



**CMA Dishmachines**  
**12700 Knott Avenue**  
**Garden Grove, CA 92841**

Toll Free: 1- (800) 854-6417  
Fax: 1- (714) 895-2141

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*Installation/Operation Manual with Service Replacement Parts*

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**Undercounter  
High Temperature  
Dishwasher**

Models:

**UC65e**



Machine Serial No.



Issue Date: 11.18.13

**Manual P/N 0512865 rev. D**

For machines beginning with S/N W090217876 and above

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Printed in the USA



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**

**CMA Dishmachines**  
**12700 Knott Avenue**  
**Garden Grove, CA 92841**  
**Toll-free: 1 (800) 854-6417**  
**Fax: 1 (714) 895-2141**

**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.

## Revision History

- The Revision History can contain part number changes, new instructions, or 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 CMA Dishmachines at 1 (800) 854-6417.

<b>Revision Date</b>	<b>Revised Pages</b>	<b>Serial Number Effectivity</b>	<b>Revision Description</b>
6.04.09	All	W090217876	Released First Edition
3.15.11	22-23	W090217876	Added motor fan cover to parts list
1.04.11	31 33 35	W090217876	Item 5 changed to P/N 0513110 Item 6 changed to P/N 0512120 Item 18 changed to P/N 0312840 Item 13 changed to P/N 0512855
6.09.11	44-45 46-47	W090217876 W090217876	Item 13 changed to P/N 0312924 Changed door assembly to P/N 0713141
4.19.13	5 24-55 26-27 30-31 34-35 46-47	All W120631743 W120631743 All W120631743 All All	Added hose barb to instructions Revised pressure gauge piping Added P/N 109069 thermostat Revised fill/drain timer, P/N 0713133 Revised pressure gauge piping Added hose barb P/N 0512231 Added Door drip seals, P/N 0512953 and P/N 0512954
6.25.13	53-62 2-3	All All	Added parts installation instructions Added hard wiring info to installation
11.18.13	All	All	Converted 0xxxxxx P/N's to CMA standards

## **Model Description**

### **UC65e**

High temperature hot water sanitizing dishwasher with built-in 40°F/22°C rise booster heater.  
208-240VAC/60/1

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**NOTE:**

The installation of your dishwasher must be performed by qualified service personnel. Problems due to improper installation are not covered by the Warranty.

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 accessories that may have shipped with your dishwasher.
4. Move the dishwasher near its permanent location.

**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.

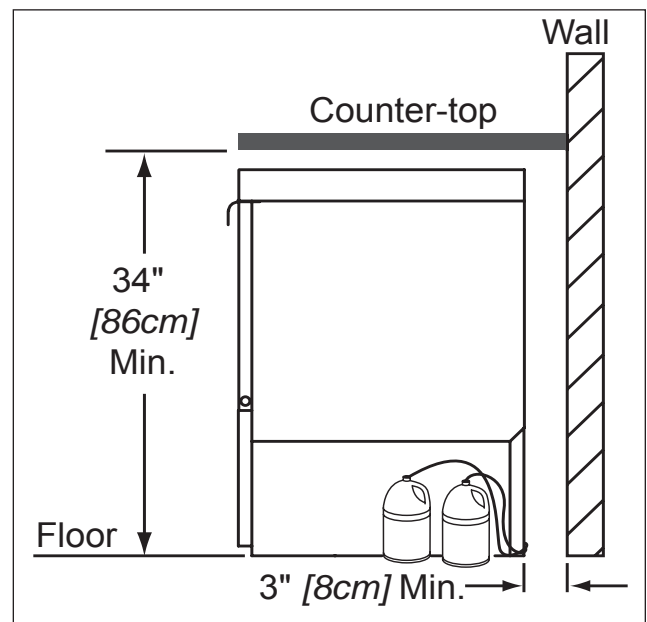
**CAUTION:**

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.

5. Compare the installation site utility connections with the dishwasher utility connections and make sure that they are the same.
6. The dishwasher can be installed as a free-standing unit or under a built-in counter-top. The typical counter-top height in most locations is 34" [86cm].
7. Under counter installations should provide storage space for the dishwasher chemical supply containers. Containers must not be placed higher than 10" [25cm] above the floor.
8. Chemical supply containers should be placed as close as possible to the machine as possible.
9. Place the dishwasher in its permanent location.
10. The dishwasher has 4 adjustable feet for leveling.
11. Level the dishwasher front-to-back and side-to-side.



## Electrical Connections

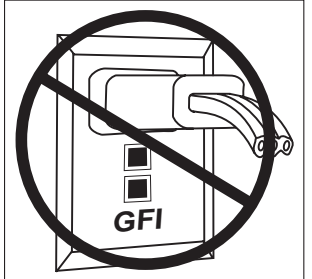


### **WARNING:**

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 to indicate that work is being performed on the circuit.



### **CAUTION:**

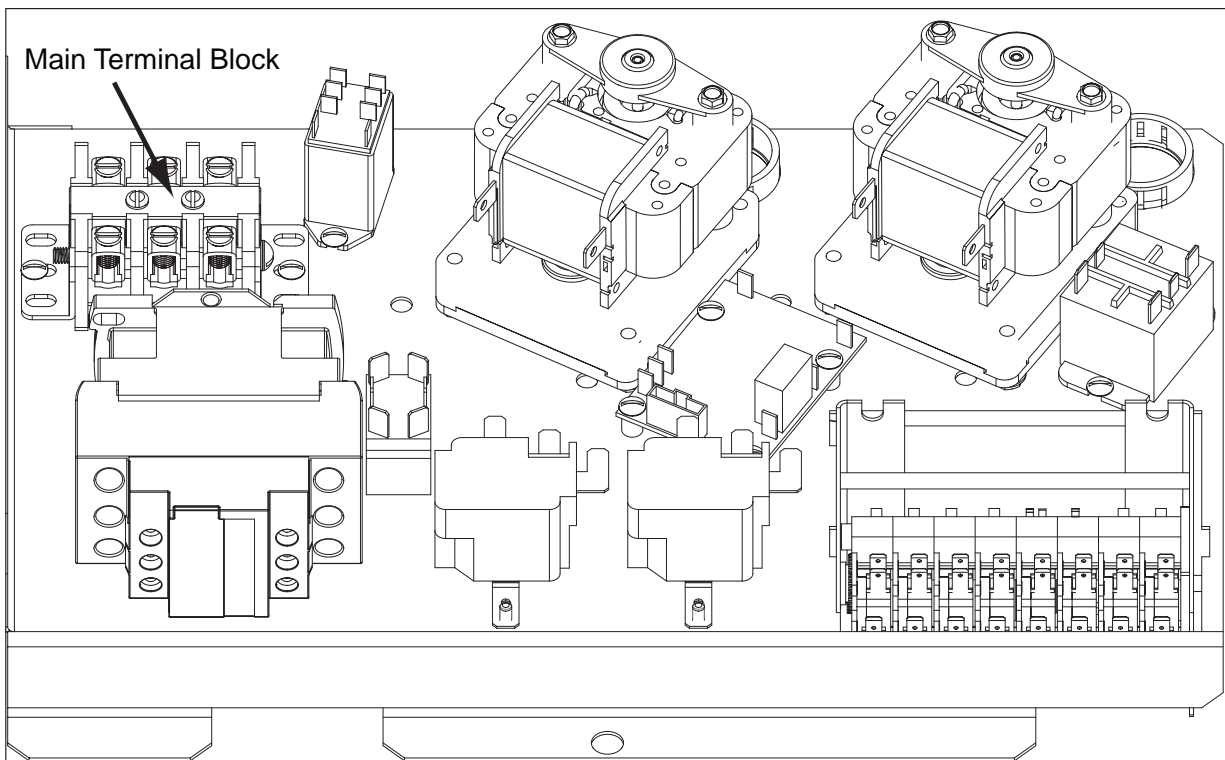
Permanent damage to the dishwasher may occur if it is improperly connected to the main electrical supply.

Never install a power cord and plug to the dishwasher nor connect the dishwasher to a standard or GFI electrical outlet.

The dishwasher must be hard wired to a dedicated appropriately sized circuit breaker or service disconnect switch.

### **ATTENTION:**

A qualified electrician must connect the main incoming power to the dishwasher in accordance with all local codes and regulations or in the absence of local codes in accordance with the National Electrical Code



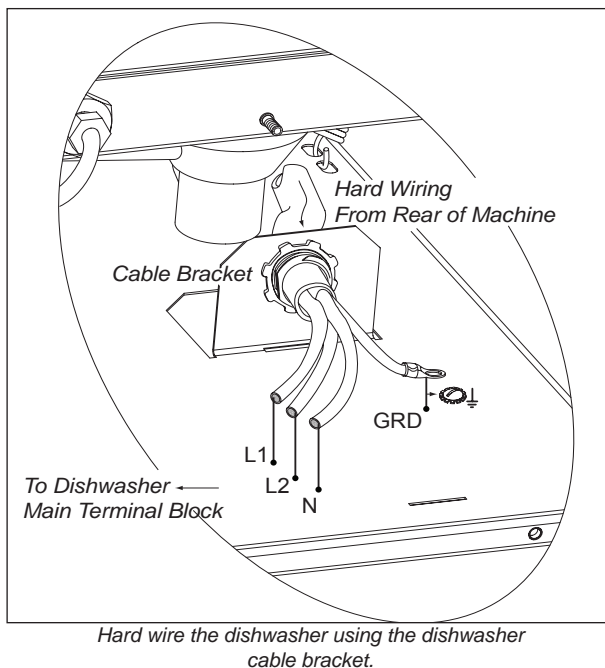
The Main Terminal Block (MTB) is located on the left-rear corner of the electrical panel.

## Electrical Connections

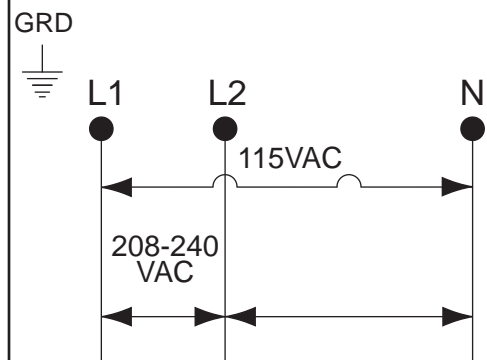
1. Refer to the connection diagram below:
2. Machines require a 3-wire plus ground supply which includes a current carrying neutral.
3. Do not use a power cord and plug nor connect to a standard or Ground Fault Interrupter, (GFI), electrical outlet.
4. The dishwasher must be hard wired to a junction box or service disconnect switch.
5. Power connections must be made at the Main Terminal Block (MTB) on the dishwasher. The MTB is located on the left-rear corner of the electrical panel behind the front access panel. (See the illustration at the bottom of page 2.)

