
7	1	Case Capscrew	05305-356-04-00
8	2	Bolt, 3/8"	05305-276-03-00
	2	Lock washer, 3/8"	05311-276-01-00
	2	Nut Hex, 3/8-16	05310-276-01-00
9	1	Mounting Bracket	05700-003-31-58

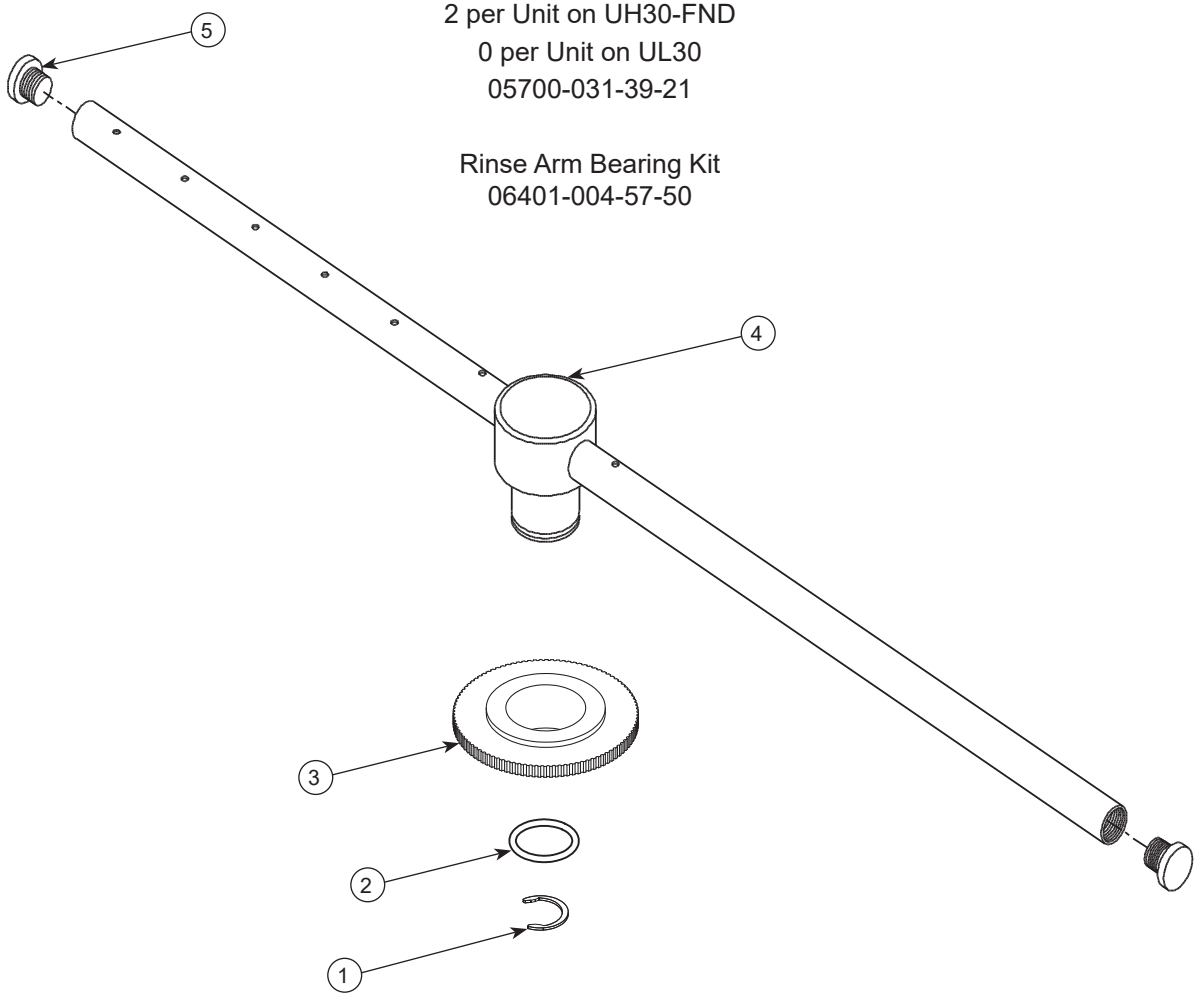
Complete Wash Arm Assembly
1 per Unit on UH30-FND
2 per Unit on UL30
05700-021-39-23



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Wash Arm with End-cap	05700-021-46-58
2	1	Bearing, Assembly	05700-021-35-97
3	1	O-ring	05330-002-60-69
4	2	End-cap, Wash Arm	05700-003-31-59

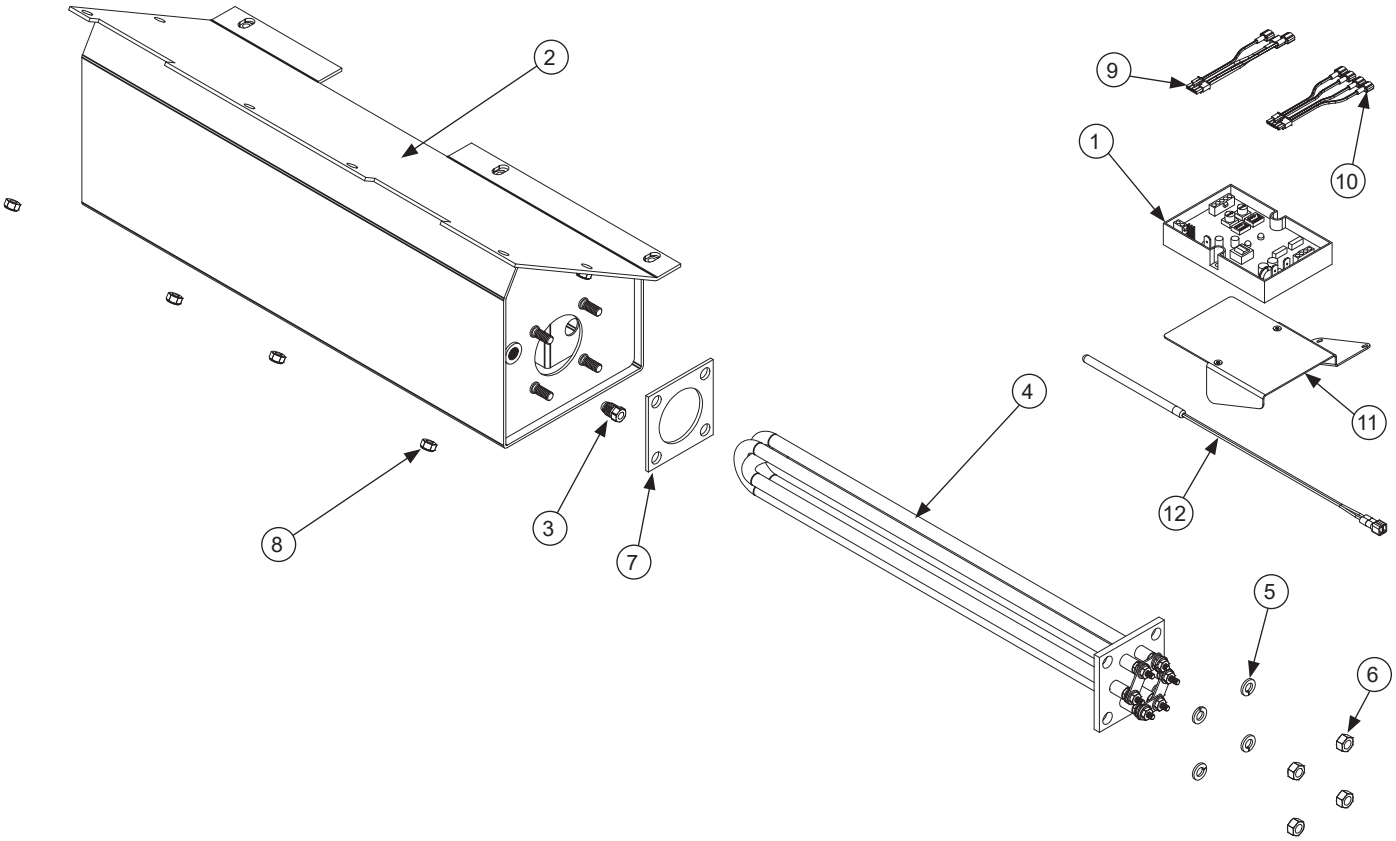
Complete Rinse Arm Assembly
2 per Unit on UH30-FND
0 per Unit on UL30
05700-031-39-21

