Champion®

Installation/Operation Manual with Service Replacement Parts

Undercounter Dishwasher
M4.2 Series

UH330 ADA

UH330 ADA

Heat Recovery
High Temperature
with built-in booster
Fresh Water Final Rinse

Issue Date: 2.8.18

Manual P/N 116141 rev. B

For machines beginning with S/N W180174571 and above

3765 Champion Blvd.,
Winston-Salem, NC 27105
(336) 661-1556 Fax: (336) 661-1660
Toll-free: (800) 858-4477

2674 N. Service Road, Jordan Station
Ontario, Canada L0R 1S0
(905) 562-4195 Fax: (905) 562-4618
Toll-free: (800) 263-5798

Printed in the USA

The Spirit of Excellence

For future reference, record your dishwasher information in the box below.

Model Number_____ Serial Number_____

Voltage_____Hertz_____ Phase_____

Service Agent _____ Tel:_____

Parts Distributor _____ Tel:_____

National Service Department

In the USA:
Toll-free: (800) 858-4477
Tel: (336) 661-1556
Fax: (336) 661-1660
email: service@championindustries.com

ATTENTION:

The model no., serial no., voltage, Hz and phase are needed to identify your machine and to answer questions.

The machine data plate is located on the lower front panel.

Please have this information ready if you call for service assistance.

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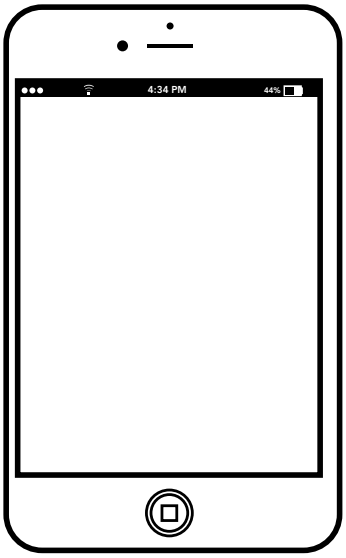
REGISTER YOUR PRODUCT to ACTIVATE YOUR WARRANTY.



Three ways to register:

- Use your mobile device to scan the QR code located on the front panel of your machine or enter our URL http://www.champdw.us/UH330 ADA.
- Visit our website at:
  http://www.championindustries.com/warranty-registration
- Use the FAX FORM on the next page.

Champion®

The Dishwashing Machine Specialists

PRODUCT REGISTRATION BY FAX

COMPLETE THIS FORM AND FAX TO:

(336) 661-1660 in the USA

1-(800) 204-0109 in Canada

PRODUCT REGISTRATION CARD

Model	Serial #

Date of Installation: ___/___ /____

Company Name: _____

Address: _____ _____ _____
(Street) Province Postal Code

Telephone #: ( ) _____ --- _____

Contact: _____

Installation Company: _____

Address: _____

Telephone #: _____

Contact: _____

FAILURE TO REGISTER YOUR PRODUCT MAY VOID YOUR WARRANTY

IMPORTANT IMPORTANT

Revision History

A revision might be a part number change, a new instruction, or other information that was not available at print time. We reserve the right to make changes to these instructions without notice and without incurring any liability by making the changes. Equipment owners may request a revised manual, at no charge, by calling 1 (800) 858-4477 in the USA.

Revision Date	***Revised Pages***	***Serial Number Effectivity***	***Revision Description***
9.30.16	*All*	*W140946406*	*M4.0 Version Machines*
2.8.18	*All*	*W180174571*	*M4.2 Version Machines*

LIMITED WARRANTY

Champion Industries (herein referred to as Champion), 3765 Champion Blvd., Winston-Salem, North Carolina 27105, and 2674 N. Service Road, Jordan Station, Canada, L0R 1S0, warrants machines, and parts, as set out below.

Warranty of Machines: Champion warrants all new machines of its manufacture bearing the name "Champion" and installed within the United States and Canada to be free from defects in material and workmanship for a period of one (1) year after the date of installation or fifteen (15) months after the date of shipment by Champion, whichever occurs first. [See below for special provisions relating to glasswashers.]

Warranty registration must be submitted to Champion within ten (10) days after installation either online on the Champion Industries website (http://www.championindustries.com/register) in the USA or http://www.championindustries.com/canada/register in Canada or by fax on the form provided at the front of this manual. If warranty registration is not returned to Champion within such period, the warranty will expire after one year from the date of shipment.

Champion will not assume any responsibility for extra costs for installation in any area where there are jurisdictional problems with local trades or unions. If a defect in workmanship or material is found to exist within the warranty period, Champion, at its election, will either repair or replace the defective machine or accept return of the machine for full credit; provided; however, as to glasswashers, Champion's obligation with respect to labor associated with any repairs shall end (a) 120 days after shipment, or (b) 90 days after installation, whichever occurs first. In the event that Champion elects to repair, the labor and work to be performed in connection with the warranty shall be done during regular working hours by a Champion authorized service technician. Defective parts become the property of Champion. Use of replacement parts not authorized by Champion will relieve Champion of all further liability in connection with its warranty. In no event will Champion's warranty obligation exceed Champion's charge for the machine. The following are not covered by Champion's warranty:

a. Lighting of gas pilots or burners.
b. Cleaning of gas lines.
c. Replacement of fuses or resetting of overload breakers.
d. Adjustment of thermostats.
e. Adjustment of clutches.
f. Opening or closing of utility supply valves or switching of electrical supply current.
g. Cleaning of valves, strainers, screens, nozzles, or spray pipes.
h. Performance of regular maintenance and cleaning as outlined in operator's guide.
i. Damages resulting from water conditions, accidents, alterations, improper use, abuse, tampering, improper installation, or failure to follow maintenance and operation procedures.
j. Wear on Pulper cutter blocks, pulse vanes, and auger brush.

Examples of the defects not covered by warranty include, but are not limited to: (1) Damage to the exterior or interior finish as a result of the above, (2) Use with utility service other than that designated on the rating plate, (3) Improper connection to utility service, (4) Inadequate or excessive water pressure, (5) Corrosion from chemicals dispensed in excess of recommended concentrations, (6) Failure of electrical components due to connection of chemical dispensing equipment installed by others, (7) 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, (8) Failure to comply with local building codes, (9) Damage caused by labor dispute.

Warranty of Parts: Champion warrants all new machine parts produced or authorized by Champion to be free from defects in material and workmanship for a period of 90 days from date of invoice. If any defect in material and workmanship is found to exist within the warranty period Champion will replace the defective part without charge.

DISCLAIMER OF WARRANTIES AND LIMITATIONS OF LIABILITY. CHAMPION'S WARRANTY IS ONLY TO THE EXTENT REFLECTED ABOVE. CHAMPION MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED, TO ANY WARRANTY OF MERCHANTABILITY, OR FITNESS OF PURPOSE. CHAMPION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. THE REMEDIES SET OUT ABOVE ARE THE EXCLUSIVE REMEDIES FOR ANY DEFECTS FOUND TO EXIST IN CHAMPION DISHWASHING MACHINES AND CHAMPION PARTS, AND ALL OTHER REMEDIES ARE EXCLUDED, INCLUDING ANY LIABILITY FOR INCIDENTALS OR CONSEQUENTIAL DAMAGES.

Champion does not authorize any other person, including persons who deal in Champion dishwashing machines to change this warranty or create any other obligation in connection with Champion Dishwashing Machines.

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UH330 ADA
Heat Recovery/Condensate Removal with Dry Assist
Fresh Water Pumped Final Rinse
High temperature hot water sanitizing dishwasher with built-in electric booster.
Two built-in chemical dispensing pumps - Detergent, Rinse-aid
Field convertible from single phase to three phase operation.
208-240VAC/60/1 and 3 phase

Optional Equipment *(consult factory)*
Peg dish rack - P/N 101285
Flat-bottom dish rack - P/N 101273
17" Stand
6" Stand

Receiving

NOTE:
The installation of your dishwasher must be performed by qualified service personnel familiar with food service equipment and must comply with all local health codes.
Problems due to improper installation are not covered by the Limited Warranty.

NOTE:
The installation of the dishwasher must comply with all local electrical, plumbing, health and safety codes or in the absence of local codes, installed in accordance with the applicable requirements in the National Electrical Code, NFPA 70, Canadian Electrical Code (CEC), Part 1, CSA C22.1; and the Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, NFPA 96.

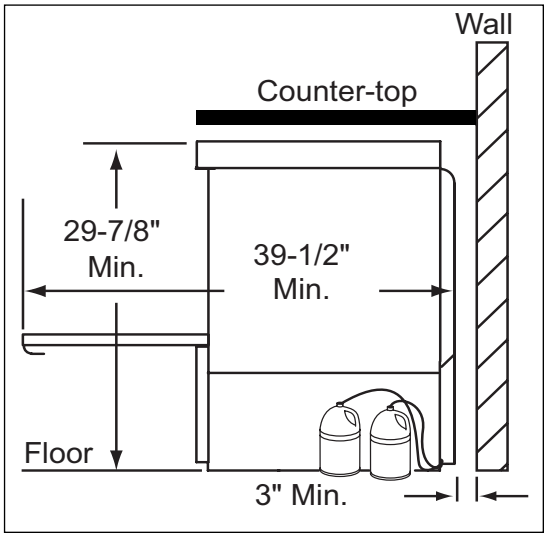
Turn to the front of this manual and follow the instructions to register your product online or by fax.

Placement

CAUTION:
Be careful when lifting and moving the dishwasher to prevent damage to the machine.

NOTE:
The installation of the dishwasher must comply with local health codes.

NOTE:
The dishwasher front-to-back dimension with the door open is 39-1/2". The clearance to the back wall is 3".



1. Inspect the outside of the dishwasher carton for signs of damage.
2. Remove the carton and inspect the dishwasher for damage.
3. Check for any options or accessories that may have shipped with your dishwasher.
4. Compare the installation site utility connections with the dishwasher utility connections and make sure they are the same.
5. The dishwasher can be installed as a free-standing unit or under a counter-top. The typical counter-top height in most locations is 34" [864 mm]. It is highly recommended that the underside of the counter-top be clad in metal.
6. Under counter installations should provide storage space for the dishwasher chemical supply containers. Do not elevate the containers above the finished floor.
7. Chemical supply containers should be placed as close to the machine as possible and the chemical tubing taped to the back of the machine should be repositioned before permanently placing the machine.
8. The dishwasher has 4 adjustable feet for leveling.
9. Place the dishwasher in its permanent location and level it front-to-back and side-to-side.

Electrical Connections - UH330 ADA with Built-in Booster
1PH and 3PH Wiring Diagrams

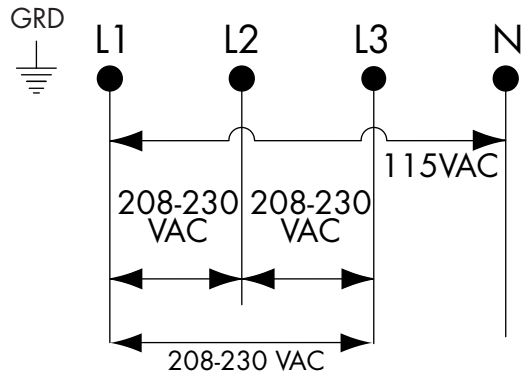
! ATTENTION !

ALL DISHWASHERS ARE SHIPPED FROM THE FACTORY WIRED FOR SINGLE PHASE OPERATION UNLESS SPECIFIED AT THE TIME OF ORDER.

IF YOU ARE CONVERTING A SINGLE PHASE MACHINE TO THREE PHASE BE SURE TO FOLLOW THE BOOSTER WIRING INSTRUCTIONS ON PAGES 71-72.

Refer to the connection diagrams below to connect main incoming power to the dishwasher.

THREE PHASE POWER CONNECTION
Models UH330 ADA



! VERY IMPORTANT !

THE ELECTRICAL POWER MUST BE A 4-WIRE PLUS GROUND SUPPLY WHICH INCLUDES A CURRENT CARRYING NEUTRAL.

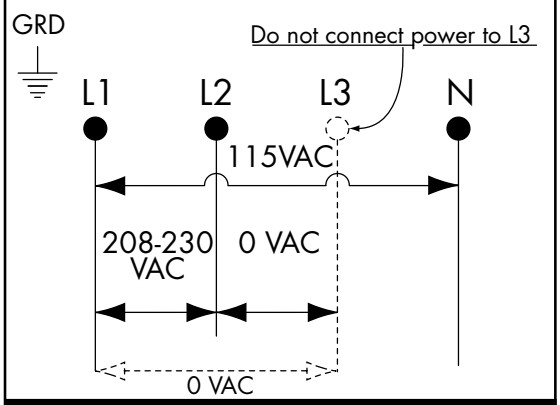
HOW TO CONNECT 3 PHASE POWER

1. Check the data plate on the front of the dishwasher for the phase of the machine.

If the data plate says the machine is 3 Phase, then connect a 3 PH power supply.

2. Remove the lower access panel.
3. Pull power connection box forward and out.
4. The Main Terminal Block has terminals for L1, L2, L3, Neutral and Ground.
5. Connect ground, then connect L1, L2, L3 to 208-230VAC.
6. Connect a current carrying neutral to N.
7. Main power connections are complete.

SINGLE PHASE POWER CONNECTION
Models UH330 ADA



! VERY IMPORTANT !

THE ELECTRICAL POWER MUST BE A 3-WIRE PLUS GROUND SUPPLY WHICH INCLUDES A CURRENT CARRYING NEUTRAL.

HOW TO CONNECT 1 PHASE POWER

1. Check the data plate on the front of the dishwasher for the phase of the machine.

If the data plate says the machine is 1 Phase, then connect a 1 PH power supply.

2. Remove the lower access panel.
3. Pull power connection box forward and out.
4. The Main Terminal Block has connections for L1, L2, L3, Neutral and Ground.
5. Connect ground, then connect L1, L2 to 208-230VAC.
6. Connect a current carrying neutral to N.

DO NOT CONNECT POWER TO L3.

7. Main Power connections are complete.

Connecting Incoming Power to the Main Terminal Block for 1PH and 3PH Machines with Boosters

WARNING:
Electrocution or serious injury may result when working on an energized circuit.

Disconnect power at the main breaker or service disconnect switch before working on the circuit.

Lock-out and tag the breaker or service disconnect switch to indicate that work is being performed on the circuit.

! VERY IMPORTANT !
PROVIDE A 3 FEET/1 METER SERVICE LOOP IN THE POWER SUPPLY CABLE TO SERVICE THE DISHWASHER.

! SINGLE PHASE POWER REQUIREMENT !

SINGLE PHASE UH330 ADA
The electrical power must be a 3-wire plus ground supply which includes a current carrying neutral.

! THREE PHASE POWER REQUIREMENT !

THREE PHASE UH330 ADA
The electrical power must be a 4-wire plus ground supply which includes a current carrying neutral.

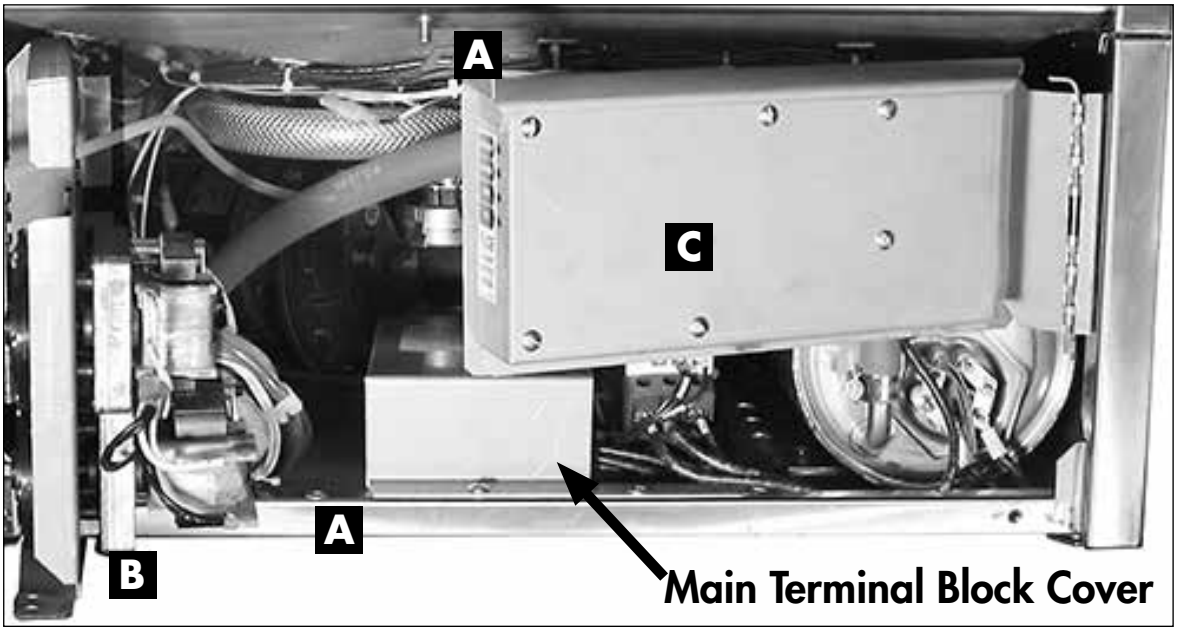
Connecting Incoming Power to the Main Terminal Block for 1PH and 3PH Machines with Boosters

Refer to the photo below:

1. Remove the lower front dishwasher panel.

2. Remove the retaining fasteners (A) from the swing-out brackets and swing the chemical pump bracket (B) and the chemical circuit board bracket (C) out of the way as shown.

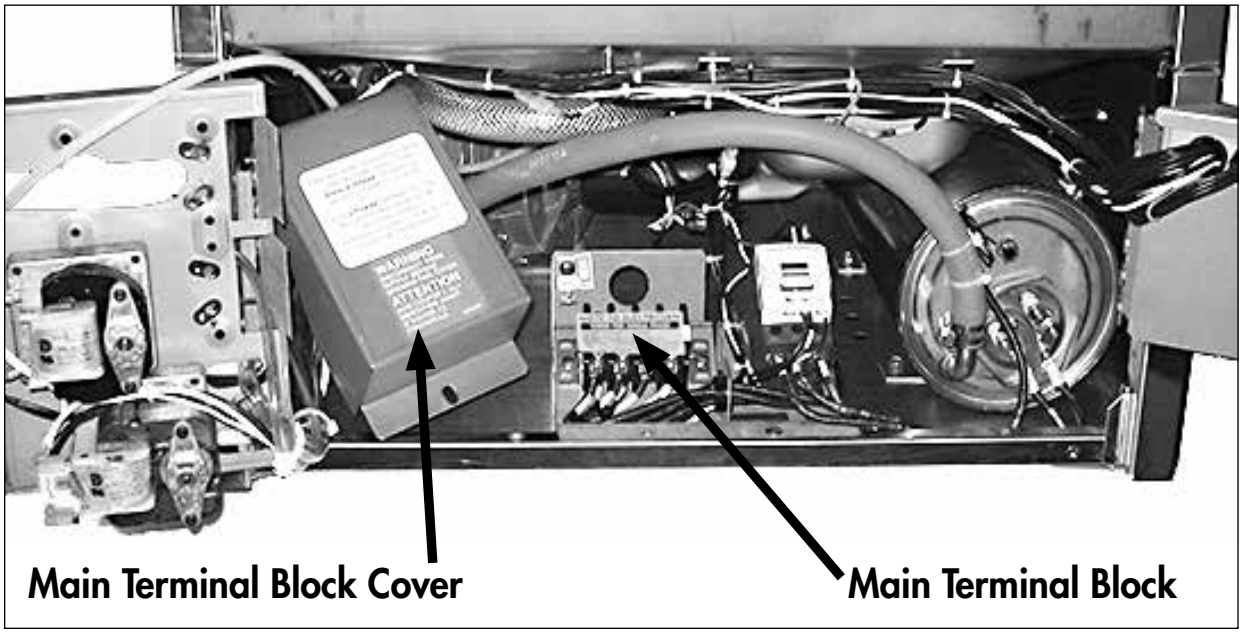
3. Remove the screw holding the main terminal block cover and set the cover aside.



Connecting Incoming Power to the Main Terminal Block for 1PH and 3PH

Refer to the photo below:

4. Provide a 3 foot/1 meter service loop in the power supply cable to service the machine.
5. Route the power cable from the rear of the machine to the terminal block making sure the cable does not touch the booster heater.
6. Connect the power cable to the terminal block bracket using a suitable strain relief connector.
7. Connect the power wires according to the wiring diagrams for either single phase or three phase operation.
8. Return the main terminal block bracket to its original position making sure the power cable does not touch the booster tank. Install the retaining screws.
9. Swing the chemical pump bracket and the chemical board back into position and secure with the existing fasteners.



Booster Heater Conversion from 1PH to 3PH Operation

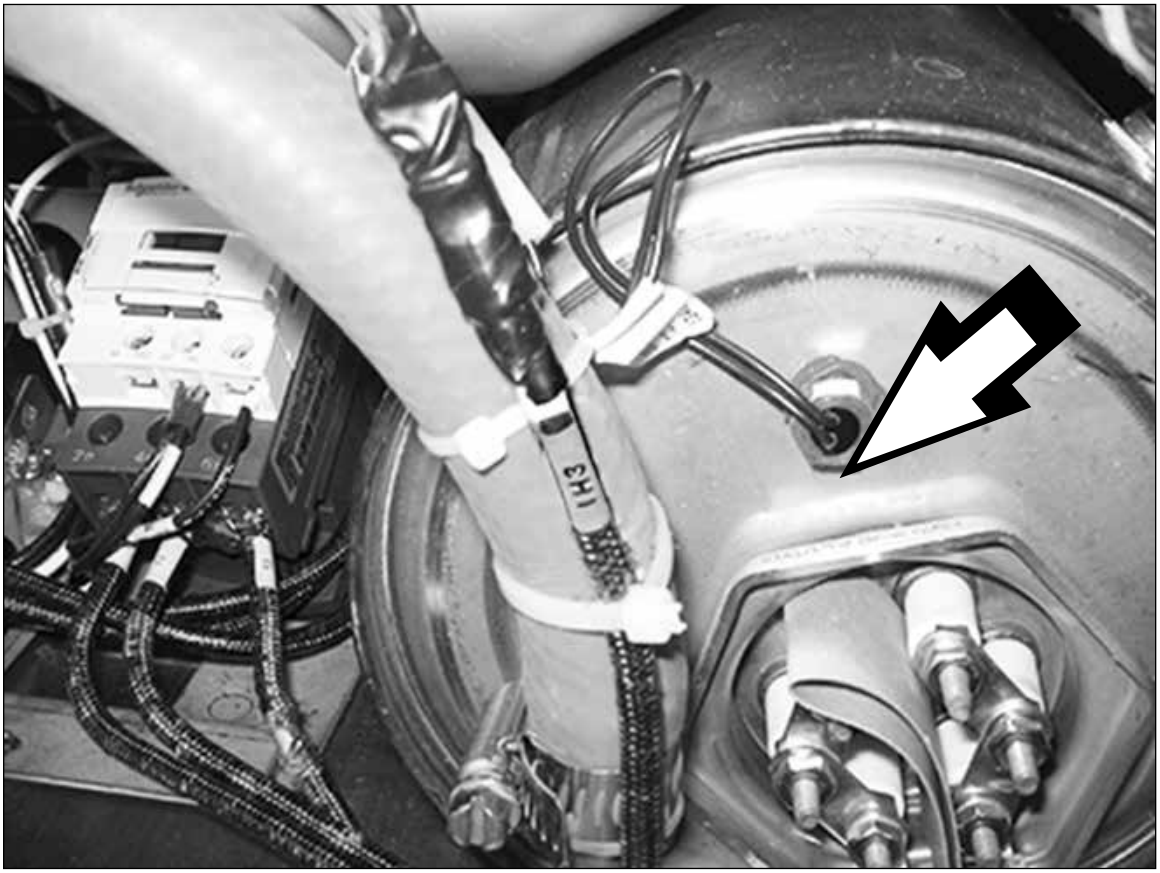
! VERY IMPORTANT !
THE BOOSTER HEATER IS WIRED FOR 1PH OPERATION WHEN SHIPPED.
FOLLOW THE INSTRUCTIONS BELOW TO WIRE THE BOOSTER FOR 3PH.

WARNING:
Electrocution or serious injury may result when working on an energized circuit.

Disconnect power at the main breaker or service disconnect switch before working on the circuit.

Lock-out and tag the breaker or service disconnect switch to indicate that work is being performed on the circuit.

1. To convert the booster heater from single phase to three phase operation, locate the booster wire labeled 1H3 that is cable-tied to the booster hose.
2. Remove the shrink insulation from the terminal and connect to the booster heater element as shown in the wiring diagram on page 72.

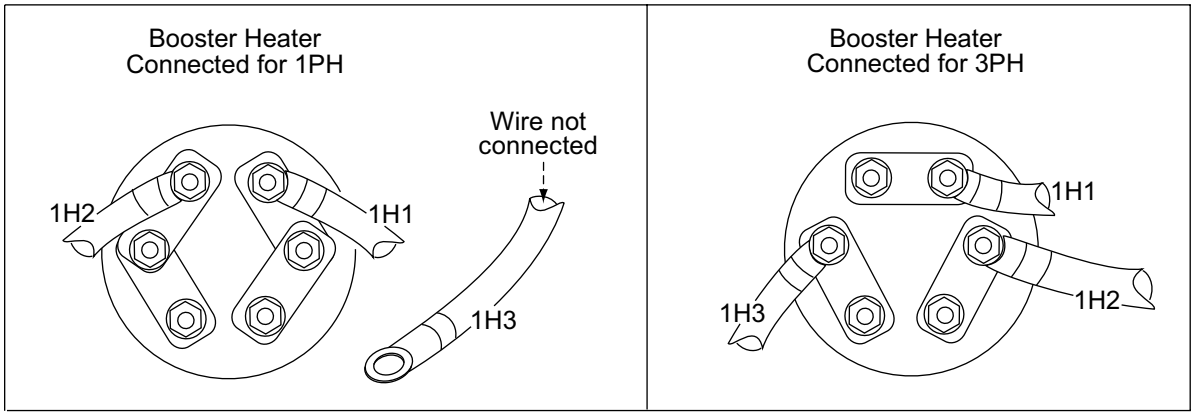


The three phase booster wire (1H3) is cable-tied to the hose adjacent to the booster tank.

Booster Heater Conversion from 1PH to 3PH Operation (continued)

! VERY IMPORTANT !
THE BOOSTER HEATER IS WIRED FOR 1PH OPERATION WHEN SHIPPED.
FOLLOW THE INSTRUCTIONS BELOW TO WIRE THE BOOSTER FOR 3PH.

3. Disconnect the existing booster heater wires and change the booster heater element jumpers as shown in the illustration below
4. Connect wires 1H1, 1H2, and 1H3 as shown below.



Wiring Diagram - Booster heater element connections shown for 1 phase and 3 phase operation.

5. A replacement 3PH data plate is stowed on the back of the lower front access panel.
6. Replace the existing 1PH data plate on the front of the panel with the new 3PH data plate. Discard the 1PH data plate.
7. Refer to the instructions on the next page to connect the main incoming power to the machine.

Completing the 1PH to 3PH Electrical Conversion

! ATTENTION !

CHANGE THE DATA PLATE ON THE LOWER FRONT PANEL OF THE MACHINE

AFTER THE MACHINE IS WIRED FOR 3PH AND THE BOOSTER HEATER IS CONNECTED FOR 3PH.

1. The data plate on the dishwasher lower front panel must be changed after the machine is converted from single phase operation to three phase operation.

2. Locate the replacement data plate stowed on the back of the lower front panel.

3. Remove the paper backing from the label and carefully place it over the existing data plate label making sure it covers the label completely.