### To Connect Main Power to the Dishwasher:

1. Remove the lower front access panel of the dishwasher.
2. Locate the electrical mounting panel on the right-side of the machine. Remove the retaining nut at the top of the panel that holds the panel in place.
3. Lower the panel and pull it forward to gain access the MTB.
4. Feed the power cable through the cable hole located on the right side, as viewed from the front of the machine, into the interior of the machine.
5. Make sure the cable passes through the cable mounting bracket located near the front-center of the base and secure the cable with a cable connector.
6. Connect the ground wire to the base of the dishwasher with the ground screw provided next to the cable mounting bracket.
7. Feed the remaining cable wires to the Main Terminal Block and connect according to the connection diagram to the right.



### SINGLE PHASE POWER CONNECTION 115/208-240VAC/60/1



### HOW TO CONNECT POWER

1. Check the data plate on the front of the dishwasher for the voltage of the machine.
2. Remove the lower-front access panel.
3. Lower the electrical component bracket.
4. Feed the power cable from the rear of the dishwasher to the center of the machine and through the cable bracket.
5. Connect the ground wire to the base of the dishwasher using the ground screw located near the bracket.
6. Feed the power leads to the terminal block.
7. Connect L1, L2 and a current-carrying neutral to the Main Terminal Block.
8. Main Power connections are complete.

## *Water Connections*

**Note**

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

**IMPORTANT**

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

1. All models have a 6 ft. flexible hot water fill hose with a 3/4" GHT connector.
2. A 1/2" or larger main incoming supply line should be installed to the dishwasher.
3. A 1/2" or larger shut-off valve should be installed in the water supply line as close to the dishwasher as possible for service.
4. The hot water supply must provide a minimum of 140°F/60°C, measured at the dishwasher for the 40°F/ 22°C rise booster.
5. For the 70°F/39°C rise booster the hot water supply must provide a minimum of 110°F/43°C measured at the dishwasher.

## Drain Connections

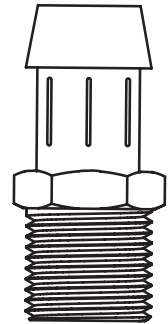
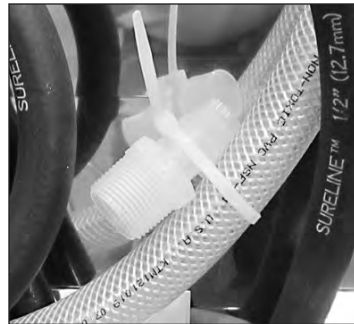
### ATTENTION

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

1. The dishwasher has a 6ft. 3/4" I.D. drain hose. The maximum drain height connection must not exceed 3 ft.[9 m].  
The recommended drain height is 17" [.4 m] or less above the floor.
2. The drain hose is secured to the rear of the machine by a clamp to maintain a goose-neck bend in the drain hose.

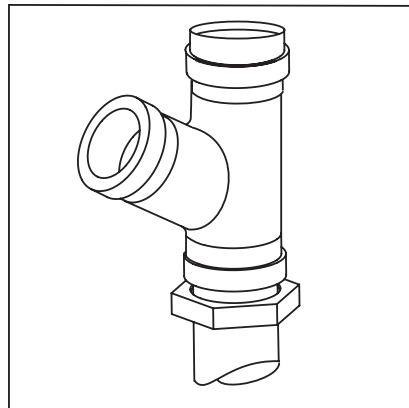
DO NOT REMOVE THE DRAIN HOSE RETAINING CLAMP.  
DO NOT STRETCH THE DRAIN HOSE.

3. A 3/4" hose barb fitting is strapped to the drain hose to use in connecting the drain hose to building drain line. The service part number for the hose barb is P/N 0512321.

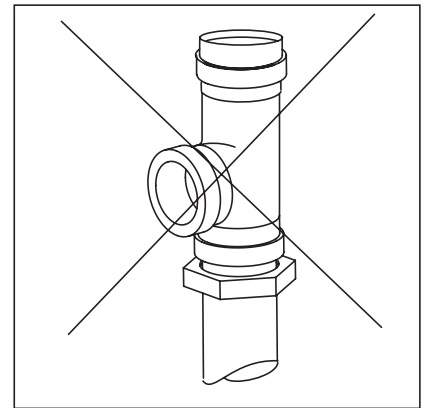


4. Install the drain hose to a "WYE" drain fitting. Connection to a "TEE" fitting will prevent the dishwasher from draining completely.
5. The maximum drain flow is 8 U.S. gpm/7 Imp. gpm/30 L.P.M.
6. Make sure the drain hose does not kink. Kinks will prevent the dishwasher from draining completely, and the dishwasher will overflow out the front door.

NOTE: DO NOT CONNECT THE DRAIN HOSE TO A DISPOSER.  
THE DISHWASHER WILL NOT DRAIN CORRECTLY.



*The dishwasher flexible drain hose must be connected to a WYE fitting.*



*Do not connect the dishwasher flexible drain hose to a TEE fitting.*

## Filling the Booster

**ATTENTION**  
**VERIFY THE CORRECT VOLTAGE IS SUPPLIED TO THE MACHINE**  
**THE CORRECT SUPPLY VOLTAGE IS 115/208-240VAC/60/1.**  
*(Refer to the diagram on page 3.)*

### Note:

The dishwasher contains a built-in booster heater that was drained prior to shipment and must be filled with water before operating the dishwasher.

### Booster Fill Switch

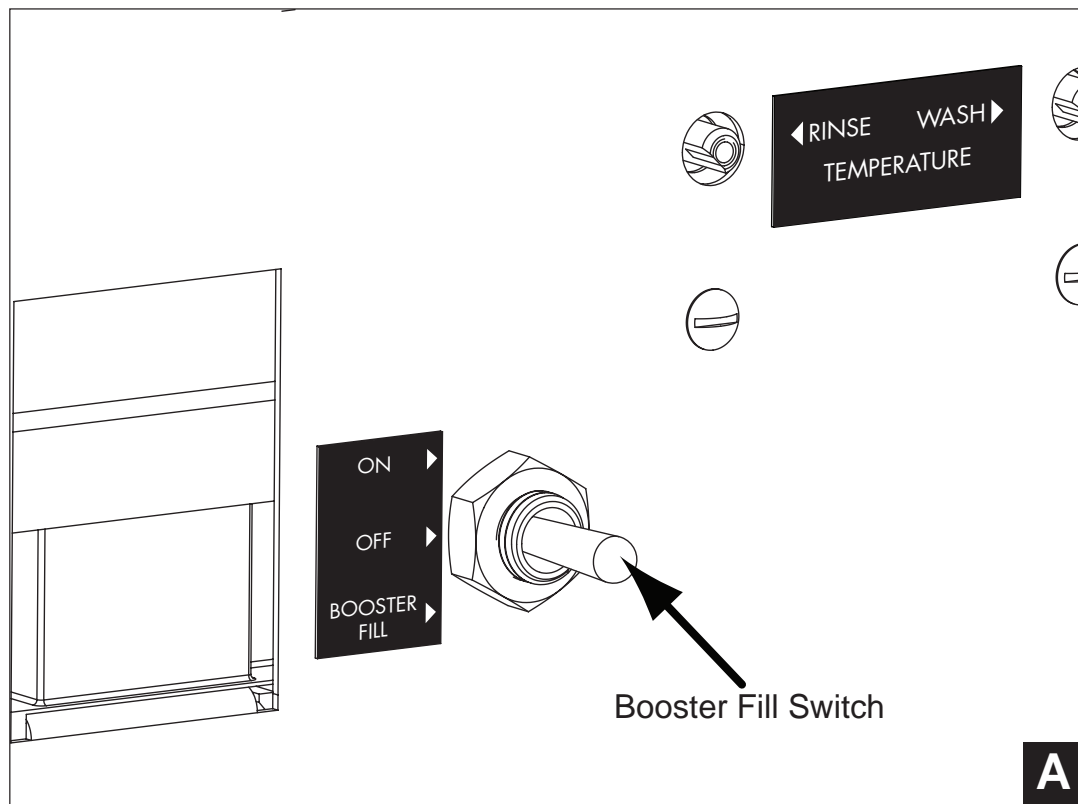
The booster heater is filled using the Booster Fill Switch. It is located behind the lower front access panel and on the left-side of the bracket that holds the chemical dispensing pumps (see the photos below).

Fill the booster heater:

1. Make sure that the dishwasher power switch is OFF.
2. Remove the lower front access panel.
3. Locate the booster fill switch. It is in the left-center of the electrical component panel.
4. Make sure the Booster Fill Switch is in the middle position, (OFF).
5. Turn the water supply and the main power supply on.

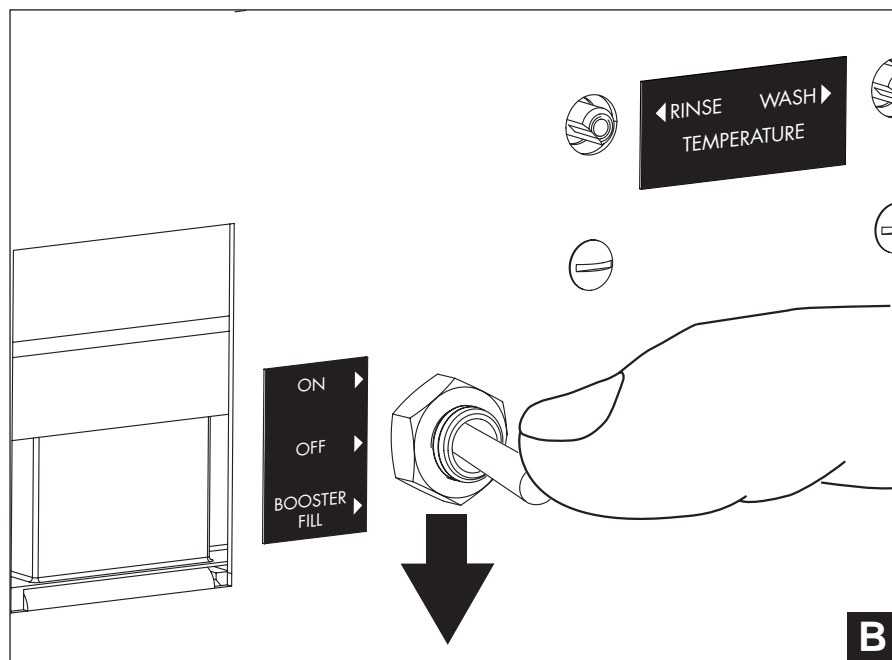
DO NOT TURN THE DISHWASHER POWER SWITCH ON.