Rinse Arm Bearing Kit
06401-004-57-50

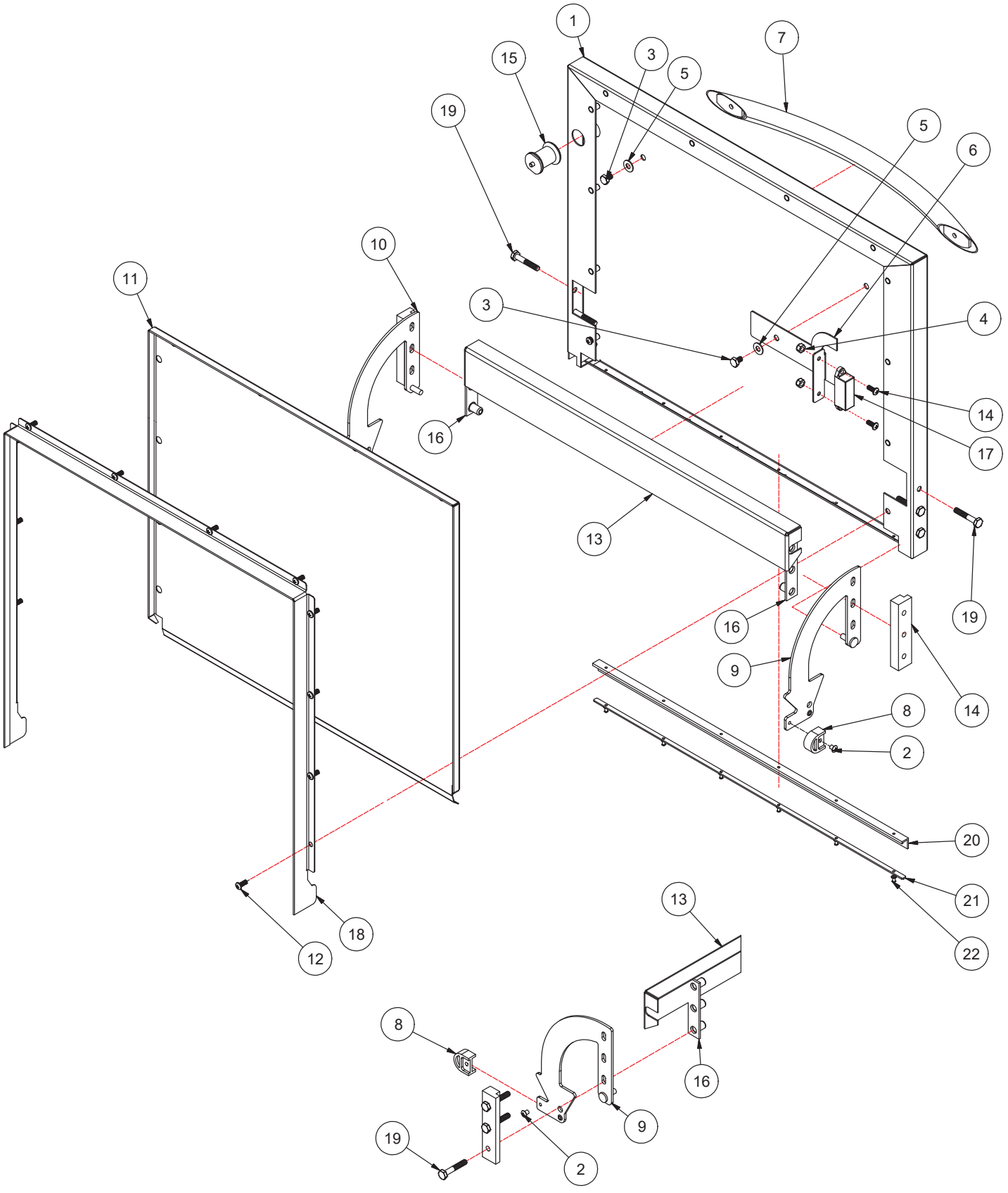


ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Retaining Ring	05340-112-01-11
2	1	O-ring (included in item #3)	05330-002-60-69
3	1	Bearing Assembly, Rinse Arm	05700-004-54-71
4	1	Rinse Arm	05700-031-38-30
5	2	End-cap, Rinse Arm	04730-111-60-41