4 Re-install the lower front panel to complete the conversion.

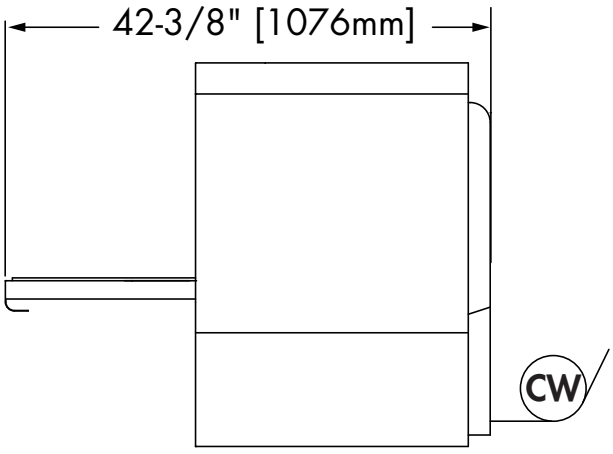
A three phase data plate is located on the back of the lower front panel.

Water Connection

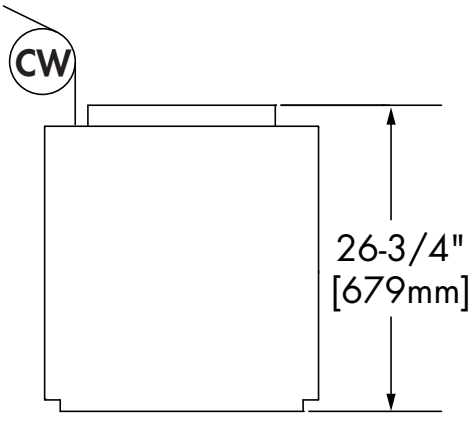
! ATTENTION!
THE MODEL UH330 ADA REQUIRES A SINGLE 1/2" INCOMING COLD WATER SUPPLY LINE

Model UH330 ADA

1. Equipped with a 6 ft. flexible cold water fill hose with a 3/4" female garden hose connector.
2. A 1/2" or larger main incoming supply line must be installed to the dishwasher.
3. We recommend that a 1/2" or larger shut-off valve be installed in the main water supply, as close to the dishwasher as possible for servicing.
4. The UH330 ADA has a built-in flow control. The flowing incoming cold water supply pressure must be between 25-95 psi.
5. A water hardness of 3 grains/gal (US) [51.3 mg/L] or less is recommended.



Side View



Plan View

CW = 1/2" Cold Water Supply
55-80°F/12-26°C

Drain Connection

! VERY IMPORTANT !
IMPROPER INSTALLATION OF MACHINE DRAIN HOSE.
Machine drain problems are often the result of improper installation and may not be covered by the limited warranty.

! VERY IMPORTANT !
Do not connect the drain hose to a disposer. The dishwasher will not drain correctly.

! IMPORTANT !
Make sure that the flexible water supply and drain hoses are not kinked.

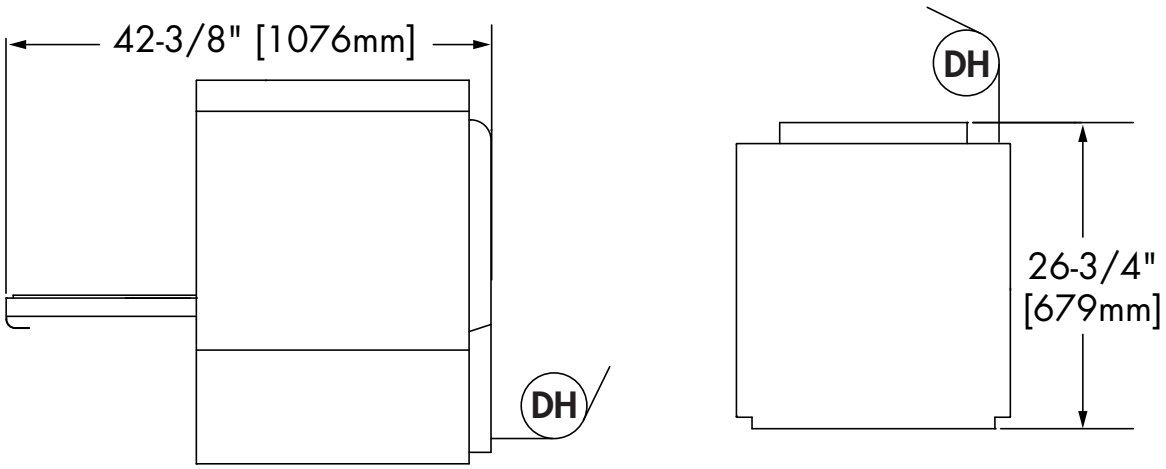
1. The UH330 ADA is a pumped drain and is equipped with a 6 ft.. 5/8" I.D. drain hose. The maximum drain height connection must not exceed 3 ft.[1 m].

2. The drain hose is located at the rear of the dishwasher, and is secured to the rear of the machine provide an anti-siphoning loop in the drain hose.

3. A 3/4" hose barb fitting is strapped to the drain hose prior to shipment. The service part number for the hose barb is P/N 0512321.

4. Additional plumbing parts must be supplied by the plumbing installer.

5. The maximum drain flow is 15 US gpm/12.4 imp gpm/60 lpm.



Side View Plan View

DH = Drain Hose
5/8" I.D., 6 ft [1829 mm] Long

Drain Connection (continued)

NOTE
Plumbing connections must comply with national, provincial local plumbing and sanitary codes.

DO NOT CONNECT THE DRAIN HOSE TO A DISPOSER.

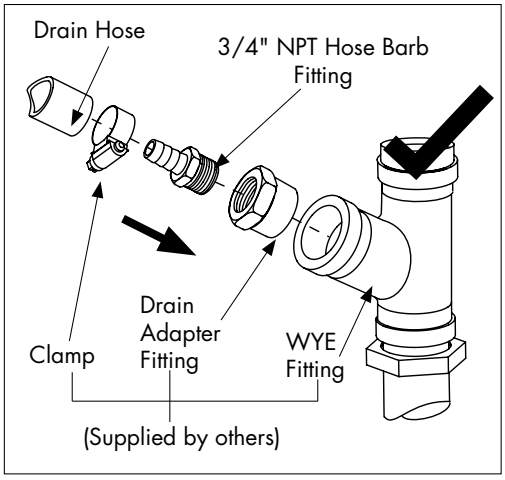
DO NOT REDUCE THE SIZE OF THE DRAIN HOSE CONNECTION.

DO NOT ADD ADDITIONAL LENGTH TO THE DRAIN HOSE.

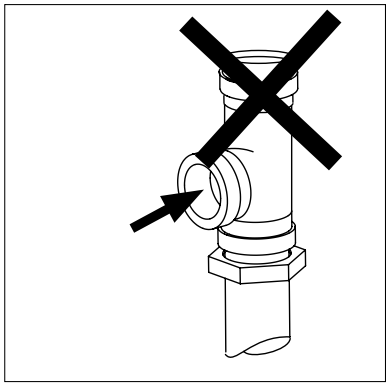
DO NOT ALLOW THE DRAIN HOSE TO KINK.

For a Direct Drain Connection:

1. Install the drain hose to an 1-1/2" or larger "WYE" vented drain fitting.
2. CONNECTION TO A "TEE" FITTING WILL PREVENT THE DISHWASHER FROM DRAINING COMPLETELY.



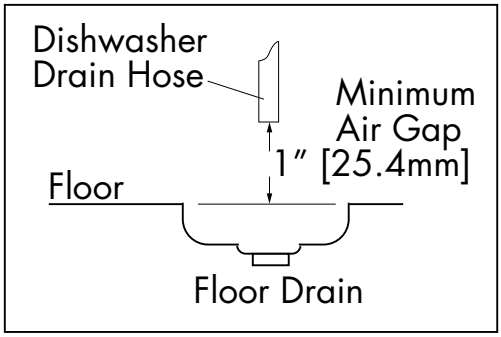
DO
connect the dishwasher flexible drain hose to a WYE drain fitting.



DO NOT
connect the dishwasher flexible drain hose to a TEE drain fitting.

For an Indirect Drain Connection:

1. A 1" [25.4mm] minimum air gap must be provided between the outlet of the dishwasher drain hose outlet and the flood-level rim of the floor drain, floor sink or any other locally approved drain receptacle. (See illustration below.)



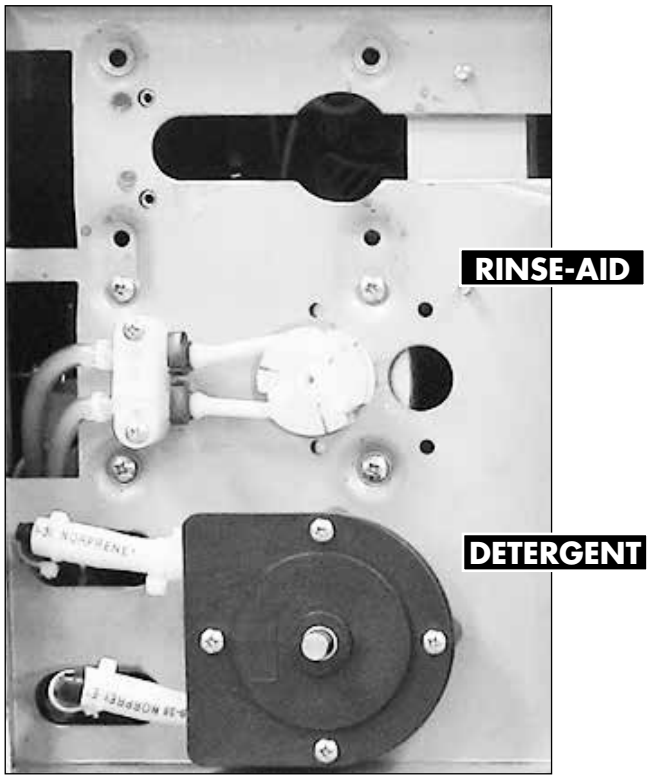
Chemical Connections

! VERY IMPORTANT !
ALWAYS USE A COMMERCIAL-GRADE NON-CHLORINATED DETERGENT.
PLACE THE CHEMICAL SUPPLY CONTAINERS AS CLOSE TO THE MACHINE AS POSSIBLE.
DO NOT ELEVATE THE CHEMICAL CONTAINERS ABOVE THE FINISHED FLOOR.

! VERY IMPORTANT !
Contact a chemical supplier for detergent and rinse-aid chemicals. The chemical supplier must adjust the chemical dispensing pumps for water hardness and food soil types.

Chemical Dispensing Pumps

1. The detergent and rinse-aid pumps are located on the lower left-side of the machine behind the lower-front access panel.
2. Each pump is equipped with 6 feet [1.8 m] of pick-up tubes consisting of supply tubing, stiffener tubes, and strainers.
3. The pick-up tubes are stowed on the back of the machine for shipping.
4. A red label marked DETERGENT and a blue label marked RINSE-AID identify the chemical lines.
5. **The chemical squeeze tubes should be inspected and replaced every six months.**



The chemical dispensing pumps are located on the left-side behind the lower front panel of the dishwasher.

The chemical dispensing pick-up tubes are stowed on the back of the dishwasher.

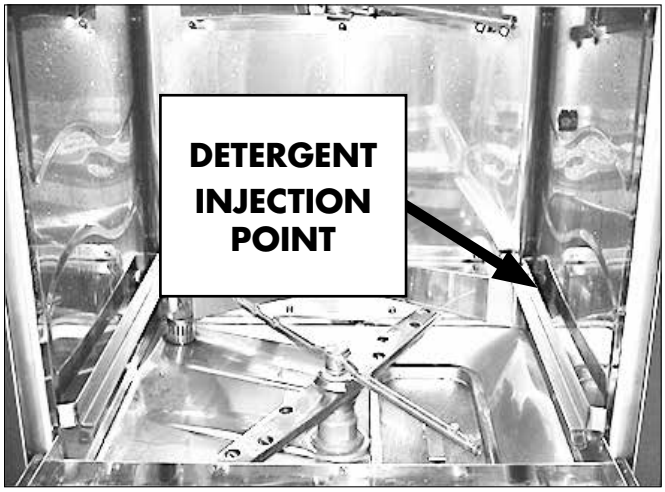
Chemical Connections (continued)

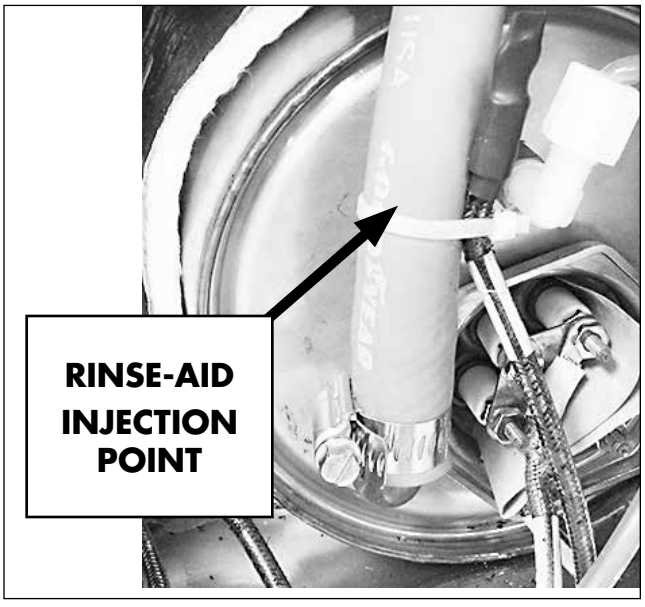
! VERY IMPORTANT !
ALWAYS USE A COMMERCIAL-GRADE NON-CHLORINATED DETERGENT.
PLACE THE CHEMICAL SUPPLY CONTAINERS AS CLOSE TO THE MACHINE AS POSSIBLE.
DO NOT ELEVATE THE CHEMICAL CONTAINERS ABOVE THE FINISHED FLOOR.

Chemical Injection Points

1. The detergent enters the wash tank compartment through a fitting at the right rear of the wash compartment.

2. Rinse-aid enters the final rinse through a fitting in the front of the booster tank.



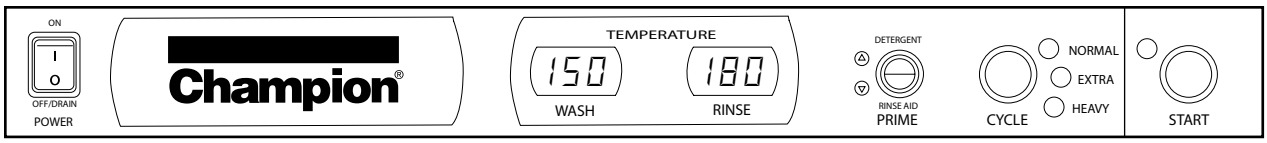


Chemical Connections

Priming the Dispensing Pumps

! VERY IMPORTANT !

The chemical dispensing pumps must be primed before operating the dishwasher and whenever the chemical container is changed.



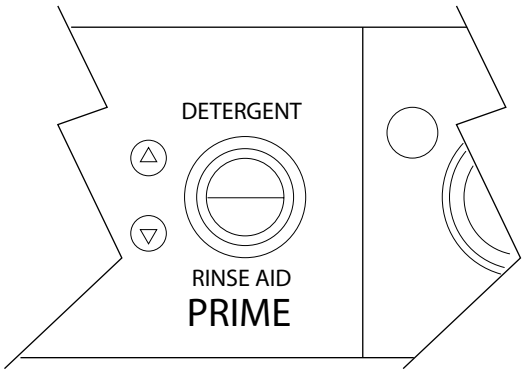
UH330 ADA Control Panel

1. The chemical dispensing pump supply lines must be primed before they will pump the chemicals properly.

2. Make sure the chemical containers are full and the correct pick-up tubes are in their containers.

3. Turn the dishwasher power switch ON. The switch will illuminate and the dishwasher will fill with water.

4. Open the dishwasher door, then push and hold the prime push button UP to the DETERGENT position until detergent is observed entering the wash tank compartment. Release the push button.



5. Push and hold the prime push button DOWN to the Rinse-aid position until you see air bubbles moving through the rinse-aid tubing, then continue to hold the prime push button for approximately 1 minute and then release.

6. Close the door to complete the priming operation.

(continued on next page)

Detergent and Rinse-aid Dispensing Pump Adjustments

Chemical Dispensing Pump Adjustments

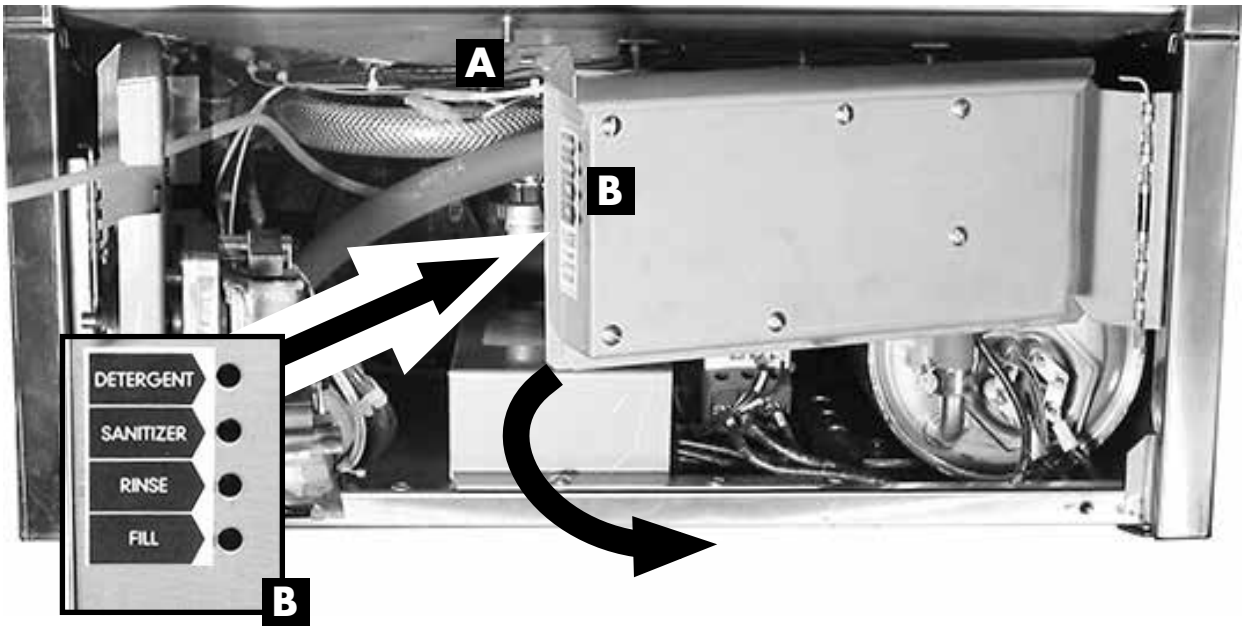
! ATTENTION !
The amount of dispensed chemical is determined by the run time of the dispensing time.

Refer to the photo below:

1. The chemical dispensing pump run adjustment screws are located on the end of the chemical circuit board swing-out bracket.

2. It is not necessary to swing the bracket out to make adjustments, but if desired, remove the mounting nut (A) and swing the bracket (B) out and to the right.

3. Refer to the next page for adjustment instructions.



! VERY IMPORTANT !
Contact a chemical supplier for detergent and rinse-aid chemicals. The chemical supplier must adjust the chemical dispensing pumps for water hardness and food soil types.

Detergent and Rinse-aid Dispensing Pump Adjustments

Chemical Dispensing Pump Adjustments *(continued)*

! ATTENTION !
THE FILL AND SANITIZER ADJUSTMENT SCREWS ARE NOT USED ON THE UH330 ADA MACHINE.

Refer to the photo below:

To adjust the amount of chemicals dispensed by the pumps:

1. Make sure the chemical containers are full and the pick-up tubes are in their proper containers.

3. Turn the dishwasher power switch ON. The switch will illuminate and the dishwasher will fill with water.

4. Run a normal dishwasher cycle and test detergent and rinse-aid concentrations according to the chemical supplier's instructions.

CAUTION:
Excessive pressure to the potentiometers when adjusting can result in bent or broken adjusting screws.

5. Each dispensing pump has a clearly marked adjustment screw. Turn the screw CW to increase the run time of the dispensing pump and CCW to reduce the run time.

Operation

Loading Dish Racks

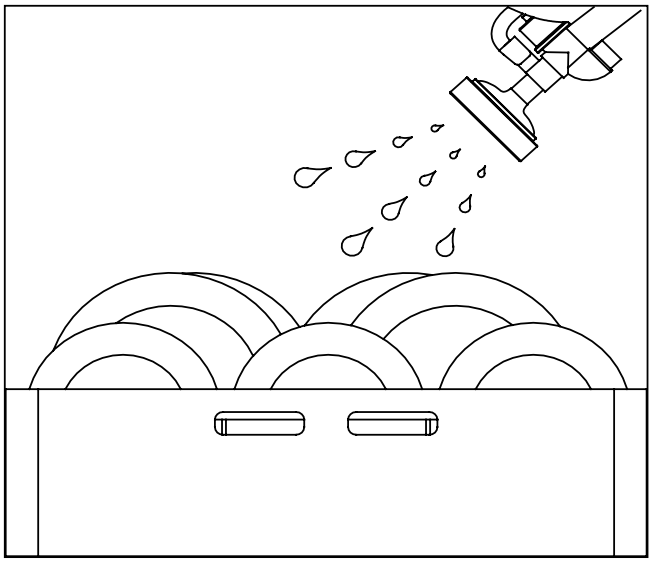
! VERY IMPORTANT !
DO NOT OVERLOAD THE DISH RACK.
LOAD ONE DISH RACK INTO THE MACHINE AT A TIME.

1. Prescrap and rinse the wares before loading to remove large food particles.
2. Load soiled wares into the dish rack. Place plates and glasses in a peg rack. Place cups and bowls in a flat bottom rack. Place utensils in a single layer in a flat-bottom rack. Place pots and pans in a flat-bottom rack.

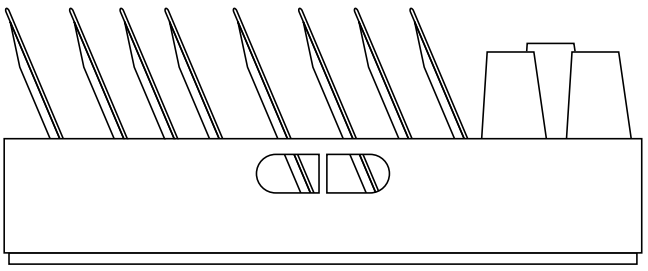
   Do not overload the dish rack. Wash one dish rack at a time.

3. Slide one dish rack into the wash compartment making sure that wares do not interfere with the rotating spray arms. Do not wash more than one dish rack at a time.

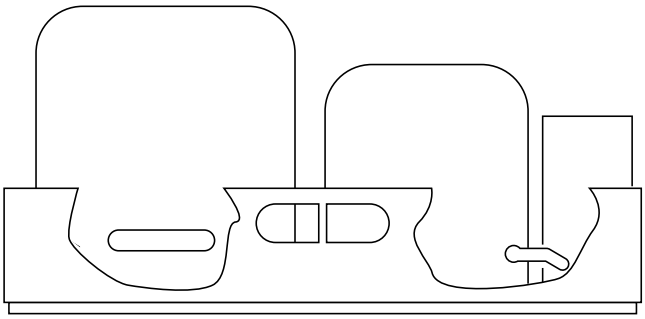
Prescrap and rinse wares before loading into the machine.



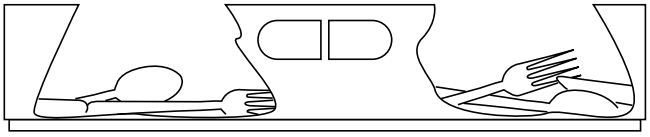
Load plates and glasses in a peg rack.



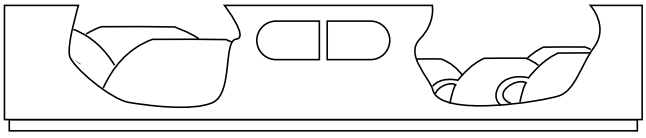
Loading Dish Racks *(continued)*



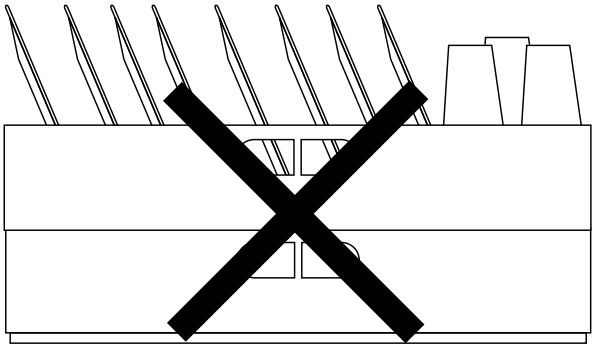
Load pots and pans in a flat-bottom rack.



Load utensils in a single layer in a flat-bottom rack.



Load cups and bowls in a flat-bottom rack.

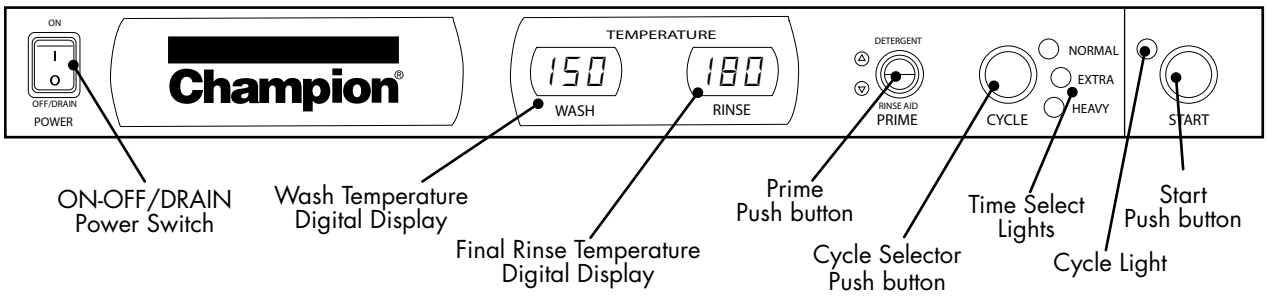


<u>NEVER</u> stack dish racks.
Wash one dish rack at a time.

Operation

UH330 ADA Control Panel

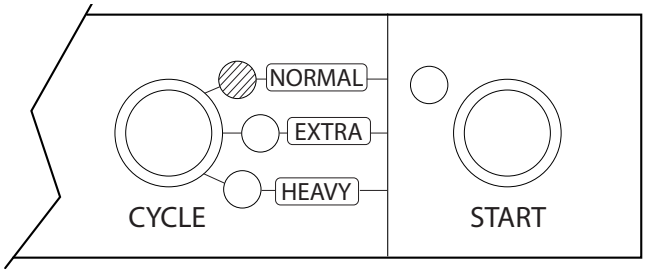
The illustration below shows the operator controls and temperature displays for the UH330 ADA.



Wash Mode

! VERY IMPORTANT !
Turn the power off to the dishwasher if it will be left unattended for an extended period of time.

1. Close the door.
2. Push the dishwasher ON-OFF/DRAIN switch UP to turn the power ON.
3. The power switch will illuminate and the machine will fill with water. The cycle light flashes during the fill cycle.
4. Wait approximately 30 minutes until the wash temperature gauge indicates a minimum of 150°F/66°C.
5. Scrap the wares to remove large food particles.
6. Load the dish rack into the machine. Wash one dish rack at a time.



Push the Cycle button once for Extra Cycle.
Push twice for Heavy Cycle.
Push the Cycle button three times to cancel the selection and return to Normal Cycle.

7. The NORMAL cycle setting is the default cycle and does not have a green indicator light. The normal cycle is approximately 2-1/2 minutes long.

Continued next page.

Operation

Wash Mode *(continued)*

8. The EXTRA cycle is selected by pushing the cycle button once. The EXTRA green indicator light will flash for 15 seconds. Pressing the START button before the flashing EXTRA indicator stops flashing starts an EXTRA wash cycle of approximately 2 minutes. The EXTRA green indicator light will come on. and the green indicator light above the start switch will illuminate indicating the machine is in the wash mode.

9. The HEAVY cycle is selected by pushing the cycle button twice. The HEAVY green indicator light will flash for 15 seconds. Pressing the START button before the flashing HEAVY indicator light stops flashing starts the heavy wash cycle of approximately 4-1/2 minutes long. The HEAVY green indicator light will come on and the green indicator light above the start switch will illuminate indicating the machine is in the wash mode.