A) Identify the booster fill switch.

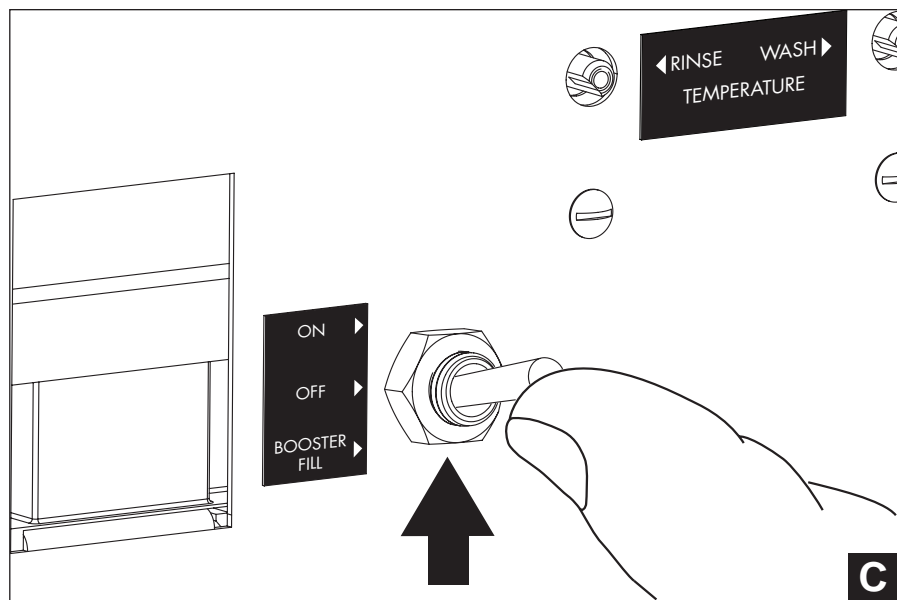


Filling the Booster (continued)

- B) Press and hold the Booster Fill Switch down to the BOOSTER FILL position until you hear the water spraying inside the dishwasher wash tank, then release the switch.



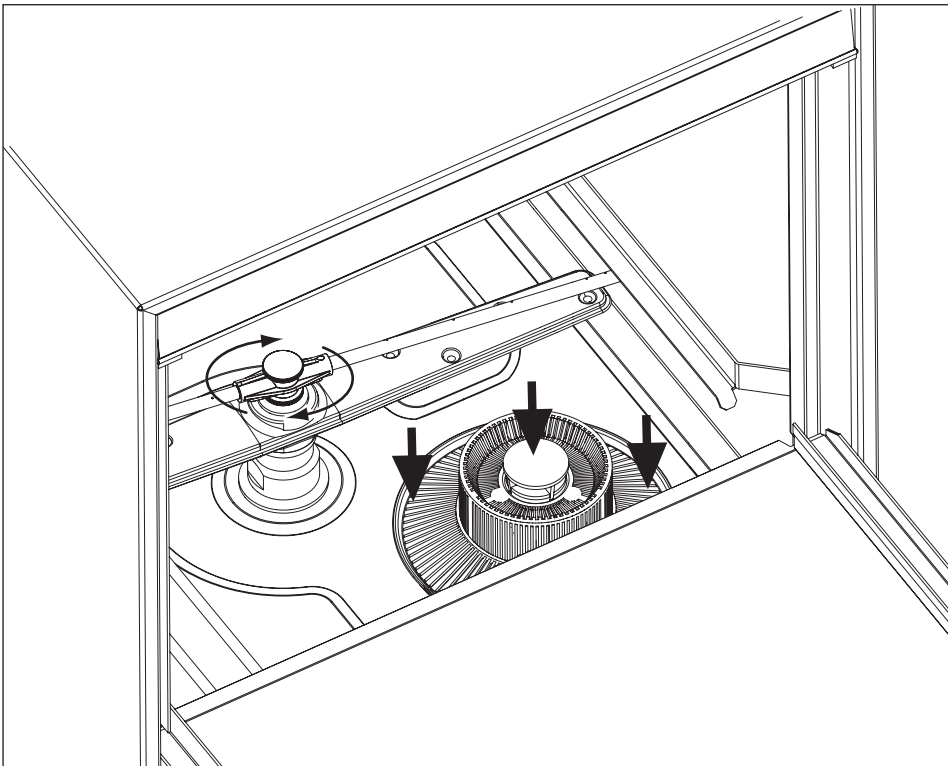
- C) Push the switch up to the ON position and release. The booster tank is filled.



## Check List

1. Remove any protective film from dishwasher. Check the interior for foreign material.
2. Make sure that the dishwasher is permanently located.
3. Make sure that all utility connections are complete.
4. Make sure that the flexible drain hose and the hot water fill hose are not kinked.
5. Make sure that the chemical supply containers are full and that the chemical pick-up tubes are installed in the proper containers.
6. Make sure that the sump filter is in place.
7. Make sure that the overflow tube is installed and firmly seated in the sump.
8. Make sure that the spray arms are in place and that they spin freely.
9. Fully close the dishwasher door.
10. Turn hot water supply on and check for leaks in the main water supply piping connected to the dishwasher.

**IMPORTANT**  
**During the initial fill, the flowing pressure of the incoming water**  
**is set to 20-22 PSI.**



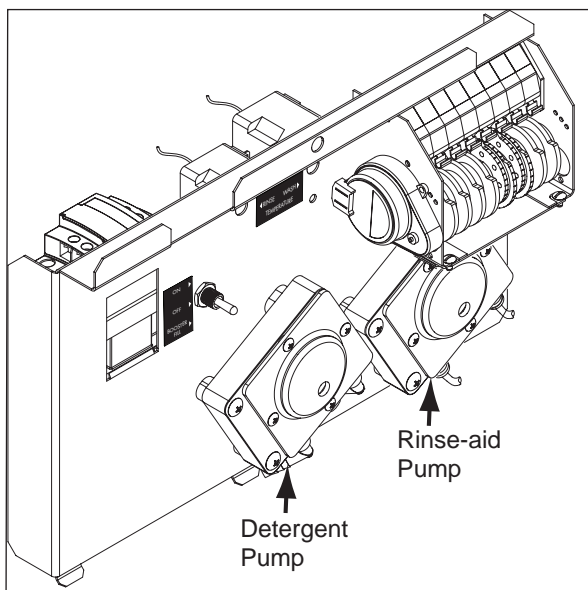
*Install the scrap screen, overflow tube, and spray arms.  
Make sure the spray arms turn freely.*

## Chemical Dispensing Pumps

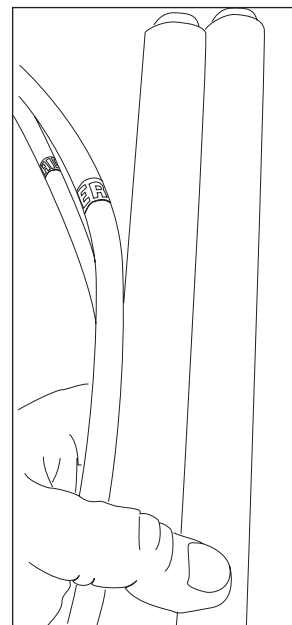
### ATTENTION

Contact a local chemical supplier for detergent and rinse-aid chemicals. The detergent should be a non-chlorinated liquid detergent. The chemical dispensing pumps are adjusted by the chemical supplier.

1. The dishwasher is equipped with a built-in detergent dispensing pump and rinse-aid dispensing pump. (See the photographs below.)
2. The pumps are located on the lower panel behind the lower-front access panel.
3. Each pump is equipped with 6 feet [1.8 m] of pick-up supply tubing, a stiffener tube, and a strainer.
4. A red label marked DETERGENT is attached to the detergent pump inlet tubing.
5. A blue label marked RINSE-AID is attached to the rinse-aid pump inlet tubing.
6. The detergent enters the wash tank compartment through a fitting at the right rear of the wash compartment (see the illustration on the next page).
7. The detergent supply should be a non-chlorinated liquid detergent.
8. The rinse-aid enters the final rinse piping through a fitting located on the upper-left rear side of the dishwasher. The fitting is located near the vacuum breaker (see the illustration on the next page).



The dispensing pumps are located behind the lower-front access panel.



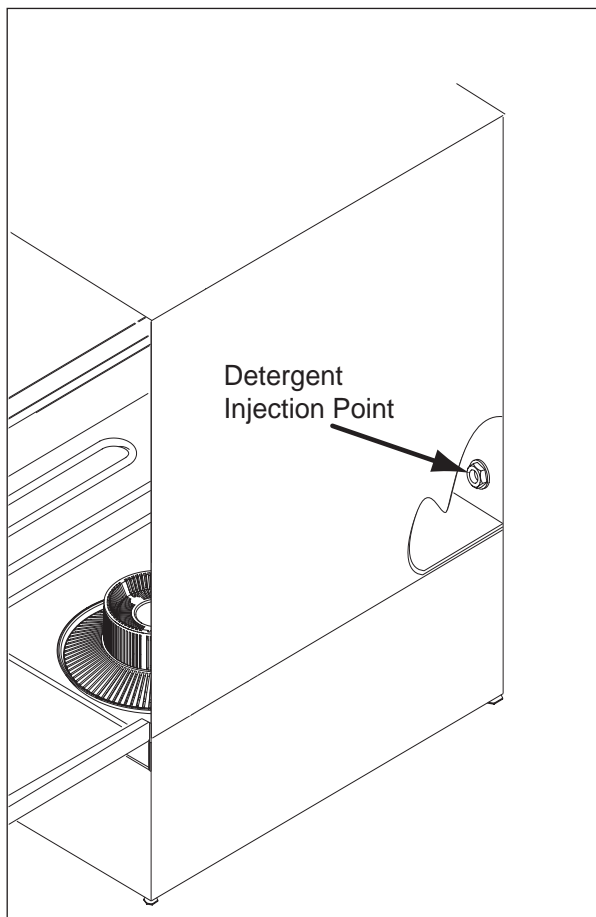
A stiffener tube, strainer and pick-up tubing are supplied with the built-in detergent and rinse-aid pumps.

9. The chemical supplier will choose the appropriate liquid rinse-aid.
10. Your chemical supplier should adjust the dispensers for the supplied product.
11. Place the chemical supply containers as close to the dishwasher as possible.
12. Do not elevate the chemical containers above the finished floor.