Complete Rinse Tank Assembly
05700-003-31-94



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Thermostat, Elan Electric Dual	06685-004-17-27
2	1	Rinse Tank Weldment	05700-003-31-95
3	1	Fitting, 1/4" Imperial Brass	05310-924-02-05
4	1	208-230 Volt Heater	04540-111-43-21
5	4	Lock Washer, 5/16" Split	05311-275-01-00
6	4	Nut, 5/16-18 SS Hex	05310-275-01-00
7	1	Gasket, Heater	05330-011-47-79
8	9	Locknut, 1/4-20 SS Hex with Nylon Insert	05310-374-01-00
9	1	Harness, 4-Connector	05700-004-36-24
10	1	Harness, 5-Connector	05700-004-36-25
11	1	Thermostat Mounting Bracket	05700-004-21-55
12	1	Probe, Thermister 4"	06685-004-17-26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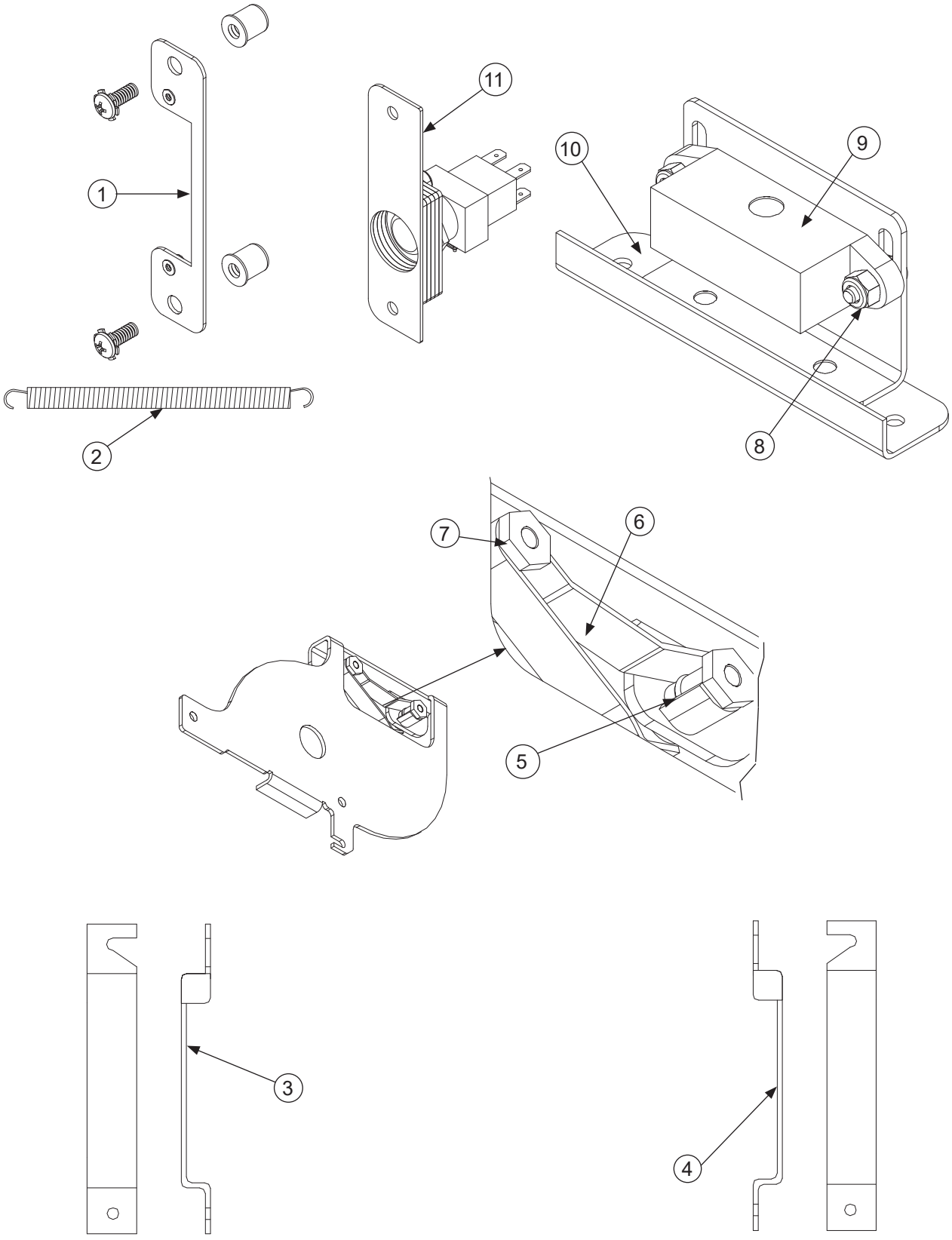
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Outer Door Weldment	05700-004-36-55
2	2	Screw, 10-32 x 1/4"	05305-173-01-00
3	2	Bolt, 1/4-20 x 3/8" Hex	05305-274-20-00
4	2	Nut, Lock 10-32 Hex with Nylon Insert	05310-373-02-00
5	2	Washer, SS 1/4-20 ID	05311-174-01-00
6	1	Bracket, Door Magnet	05700-004-52-68
7	1	Door Handle	05700-003-26-62
8	2	Stop, Door Hinge	05700-003-32-55
9	1	Hinge, Left	05700-003-32-71
10	1	Hinge, Right	05700-003-32-72
11	1	Inner Door	05700-003-33-21
12	14	Screw, 10-32 x 1/2" Pan Phillips Head	05305-011-44-52
13	1	Baffle, Door	05700-003-33-38
14	2	Hinge Spacer	05700-003-33-42
15	1	Switch Assembly	05700-003-34-80
16	2	Retaining Plate	05700-011-44-37
17	1	Magnet, Door	05930-002-88-42
18	1	Channel, Door Seal	05700-003-55-49
19	6	Screw, 1/4-20 x 1 1/2" Hex	05305-274-23-00
20	1	Gasket, Door L	05330-004-36-05
21	1	Gasket Clamp	05700-004-36-56
22	6	Pop Rivet, 1/8" x 3/8"	05320-003-06-98