10. Opening the door during a cycle will stop the dishwasher. The cycle will resume automatically if the dishwasher door is closed within 5 seconds. If the door is open for more than 5 seconds the cycle will start from the beginning of the cycle.

11. The final rinse cycle begins at the end of the wash cycle. The machine drains and retains a portion of the final rinse water for the next wash cycle.

12. Check the rinse temperature gauge during the final rinse. It must indicate a minimum of 180-195°F/82-91°C. The final rinse water is retained for the next wash cycle.

13. When the green cycle light goes out, open the door and remove the rack of clean wares.

! ATTENTION !
DOOR LEFT OPEN DURING WASH CYCLE
If the dishwasher door is left open for more than 5 seconds during the wash mode the dishwasher cycle will reset to the beginning of the selected wash cycle.

Rinse Sentry Mode

! ATTENTION !
RINSE SENTRY MODE WILL EXTEND WASH CYCLE TIME
In the event that the final rinse temperature inside the booster tank has not reached 180-195°F/82-91°C after the wash cycle, the rinse sentry will extend the wash cycle time until the booster reaches 180-195°F/82-91°C. If the proper temperature is not reached within 5 minutes, the machine will leave the rinse sentry mode and complete the cycle.

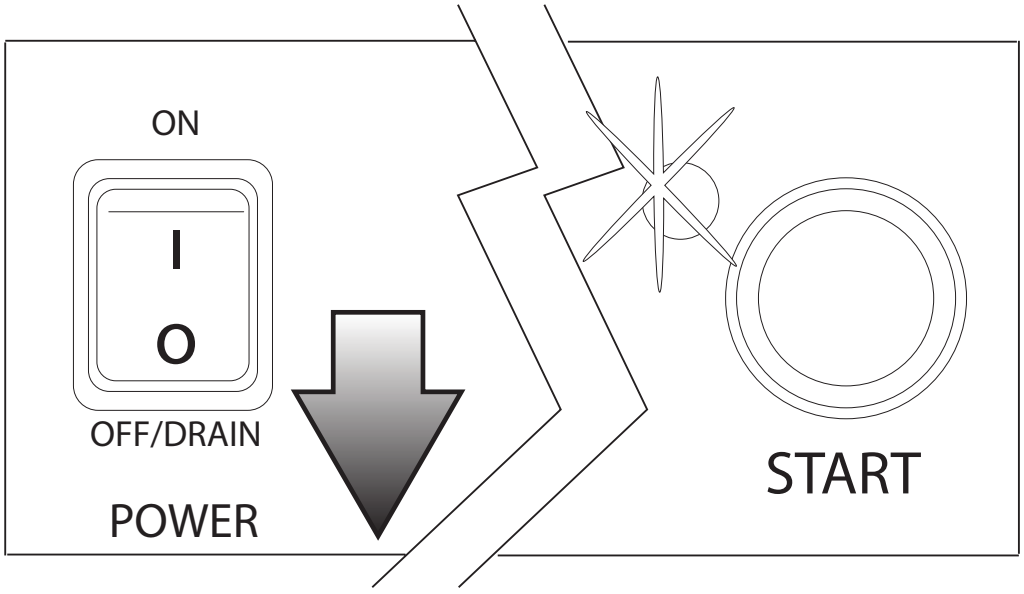
Operation

! VERY IMPORTANT !
Draining Problems Related To Improper Installation.
Problems with machine draining are often the result of improper installation.
NEVER EXTEND OR ADD LENGTH TO THE DRAIN HOSE.

Drain Mode

The dishwasher will enter the drain mode whenever the ON-OFF/DRAIN power switch is pushed down to the OFF/DRAIN position. The switch is located on the left side of the control panel.

IF THE ON-OFF/DRAIN SWITCH IS PLACED IN THE OFF/DRAIN POSITION FOR MORE THAN 3 SECONDS, THE DISHWASHER WILL CONTINUE TO DRAIN EVEN IF THE SWITCH IS PUSHED BACK TO THE ON POSITION.



1. Remove any dish rack that may be inside the machine.

2. Push the illuminated power switch down to the OFF/DRAIN position. The power switch light will go out.

3. The cycle light will illuminate and the machine will drain.

4. The cycle light will go out indicating that the drain cycle is complete. DO NOT OPEN THE DOOR UNTIL THE LIGHT GOES OUT.

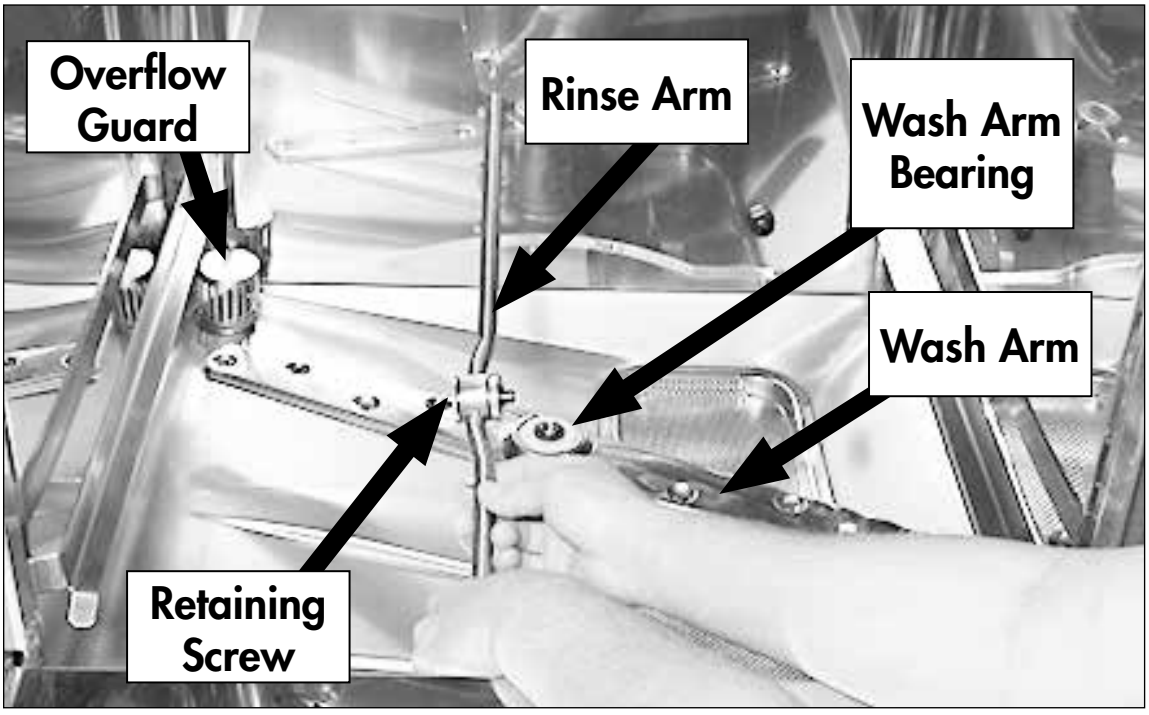
Cleaning

! VERY IMPORTANT !
DRAIN AND CLEAN THE DISHWASHER EVERY 2 HOURS OF CONTINUOUS OPERATION, AFTER EACH MEAL PERIOD, AND AT THE END OF THE DAY.

! ATTENTION !
DO NOT USE STEEL WOOL SCRUB PADS TO CLEAN THE MACHINE.
DO NOT SPRAY THE EXTERIOR OF THE MACHINE WITH WATER.

To clean your machine:

1. Open the door and remove any dish rack inside the machine.
2. Drain the machine according to the instructions on the previous page.
3. Refer to the photo below. Remove the upper and lower wash and rinse arms.
4. Clean the overflow guard by hand with it installed in the machine.

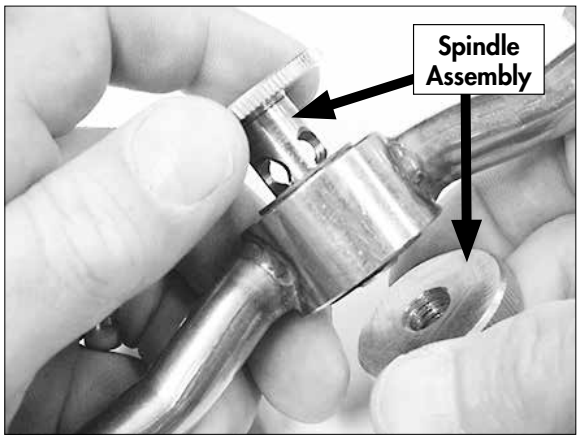


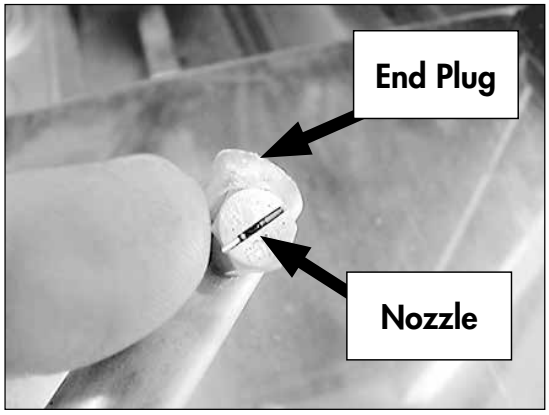
(continued on next page)

Cleaning

Rinse Arms

1. There are two rinse arms. They are interchangeable.
2. Remove the spindle assembly and end plugs in each pipe and flush the rinse pipes.
3. Inspect the rinse arm bearings for wear and replace as necessary.
4. Clean the rinse arm nozzles with a small paper clip.
5. Reassemble the rinse arm assemblies.





Wash Arms

1. There are two interchangeable wash arms.
2. Flush the wash arms thoroughly in a sink.
3. Inspect the wash arm bearings for wear and replace as necessary.

Cleaning

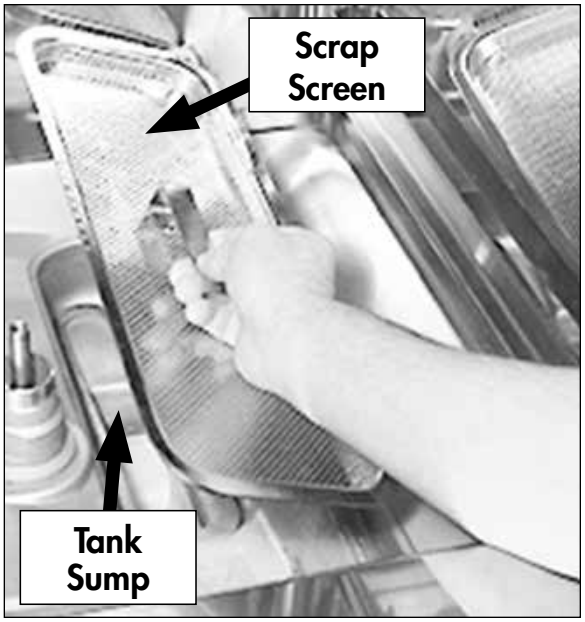
Scrap Screen and Sump Strainer

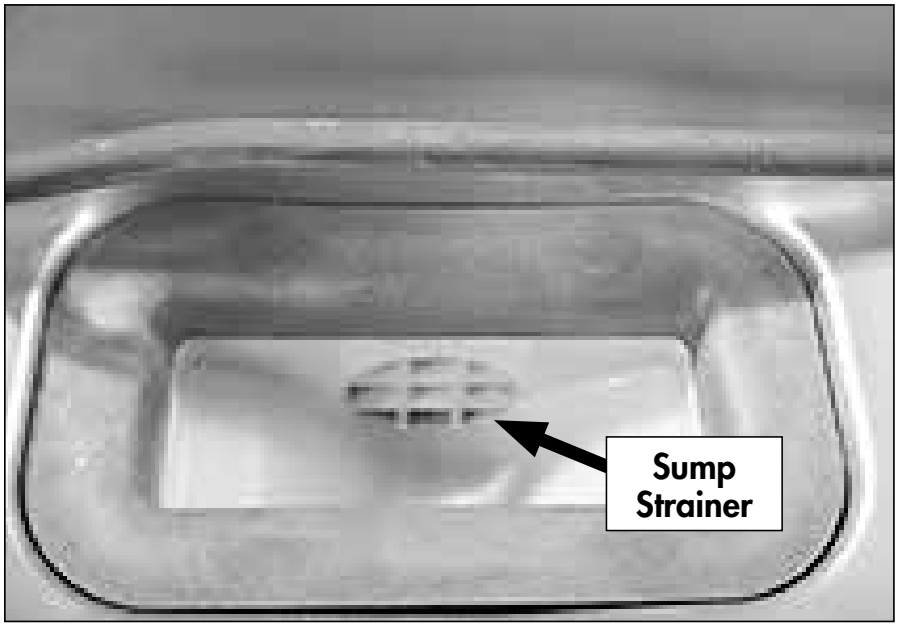
1. Lift the scrap screen straight up and out of the machine to prevent debris from falling into the tank sump.

2. Flush the scrap screen in a remote sink making sure to back-flush both sides of the screen.

3. Wipe the tank sump of water and debris.

4. Carefully inspect the sump strainer. This strainer is not removeable but must be thoroughly cleaned before reinstalling the scrap screen.





! ATTENTION !

A CLOGGED OR RESTRICTED SUMP STRAINER WILL PREVENT THE PROPER WASHING, RINSING AND DRAINING OF THE MACHINE.

! ATTENTION !

WIPE THE EXTERIOR OF THE MACHINE WITH A SOFT CLOTH AND MILD DETERGENT. DO NOT SPRAY THE EXTERIOR WITH WATER.

LEAVE THE DOOR OPEN TO AID IN OVERNIGHT DRYING.

Deliming Cautions and Warnings

A deliming agent must be used in accordance with your chemical supplier's instructions.

DANGER:
Death or serious injury may result when deliming solution is mixed with sodium hypochlorite sanitizing agent. Mixing may cause hazardous gases to form. Deliming solution and other acids must never be mixed with chlorine, iodine, bromine, or fluorine.

CAUTION:
Skin contact with deliming solutions can cause severe irritation and possible chemical burns. Always wear eye protection, rubber gloves and protective clothing when handling chemicals.

Follow the procedures below to de-lime the UH330 ADA dishwasher.

1. Open the dishwasher door and remove any dish racks.
2. Turn the power switch on the dishwasher to the ON position.
3. Remove the detergent and rinse-aid chemical supply tubing from their chemical supply containers.
4. Place the tubing in a container of hot water.
5. Press and hold the prime switch UP in the DETERGENT position to flush the detergent from the supply tubing. Release the switch.
6. Press and hold the prime switch DOWN in the RINSE AID position to flush the rinse-aid from the supply tubing. Release the switch.
7. Turn the dishwasher power switch to OFF/DRAIN to drain the wash tank. The green cycle light will go out in about 2 minutes.
8. **Always wear eye protection, rubber gloves and protective clothing when handling chemicals.** Open the door and carefully add the deliming chemical to the wash tank in accordance with your chemical supplier's instructions. Be careful to avoid splashing.
9. Close the door and press the CYCLE push button three times. The green cycle indicator light will illuminate and the machine will run for 23 minutes.
10. Check the deliming results and if scale is still present repeat steps 8-9.
11. Turn the power switch ON to refill the dishwasher and to return the dishwasher to normal operation.
12. Return chemical supply tubing to their containers and prime the chemical lines.

Maintenance

Follow the maintenance schedules below to keep the dishwasher operating efficiently.

Daily Maintenance

1. Make sure the water supply is on and that the drain is not clogged.
2. Check the temperature displays to ensure they are operating.
3. Make sure the dish racks are in good condition.
4. Check the chemical containers and refill as required.
5. Follow the cleaning procedures provided in the *Cleaning Section*.

Weekly Maintenance

1. Perform Steps 1-5 in the Daily Maintenance.
2. Inspect water lines for leaks.
3. Check for water leaks underneath the dishwasher.
4. Make sure the flexible water fill and drain hoses are not kinked.
5. Make sure that the dishwasher is level.
6. Clean accumulated lime deposits from the wash tank heating element.
7. Inspect the scrap screen and replace it if damaged.
8. Check the spray arms and replace or repair if damaged.

Monthly Maintenance

1. Perform the Daily and Weekly Maintenance listed above.
2. Clean the chemical dispenser pick-up tubing.

To clean the pick-up tubing:

1. Remove the pick-up tubes from their containers.
2. Place each tube in a separate container of hot water.
3. Press and hold the PRIME buttons UP and DOWN until water flows into the wash tank compartment.
4. Return the pick-up tubes to their containers and prime the chemical lines.
5. Drain and refill the dishwasher.

NOTE:
There are no lubrication points on the dishwasher.

Troubleshooting

Illustrations ***Page***

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Temperature Display Board M3-M4 Selector Slide Switch 35

Digital Temperature Display Board 36

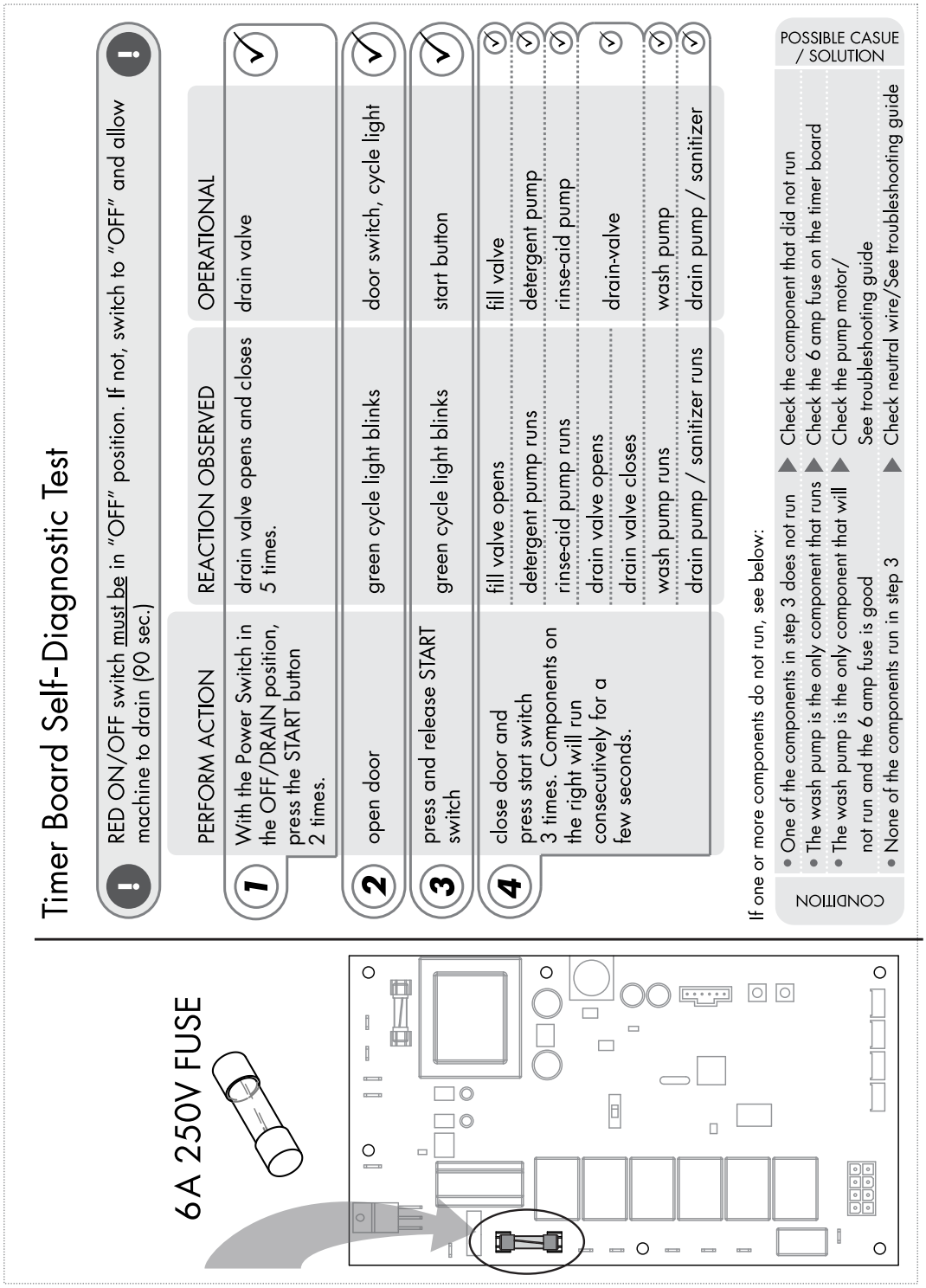
M4 Temperature Control Board Operation Explained 37

Troubleshooting

Condition	Cause	Solution
Dishwasher will not run.	Door not closed. Main power OFF. Dishwasher OFF. Circuit board fuse blown.	Close door completely. Check breaker on panel. Turn dishwasher power switch ON. Contact service agent.
Low or no water.	Main water supply off. Fill hose kinked. Low incoming water pressure Solenoid valve defective. Solenoid strainer clogged.	Open supply valve. Straighten fill hose. Set flowing water pressure to 25-95 PSI. Install repair kit or replace. Clean strainer.
Chemicals won't feed into dishwasher.	Chemical supply low. Supply tubing damaged. Supply tubing kinked. Pick-up tube clogged Chemical circuit board fuse blown. Pump squeeze tube defective.	Refill chemical container. Replace tubing. Straighten tubing. Clean/replace tube. Contact service agent. Replace squeeze tube.
Low water pressure pumped from wash spray arms.	Clogged scrap screen. Clogged spray arms. Clogged pump intake.	Clean scrap screen. Clean spray arms. Inspect sump and clean pump intake.
Poor wash results.	Excessively hard water. Thermistor defective. (See chemicals won't feed above.) (See low or no water above.) Detergent injector defective. Chemical circuit board fuse blown. Wares incorrectly loaded. in dishrack. Booster high limit tripped. Wash tank high limit tripped. Rinse arm nozzles clogged.	Contact chemical supplier. Replace thermistor. (See chemicals won't feed above.) (See low or no water above.) Replace squeeze tube. Replace injector motor. Clean tubing and pick-up. Contact service agent. Reposition wares or reduce amount of wares in dish racks. Reset or replace high limit. Reset or replace high limit. Clean nozzles with small paper clip.
Water has drained out of the wash tank while the dishwasher was idle.	Anti-siphoning loop in drain hose has been removed. Drain hose was extended. Drain hose clamp is not holding the drain hose in proper position. Building plumbing does not provide correct air vent to prevent siphoning.	Re-route drain hose. DO NOT STRETCH HOSE Replace/adjust hose clamp making sure goose-neck is maintained. Contact service Agent and/or plumber.
Dishwasher stays in wash cycle.	Rinse Sentry extends wash mode for a maximum time of 5-minutes to allow final rinse water booster temperature to reach 180˚F/82˚C.	Contact service agent.

Timer Board Diagnostics

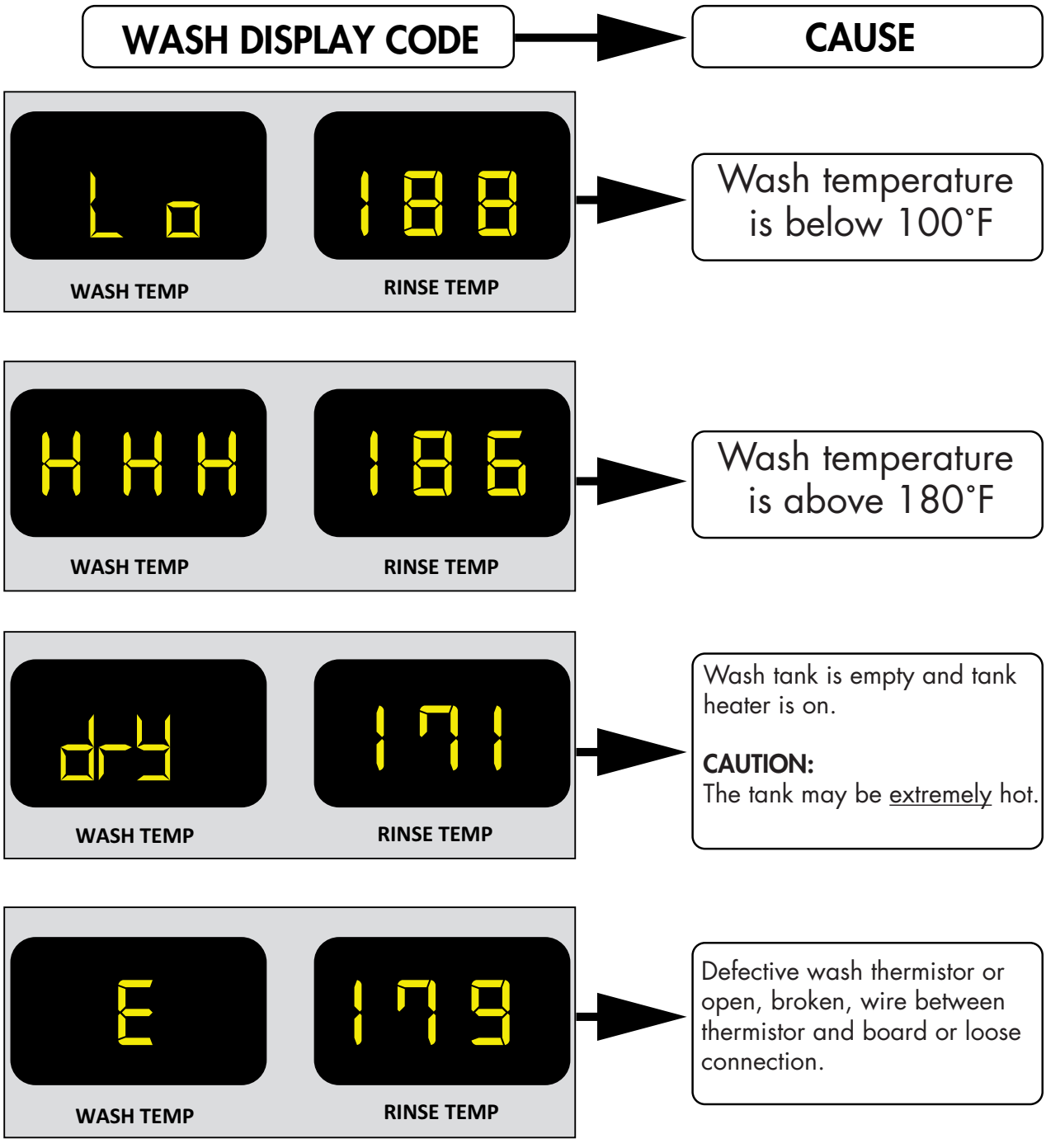
Follow the instructions below to quickly check the status of many machine components.



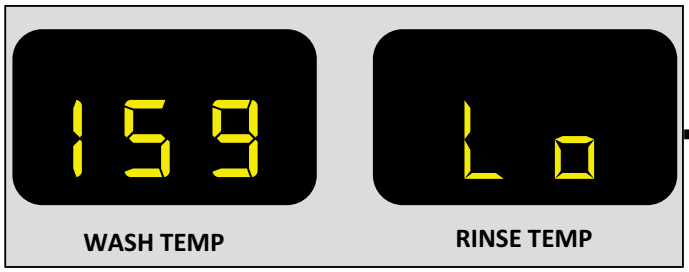
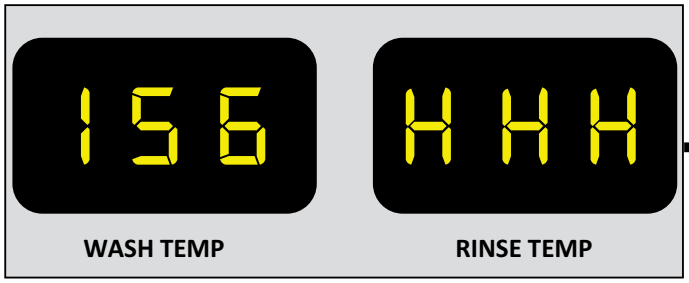
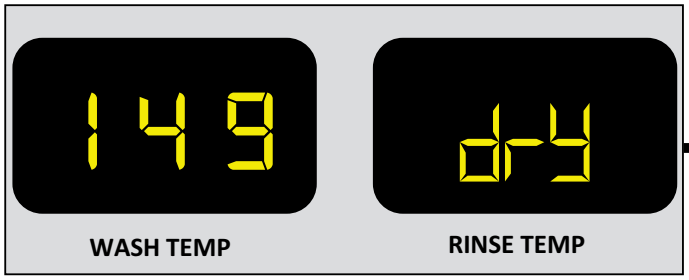
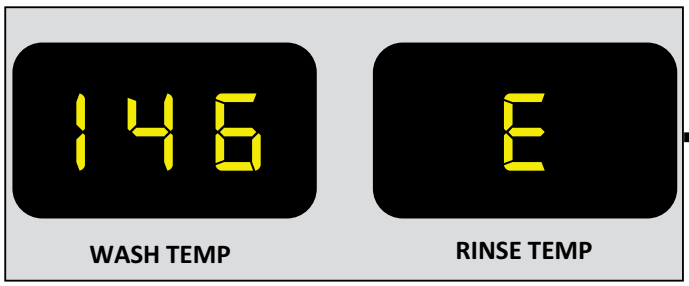
Digital Temperature Display Codes

Display codes that appear in the display windows indicate the operating condition of the machine. Refer to the illustrations below for the meaning of the codes.