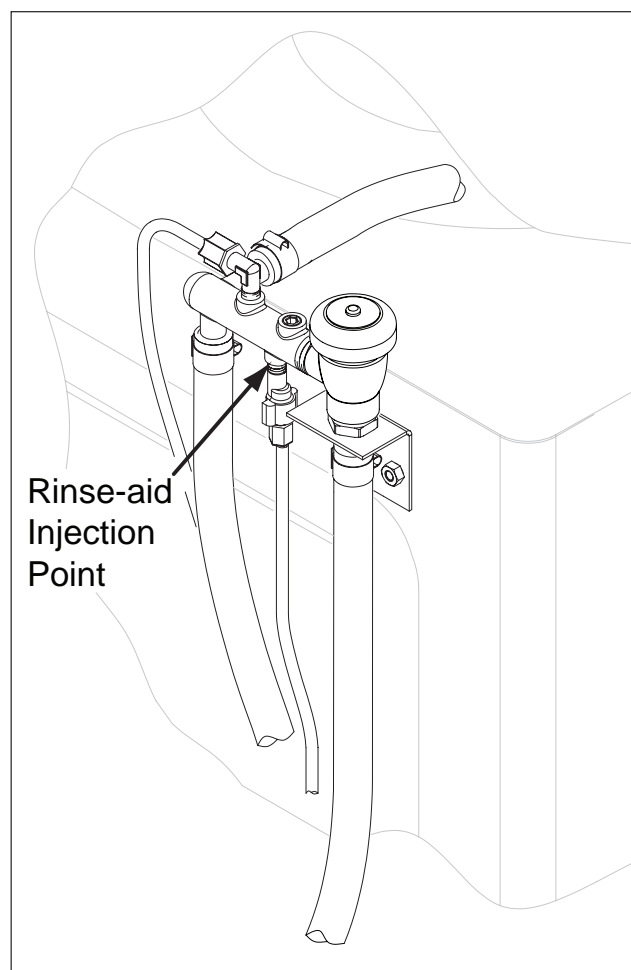
## Chemical Dispensing Pumps (continued)

### Chemical Injection Points

The illustrations below show the location of the detergent and the rinse-aid injection points.



*Detergent enters the wash tank compartment through a fitting on the rear wall of the wash tank compartment.*



*The rinse-aid enters the final rinse piping at the top-rear of the dishwasher near the vacuum breaker.*

## Chemical Dispensing Pumps

### Priming the Chemical Dispensing Pumps

The chemical dispensing pumps must be primed before the dishwasher is operated. A 2-position PRIME switch is located on the front control panel to do this. The Detergent dispensing pump is primed when the Prime switch is pushed UP to the DET position. The Rinse-aid dispensing pump is primed when the Prime switch is pushed DOWN to the R/A position (see below).



**Chemical Dispenser Prime Switch**

1. Make sure the chemical containers are full and the correct pick-up tubes are in the containers.
2. Turn the dishwasher power switch ON. The switch will illuminate and the dishwasher will fill with water.
3. Once the fill is complete, open the dishwasher door, then push and hold the prime push button UP to the DET (detergent) position until detergent is observed entering at the right-rear of the wash tank compartment.
4. Push and hold the prime push button DOWN to the R/A (rinse-aid) position for 30-seconds. Release the push button.
5. Close the door.

## Chemical Dispensing Pumps

### Adjusting the Chemical Dispenser Pumps

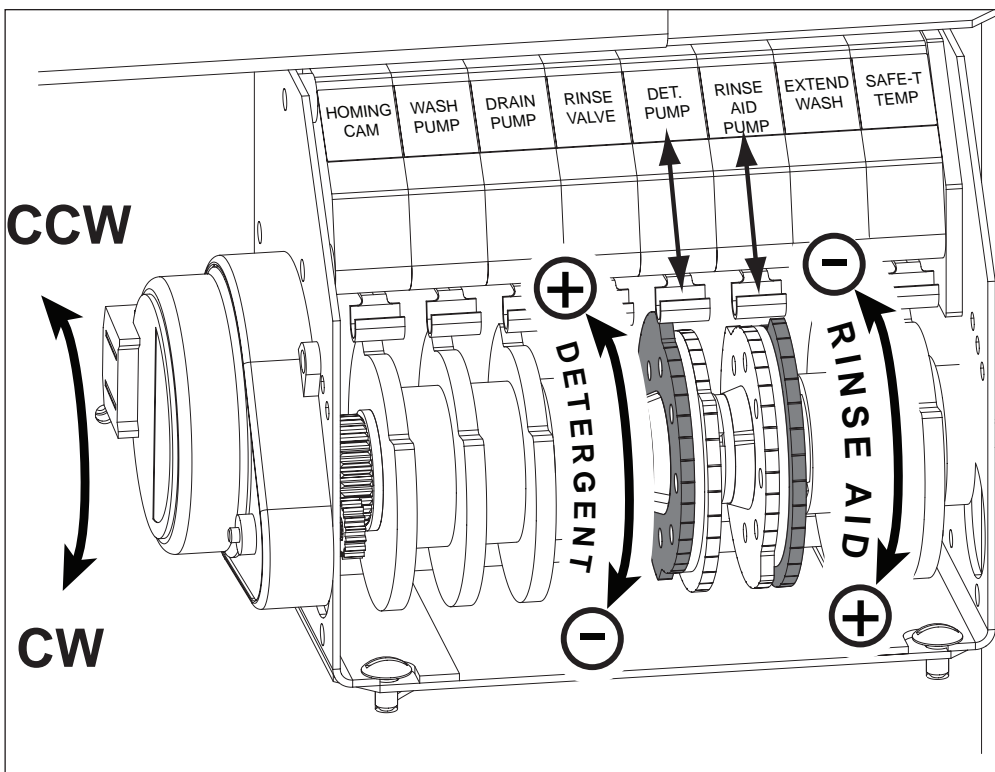
The amount of detergent and rinse-aid that are dispensed during the dishwasher cycle are controlled by adjustable cams on the timer assembly. Variables such as the type of chemicals used and the hardness of the water supply often require that the timer cam settings must be changed. It is recommended that the chemical supplier make these adjustments. (Refer to the illustration below).

**Note:**

Only the Detergent and the Rinse-aid cams are adjustable. Do not attempt to adjust any other timer cam.

To adjust the chemical dispensing pump timer cams:

1. Remove the lower-front access panel. The timer assembly is located on the right-side of the electrical component panel.
2. Make sure the dishwasher power is OFF.
3. The detergent timer cam has 2 halves. Hold the stationary right-half of the cam and turn the left-half of the cam counter-clockwise to increase the amount of detergent that is dispensed. Turn the left-half clockwise to decrease the detergent dispensed.
4. The rinse-aid timer cam has 2 halves. Hold the stationary left-half of the cam and turn the right-half of the cam counter-clockwise to decrease the amount of rinse-aid that is dispensed. Turn the right-half clockwise to increase the amount of rinse-aid dispensed.



## Normal Wash Mode

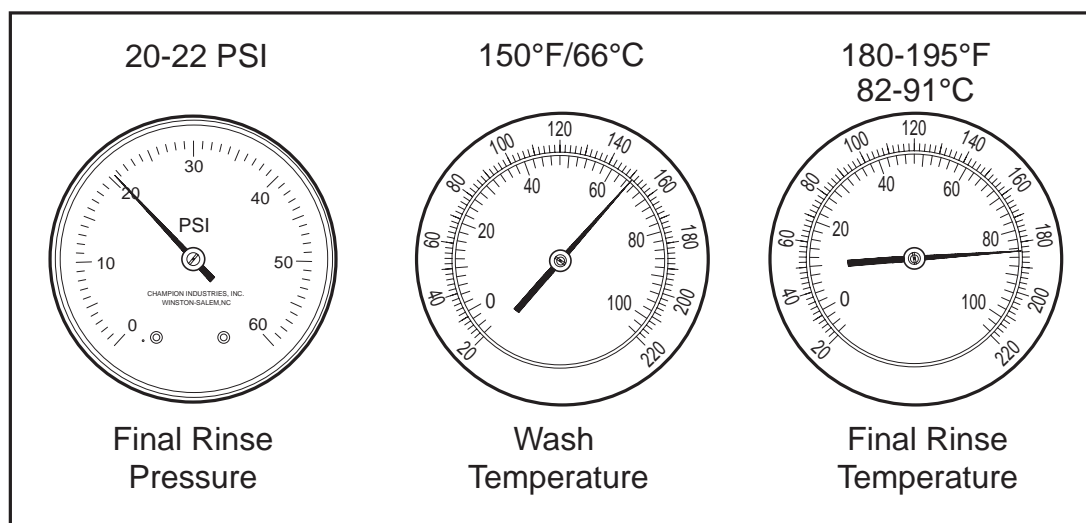
Follow the instructions below to operate the dishwasher in a Normal Wash Mode. A Safe-T-Temp feature holds the dishwasher in a wash mode if the booster heater temperature is below 180°F/82°C.

1. Turn the main power on at the main circuit breaker.
2. Install the sump filter, overflow tube and spray arms.
3. Make sure the flexible drain hose and the flexible fill hose are not kinked, then turn the water supply on.
4. Close the dishwasher front door.
5. Push the dishwasher Power Switch to the ON position. The power switch will illuminate and the machine will fill with water.
6. Check the pressure gauge as the machine fills and make sure the incoming water pressure is between 20-22 psi.
7. Wait 15-minutes for the WASH temperature gauge to indicate a minimum of 150°F/66°C.

### ATTENTION

At the beginning of the day, run 2 empty cycles before checking the final rinse operating temperature. The first cycle will take longer than normal because the water temperature in the booster is low.

8. Load soiled wares into the dish rack. Place plates, glasses, cups and bowls in a peg 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 racks.
9. Slide 1 dish rack into the wash compartment making sure that wares do not interfere with the rotating spray arms. Do not wash more than 1 dish rack at a time.
10. Close the front door fully, then press and hold the START BUTTON for 1-second. The green in-cycle light will illuminate and the wash cycle will begin. The wash cycle time runs for approximately 1-1/2 minutes. (continued on next page)



*The pressure and temperature gauges are located on the lower-left corner of the lower-front access panel.*

### *Normal Wash Mode (continued)*

11. Opening the door when the dishwasher is in-cycle will stop the dishwasher. The cycle will resume automatically when the dishwasher door is closed fully.
12. The final rinse cycle begins at the end of the wash cycle and runs for approximately 15-seconds. Check the RINSE temperature gauge during the final rinse and make sure that it indicates a minimum of 180°F/82°C. The acceptable range of operation is 180-195°F/82-91°C.
13. At the end of the rinse cycle, the in-cycle light will go out. Open the door and remove the clean rack of wares. Repeat steps 8-12 for additional dish racks.
14. Refer to the Cleaning Instructions, "After Each Meal Period or every 8 Hours of Operation", on page 15 for the procedures to drain and clean the dishwasher.