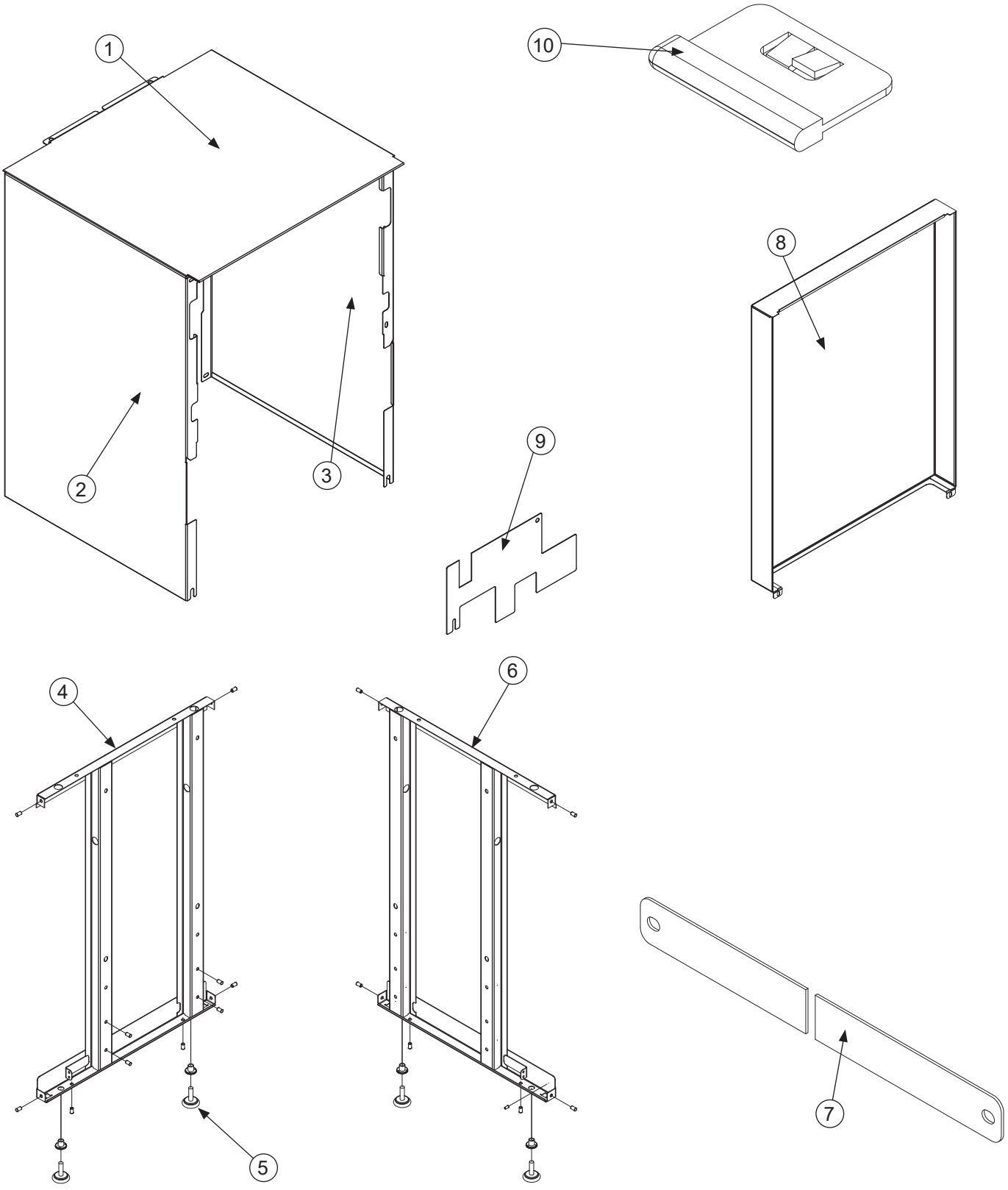
MISCELLANEOUS DOOR COMPONENTS



MISCELLANEOUS DOOR COMPONENTS

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Switch Mounting Plate Assembly	05700-003-33-54
2	1	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
		Hinge Components secured with Locknut, 1/4-20 Hex with Nylon Insert	05310-374-01-00
5	2	O-ring	05330-003-32-34
6	1	Latch Spring	05700-003-32-32
7	2	Latch Nut	05700-003-32-33
8	2	Hardware: Locknut, 6-32 Hex with Nylon Insert	05310-373-03-00
	2	Screw, 6-32 x 1/4” Flat Head	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