Wash Display Codes

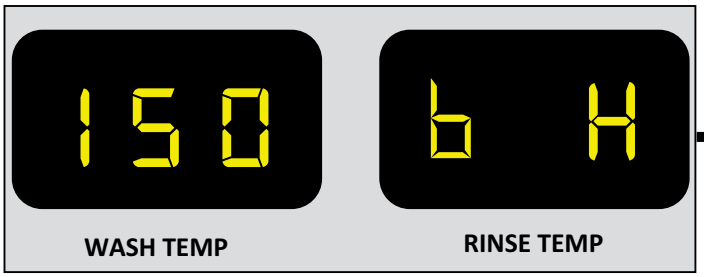
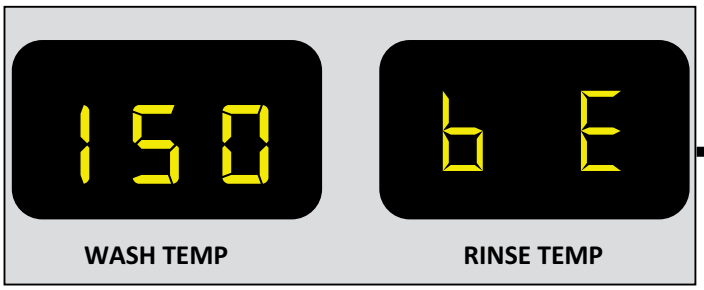
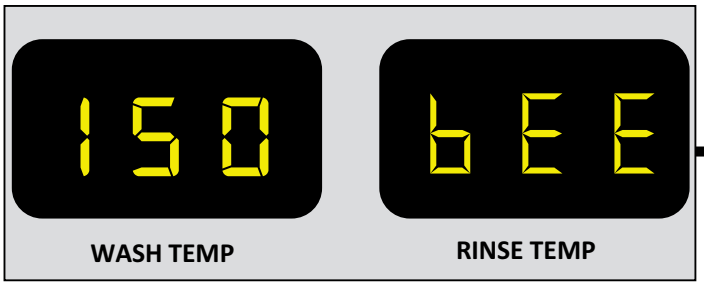


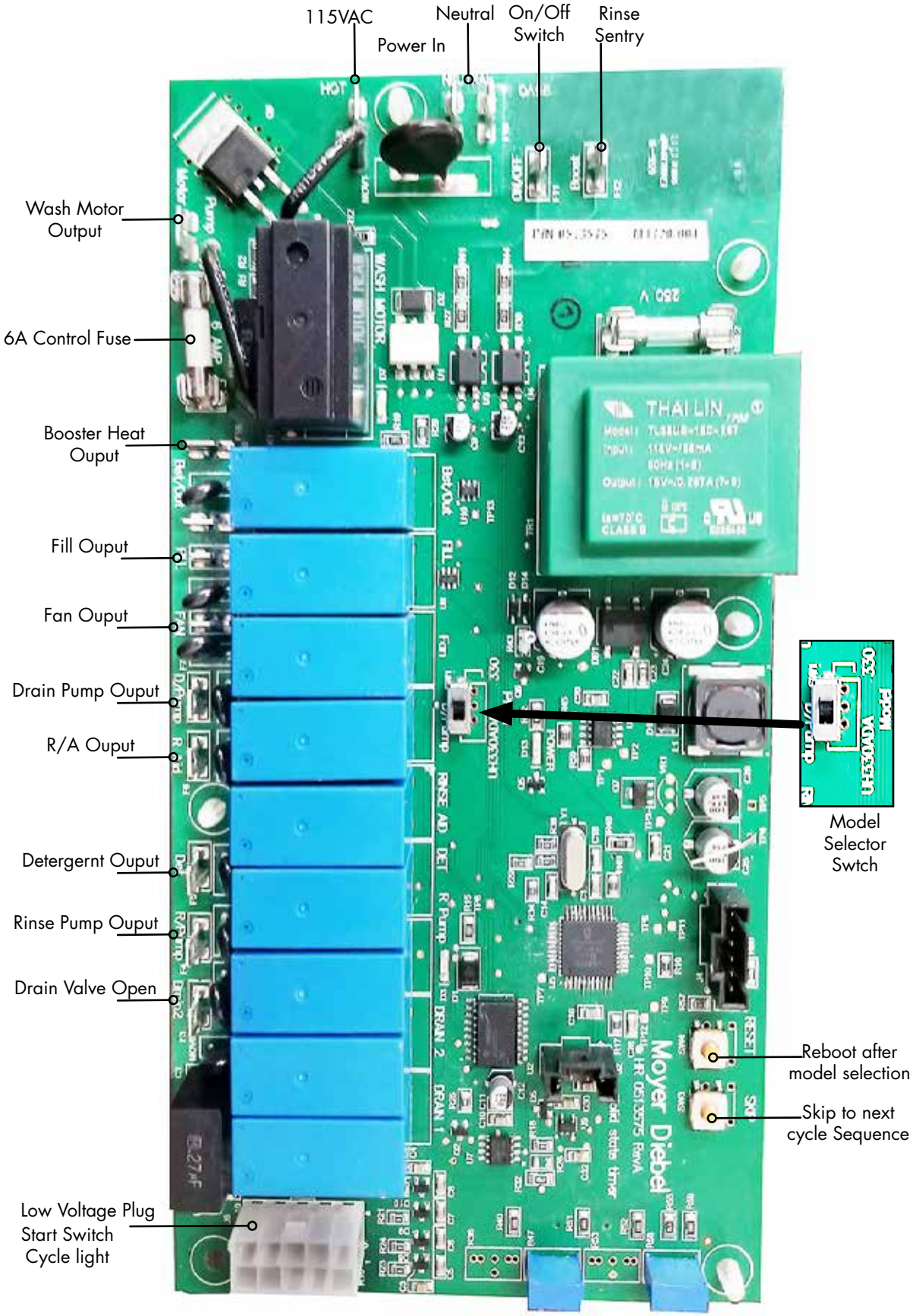
Rinse Display Codes

RINSE DISPLAY CODE	CAUSE
	Rinse temperature is below 100°F
	Rinse temperature is above 200°F
	Booster tank is empty & booster heater is on. **CAUTION:** Temperature in the booster may be extremely hot
	Defective rinse thermistor or open, broken, wire between thermistor and board or loose connection.

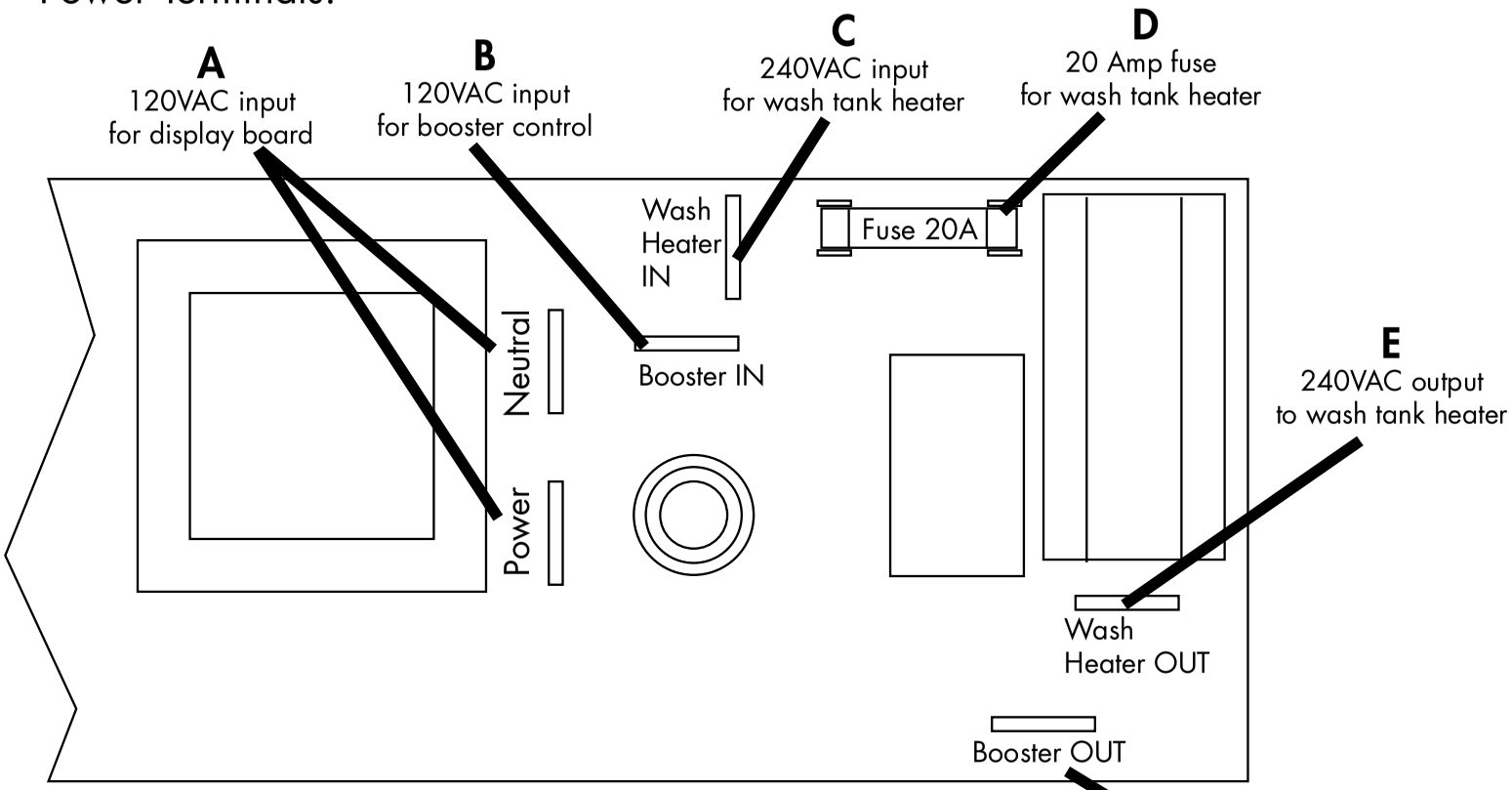
Booster Display Codes

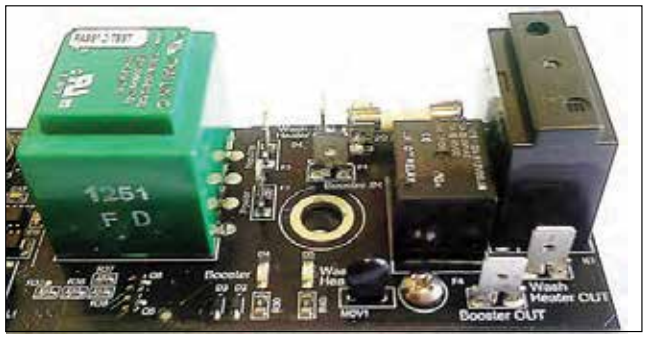
Error Codes for Booster and Final Rinse Thermistors Only.

DISPLAY CODES	CAUSE
	Booster overtemp lockout because booster temperature is greater than 210°F. **NOTE:** Booster is locked out for 10 minutes before being re-energized.
	Booster therrmistor is defective or disconnected, broken wires. **NOTE:** After the therrmistor is reconnected, there is a 5 second delay before the display is re-energized.
	Both booster and final rinse display thermistors are defective, unplugged, or open or broken wires between the display and thermistor. **NOTE:** After a therrmistor is reconnected, there is a 5 second delay before the display is re-energized.


115VAC
Power In
Neutral
On/Off Switch
Rinse Sentry
Wash Motor Output
6A Control Fuse
Booster Heat Ouput
Fill Ouput
Fan Ouput
Drain Pump Ouput
R/A Ouput
Detergernt Ouput
Rinse Pump Ouput
Drain Valve Open
Low Voltage Plug
Start Switch
Cycle light
Model Selector Swtch
Reboot after model selection
Skip to next cycle Sequence

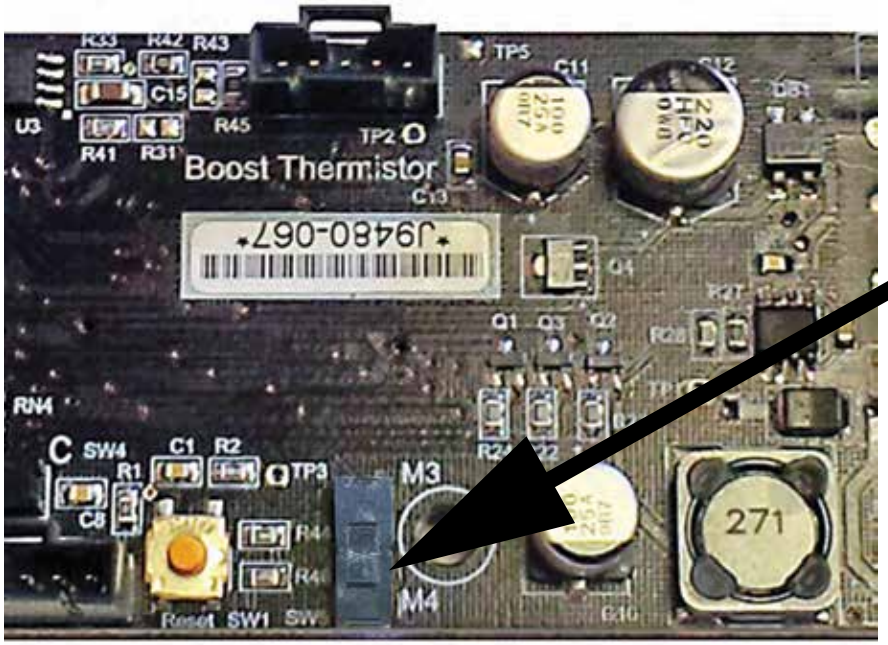
Undercounter Temperature Display Board — P/N 0512106-1
Power Terminals.

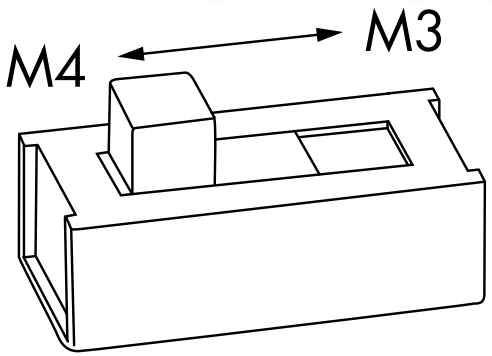




Undercounter Temperature Display Board — P/N 0512106-1

M3 - M4 Model Selector Slide Switch





! ATTENTION — VERY IMPORTANT !

Before installing a new version display board, you must select the model type using the M3 - M4 Switch located at the bottom center of the circuit board.

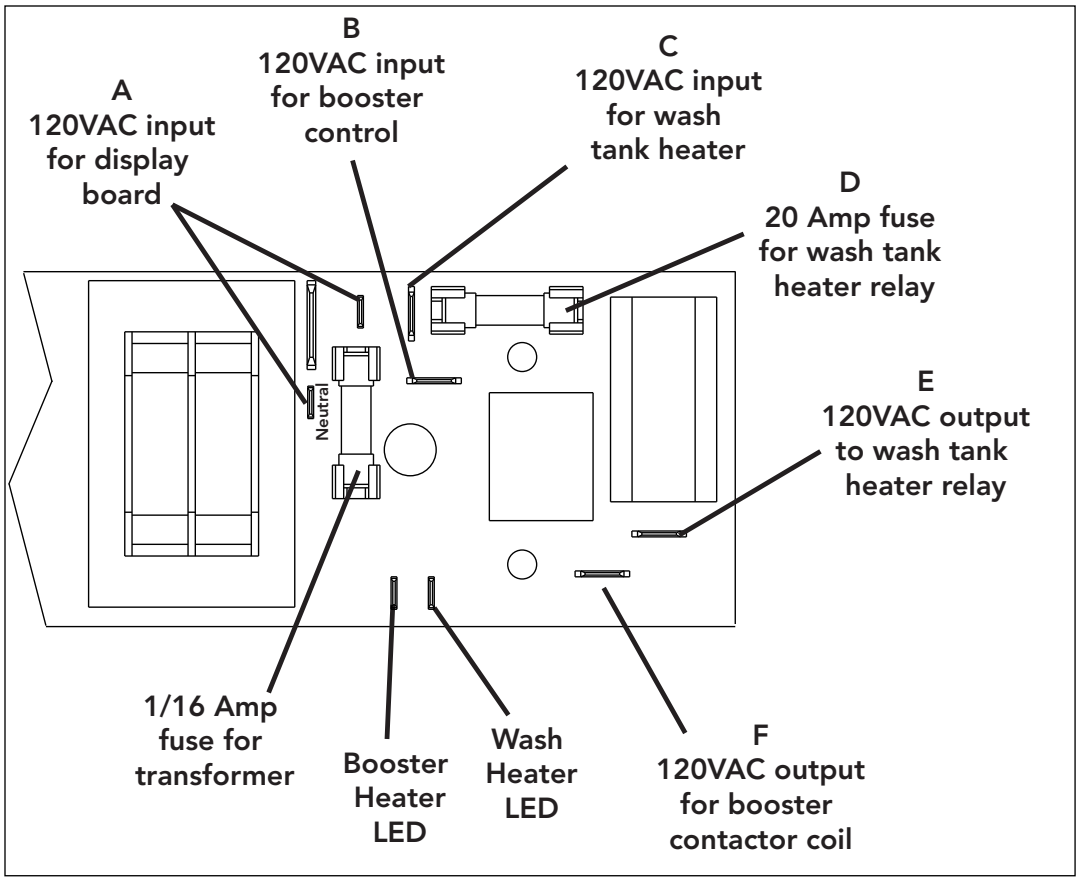
M3 Setting

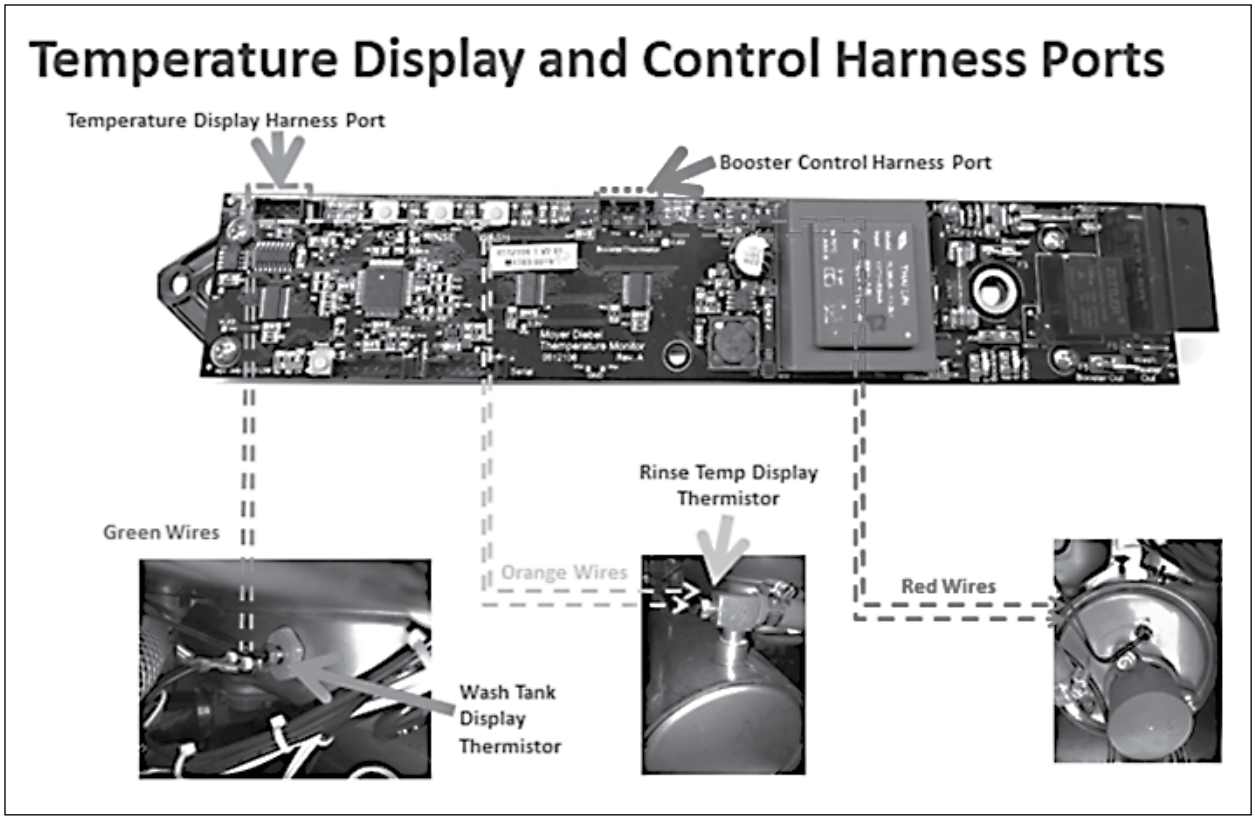
Slide the selector switch to the M3 position for machines equipped with thermostats.

M4 Setting

Slide the selector switch to the M4 position for machines equipped with thermistors only.

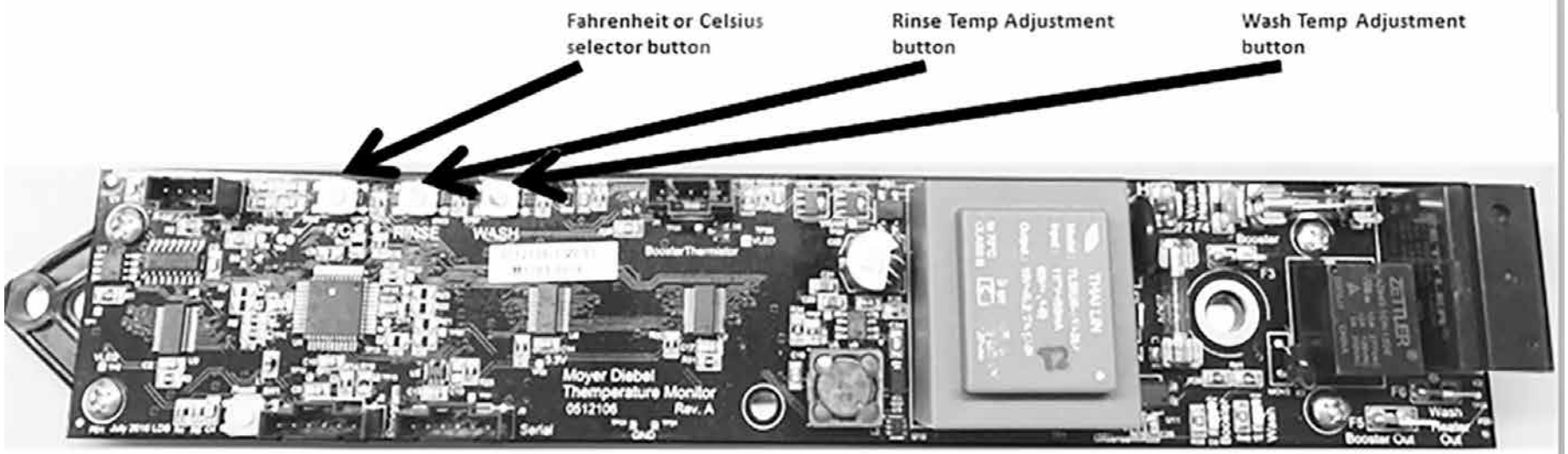
NOTE:
The machine will not operate properly if the selector switch is set to the wrong position.


A
120VAC input
for display
board
B
120VAC input
for booster
control
C
120VAC input
for wash
tank heater
D
20 Amp fuse
for wash tank
heater relay
E
120VAC output
to wash tank
heater relay
Neutral
1/16 Amp
fuse for
transformer
Booster
Heater
LED
Wash
Heater
LED
F
120VAC output
for booster
contactor coil


Temperature Display and Control Harness Ports
Temperature Display Harness Port
Booster Control Harness Port
Rinse Temp Display
Thermistor
Green Wires
Orange Wires
Red Wires
Wash Tank
Display
Thermistor

M4 Temperature Control Board Operation Explained

To adjust temperatures on M4 machines, push and hold the button of the target heat system. The display will begin to flash its temperature set point. Continue to push and release the button, and the available set points will scroll through the display. When you reach your desired temp set point, let go of the button, and the board will store the new setting.