### *Safe-T-Temp Mode*

The final rinse water temperature must be a minimum of 180°F/82°C during the final rinse cycle to ensure that all wares are sanitized. If for any reason, the hot water temperature in the booster tank cannot provide this temperature, the dishwasher will enter a Safe-T-Temp Mode of operation and extend the cycle time.

The Safe-T-Temp changes the Normal Operation Mode as described below:

1. The Safe-T-Temp constantly monitors the water temperature inside final rinse booster.
2. If the temperature inside the booster heater falls below 180°F/82°C then the Safe-T-Temp will extend the wash cycle time until the booster heater water temperature reaches the proper temperature.
3. The in-cycle light will remain illuminated during the Safe-T-Temp Mode.
4. The RINSE water temperature gauge must be monitored to ensure that a minimum of 180°F/82°C is maintained during the rinse cycle.
5. The temperature range for the final rinse water is 180-195°F/82-91°C.
6. An extraordinarily long wash cycle may indicate a low incoming water temperature or a problem with the booster heater operation.

**DO NOT REMOVE WARES UNTIL THE FINAL RINSE CYCLE HAS SANITIZED THE WARES AND THE GREEN CYCLE LIGHT GOES OUT.**

### *Extended Wash Mode*

The Extended Wash Mode is used to wash heavily soiled items such as pots, pans and other wares that require more washing time than the standard 100-second Normal Wash Mode.

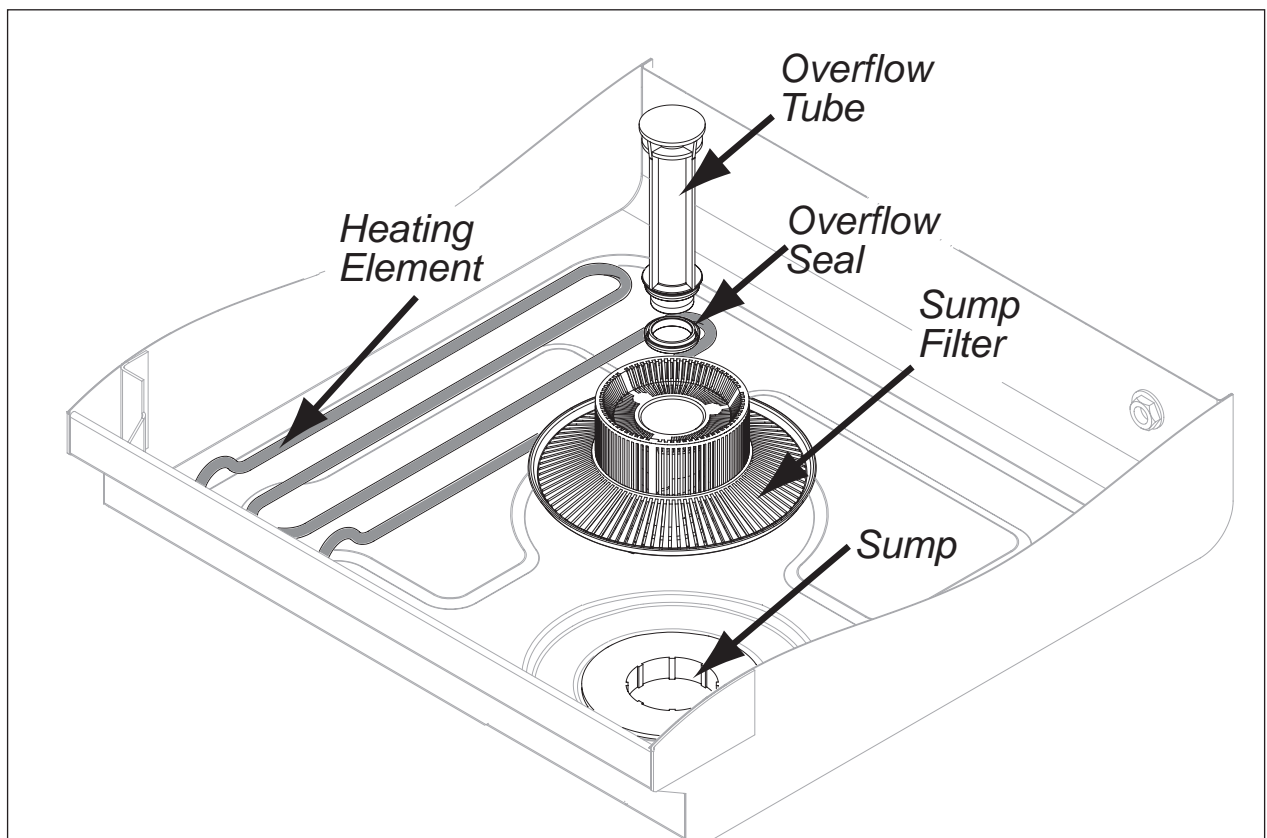
The dishwasher will remain in the Extended Wash Mode until the operator exits the mode.

1. Load a dish rack into the dishwasher, close the door.
2. Press and hold the START button for 1-second then release.
3. The green in-cycle light will illuminate and the dishwasher will begin a normal wash cycle.
4. Press the EXT WASH button to place the dishwasher in the Extended Wash Mode.
5. The green extended wash light will illuminate indicating that the machine is in the Extended Wash Mode.
6. The dishwasher will continue to wash until the operator presses the EXT WASH button again.
7. Press the EXT WASH button. The green extended wash light will go out indicating that the dishwasher has returned to the Normal Wash Mode.
8. The dishwasher will finish the wash cycle and perform a final rinse of the wares.

## Cleaning

**After Each Meal Period or every 8 Hours of Operation.**

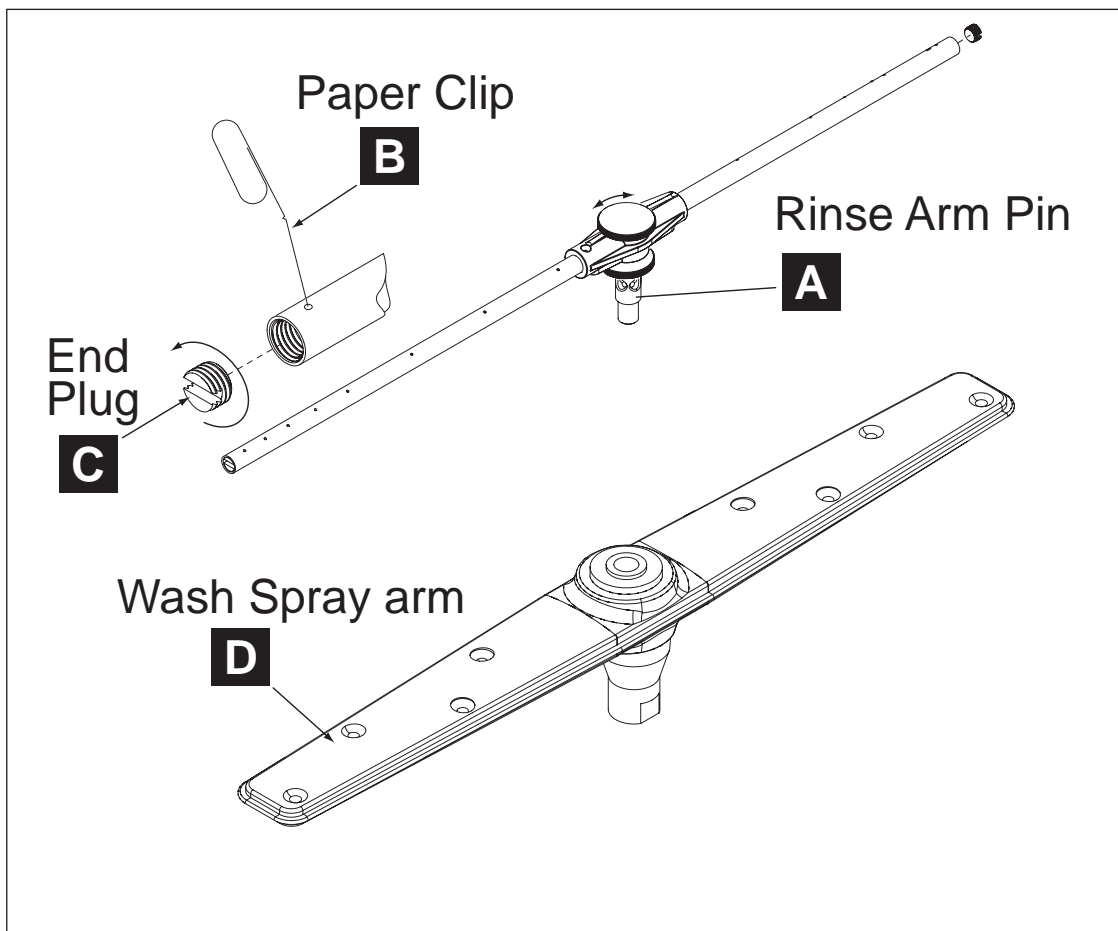
1. Press the lighted power switch to the OFF position. The power switch light will go out.
2. Open the door and remove the overflow tube from the wash tank sump.
3. Inspect and clean the overflow tube rubber seal
4. Close the door.
5. Push and hold the drain switch until all of the water has drained.
6. Remove the sump filter carefully to keep the soil or waste particles from falling into the sump.
7. Clean the sump filter by rinsing with clean water.  
Be sure to back-flush the filter.  
Do not strike the filter against solid objects.
8. Check the sump for foreign material and clean as required.
9. Replace sump filter and the overflow tube.
10. Make sure that spray arms turn freely.
11. Check the chemical containers and refill as required.
12. Close the door and turn the ON/OFF switch to ON and return to normal operation mode.



## Cleaning

### At the End of the Day

1. Perform Steps 1-8 on the previous page.
2. Remove the upper and lower rinse and wash spray arms. The spray arms are interchangeable.
3. Unscrew the rinse arm pin (A). Remove the rinse arm assemblies
4. Clean the final rinse arm nozzles using a small paper clip (B).
5. Remove the rinse arm end plugs (C) *if necessary*, and flush the rinse arm with clean water.
6. Re-install the rinse arm end plugs if they were removed.
7. Remove the wash spray arms and flush with clean water.
8. DO NOT USE STEEL WOOL TO CLEAN THE INTERIOR OF THE MACHINE.
9. Contact the chemical supplier for de-liming if required (see next page).
10. Wipe the interior and exterior of the machine with a soft cloth and a mild detergent. DO NOT HOSE THE EXTERIOR OF THE MACHINE WITH WATER.
11. Reassemble the dishwasher and leave the door open to allow overnight drying.