FRAME & PANEL COMPONENTS

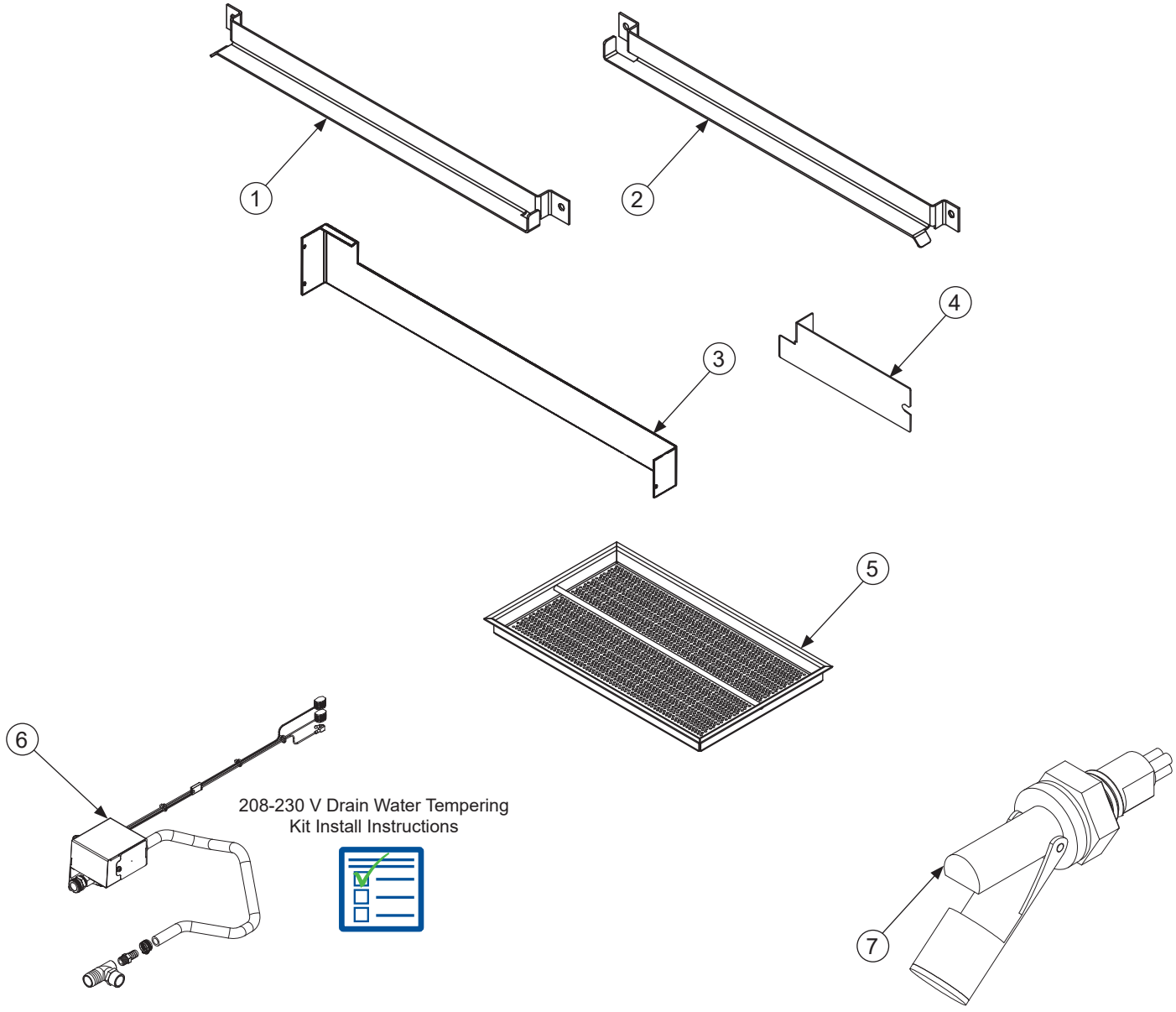


FRAME & PANEL COMPONENTS

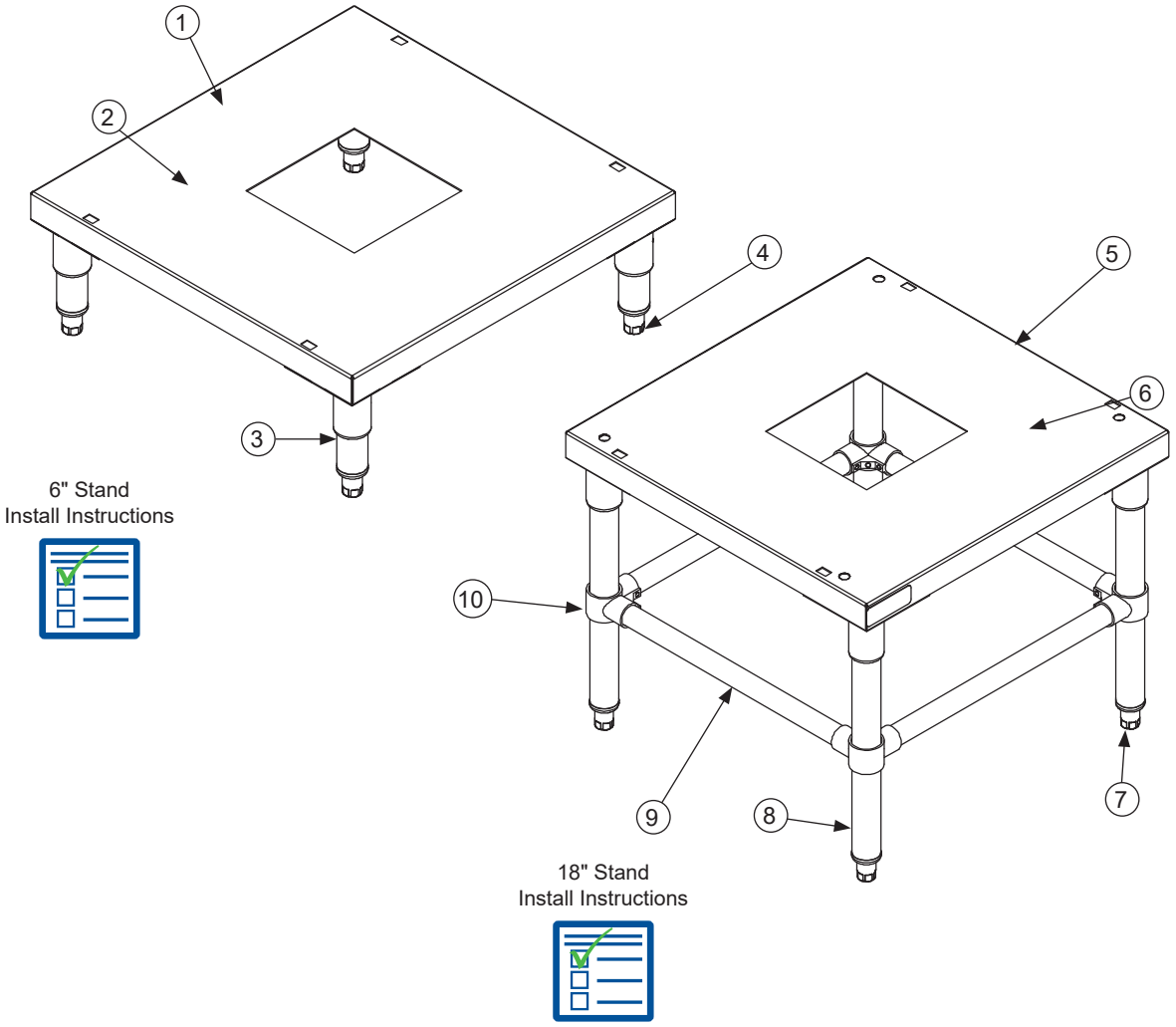
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Top Shroud Weldment	05700-003-37-06
2	1	Left Shroud Weldment	05700-003-37-04
3	1	Right Shroud Weldment	05700-004-36-82
4	1	Left Frame Weldment	05700-003-31-91
5	1	Swivel Feet	05340-108-02-00
6	1	Right Frame Weldment	05700-003-31-90
	4	Hardware: Nut, 1/4-20 Serrated Hex	05310-959-03-00
	4	Nut, 5/16-18 Cad Spine	05310-959-03-00
7	2	Bottom Strap	05700-003-92-20
8	1	Optional Back Panel	05700-003-33-55
9	1	Standard Back Panel	05700-004-36-83
10	2	Shroud Plug	05700-003-32-50

MISCELLANEOUS PARTS

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



ITEM	QTY	DESCRIPTION	PART NUMBER
		Components secured with Locknut, 1/4-20 SS Hex with Nylon Insert	05310-374-01-00
1	1	Rail, Left Rack	05700-031-37-89
2	1	Rail, Right Rack	05700-031-37-88
3	1	Splash Shield	05700-003-33-51
4	1	Strainer Spacer	05700-002-70-60
		Attaches with: Nut, Nylon Wing, 1/4-20	05310-994-01-00
5	1	Strainer Weldment	05700-031-35-81
6	1	Drain Water Tempering Kit (UH30-FND)	06401-004-60-64
7	1	Switch, Horizontal Float (UL30)	06680-004-05-50



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	6” Stand Assembly	05700-003-34-24
2	1	Stand	05700-002-88-82
3	4	6” Leg	05700-021-61-10
4	4	Bullet Foot	05340-108-01-03
5	1	18” Stand Assembly	05700-003-34-25
6	1	Stand	05700-002-88-82
7	4	Bullet Foot	05340-108-01-03
8	4	18” Leg	05700-002-89-47
9	4	Cross Brace	05700-003-25-90
10	4	Cross Member Bracket	04730-003-25-89