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Service Replacement Parts

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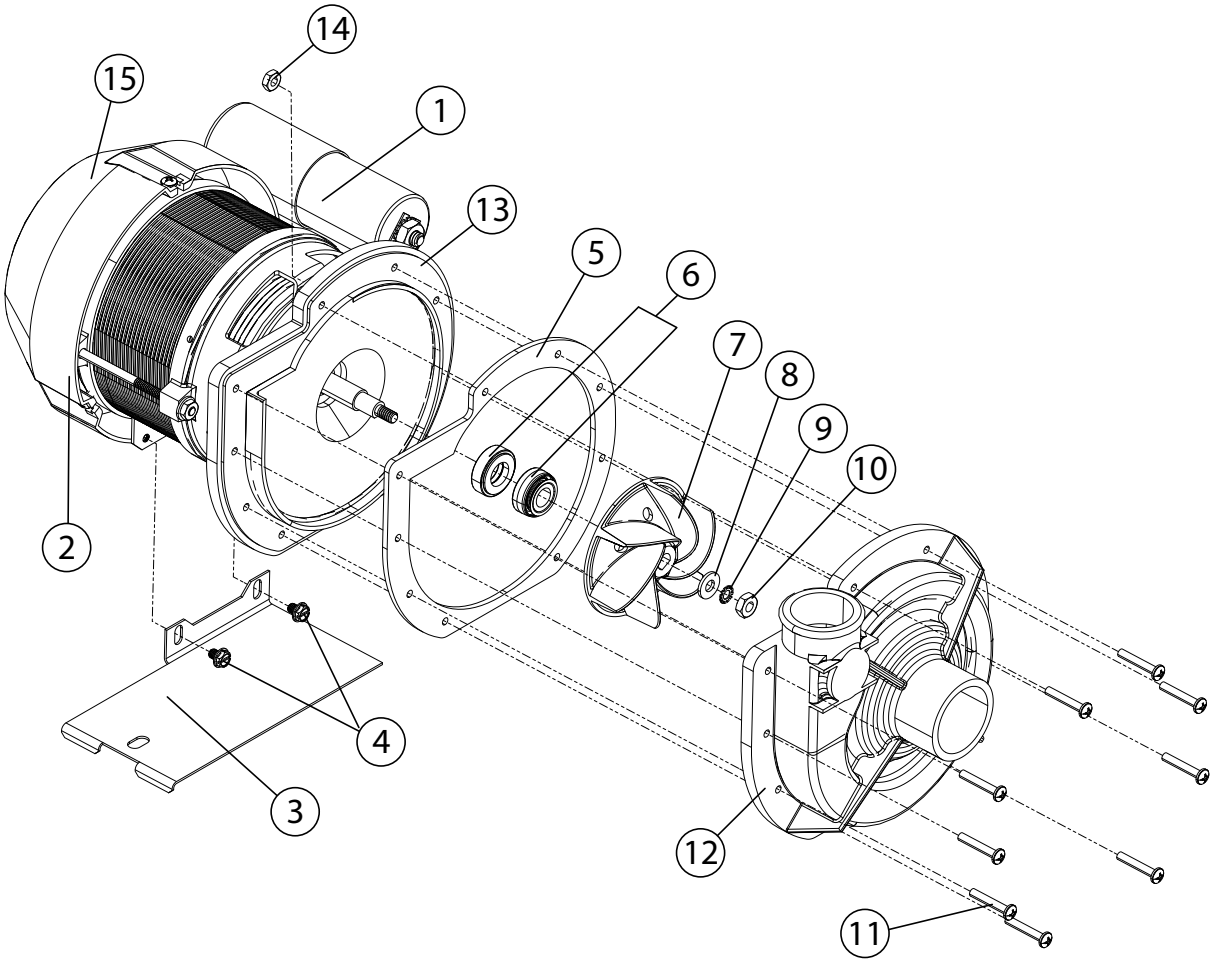
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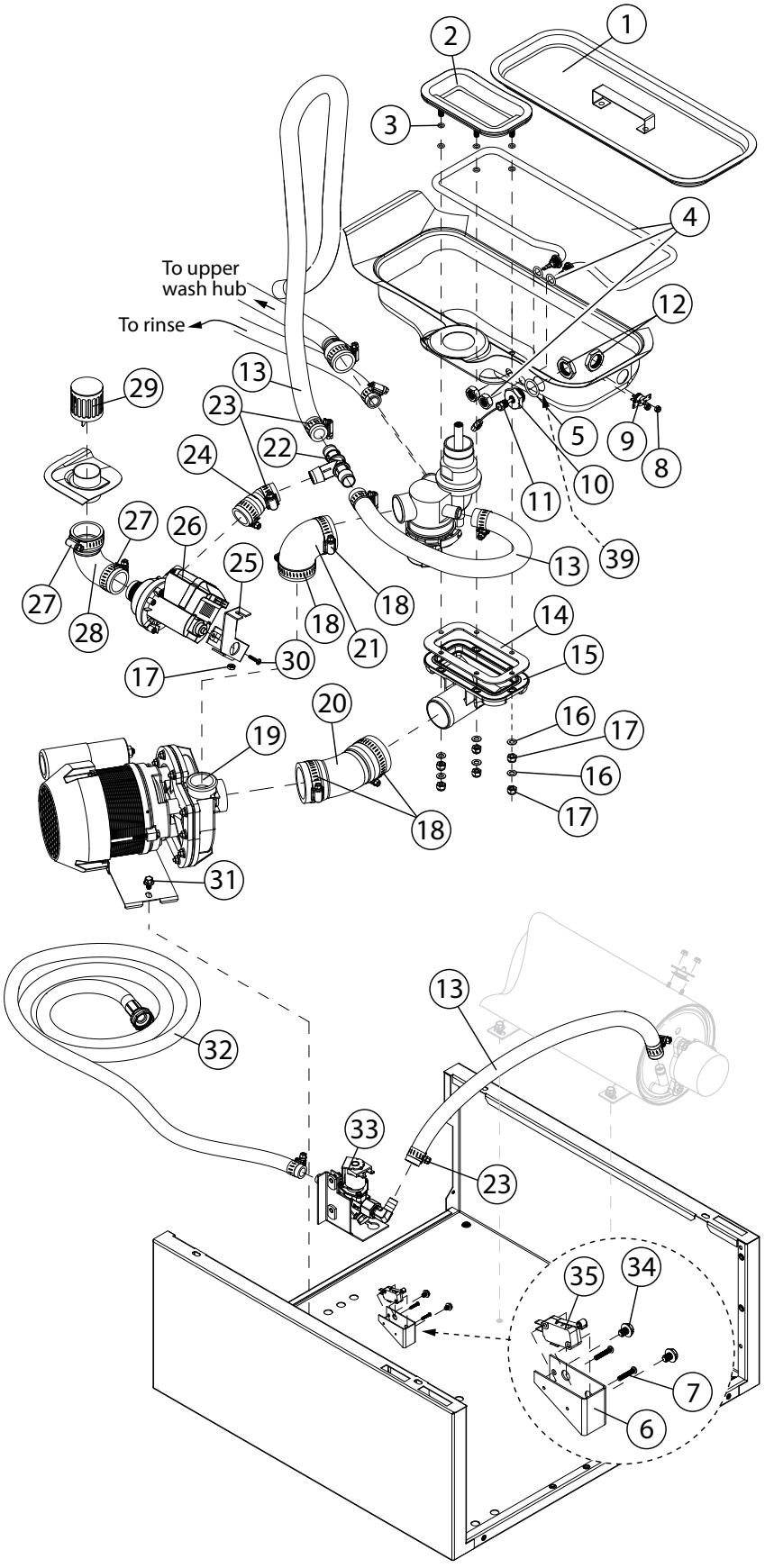
Item No.	Part No.	Description	Qty.
1	0512347	CAPACITOR 40μF	1
2	0512101	PUMP/MOTOR ASSEMBLY COMPLETE 115VAC/60/1	1
3	0313394	BRACKET, WASH PUMP	1
4	0512185	BOLT, HEX FLANGE 1/4-20 X 3/8" SST	2
5	110285	GASKET	1
6	114139	SEAL	1
7	0512345	IMPELLER	1
8	0501478	WASHER, PLAIN, 17/64"	1
9	106482	WASHER, LOCK, 1/4"	1
10	114144	NUT, M6	1
11	0512340	SCREW, M4, PHIL, PAN HD.	9
12	0512341	VOLUTE, PUMP	1
13	114137	BACKPLATE, PUMP	1
14	107337	NUT, M4	9
15	0513131	COVER, REAR MOTOR FAN	1

NOTE: The pump motor is not sold separately.

Base Assembly



Item No.	Part No.	Description	Qty.
1	0512136	SCREEN, SCRAP ASSY.	1
2	0513324	FLANGE, PUMP SUCTION	1
3	0513677	O-RING	A/R
4	0512426	HEATER, 240VAC 2000W	1
5	0512099	O-RING	1
6	0313432	BRACKET, DOOR SWITCH	1
7	0508752	SCREW, 4-40 X 5/8" RH. HD. PHILL. SST	2
8	108954	NUT, GRIP 6-32 WITH NYLON INSERT SST	2
9	113604	THERMOSTAT, HI-LIMIT BI-METAL SNAP, 212°F	1
10	0512299	ADAPTOR, THERMISTOR	1
11	0513310	THERMISTOR, 10 KΩ, 2 WIRE ASSY, WASH TANK	1
12	201029-1	NUT, LOCK 1/2 INCH NI PLATED	A/R
13	0509302	HOSE, 5/8" ID X 1" OD	A/R
14	0513329	GASKET, PUMP SUCTION	1
15	0513324	ELBOW, PUMP SUCTION	1
16	0501476	WASHER	6
17	107967	NUT, 1/4-20 W/NYLON INSERT SST	6
18	0502571	CLAMP, HOSE 1-1/16" - 2"	2
19	0512101	PUMP/MOTOR COMPLETE 115/60/1	1
20	0513328	HOSE, PUMP SUCTION	1
21	0512119	HOSE, PUMP DISCHARGE	1
22	0512134	TEE, 3/4", POLY.	1
23	0508808	CLAMP, SS GEAR	2
24	0508549	HOSE, MOULDED (CUT TO FIT) 1-1/4"	1
25	0312145	BRACKET, DRAIN PUMP UH330 ADA	1
26	0512227	PUMP, DRAIN 115VAC	1
27	0512322	CLAMP, HOSE	2
28	0513339	HOSE, OVERFLOW	1
29	0712236-1	TUBE, OVERFLOW GUARD	1
30	109835	SCREW #8 X 1/2" SELF-TAPPING SST	1
31	0512185	BOLT, HEX FLANGE 1/4-20 X 3/8" SST	1
32	0509526	HOSE, 1/2" X 7 FT. FEM. GARD. ADAPT.	1

Item No.	Part No.	Description	Qty.
33	0513557	VALVE, FILL 1.0 GPM	1
34	0512792	SCREW, 10-32 X 1/4" RD. HD. PHILL. SST	2
35	0501379	SWITCH, 15A	1

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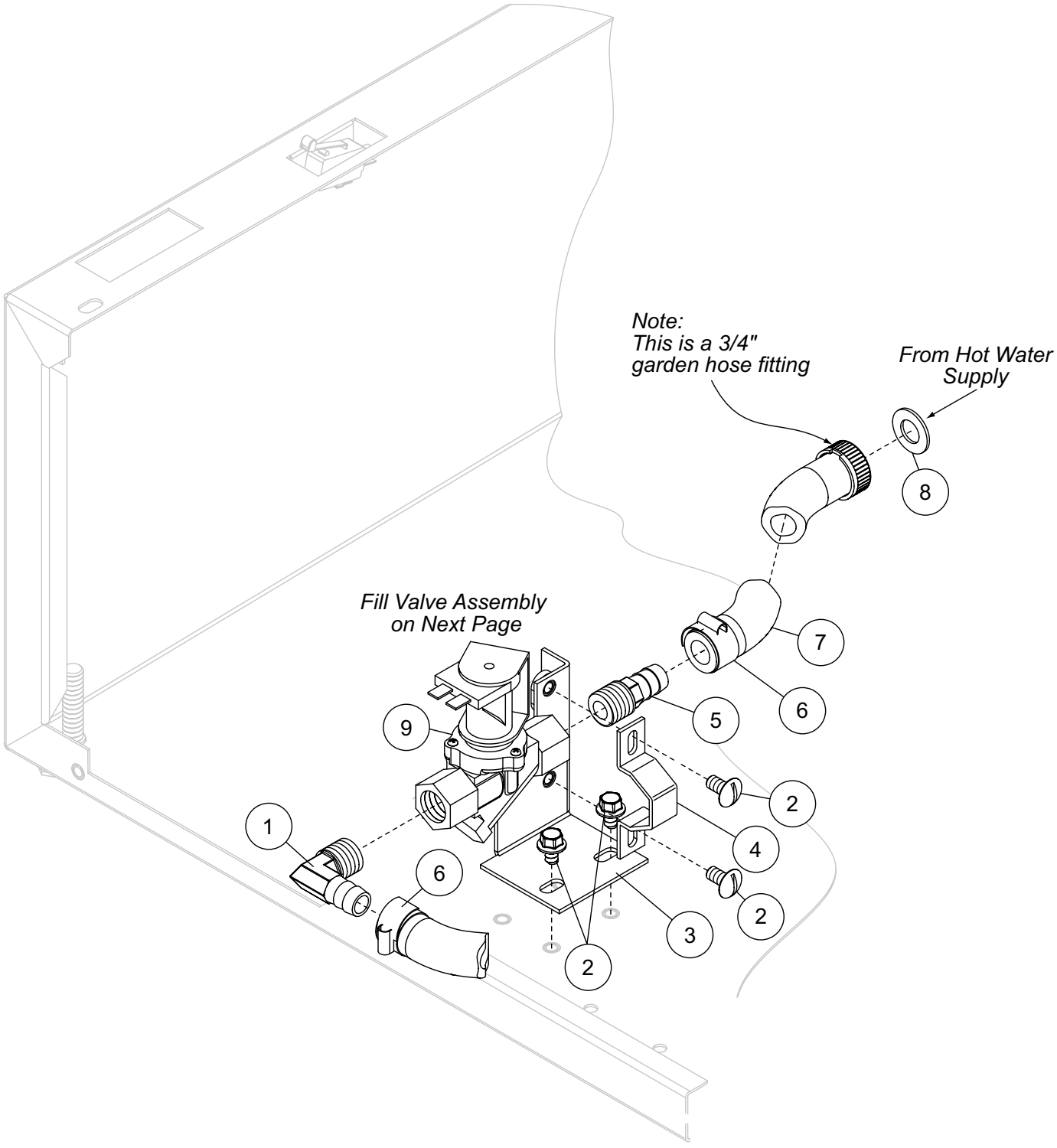
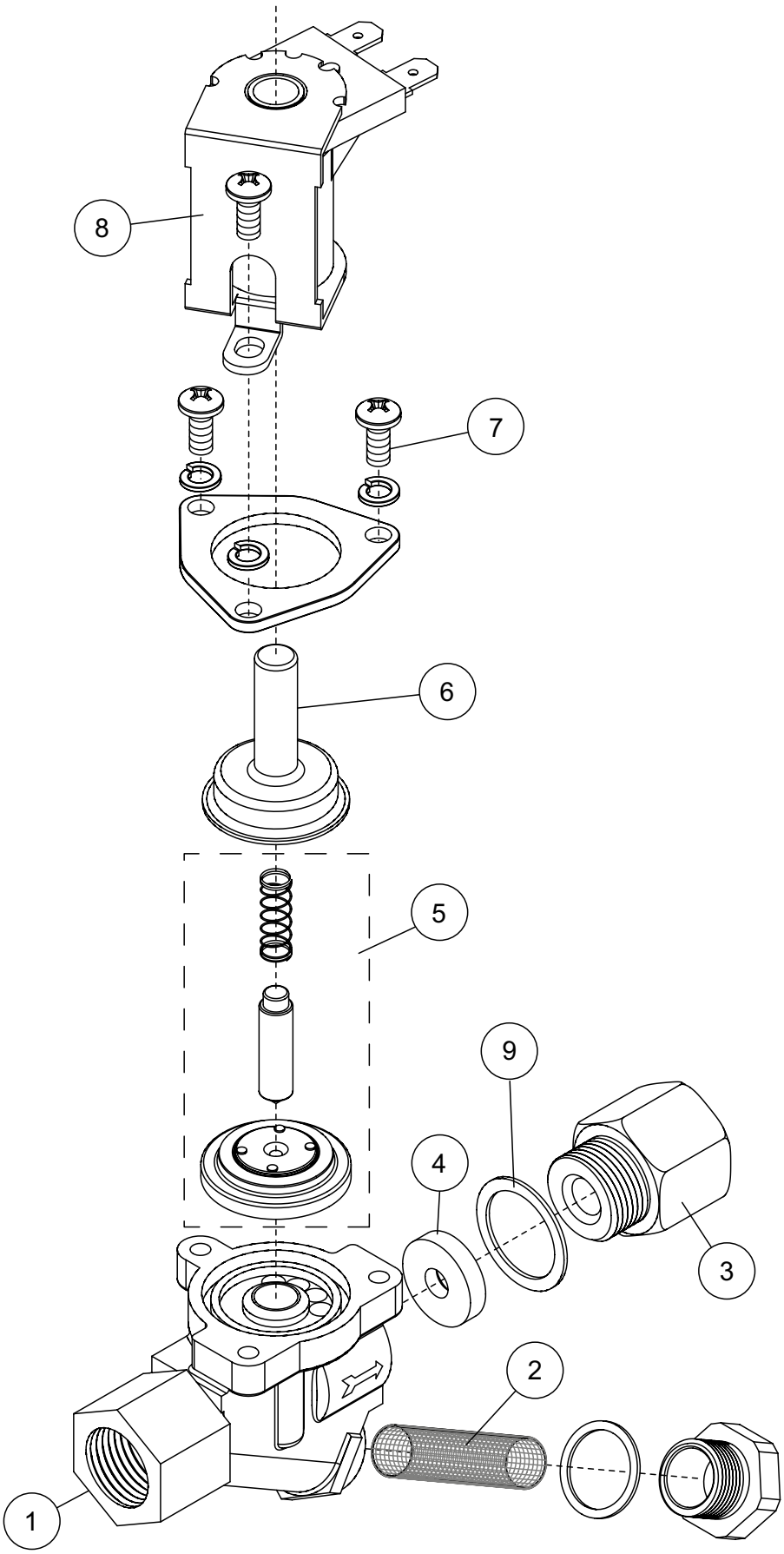
Fill Piping Assembly



Item No.	Part No.	Description	Qty.
1	0502653	ELBOW, 90° 3/8" MPT X 1/2" HOSE	1
2	0512185	BOLT, HEX FLANGE 1/4-20 X 3/8" SST	4
3	0300065	SUPPORT, VALVE	1
4	0300203	CLAMP, VALVE	1
5	0502618	HOSE BARB, 1/2" X 3/8" MPT	1
6	0512985	CLAMP, HOSE	1
7	0509526	HOSE, 1/2" X 7 FT. FEM. GARD. ADAPT.	1
8	0505320	WASHER, 1" OD GARDEN HOSE	1
9	0504952	VALVE, FILL, 3/8" NPT	1
–	0513557	VALVE, FILL 1.0 GPM	1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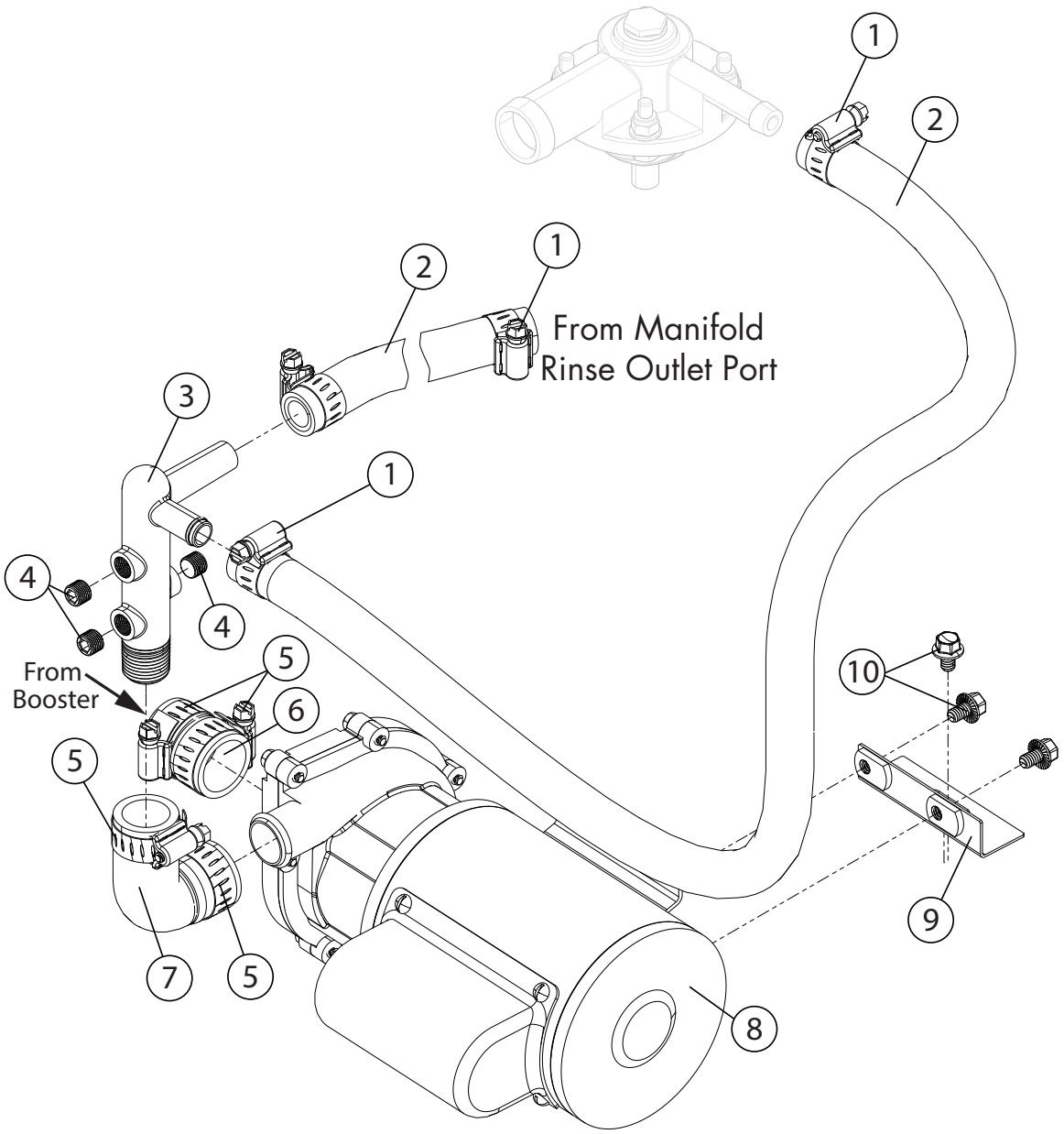
Item No.	Part No.	Description	Qty.
1	0513557	VALVE, FILL 1.0 GPM	1
2	0502803	SCREEN, VALVE STRAINER	1
3	0502804	GASKET, CAP	1
4	0513674	WASHER, FLOW 1.0 GPM	1
5	0502811	KIT, REBUILD	1
6	0505229	GUIDE	1
7	0501406	SCREW, SLOT SS RH 8-32 X 1/2"	3
8	0505235	COIL, 115V 60HZ 10W	1
9	0502807	GASKET, OUTLET (COPPER)	1


1
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From Manifold
Rinse Outlet Port
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1
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From
Booster
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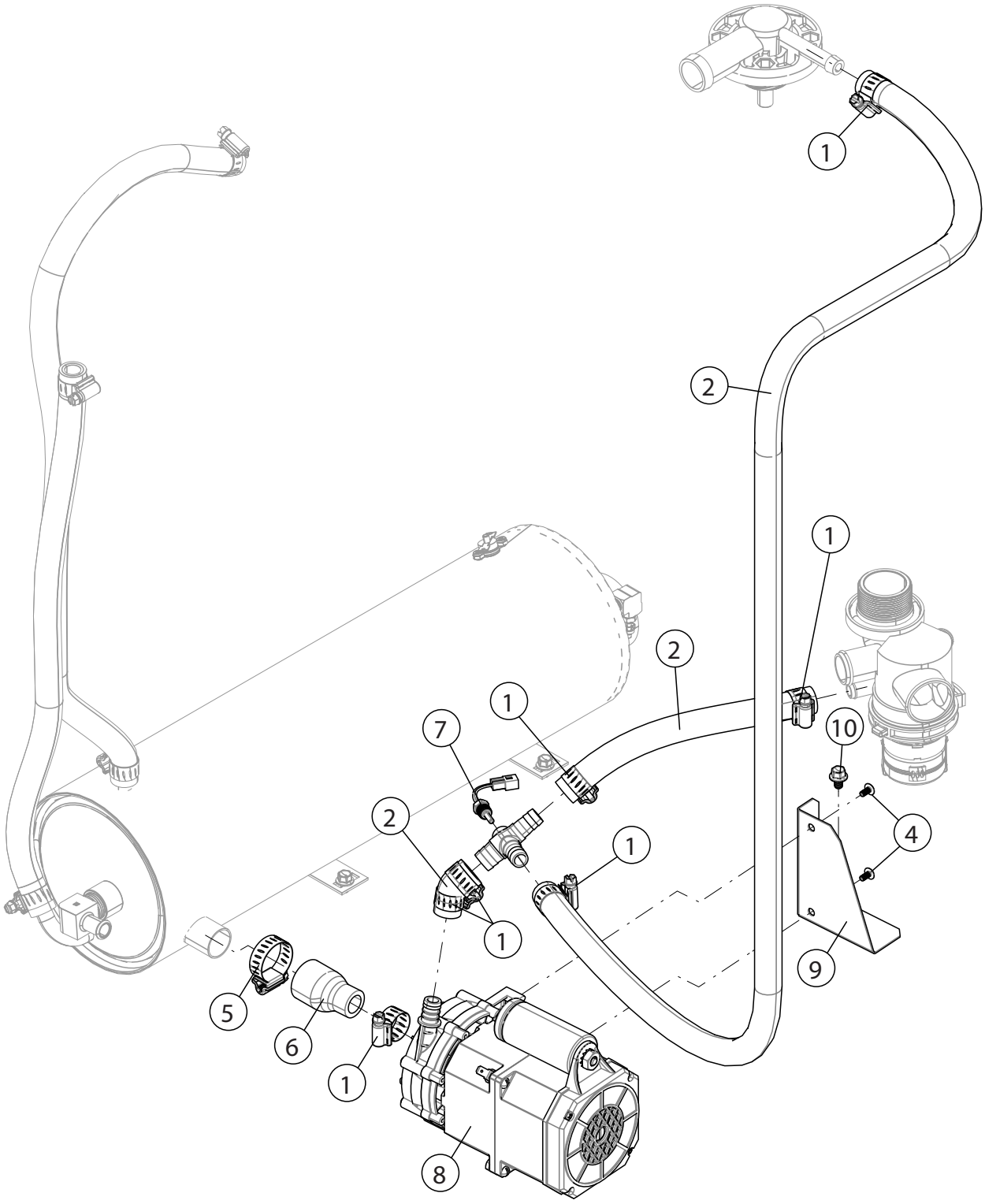
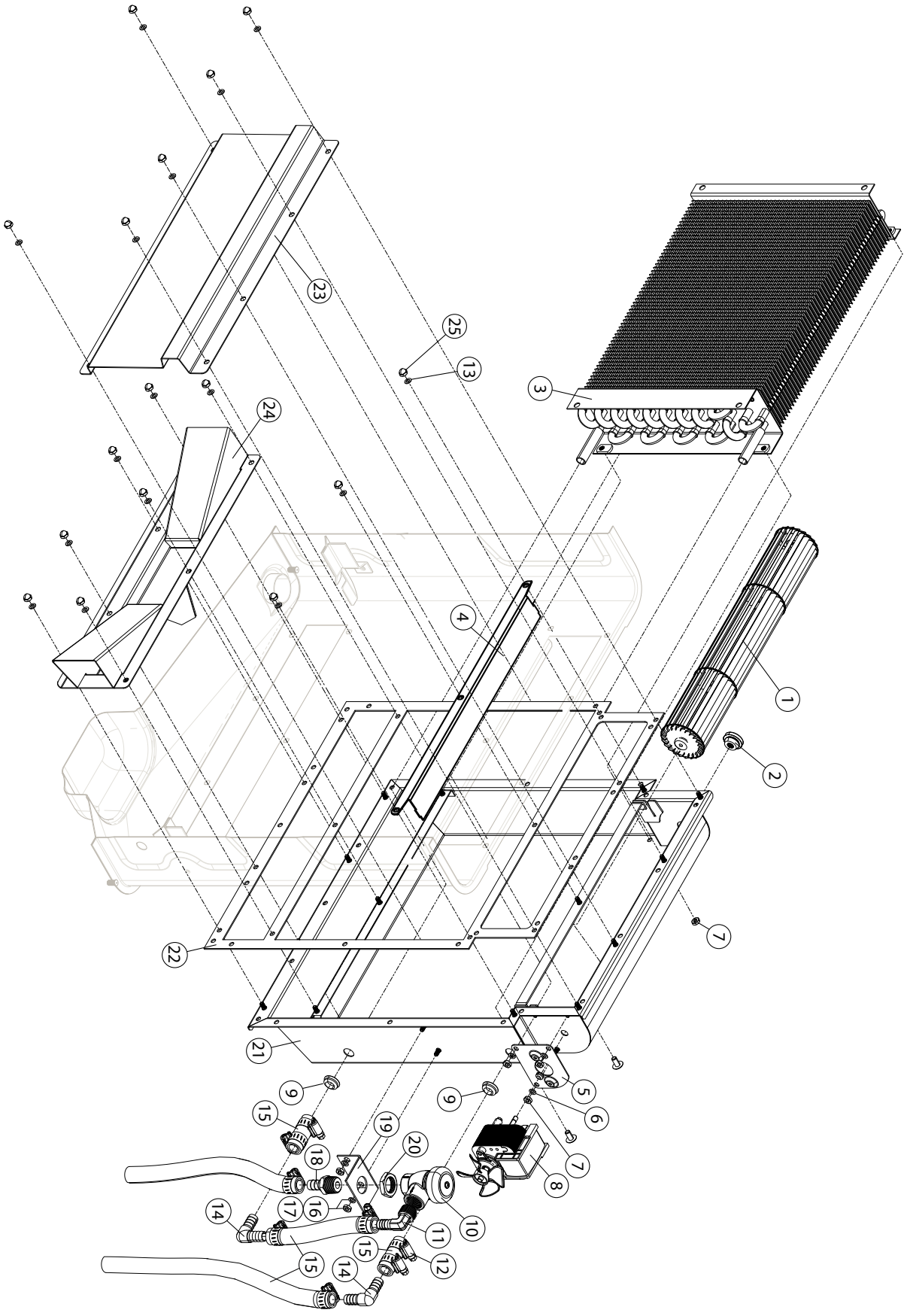
Item No.	Part No.	Description	Qty.
1	0512985	CLAMP, HOSE	A/R
2	107417	HOSE, RUBBER 1/2" ID X .84" OD	A/R
3	0513110	MANIFOLD, RINSE	1
4	0508817	PLUG, 1/8" HEX COUNTERSUNK	3
5	0502563	CLAMP	2
6	0513679	HOSE, 1" ID X 1-3/8" BRAIDED	1
7	0513613	HOSE, MOLDED, RINSE DISCHARGE	1
8	115231	PUMP/MOTOR, RINSE	1
9	0313610	BRACKET, RINSE PUMP	1
10	0512185	BOLT, HEX FLANGE 1/4-20 X 3/8" SST	2