## De-liming

Minerals accumulate on the interior surfaces of the dishwasher. The deposits have a white haze and, in cases of heavy accumulation, may appear as a granular solid. The generic name for mineral deposits is lime. The removal of lime deposits is called de-liming. Your dishwasher should be de-limed regularly; how often will depend on the mineral content of your water.

Inspect your machine interior for lime deposits. If deliming is required, a de-liming agent should be used for best results in accordance with the chemical supplier's instructions.

### **Danger:**

Death or serious injury may result when de-liming solution is mixed with sodium hypochlorite (*chlorine bleach*) sanitizing agent. Mixing may cause hazardous gases to form.

De-liming solution and other acids must never be mixed with chlorine, iodine, bromine, or fluorine.

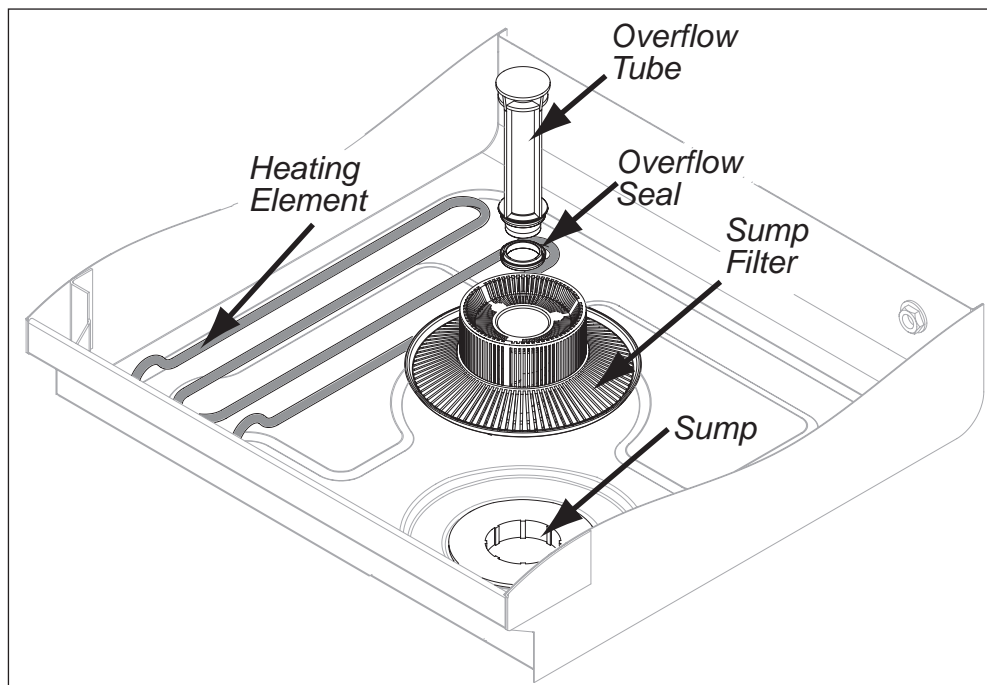
### **Caution:**

Skin contact with de-liming solutions can cause severe irritation and possible chemical burns. Always wear protective clothing and goggles when handling chemicals.

### **Attention:**

Contact your chemical supplier for specific safety procedures and instructions for the use of the de-liming solution supplied for the dishwasher.

De-liming solution or other chemicals are not supplied by the dishwasher manufacturer.



## *Maintenance*

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

### **Daily Maintenance**

1. Check all of the wash arm and rinse arm spray jets and clean as necessary.
2. Make sure that the water supply is on and that the drain is not clogged.
3. Check the temperature gauges and/or displays to ensure that they are operating.
4. Make sure that dish racks are in good condition.
5. Check the chemical containers and refill as required.
6. Follow the cleaning procedures given above.

### **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.
9. Clean the chemical dispenser pick-up tubing for the detergent and rinse-aid pumps.

#### **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 button up in the DET position until water flows into the wash tank compartment.
4. Press and hold the PRIME button down in the RINSE position until water flows into the wash tank compartment.
5. Return the pick-up tubes to their containers.
6. Run 3 empty dishwasher cycles to flush any chemicals from the dishwasher wash compartment.
7. Push and hold the chemical prime button to prime the chemical pumps.

## Troubleshooting

Follow the troubleshooting guide below in the event that your dishwasher does not operate as expected. Perform the basic checks below before calling an authorized service agent:

1. Make sure that the main water supply is turned on.
2. Make sure that the main power is turned on.
3. Make sure that the flexible water fill and drain hoses are not kinked.

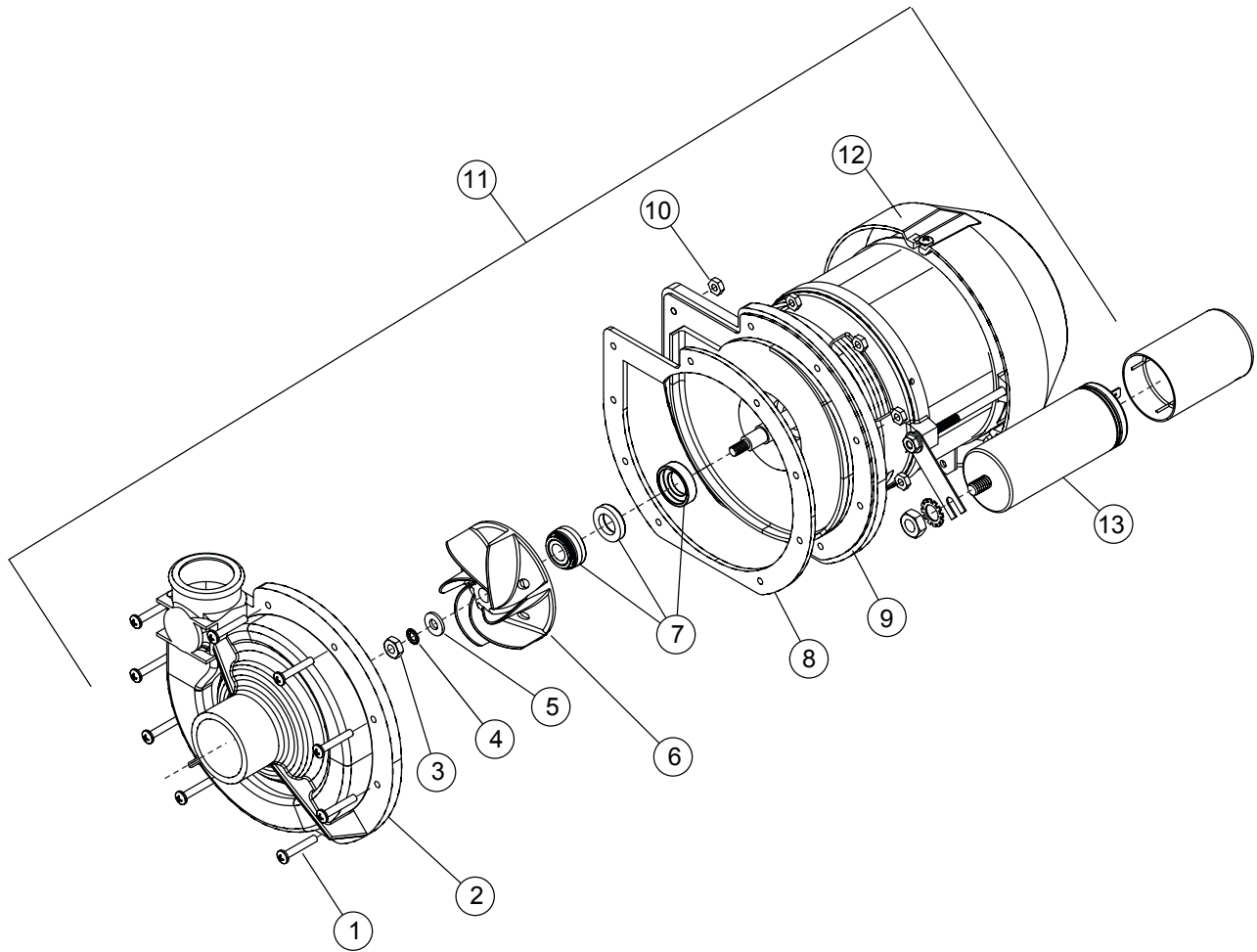
Condition	Cause	Solution
Dishwasher will not run.	Door not closed. Main power OFF. Dishwasher OFF.	Close door completely. Check breaker on panel. Turn dishwasher ON.
Low or no water.	Main water supply off. PRV setting incorrect Solenoid strainer clogged. Solenoid valve defective.	Open supply valve. Adjust the PRV setting Clean strainer. Contact Service Agent.
Chemicals won't feed into dishwasher.	Chemical supply low. Pick-up tube clogged Supply tubing damaged. Supply tubing kinked.	Refill chemical container. Clean/replace tube. Replace tubing. Straighten tubing.
Poor wash results.	Wares incorrectly loaded. in dishrack.  Clogged sump filter. Clogged spray arms.  Detergent injector not feeding.  Thermostat defective.  Detergent motor defective.  Water temperature low.	Reposition wares or reduce amount of wares.  Clean sump filter. Clean spray arms.  Replace squeeze tube or clean tubing and pick-up tube.  Contact Service Agent.  Contact Service Agent  Contact Service Agent
Dishwasher stays in wash cycle.	Safe-T-Temp extends wash mode to allow final rinse water booster temperature to reach 180°F/82°C.  Dishwasher is operating in the Extended Wash Mode.	Contact Service Agent because booster thermostat is defective.  Press the Extended Wash button 1 time. The Extended Wash Indicator light will go out, the wash cycle will resume where it left off and perform a final rinse cycle.