GO BOX KIT

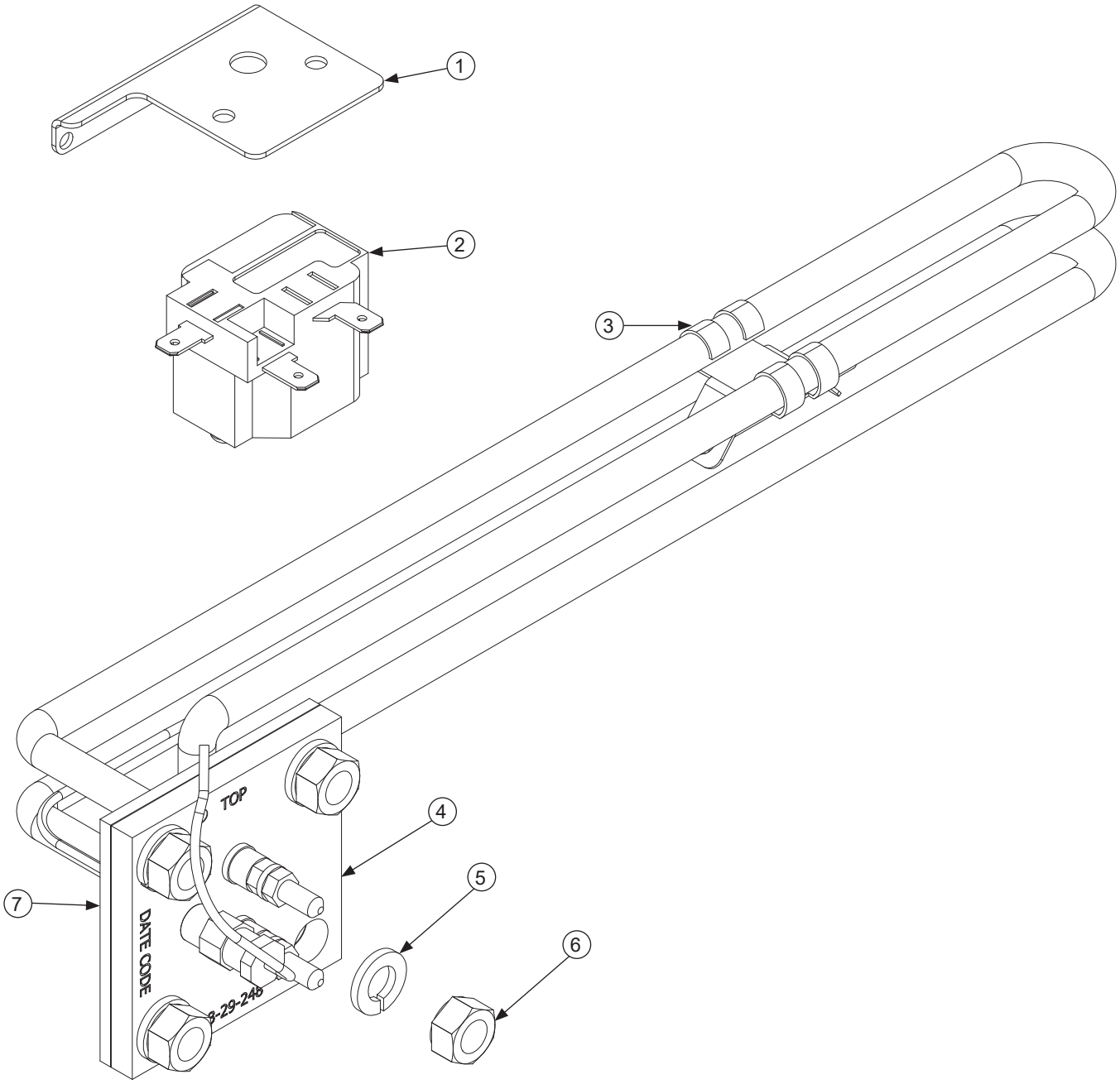
A GO Box is a kit of the most-needed parts for a particular model or model family to successfully effect a repair in the first call, 90% or more of the time.

UH30-FND Go Box Kit
06401-004-40-87

ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	Squeeze Tube, Rinse-aid	04320-004-92-38
2	2	Squeeze Tube, Detergent and Sanitizer	05700-003-22-89
3	12	Tubing, Blue Plastic	04720-601-11-00
4	12	Tubing, Red Plastic	04720-601-12-00
5	1	Timer, Universal	05945-003-75-23
6	2	Bearing, Rinse Arm	03120-004-12-13
7	2	Snap Ring, Retaining, Rinse Arm	05340-112-01-11
8	4	Washer, Rinse Arm	05330-011-42-10
9	1	Harness, 10-Wire Solid Fused Timer	05999-003-87-88
10	2	End-cap, Rinse Arm	04730-111-60-41
11	4	Bearing Assembly, Wash Arm	05700-021-35-97
12	4	End-cap, Wash Arm	05700-003-31-59
13*	1	Pump/Motor Assembly	06105-002-72-75
14	1	Auto/Manual, ON/OFF Switch	05930-011-49-55
15	1	Solenoid Valve, 1/2"	04810-003-71-56
16	1	Pump Seal	05330-002-34-22
17	2	Shim Kit	05700-002-82-58

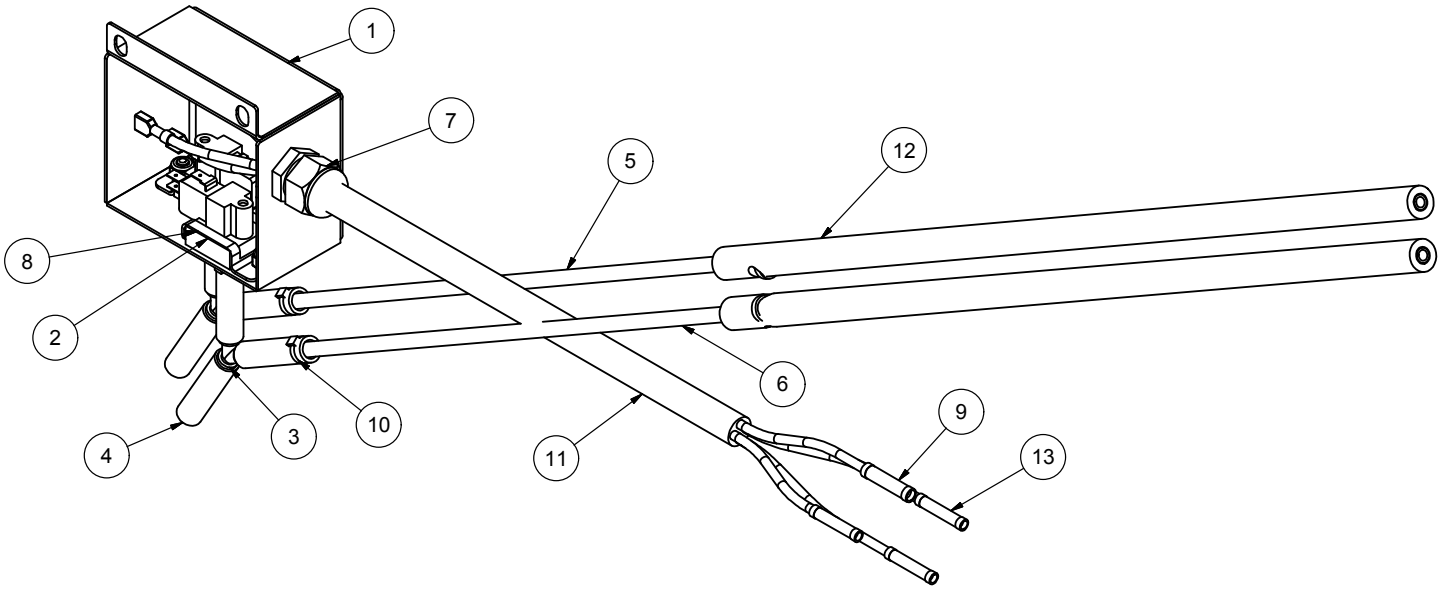
* Special pricing when purchased with a Go Box Kit. Call for details.