Final Rinse Piping - UH330 ADA beginning with S/N W170568116 and above



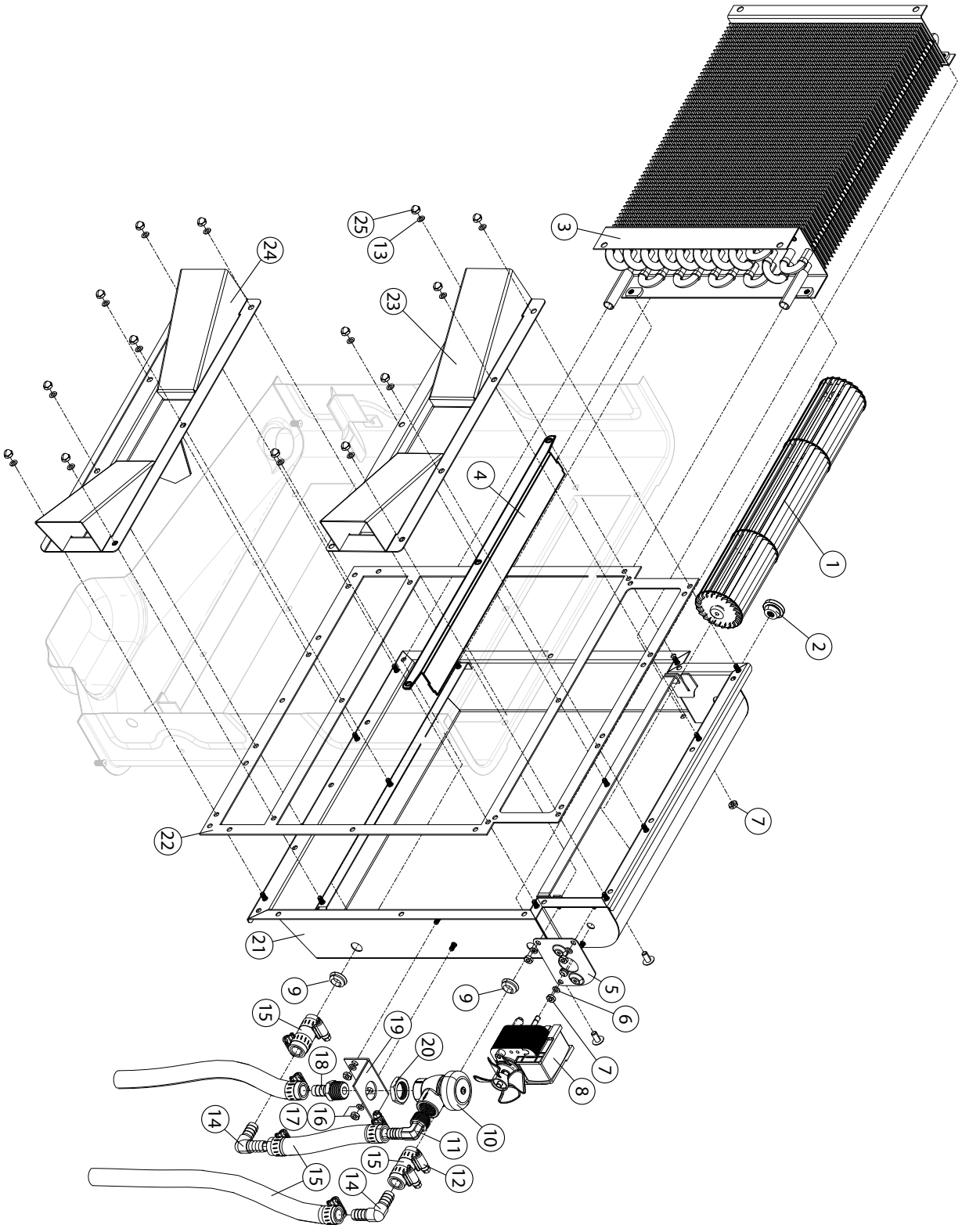
Item No.	Part No.	Description	Qty.
1	0512985	CLAMP, HOSE	6
2	107417	HOSE, RUBBER 1/2" ID X .84" OD	A/R
3	0514324	MANIFOLD, RINSE PUMP	1
4	104624	SCREW, 8-32 X 3/8" TRUSS HEAD	2
5	0502563	CLAMP	1
6	0514323	HOSE, MOLDED RINSE SUCTION	1
7	112612	THERMISTOR, 10KΩ, 2-WIRE ASSY.	1
8	0514317	PUMP, RINSE 115VAC, HR M4.2	1
9	0314319	BRACKET, PUMP MOUNT	1
10	0512185	BOLT, HEX FLANGE 1/4-20 X 3/8" SS	1

Heat Recovery Assembly - Prior to S/N W170568116

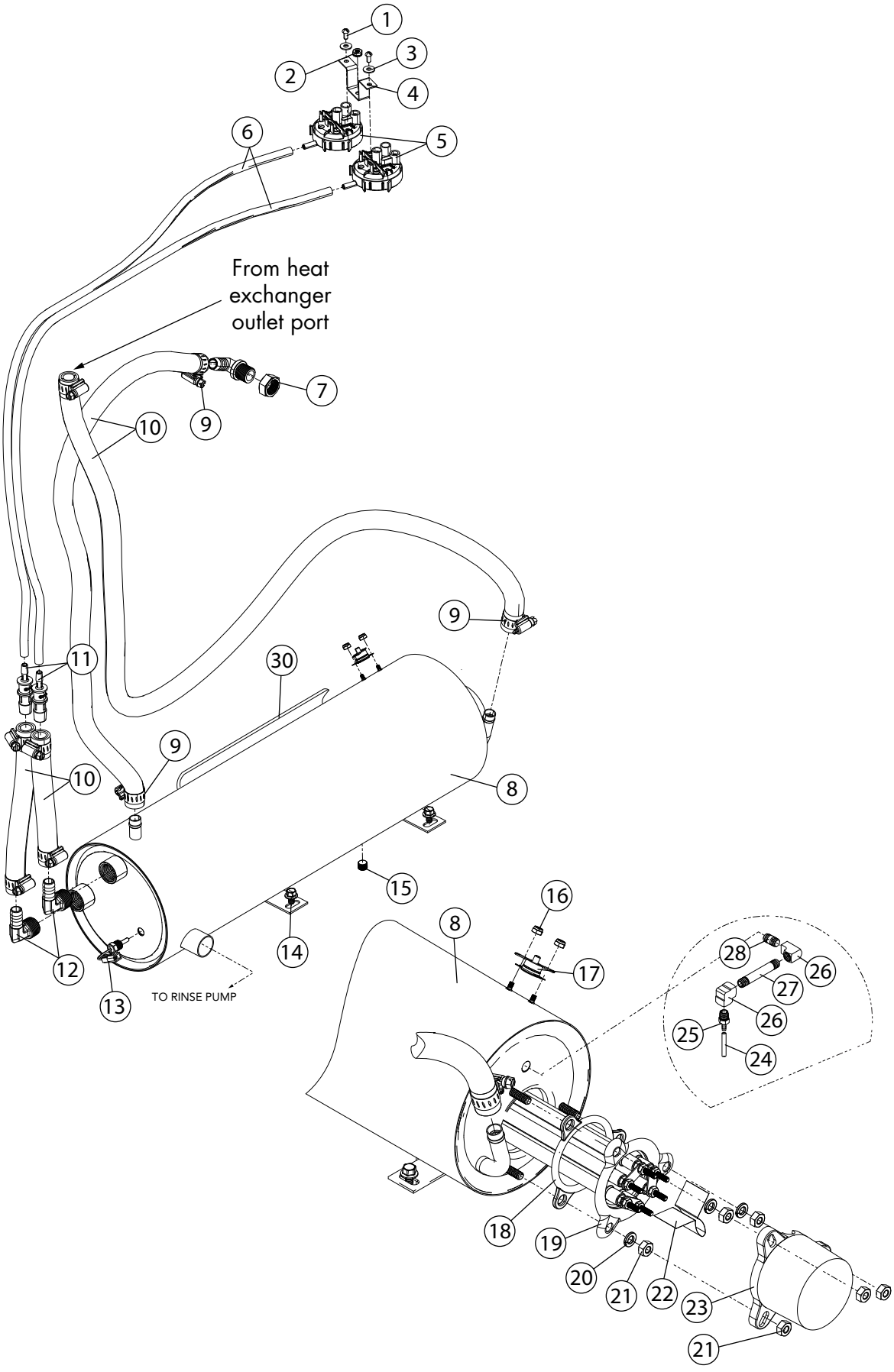


Item No.	Part No.	Description	Qty.
1	0513572	BLOWER	1
2	0513574	BEARING (COMES WITH RUBBER HSG.)	2
3	0514240	COIL, HEAT RECOVERY	1
4	0313599	DEFLECTOR, FAN AIR	1
5	0313594	MOUNT, FAN MOTOR	1
6	0513733	SEAL, V-RING 1/4"	2
7	0503580	NUT, 10-32 SST	A/R
8	0513573	MOTOR, BLOWER 115VAC	1
9	0513732	SEAL, V-RING 1/2"	2
10	100500	BREAKER, VACUUM	1
–	900836	REPAIR KIT, VACUUM BREAKER 1/2"	A/R
11	0508782	ELBOW, 1/2" X 1/2" HOSE BARB	1
12	0512985	CLAMP, HOSE	4
13	0507709	WASHER	A/R
14	0513648	ELBOW, 1/2" HOSE	2
15	107417	HOSE, RUBBER 1/2" ID X .84" OD	A/R
16	100003	NUT, HEX 1/4-20 SST	2
17	106482	WASHER, SPLIT LOCK 1/4" SST	2
18	0502651	COUPLER, 1/2" MPT X 1/2" HOSE	1
19	0312190	BRACKET, VACUUM BREAKER	1
20	201029-1	NUT, LOCK 1/2" NICKEL PLATED	1
21	0714243	HOUSING, COIL	1
22	0514241	GASKET, HOUSING	1
23	0314282	DEFLECTOR, UPPER AIR	1
24	0713566	DEFLECTOR, LOWER AIR	1
25	106481	NUT, CAP 10-32 SST	A/R

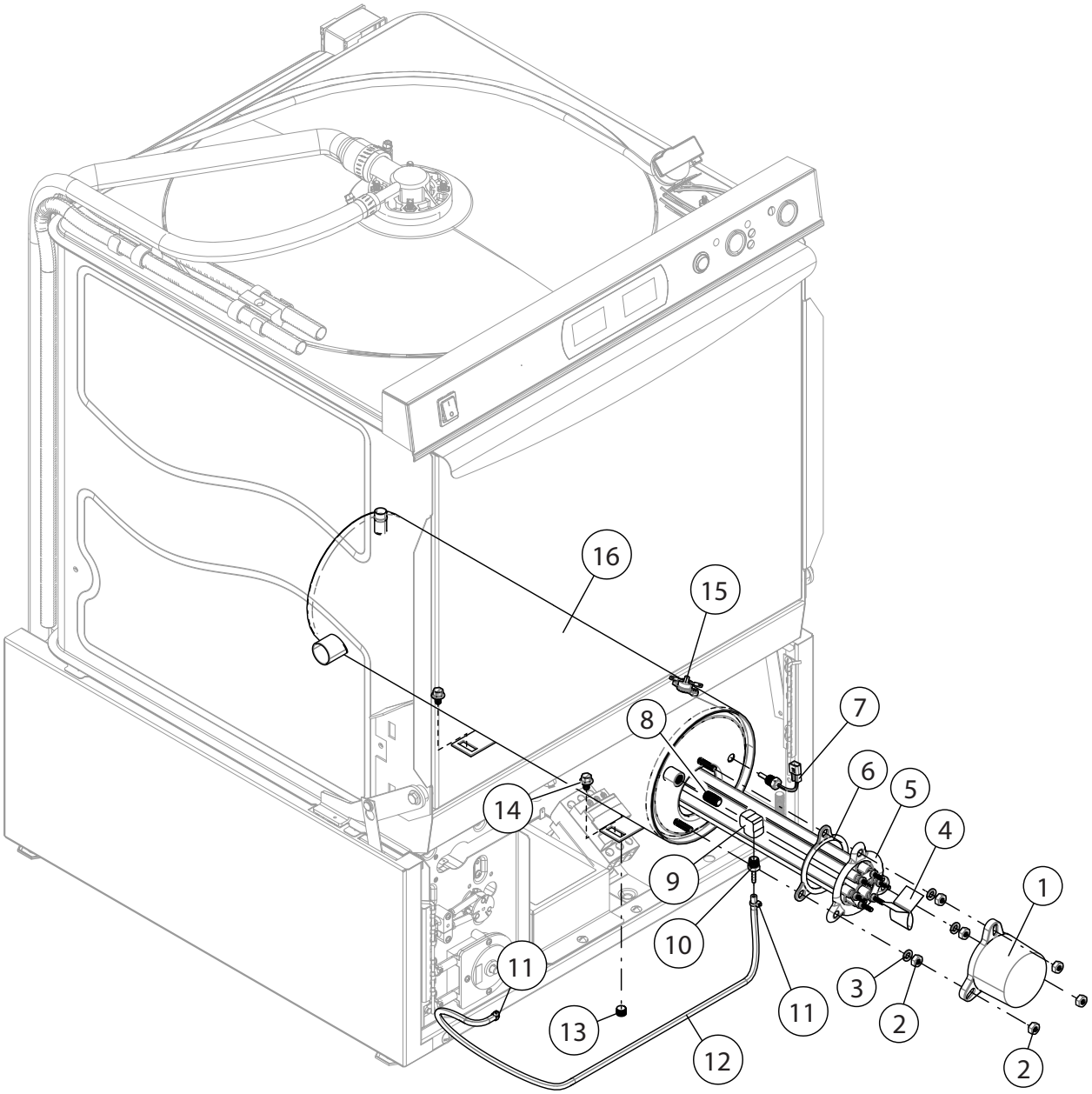
Heat Recovery Assembly - beginning with S/N W170568116 above



Item No.	Part No.	Description	Qty.
1	0513572	BLOWER	1
2	0513574	BEARING (COMES WITH RUBBER HSG.)	2
3	0514293	COIL, HEAT RECOVERY M4.2	1
4	0314311	DEFLECTOR, FAN AIR M4.2	1
5	0313594	MOUNT, FAN MOTOR	1
6	0502808	WASHER	2
7	0503580	NUT, 10-32 SST	A/R
8	0513573	MOTOR, BLOWER 115VAC	1
9	0513732	SEAL, V-RING 1/2"	2
10	100500	BREAKER, VACUUM	1
–	900836	REPAIR KIT, VACUUM BREAKER 1/2"	A/R
11	0508782	ELBOW, 1/2" X 1/2" HOSE BARB	1
12	0512985	CLAMP, HOSE	4
13	0501476	WASHER	A/R
14	0514316	ELBOW, 1/2" COMP. X 3/8" MNPT BRASS	1
15	107417	HOSE, RUBBER 1/2" ID X .84" OD	A/R
16	100003	NUT, HEX 1/4-20 SST	2
17	106482	WASHER, SPLIT LOCK 1/4" SST	2
18	0502651	COUPLER, 1/2" MPT X 1/2" HOSE	1
19	0314312	BRACKET, VACUUM BREAKER M4.2	1
20	201029-1	NUT, LOCK 1/2" NICKEL PLATED	1
21	0714299	HOUSING, COIL M4.2	1
22	0514313	GASKET, HOUSING M4.2	1
23	0714300	DEFLECTOR, AIR M4.2	1
24	0507324	VALVE, CHECK 3/8"	1
25	106014	NUT, ACORN 1/4-20 SST	A/R
26	0502618	BARB, HOSE 1/2" X 3/8" MPT	1
27	0514322	HOSE, HEAT EXCHANGE COIL SUPPLY M4.2	1
28	100007	SCREW, 10-32 X 3/8" TRUSS HEAD SST	A/R


From heat exchanger outlet port
TO RINSE PUMP

Item No.	Part No.	Description	Qty.
1	109835	SCREW, #8 X 1/2" PAN HD. PHIL. SST	4
2	0503580	NUT 10-32 SST	4
3	0507709	WASHER, FLAT #10 SST	4
4	0313587	BRACKET, PRESSURE SWITCH	2
5	H31171	SWITCH, PRESSURE	2
6	H160121	HOSE, EPDM	A/R
7	0513731	ELBOW, 1/4 NPT X 1/2" HOSE (C/W NUT)	1
8	0713565	TANK, BOOSTER	1
9	0512985	HOSE, CLAMP	A/R
10	107417	HOSE, RUBBER 1/2" ID X .84" OD	A/R
11	0513650	ADAPTER, 1/2" X 1/4" HOSE	2
12	0508782	ELBOW, 1/2" NPT X 1/2" HOSE	2
13	0513310	THERMISTOR, 10 KΩ, 2-WIRE	1
14	0512185	BOLT, HEX FLANGE 1/4-20 X 3/8" SST	2
15	0508817	PLUG, 1/8"	1
16	108954	NUT, GRIP 6-32 W/NYLON INSERT	2
17	110562	THERMOSTAT, HIGH LIMIT 240°F	1
18	109985	SEAL, ELEMENT BOOSTER	1
19	111235-1	BOOSTER, ELEMENT 5 KW	1
20	106482	WASHER, LOCK 1/4" SPLIT SST	3
21	100003	NUT, PLAIN 1/4-20 SST	6
22	111885	INSULATOR	1
23	107908	COVER, ELEMENT	1
24	112883-1	TUBING, 1/8" OD X 1/16" ID (RINSE-AID)	A/R
25	0514158	ADAPTER, 1/8" HOSE X 1/8" MNPT BRASS	1
26	0514156	ELBOW, 1/8" X 1/8" NPT BRASS	2
27	0514155	NIPPLE, 1/8" X 2" BRASS	1
28	100939	NIPPLE, CLOSE 1/8" NPT BRASS	1
29	0512790	INSULATION, BOOSTER TANK	1
—	0513538	HARNESS, BOOSTER CONTROL WIRING *(Not Shown)*	1
—	0714170	KIT, BOOSTER SERVICE (Includes items 12,13,15,17,18,26-30. Does not include item 19)	A/R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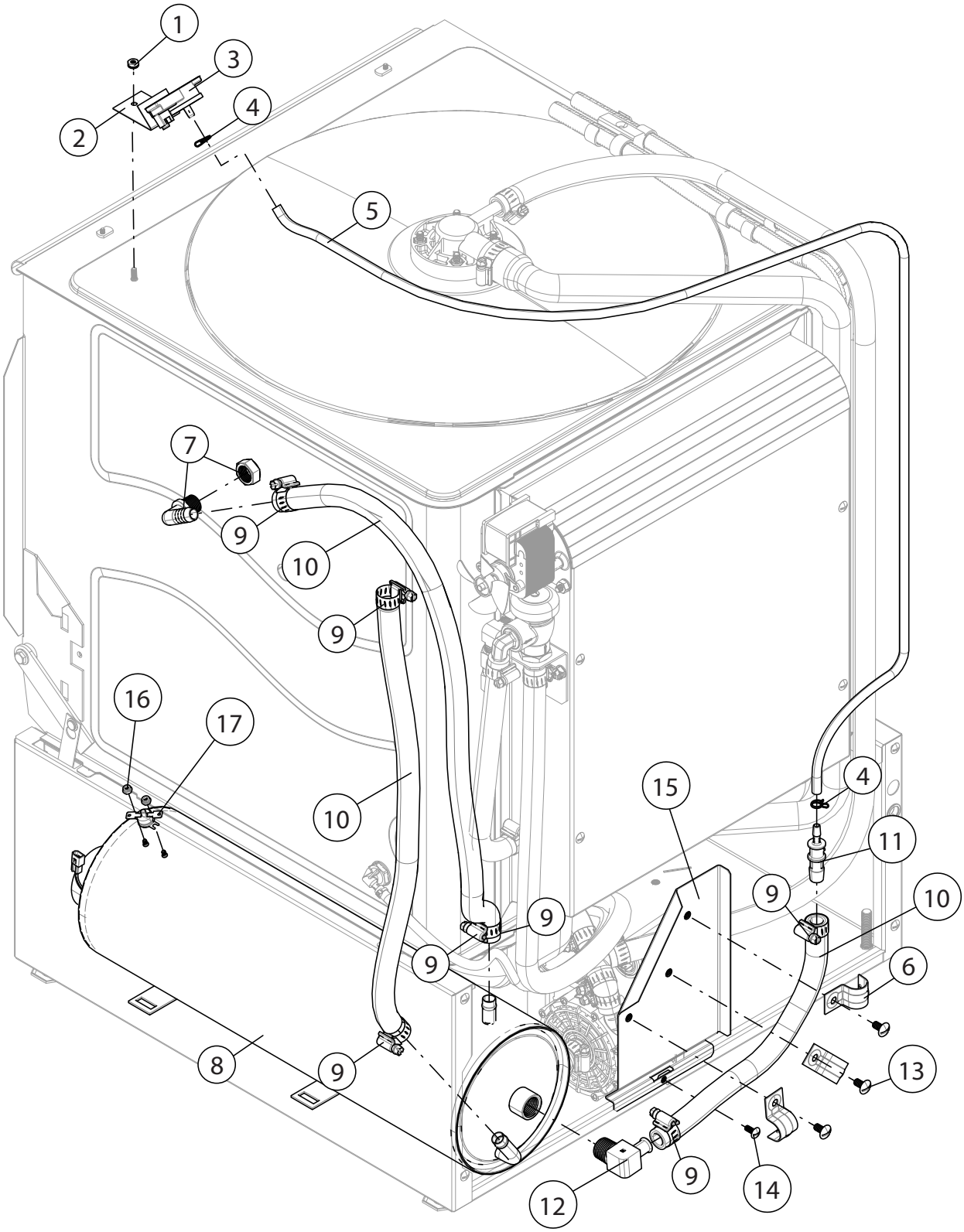
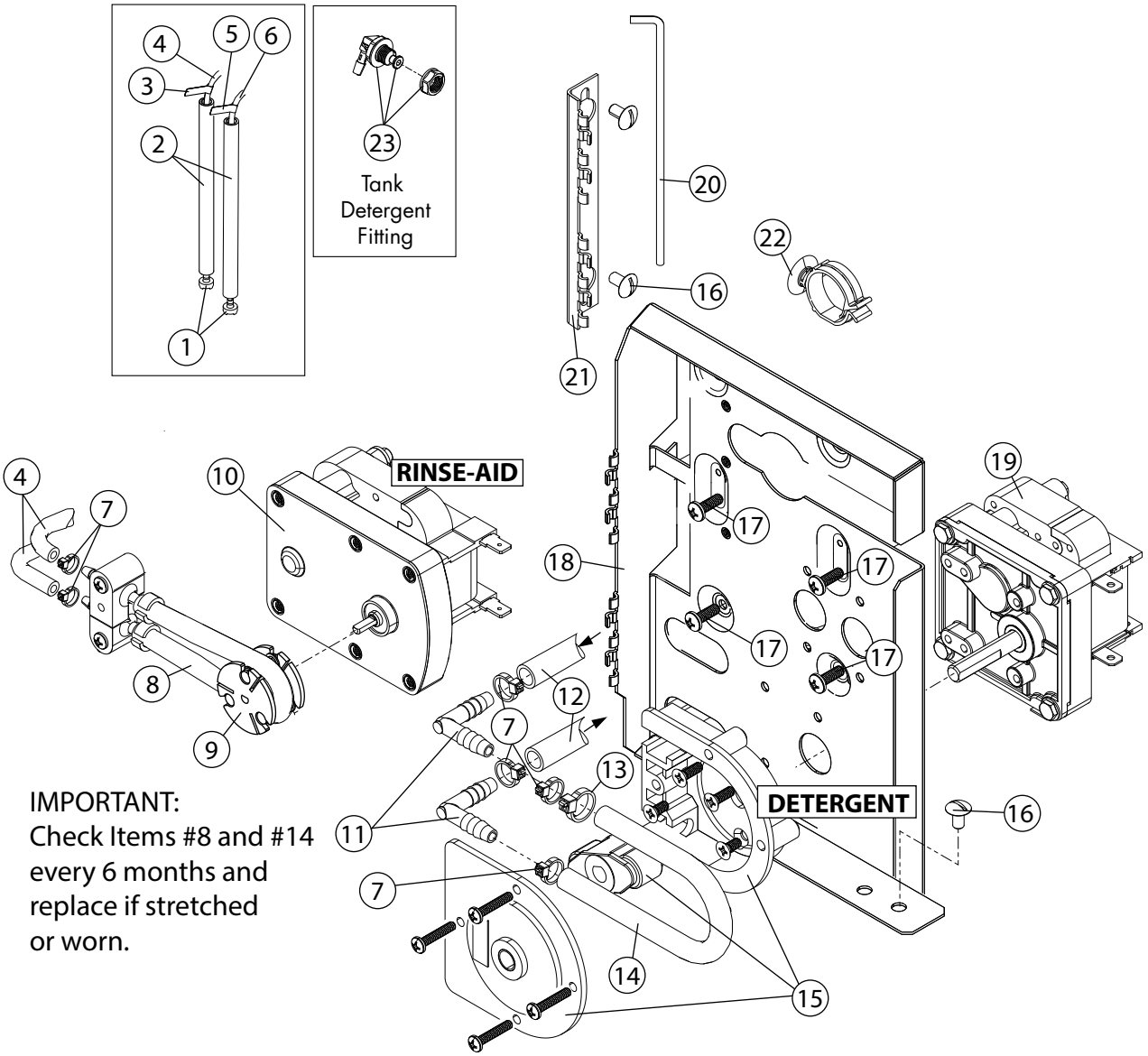
Item No.	Part No.	Description	Qty.
1	107908	COVER, ELEMENT	1
2	100003	NUT, PLAIN 1/4-20 SST	6
3	106482	WASHER, LOCK 1/4" SPLIT SST	3
4	111885	PAPER, FISH	1
5	0514296	BOOSTER, ELEMENT 4.3 KW	1
6	109985	SEAL, ELEMENT BOOSTER	1
7	0513310	THERMISTOR, PROBE	1
8	100939	NIPPLE, CLOSE 1/8" NPT BRASS	1
9	0514156	ELBOW, 1/4" X 1/8" NPT BRASS	1
10	0514158	ADAPTER, 1/8" HOSE X 1/8" MNPT BRASS	1
11	0501519	TIE, CABLE 4"	2
12	0502666	HOSE, 1/8" ID X 1/4" OD PVC	A/R
13	0508817	PLUG, 1/8" HEX COUNTERSUNK SST	1
14	0512185	BOLT, HEX FLANGE 1/4-20 X 3/8" SST	2
15	110562	THERMOSTAT, HIGH LIMIT 240°F	1
16	0714284	TANK, BOOSTER	1
—	0512790	INSULATION, BOOSTER TANK (Not Shown)	1

Booster Hoses and Level Sensor - UH330 ADA beginning with S/N W170568116 and above