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# Service Replacement Parts

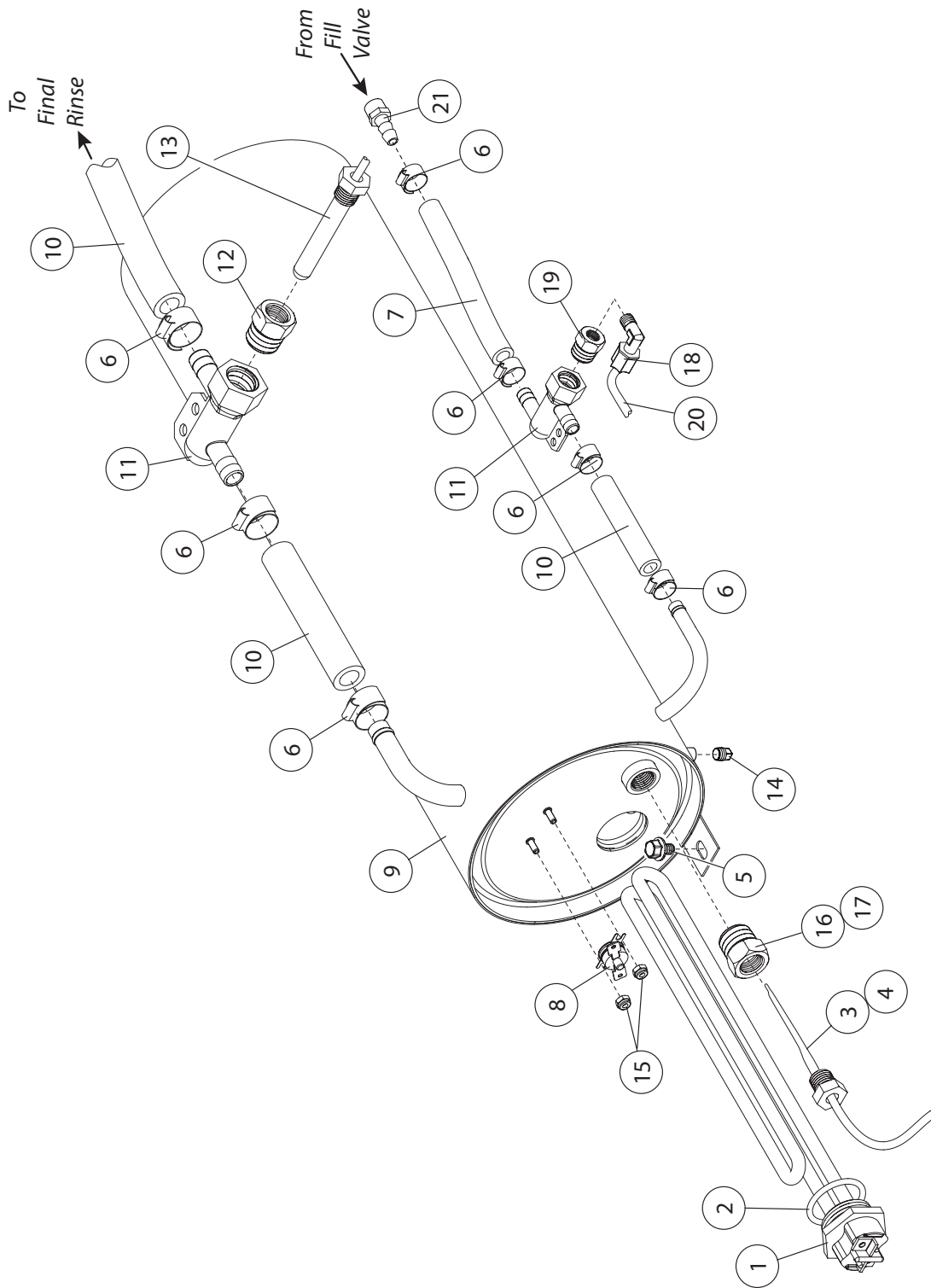
<b>Illustrations</b>	<b>Page</b>
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Wash Pump/Motor Assembly



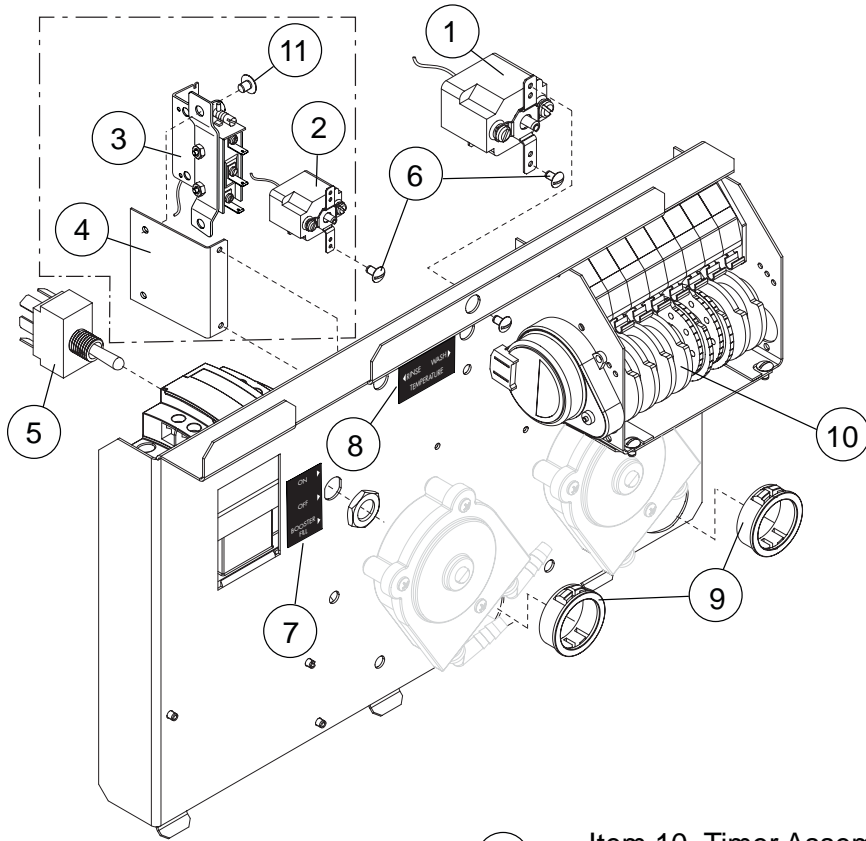
<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	2103.01	SCREW, M4, PHIL, PAN HD.	9
2	2103.02	IMPELLER HOUSING COVER	1
3	2103.03	NUT, M6 (left-hand threads)	1
4	2103.04	WASHER, LOCK, 1/4"	1
5	2103.05	WASHER, PLAIN, M6	1
6	2103.06	IMPELLER	1
7	2103.07	SEAL	1
8	2103.30	GASKET, PUMP	1
9	2103.09	BACKPLATE, PUMP	1
10	2103.08	NUT, M4	9
11	2103.10	PUMP/MOTOR ASSEMBLY COMPLETE 220VAC/60/1	1
12	2103.37	COVER, REAR MOTOR FAN	1
13	2103.11	CAPACITOR 16 $\mu$ F	1

# Booster Assembly

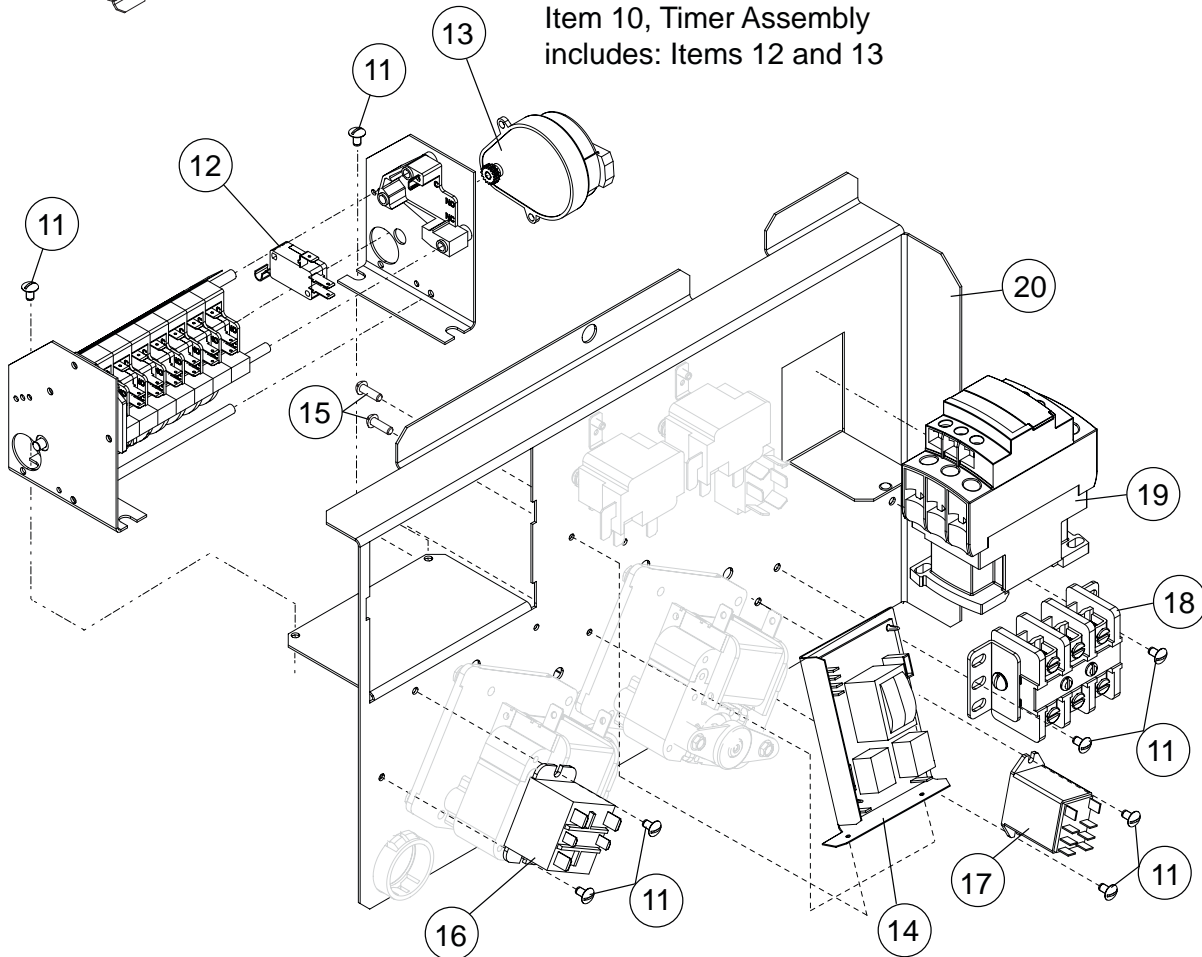


Item No.	Part No.	Description	Qty.
1	2103.12	HEATER, BOOSTER 4kW, 208V, 40°F RISE <i>(Does not include gasket)</i>	1
1	2103.13	HEATER, BOOSTER 6kW, 208V, 70°F RISE <i>(Does not include gasket)</i>	1
2	2103.14	GASKET, BOOSTER HEATER	1
3	2103.15	THERMOSTAT, CONTROL 195°F <i>(Prior to S/N W120631743)</i>	1
4	2103.36	THERMOSTAT, CONTROL 110-195°F <i>(Beginning with S/N W120631743)</i>	1
5	2103.16	BOLT, HEX FLANGE, 1/4-20 X 3/8" SST	1
6	2103.38	CLAMP, 29/32" x 1/2" WIDE SST	6
7	2103.22	HOSE, BOOSTER FILL	1
8	2103.19	THERMOSTAT, HI-LIMIT FIXED SNAP 240°F	1
9	2103.20	TANK, BOOSTER <i>(All S/N's)</i> <i>(Includes Item 14)</i>	1
10	2103.22	HOSE, 1/2" ID	A/R
11	2103.23	TEE, RINSE	2
12	2103.24	FITTING, BOOSTER THERMOMETER	1
13	0302.00	THERMOMETER, 2" DIAL, 7' CAPILLARY	1
14	2103.26	PLUG, 1/8" SST	1
15	2103.27	NUT, GRIP 6-32 W/NYLON INSERT	2
16	2103.28	FITTING, BOOSTER THERMOSTAT <i>(Use with Item 3, Prior to S/N W120631743))</i>	1
17	2103.61	FITTING, BOOSTER THERMOSTAT <i>(Use with Item 3, Beginning with S/N W120631743))</i>	1
18	2103.62	FITTING, COMP. 1/4" OD X 1/8" MPT ELL J	1
19	13604.10	BUSHING, REDUCER 1/2" X 1/8"	1
20	2103.74	TUBING, 1/4" NATURAL	2 FT.
21	40014.00	COUPLER, 1/2" HOSE X 1/2" FNPT BRASS	1