UL30 HEATER COMPONENTS



ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Thermostat Bracket	05700-004-36-37
2	1	High Limit Thermostat	05930-004-33-15
3	1	Probe Bracket	05700-004-38-45
4	1	Wash Heater, 115 V, 1.5 kW	04540-004-33-76
5	4	Lockwasher, Split, 5/16"	05311-275-01-00
6	4	Nut, Hex 5/16-18	05310-275-01-00
7	1	Wash Heater Gasket	05330-011-61-34

UL30 VACUUM SWITCH



ITEM	QTY	DESCRIPTION	PART NUMBER
		Complete Assembly	05700-003-55-98
1	1	Box, Vacuum Switch	05700-003-55-96
2	2	Switch, Vacuum	06685-003-36-13
3	2	Wye, 1/4” Barbed PVDF	04730-003-36-14
4	6	Tubing, Clear 5/16" ID	04710-003-53-26
5	1	Tube, Red 1/4" OD x 100" Long	05700-003-03-45
6	1	Tube, White 1/4" OD x 100" Long	05700-003-03-45
7	1	Fitting, Liquidtite .231" x .394" Heyco	05700-003-20-67
8	2	Pressure Switch Bracket	05700-003-53-03
9	2	Spice, Blue Butt	05940-200-11-44
10	6	Locknut, 10-24 x 3/8" Phillips Truss	05945-602-01-16
11	14	Cable, 18 GA/5 Con 46”	05700-003-55-97
12	3	Tube Stiffener	05700-002-66-49
13	2	Splice, Red Butt	05940-200-26-00

UL30 VACUUM SWITCH INSTALL

Back of machine showing use of existing mounting hardware for installation of vacuum switch assembly.

Remove locknut on plumbing support bracket and mount switch box over existing stud. Reinstall bracket and route red and white tubes behind blue hose as shown.

Route gray cable down back and under the tub along inlet plumbing, remove wires from existing pressure switches, and connect to gray cable per instructions below.

Detergent Switch (Red Tube)

1. Connect black wire from gray cable to black/yellow wire from switch.

2. Connect brown wire from gray cable to blue wire from switch.

Sanitizer Switch (White Tube)

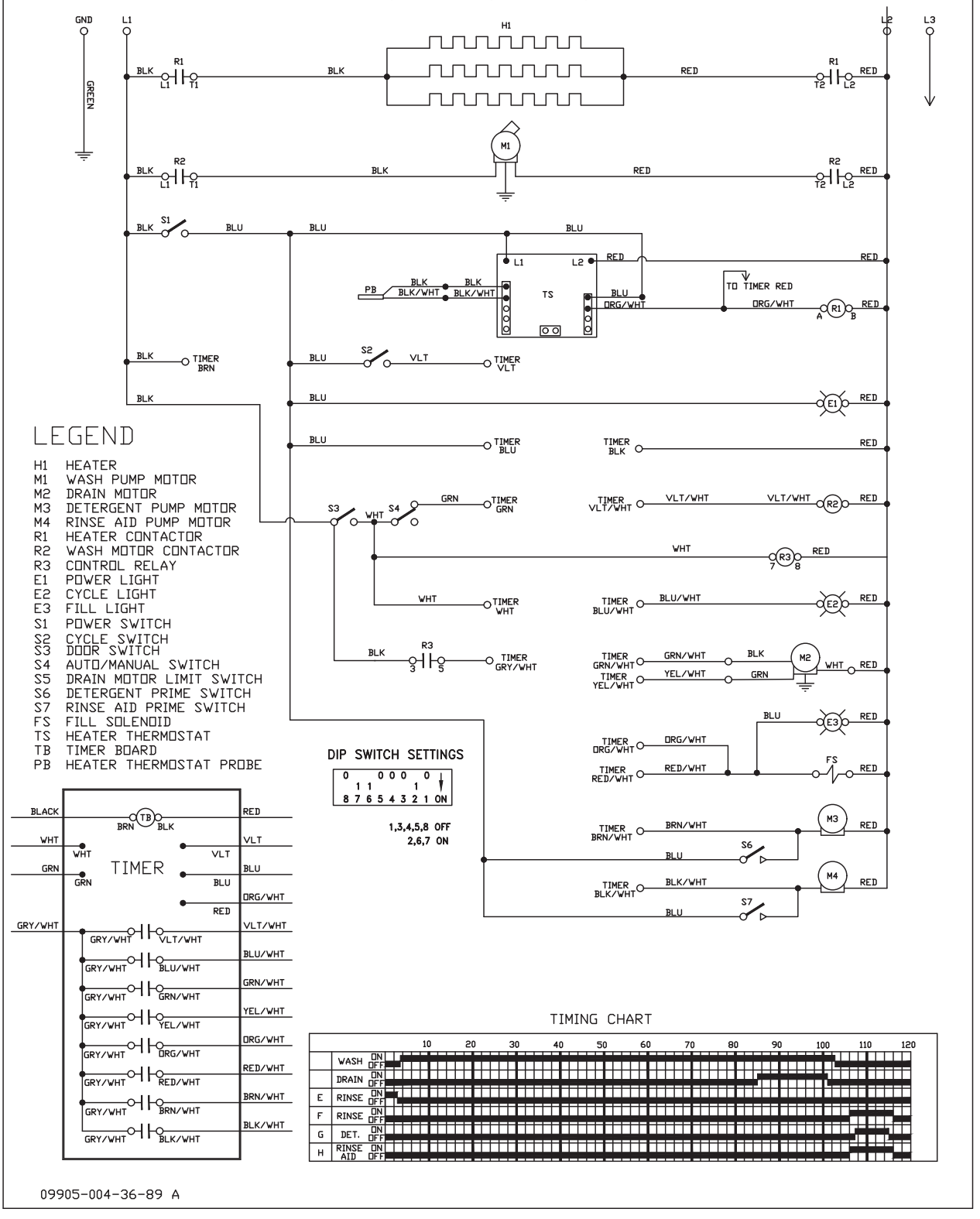
1. Connect white wire from gray cable to white/yellow wire from switch.

2. Connect red wire from gray cable to blue wire from switch.

After cutting the existing red and white tube approximately 12” above the gray tube stiffener, insert the cut ends into the clear tubes as shown.