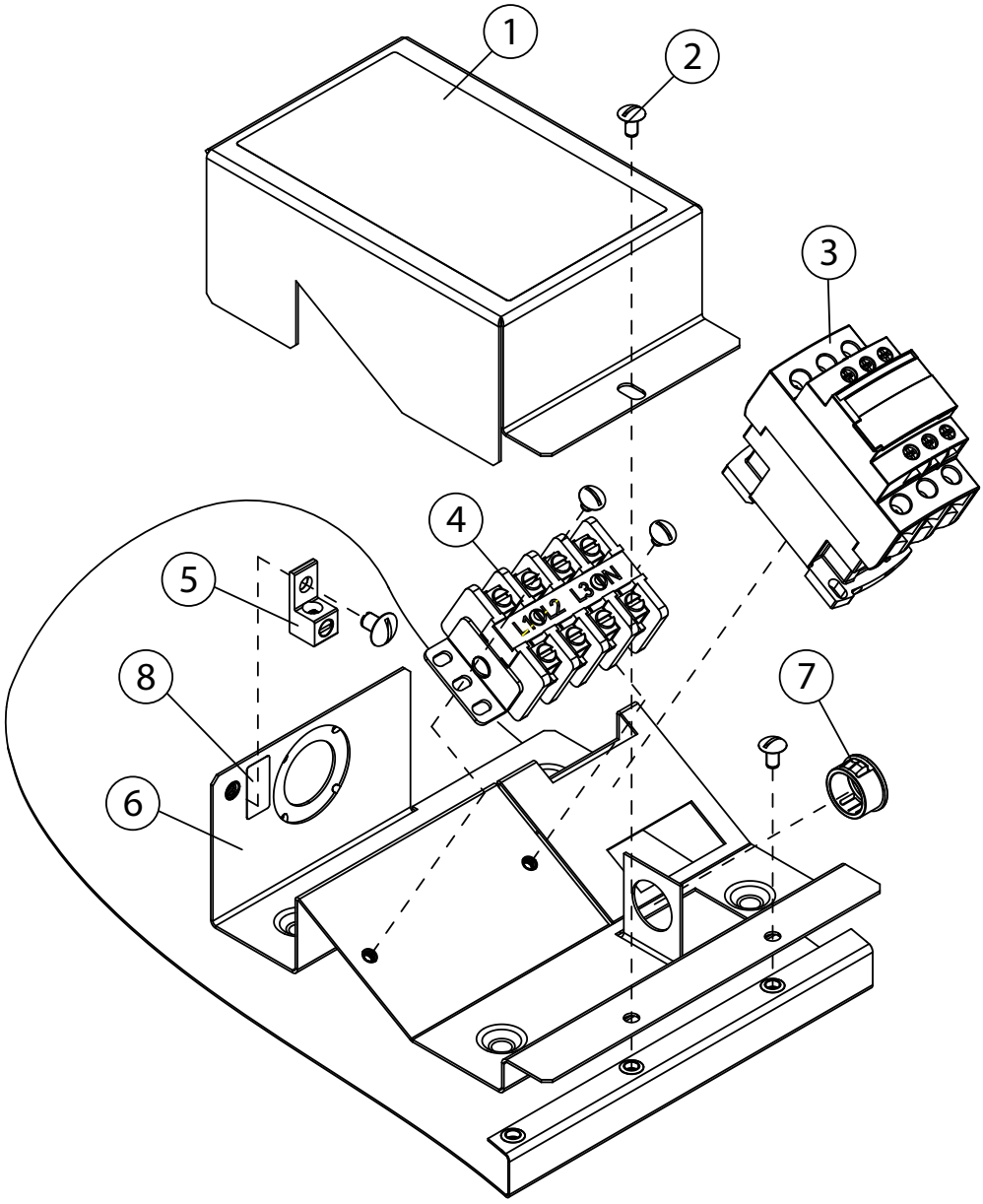


Item No.	Part No.	Description	Qty.
1	0503580	NUT, KEPS 10-32 SST	1
2	0313865	BRACKET, SENSOR	1
3	0513831	SENSOR, LEVEL	1
4	0513696	CLAMP, DOUBLE SPRING 10.7 MM PLATED	2
5	H160121	HOSE, EPDM	A/R
6	0513736	CLAMP, EMT 1/2"	3
7	0513731	ELBOW, 1/4 NPT X 1/2" HOSE (C/W NUT)	1
8	0713565	TANK, BOOSTER	1
9	0512985	CLAMP, HOSE	6
10	107417	HOSE, RUBBER 1/2" ID X .84" OD	A/R
11	0513650	ADAPTER, 1/2" X 1/4" HOSE	2
12	0514318	ELBOW, 1/2" HOSE X 1/2" MNPT BRASS	1
13	100073	SCREW, 1/4-20 X 1/2" TRUSS HEAD SST	3
14	100007	SCREW, 10-32 X 1/2" TRUSS HEAD SST	1
15	0314320	BRACKET, PRESSURE TUBE M4.2	1
16	108954	NUT, GRIP 6-32 W/NYLON INSERT	2
17	110562	THERMOSTAT, HIGH LIMIT 240°F	1



IMPORTANT:
Check Items #8 and #14 every 6 months and replace if stretched or worn.

Item No.	Part No.	Description	Qty.
1	0501869	STRAINER	2
2	0306363	TUBE, 3/8" ID X 12" LG. STIFFENER	1
3	0505483	LABEL, RINSE-AID HOSE	1
4	0502666	HOSE, 1/8" ID X 1/4" OD PVC	A/R
5	0503695	LABEL, DETERGENT HOSE	A/R
6	0502667	HOSE, 1/4" ID X 3/8" OD PVC	A/R
7	0501519	TIE, NYLON 4"	7
8	0706635	TUBE, ELEMENT ASSEMBLY 45CC	1
9	0707142	ROTOR	1
10	0503756	MOTOR, INJECTOR PUMP	1
11	0502644	ELBOW, 1/4" HOSE BARB	2
12	0502667	HOSE, 1/4" ID X 3/8" OD PVC	A/R
13	0512369	CLAMP, HOSE	1
14	114202	TUBE, 3/16" ID X 3/8" OD X 9" LG.	1
15	114203	PUMP HD KIT, PERISTALIC	1
16	100007	SCREW, 10-32 X 3/8" TRUSS SST	3
17	0504822	SCREW, 8-32 X 1/2" PAN HD. SST	4
18	0313393	BRACKET, CHEMICAL PUMP	1
19	0510870-1	GEARMOTOR, 115/60/1, DETERGENT PUMP	1
20	0313644	PIN, HINGE	1
21	0313431	BRACKET, HINGED PANELS	1
22	0513645	HOLDER, CABLE	4
23	0713656	KIT, DETERGENT FITTING	1
—	110750	GASKET	1
—	0513672	NUT, NP 1/4' NPS PP BLACK	1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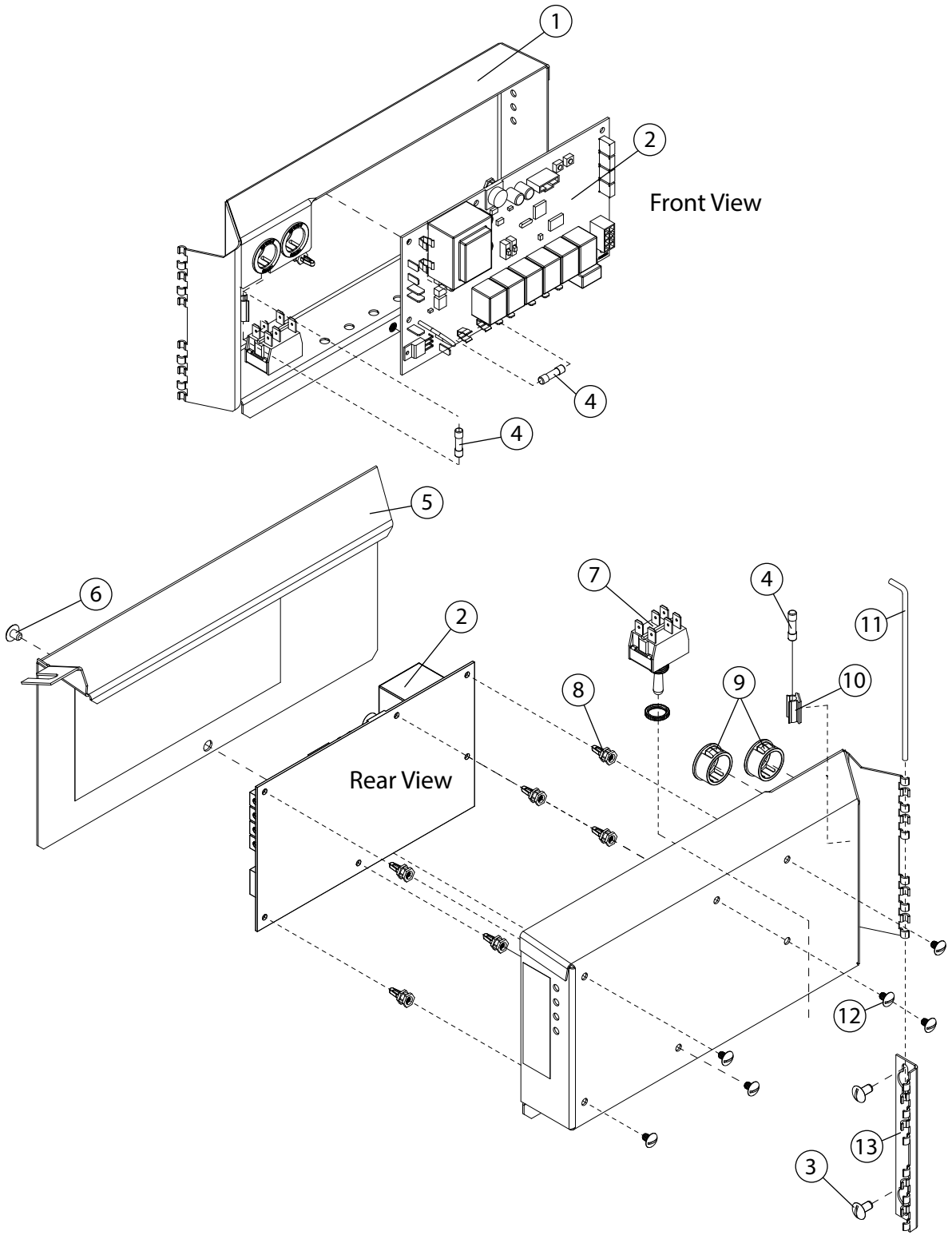
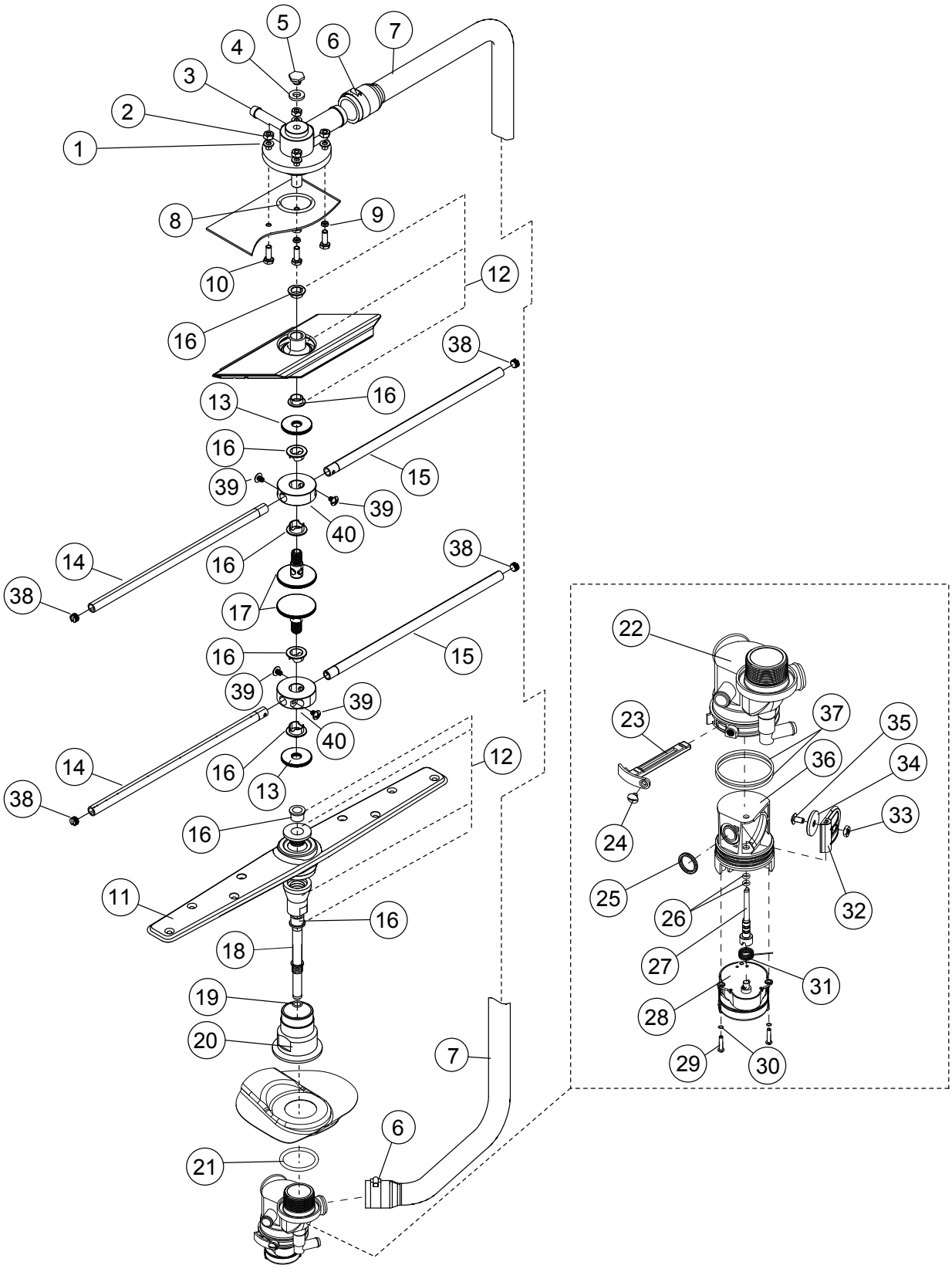
Item No.	Part No.	Description	Qty.
1	0313396	COVER, BOX WIRING	1
2	0501411	SCREW, 10-32 X 1/4", TRUSS HD.	2
3	0512432	CONTACTOR, 3-POLE 120VAC COIL	1
4	0509527	BLOCK, TERMINAL, 4-POLE	1
5	103310	LUG, GROUND	1
6	0313395	BOX, WIRING	1
7	107964	BUSHING, STRAIN RELIEF, SMALL	A/R
8	0503592	LABEL, GROUND	1

Timer Control Board Assembly

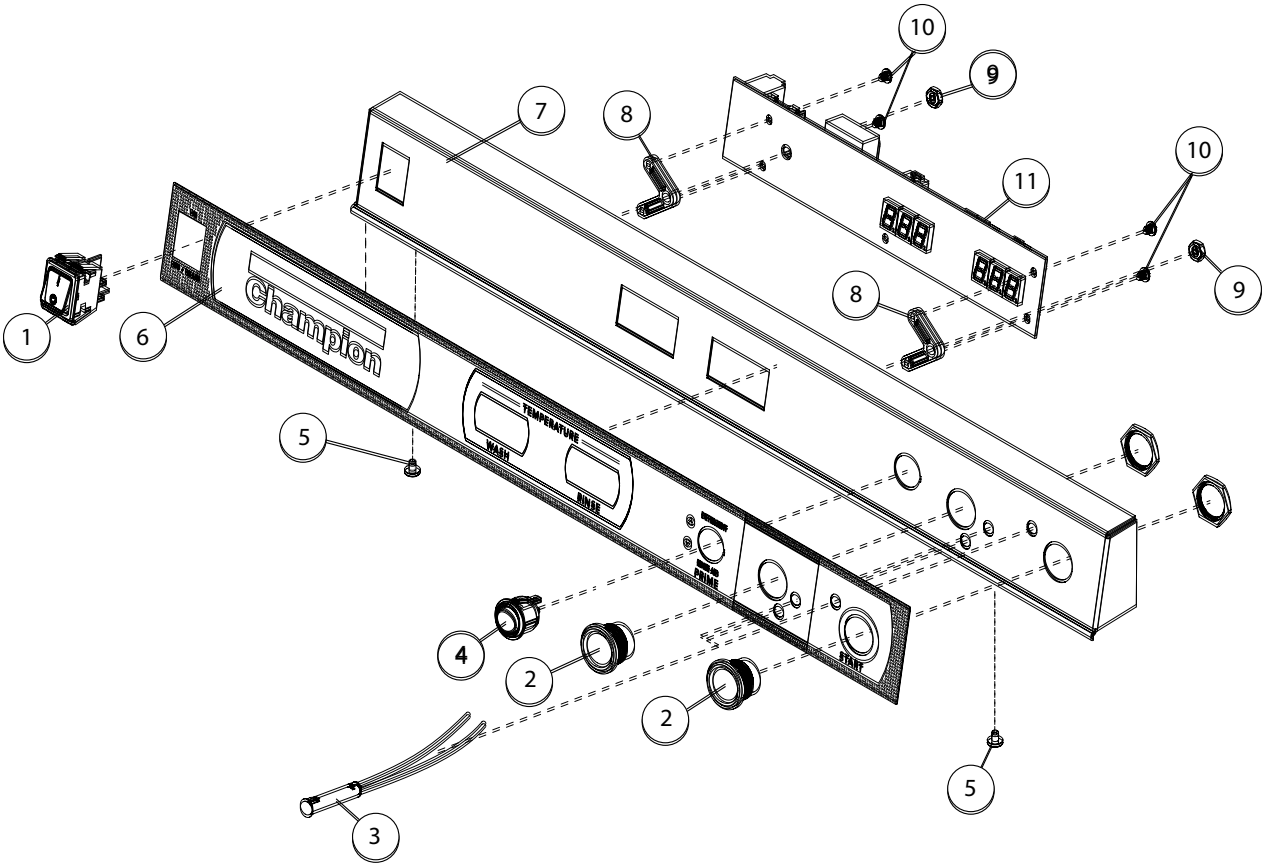


Item No.	Part No.	Description	Qty.
1	0313397-1	BOX, CONTROL BOARD	1
2	0513575	TIMER CKT. BD.	1
3	0501464	SCREW, 10-24 X 3/8; TRUSS HD. SST	2
4	0513698	FUSE, 6A 250V	1
5	0313398-1	COVER, BOX	1
6	0501411	SCREW, 10-32 X 1/4" SST	1
7	0501373	SWITCH, BOOSTER FILL	1
8	0512973	STANDOFF	6
9	107964	BUSHING, STRAIN RELIEF	2
10	0512781	HOLDER, FUSE	1
11	0313644	PIN, HINGE	1
12	0501408	SCREW, 8-32 X 1/4" TRUSS HD. PHIL. SST	6
13	0313431	BRACKET, HINGED PANELS	1

Wash and Rinse Spray Arms and Drain Valve



Item No.	Part No.	Description	Qty.
1	0501478	WASHER, 17/64 id X 9/16" OD SST	4
2	107967	NUT, HEX 1/40-20 NYLON INSERT SST	4
3	0314254	HUB, UPPER SPRAY ARMS	1
4	107873	WASHER, PACKING (USE FOR M4 MODELS ONLY)	1
5	110215	PLUG, UPPER MANIFOLD (USE FOR M4 MODELS ONLY)	1
6	0502571	CLAMP, HOSE GEAR 1-1/2" SST	2
7	0512120	HOSE, UPPER WASH ARM	1
8	0512133	O-RING, 2-1/8" OD X 1-3/4" ID X 3/16"	1
9	0501481	WASHER, NYLITE	4
10	100738	BOLT, 1/4-20 X 1" SST	4
11	H420548	WASH ARM ASSEMBLY (Includes Item 12)	2
12	0714277	BEARING ASSEMBLY	2
13	0514256	NUT, WASH ARM	2
14	0514259	ARM, LH RINSE (8-HOLES)	2
15	0514260	ARM, rh RINSE (7-HOLES)	2
16	H190663	BEARING, RINSE ARM	4
17	0514270	SPINDLE, RINSE ARM	2
18	0512124	SHAFT, LOWER	1
19	0512239	O-RING	1
20	0512066	HUB, LOWER WASH ARM	1
21	0512133	O-RING, 2-1/8" OD X 1-3/4" ID X 3/16"	1
22	0513439	HOUSING, MANIFOLD FWR	1
23	0513443	PIN, RETENTION	1
24	0509439	SCREW, RETENTION PIN 10-32 X 5/16" SST	1
25	0513446	O-RING, QUAD	1
26	0513445	O-RING, PIVOT SHAFT	2
27	0513447	SHAFT, FLAPPER	1
28	0712123	MOTOR, DRAIN VALVE	1
—	0509257	PIN, MOTOR (COMES WITH MOTOR)	1
29	104883	SCREW, MOTOR 6-32 X 3/8" SST	2
30	0501497	WASHER,SPLIT LOCK #8	2
31	0512126	SPRING, TORSION	1
32	0513442	FLAPPER	1
33	100194	NUT, FLAPPER SEAL 10-32 SST	1
34	0512127	GASKET, FLAPPER	1
35	100007	SCREW, FLAPPER SEAL 10-32 X 3/8" RD.HD. SST	1
36	0513441	BODY, CARTRIDGE DRAIN VALVE	1
37	0513444	O-RING, CARTRIDGE BODY	2
38	0512843	CAP, RINSE ARM	4
39	0501408	SCREW, 8-32 X 1/4" TRUSS HEAD PHILLIPS SST	4
—	0714258	RINSE ARM ASSEMBLY, COMPLETE (Includes Items 14-16 & 38-40)	2
—	0713667	CARTRIDGE ASSEMBLY, DRAIN VALVE COMPLETE INCLUDES ITEMS 23-37	1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Champion
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TEMPERATURE
WASH
RINSE
SPIN
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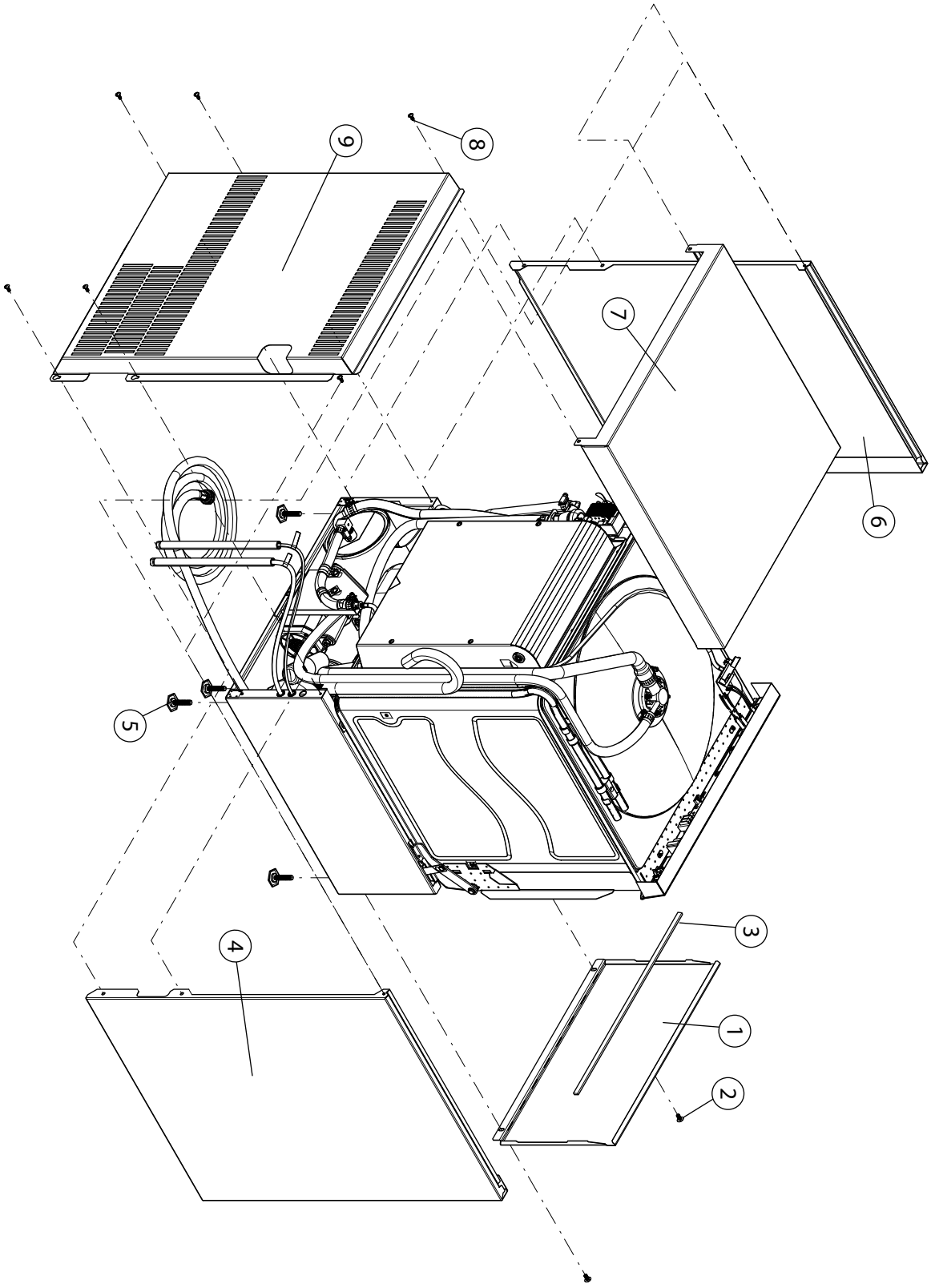
Item No.	Part No.	Description	Qty.
1	0512221	SWITCH, ROCKER DPST 250V NEON	1
2	0512213	SWITCH, PIEZIO	2
3	0512232	LIGHT, INDICATOR, GREEN	3
4	0512226	SWITCH, ROCKER RND SPDT MOMENTARY	1
5	0501408	SCREW, TRUSS PHIL. SST 8-32 X 1/4"	2
6	0513579	LABEL, FACIA	1
7	0713583	PANEL, FACIA	1
8	0512357	STANDOFF, LED DISPLAY BOARD	2
9	0503580	NUT, 10-32	2
10	0501563	SCREW, #8 X 3/8"	4
11	0512106-1	TEMPERATURE INDICATOR BD., DIGITAL, UH330ADA M4 Prior to S/N W170568116	1
–	0514315	TEMPERATURE INDICATOR BD., DIGITAL, UH330ADA M4.2 Beginning with S/N W170568116 and above	1
—	0512362	HARNESS, DIGITAL DISPLAY *(Not Shown)*	1
–	0513538	HARNESS, BOOSTER CONTROL *(Not Shown)*	1
–	0513576	HARNESS, MACHINE *(Not Shown)* (Does not include Booster or Digital display harness)	1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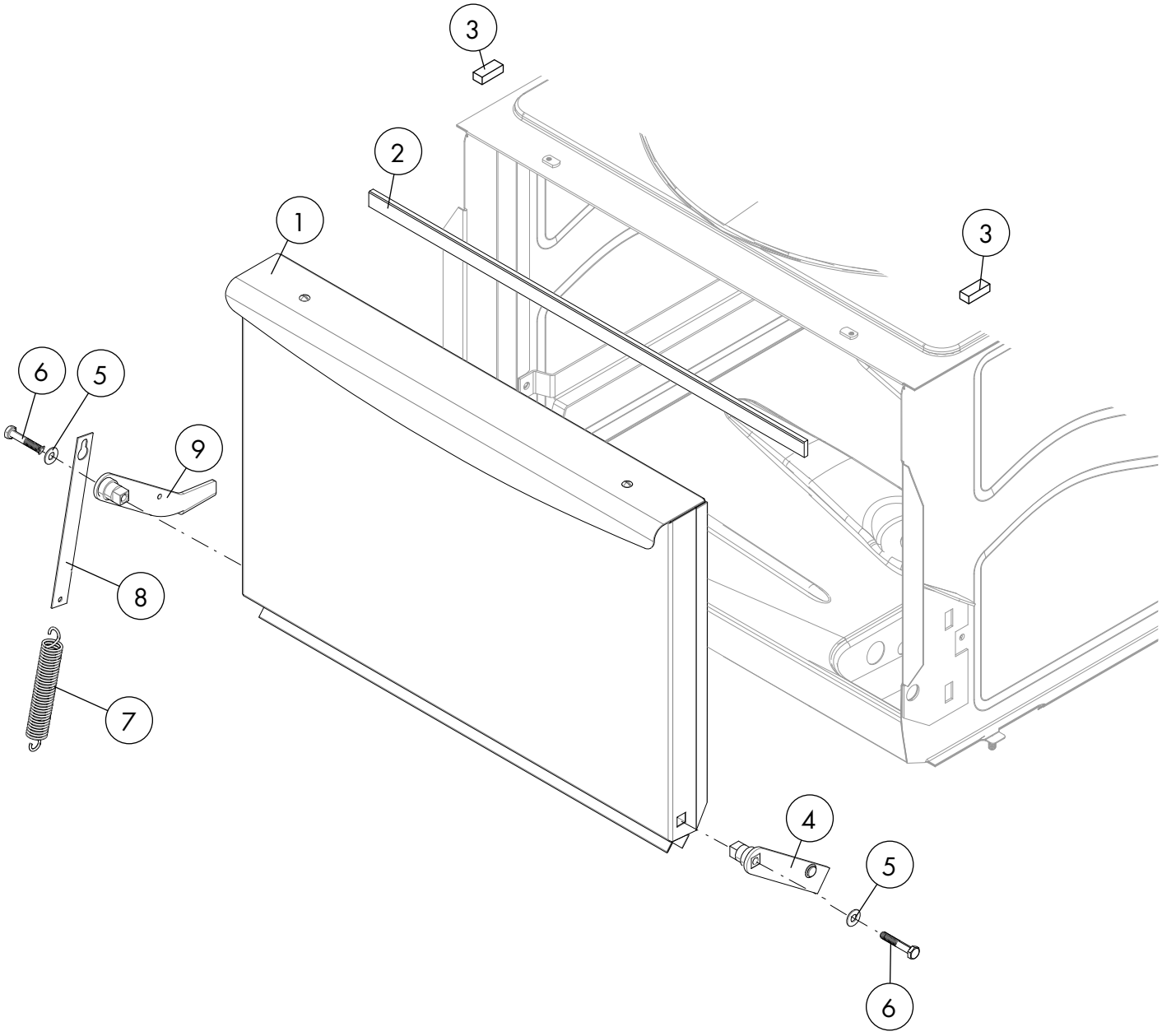
Item No.	Part No.	Description	Qty.
1	0313406	PANEL, FRONT	1
2	100779	SCREW 1/4-20 X 5/8" TRUSS SS PHIL	A/R
3	0513735	GASKET	1
4	0314232	PANEL, LH SIDE	1
5	0503718	FOOT, ADJUSTING	4
6	0314237	PANEL, RH SIDE	1
7	0313584-1	PANEL, TOP	1
8	100007	SCREW, TRUSS SLOT SST 10-32 X 3/8"	A/R
9	0374233	PANEL, REAR	1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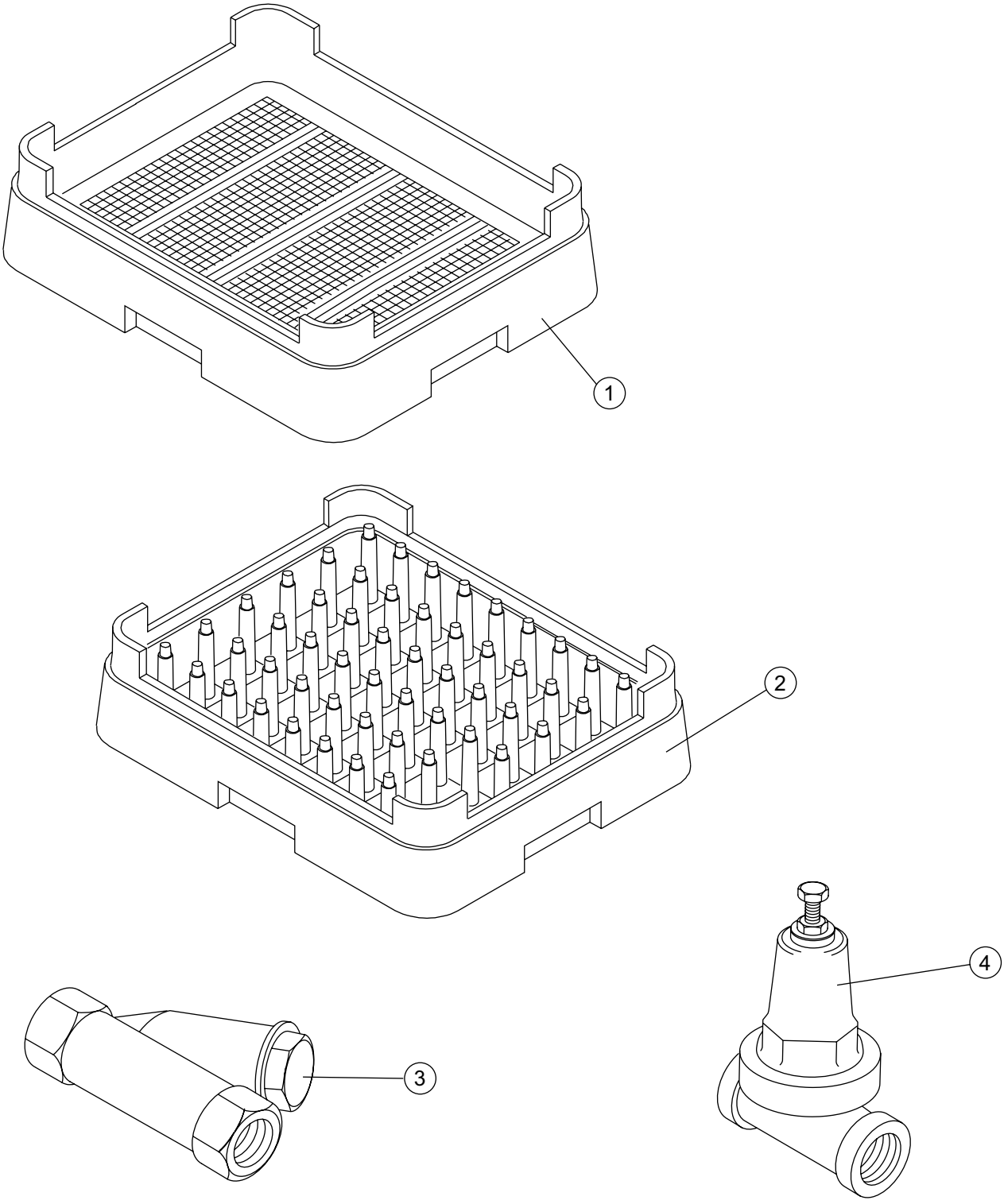
Item No.	Part No.	Description	Qty.
1	0714245	DOOR ASSEMBLY	1
2	0513794	GASKET, DOOR TOP	1
3	0512320	GASKET, STEAM	2
4	0713428	HINGE, RH ASSY	1
5	0501476	WASHER, 9/32" X 5/8" OD SS	1
6	0501422	BOLT, HEX SS 1/4-20 X 1-1/2"	1
7	0513332	SPRING, DOOR	1
8	0313430	ARM, DOOR SPRING	1
9	0713429	HINGE, LH ASSY	1