WAREFORCE UH30 FND ELECTRICAL DIAGRAM

208/240 VOLT 50/60 HERTZ 1/3 PHASE



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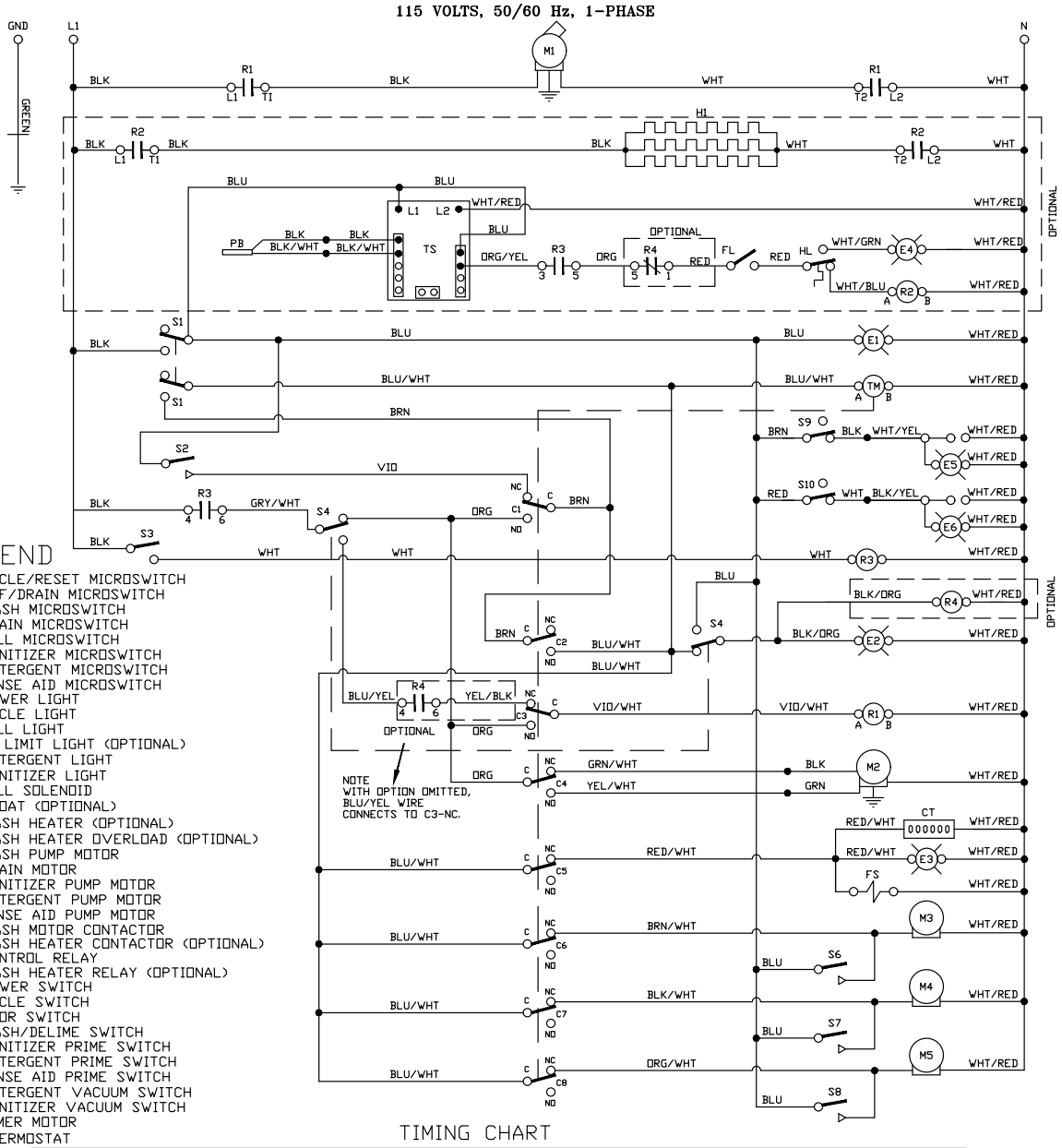
WAREFORCE UL30 SCHEMATIC

(OPTIONAL WASH TANK HEATER)

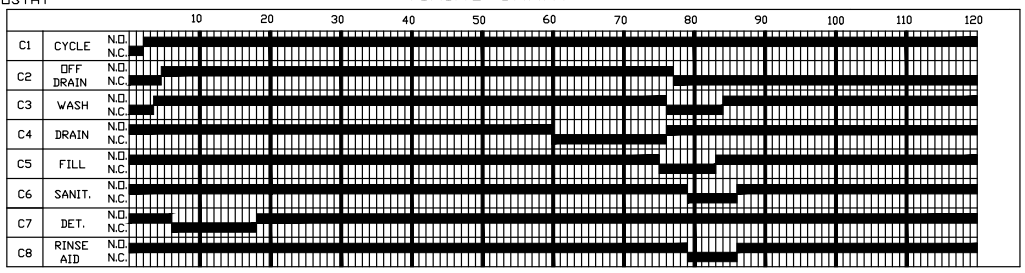
115 VOLTS, 50/60 Hz, 1-PHASE



LEGEND

C1 CYCLE/RESET MICROSWITCH
C2 OFF/DRAIN MICROSWITCH
C3 WASH MICROSWITCH
C4 DRAIN MICROSWITCH
C5 FILL MICROSWITCH
C6 SANITIZER MICROSWITCH
C7 DETERGENT MICROSWITCH
C8 RINSE AID MICROSWITCH
E1 POWER LIGHT
E2 CYCLE LIGHT
E3 FILL LIGHT
E4 HI LIMIT LIGHT (OPTIONAL)
E5 DETERGENT LIGHT
E6 SANITIZER LIGHT
FS FILL SOLENOID
FL FLOAT (OPTIONAL)
H1 WASH HEATER (OPTIONAL)
HL WASH HEATER OVERLOAD (OPTIONAL)
M1 WASH PUMP MOTOR
M2 DRAIN MOTOR
M3 SANITIZER PUMP MOTOR
M4 DETERGENT PUMP MOTOR
M5 RINSE AID PUMP MOTOR
R1 WASH MOTOR CONTACTOR
R2 WASH HEATER CONTACTOR (OPTIONAL)
R3 CONTROL RELAY
R4 WASH HEATER RELAY (OPTIONAL)
S1 POWER SWITCH
S2 CYCLE SWITCH
S3 DOOR SWITCH
S4 WASH/DELIME SWITCH
S6 SANITIZER PRIME SWITCH
S7 DETERGENT PRIME SWITCH
S8 RINSE AID PRIME SWITCH
S9 DETERGENT VACUUM SWITCH
S10 SANITIZER VACUUM SWITCH
TM TIMER MOTOR
TS THERMOSTAT

TIMING CHART



09905-004-39-51 REV K

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