1
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3
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Item No.	Part No.	Description	Qty.
1	101273	DISH RACK, FLAT-BOTTOM	AR
2	101285	DISH RACK, PEG	AR
3	104421	STRAINER, LINE 1/2" BRONZE	1
4	108265	VALVE, PRESSURE REGULATING (PRV)	1

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Electrical Schematics and Timing Charts

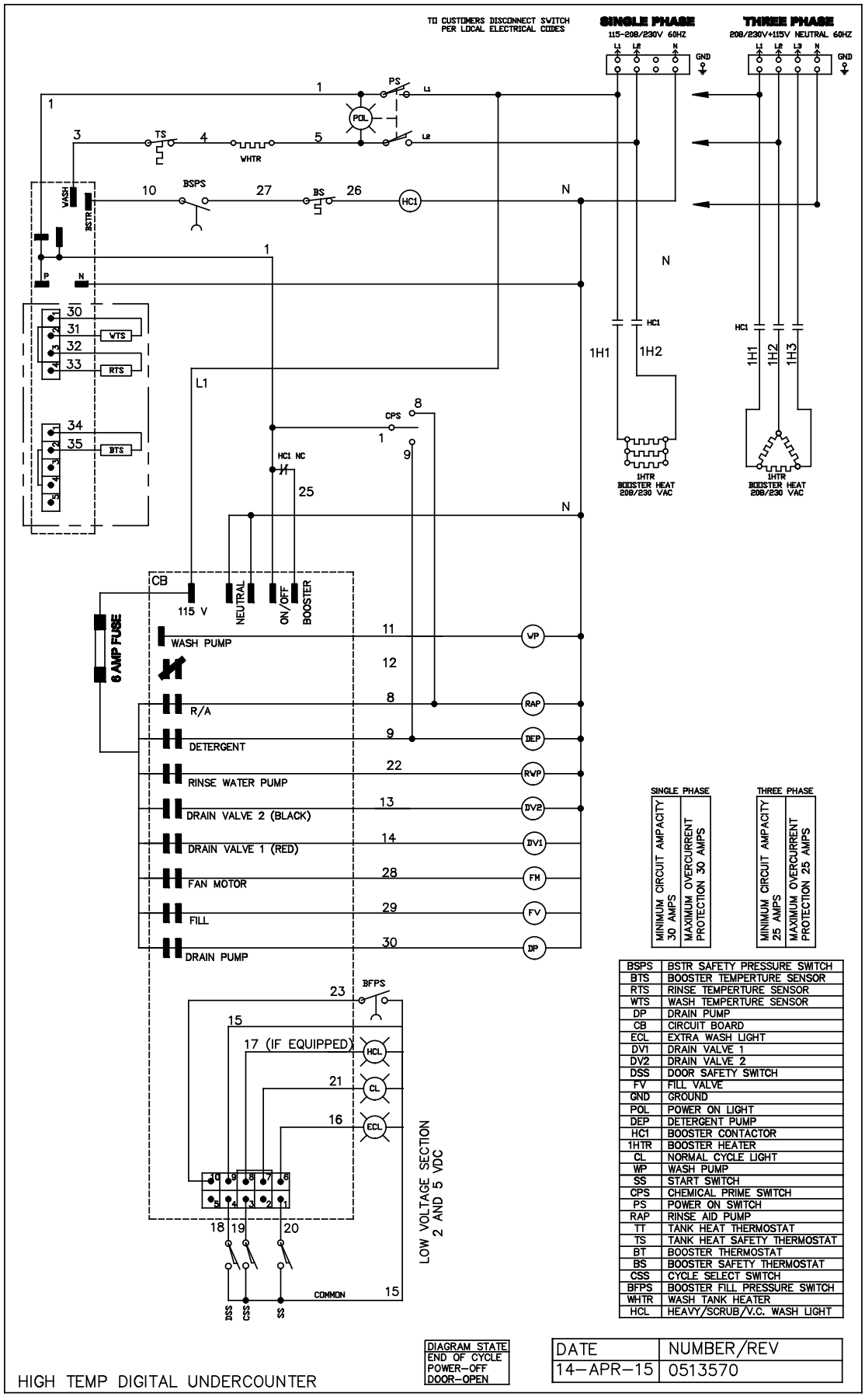
Illustrations ***Page***

Heat Recovery - Prior to S/N W170568116 82

Chemical Alarm Schematics 83

Timing Chart 84

Heat Recovery -Beginning with S/N W170568116 85



SINGLE PHASE	
MINIMUM CIRCUIT AMPACITY 30 AMPS	MAXIMUM OVERCURRENT PROTECTION 30 AMPS

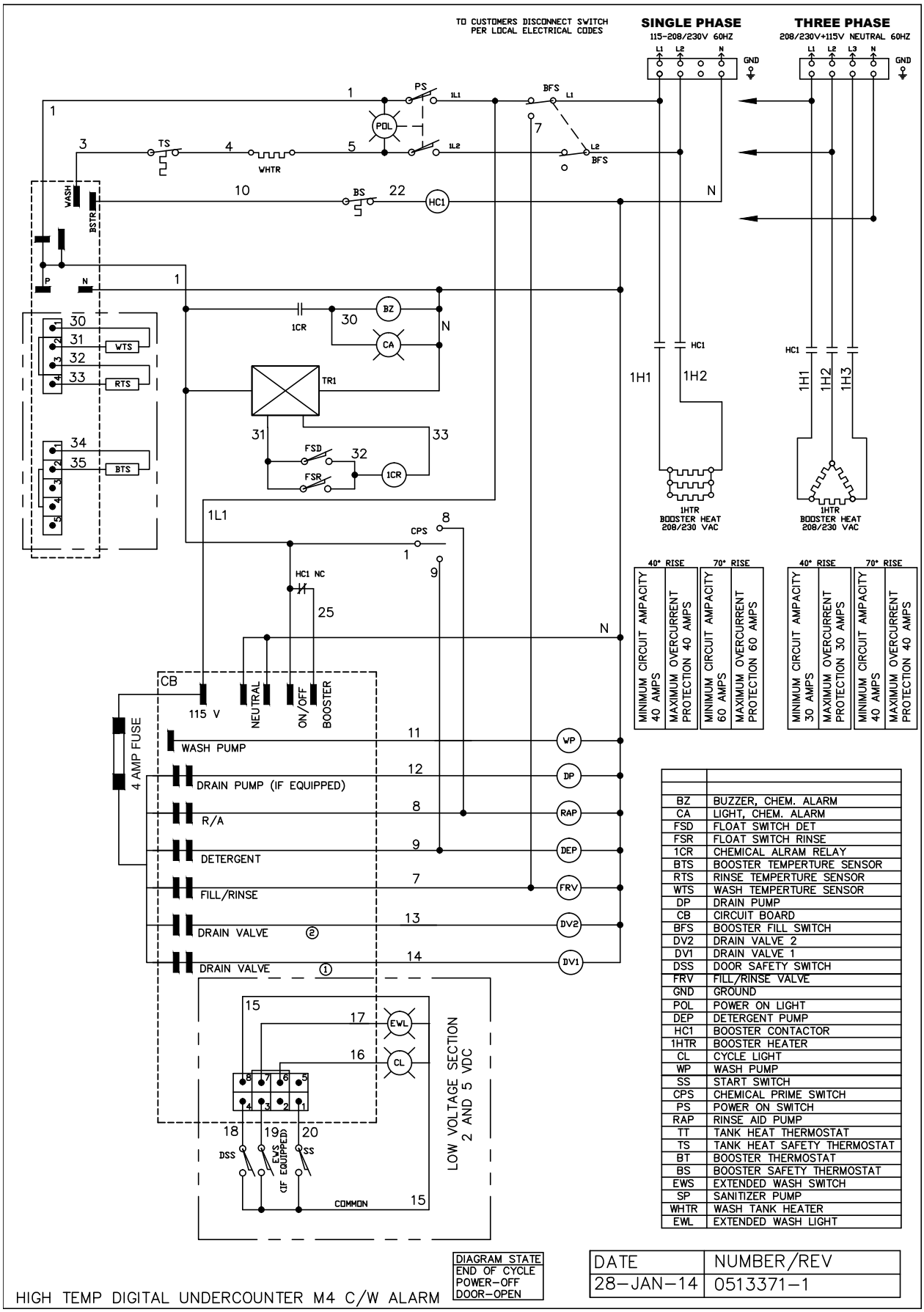
THREE PHASE	
MINIMUM CIRCUIT AMPACITY 25 AMPS	MAXIMUM OVERCURRENT PROTECTION 25 AMPS

BSPS	BSTR SAFETY PRESSURE SWITCH
BTS	BOOSTER TEMPERTURE SENSOR
RTS	RINSE TEMPERTURE SENSOR
WTS	WASH TEMPERTURE SENSOR
DP	DRAIN PUMP
CB	CIRCUIT BOARD
ECL	EXTRA WASH LIGHT
DV1	DRAIN VALVE 1
DV2	DRAIN VALVE 2
DSS	DOOR SAFETY SWITCH
FV	FILL VALVE
GND	GROUND
POL	POWER ON LIGHT
DEP	DETERGENT PUMP
HC1	BOOSTER CONTACTOR
1HTR	BOOSTER HEATER
CL	NORMAL CYCLE LIGHT
WP	WASH PUMP
SS	START SWITCH
CPS	CHEMICAL PRIME SWITCH
PS	POWER ON SWITCH
RAP	RINSE AID PUMP
TT	TANK HEAT THERMOSTAT
TS	TANK HEAT SAFETY THERMOSTAT
BT	BOOSTER THERMOSTAT
BS	BOOSTER SAFETY THERMOSTAT
CSS	CYCLE SELECT SWITCH
BFPS	BOOSTER FILL PRESSURE SWITCH
WHTR	WASH TANK HEATER
HCL	HEAVY/SCRUB/V.C. WASH LIGHT

DIAGRAM STATE
END OF CYCLE
POWER-OFF
DOOR-OPEN

DATE	NUMBER/REV
14-APR-15	0513570

HIGH TEMP DIGITAL UNDERCOUNTER



BZ	BUZZER, CHEM. ALARM
CA	LIGHT, CHEM. ALARM
FSD	FLOAT SWITCH DET
FSR	FLOAT SWITCH RINSE
1CR	CHEMICAL ALRAM RELAY
BTS	BOOSTER TEMPERTURE SENSOR
RTS	RINSE TEMPERTURE SENSOR
WTS	WASH TEMPERTURE SENSOR
DP	DRAIN PUMP
CB	CIRCUIT BOARD
BFS	BOOSTER FILL SWITCH
DV2	DRAIN VALVE 2
DV1	DRAIN VALVE 1
DSS	DOOR SAFETY SWITCH
FRV	FILL/RINSE VALVE
GND	GROUND
POL	POWER ON LIGHT
DEP	DETERGENT PUMP
HC1	BOOSTER CONTACTOR
1HTR	BOOSTER HEATER
CL	CYCLE LIGHT
WP	WASH PUMP
SS	START SWITCH
CPS	CHEMICAL PRIME SWITCH
PS	POWER ON SWITCH
RAP	RINSE AID PUMP
TT	TANK HEAT THERMOSTAT
TS	TANK HEAT SAFETY THERMOSTAT
BT	BOOSTER THERMOSTAT
BS	BOOSTER SAFETY THERMOSTAT
EWS	EXTENDED WASH SWITCH
SP	SANITIZER PUMP
WHTR	WASH TANK HEATER
EWL	EXTENDED WASH LIGHT

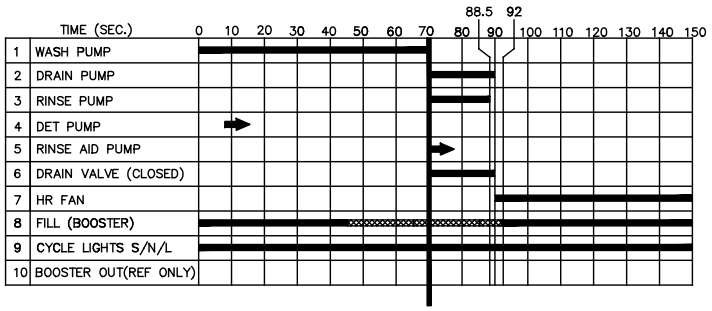
DIAGRAM STATE
END OF CYCLE
POWER-OFF
DOOR-OPEN

DATE	NUMBER/REV
28-JAN-14	0513371-1

HIGH TEMP DIGITAL UNDERCOUNTER M4 C/W ALARM

UH330 ADA Timing Charts

TIMING CHART FOR FRESH WATER RINSE HEAT RECOVERY



		MINIMUM	MAXIMUM
1	FILL VALVE	2 SEC.	60 SEC
2	DET. PUMP	0 SEC.	12 SEC.
4	RINSE AID PUMP	0 SEC.	5 SEC.

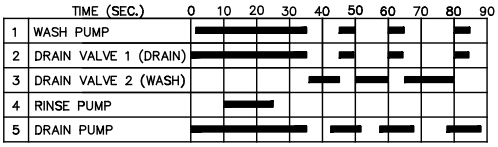
ARROW INDICATES THAT FUNCTION END TIME IS VARIABLE WITH THE ADJUSTMENT POTENTIOMETER

NORMAL– WASH=70 TOTAL CYCLE=150
MEDIUM – WASH=120 TOTAL CYCLE=200
LONG – WASH=196 TOTAL CYCLE=277

SETTINGS

1 3 SELECTABLE WASH TIMES 70/120/196
2 S/L CL FLASHES WHEN CYCLE IS SELECTED–TURNS SOLID WHEN CYCLE START IS PUSHED – CYCLE LIGHT STAYS ON UNTIL END OF CYCLE.
3 FILL MAY HAPPEN AS REQUIRED BY WATER LEVEL SENSOR ANY TIME WHEN MACHINE IS NOT IS CYCLE. DURING CYCLE FILL MAY NOT OCCUR DURING LOCKOUT PERIOD DENOTED BY ▬▬▬

TIMING CHART FOR HEAT RECOVERY DRAIN CYCLE
ACTIVATED 4 SEC. AFTER "POWER" SWITCH IS TURNED OFF



WASH PUMP

TIME	ON	OFF
PD1	1	35
PD2	46	51
PD3	61	66
PD4	81	86

DRAIN PUMP

TIME	ON	OFF
PD1	0	35
PD2	43	53
PD3	59	68
PD4	79	89

DRAIN VALVE 1

TIME	ON	OFF
DD1	0	34.5
DD2	45	50.5
DD3	60	65.5
DD3	80	85.5

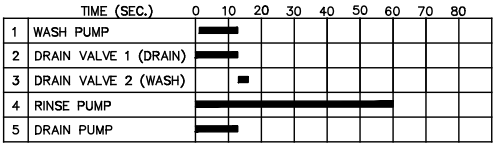
DRAIN VALVE 2

TIME	ON	OFF
DD1	35	44.5
DD2	51	59.5
DD3	66	79.5
DD3		

RINSE PUMP

TIME	ON	OFF
FD1	10	25

TIMING CHART FOR HEAT RECOVERY FILL CYCLE



WASH PUMP

TIME	ON	OFF
PD1	1	12.5

RINSE PUMP

TIME	ON	OFF
FD1	0	60

DRAIN VALVE 1

TIME	ON	OFF
DD1	0	12.5
DD2		

DRAIN VALVE 2

TIME	ON	OFF
DD1	13	15
DD2		

RINSE PUMP

TIME	ON	OFF
FD1	0	60

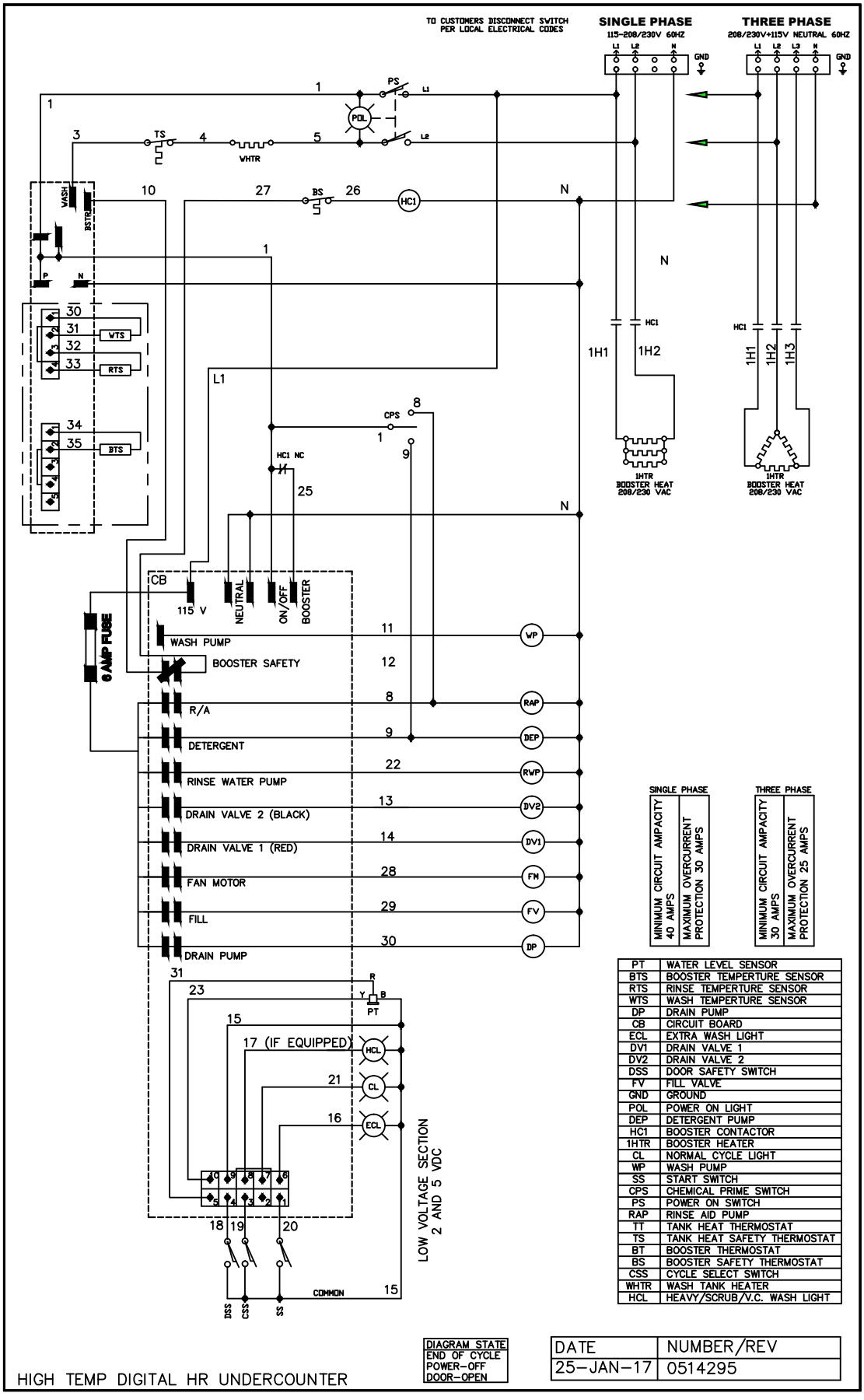
Timing Chart for Heat Recovery Fill Cycle:

1) The heat recovery fill cycle is enabled as soon as the booster tank is full and has reached the required temperature.

2) The wash tank will fill with hot water from the booster tank.

3) The cycle light will flash during the fill cycle.

4) The machine may fill if the machine is not in cycle; however, the machine will not fill during the wash cycle lockout period as denoted by ▬▬▬ in the chart at the top of the page.



PT	WATER LEVEL SENSOR
BTS	BOOSTER TEMPERTURE SENSOR
RTS	RINSE TEMPERTURE SENSOR
WTS	WASH TEMPERTURE SENSOR
DP	DRAIN PUMP
CB	CIRCUIT BOARD
ECL	EXTRA WASH LIGHT
DV1	DRAIN VALVE 1
DV2	DRAIN VALVE 2
DSS	DOOR SAFETY SWITCH
FV	FILL VALVE
GND	GROUND
POL	POWER ON LIGHT
DEP	DETERGENT PUMP
HC1	BOOSTER CONTACTOR
1HTR	BOOSTER HEATER
CL	NORMAL CYCLE LIGHT
WP	WASH PUMP
SS	START SWITCH
CPS	CHEMICAL PRIME SWITCH
PS	POWER ON SWITCH
RAP	RINSE AID PUMP
TT	TANK HEAT THERMOSTAT
TS	TANK HEAT SAFETY THERMOSTAT
BT	BOOSTER THERMOSTAT
BS	BOOSTER SAFETY THERMOSTAT
CSS	CYCLE SELECT SWITCH
WHTR	WASH TANK HEATER
HCL	HEAVY/SCRUB/V.C. WASH LIGHT

DATE	NUMBER/REV
25-JAN-17	0514295

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