# Electrical Panel and Timer Assembly

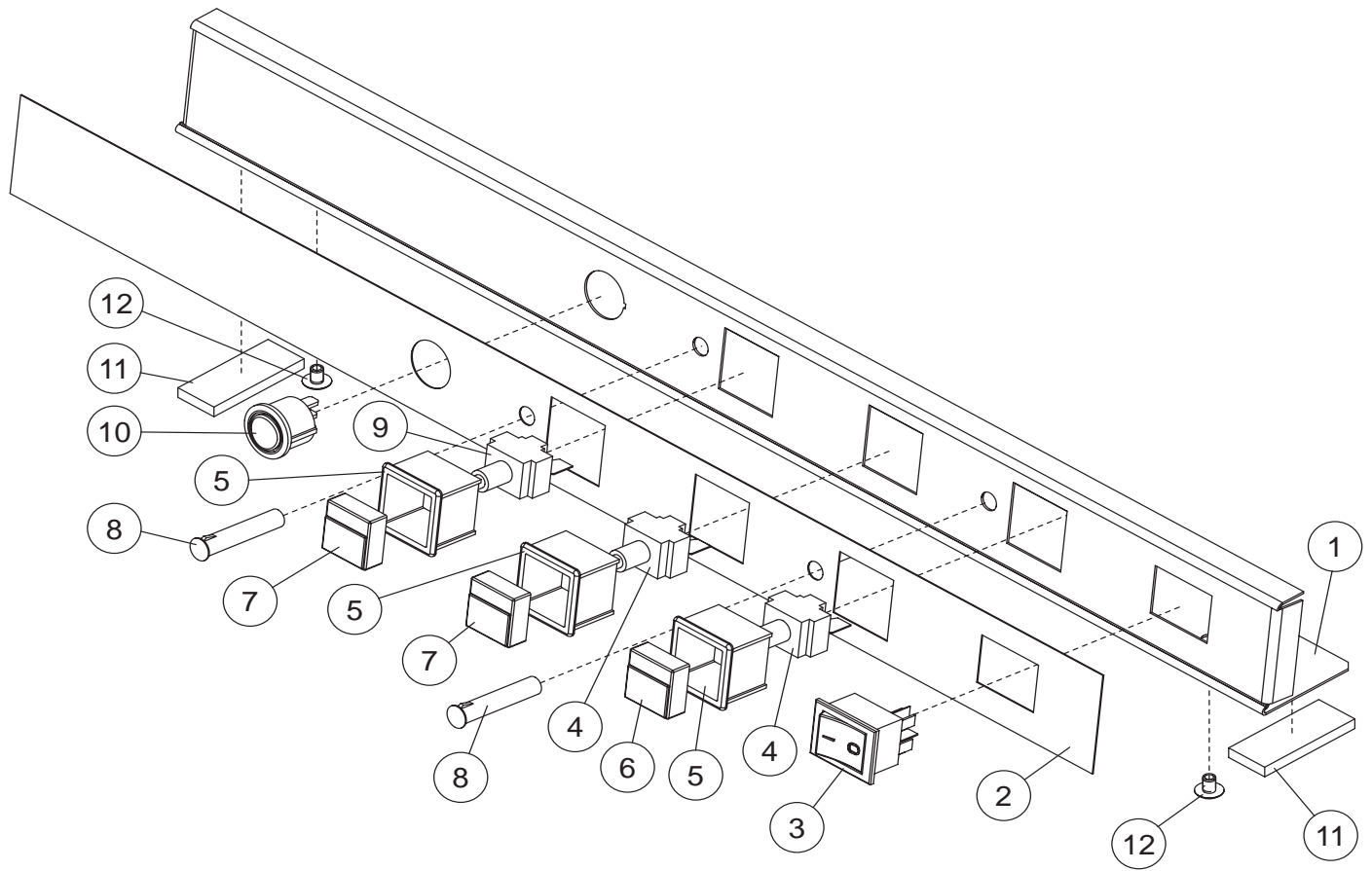


Item 10, Timer Assembly includes: Items 12 and 13



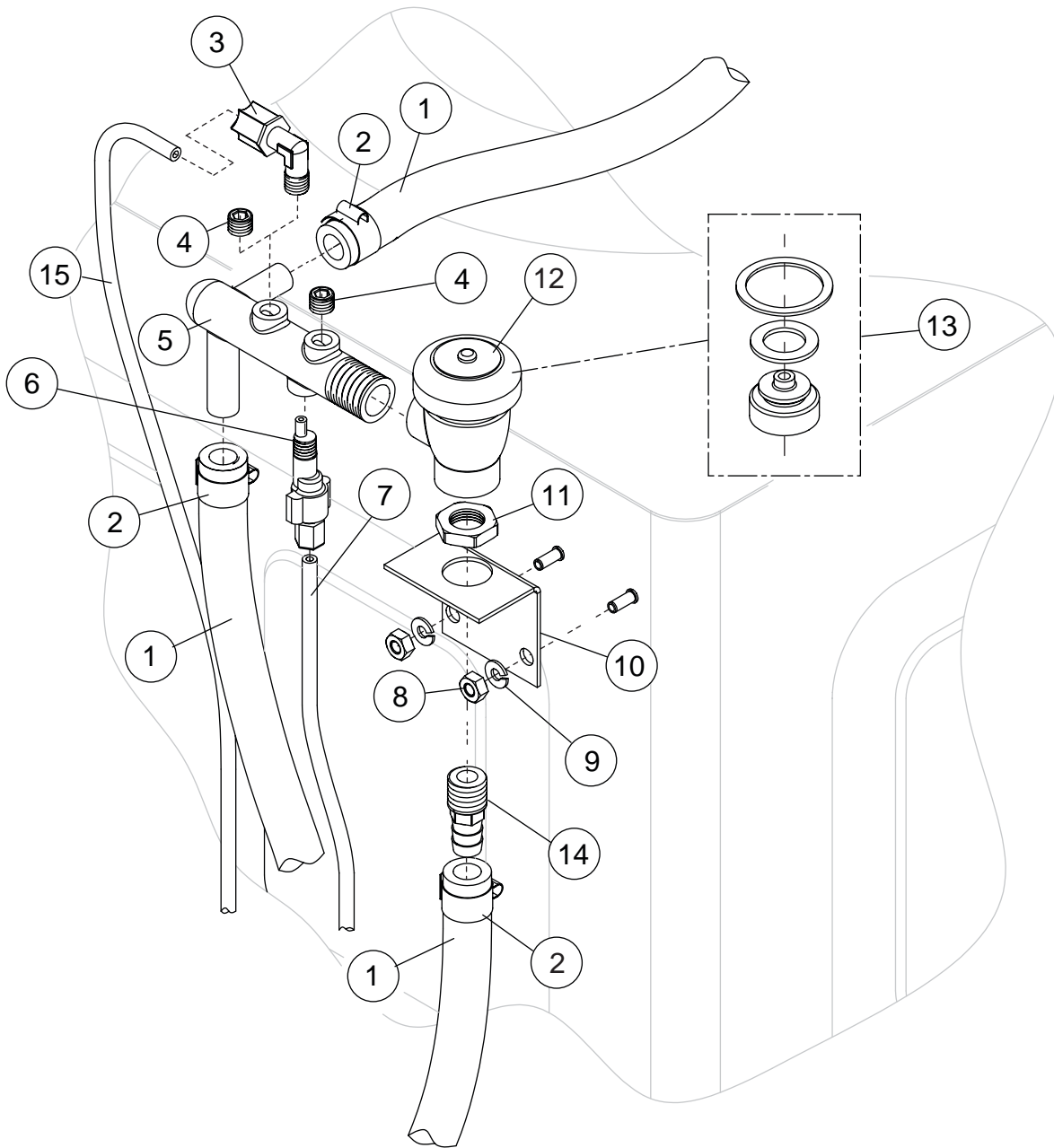
Item No.	Part No.	Description	Qty.
1	2103.29	THERMOSTAT, WASH TANK	1
2	2103.15	THERMOSTAT, CONTROL 195°F (Prior to S/N W120631743)	1
3	2103.36	THERMOSTAT, CONTROL 110-195°F (Beginning with S/N W120631743)	1
4	2103.63	BRACKET, THERMOSTAT (Use with Item 3 only)	1
5	2103.31	SWITCH, 3-POSITION, TOGGLE	1
6	2103.34	SCREW, NIBS RH 6-32 X 3/16" PHIL. SST	4
7	2103.32	LABEL, ON/OFF/BOOSTER FILL	1
8	2103.33	LABEL, WASH-RINSE TEMPERATURE	1
9	2103.35	BUSHING, 1" ID	2
10	00408.60	ASSEMBLY, TIMER (Includes Items 12, 13)	7
11	2103.59	SCREW, TRUSS SLOT, 8-32 X 1/4" SST	10
12	0411.00	SWITCH, TIMER	7
13	00501.00	MOTOR, TIMER	1
14*	2103.43*	KIT, FILL/DRAIN TIMER (All S/N's)	1
15	2103.45	SCREW, RH 4-40 X 3/16" SLOTTED SST	4
16	2103.40	RELAY, 15 AMP, 120VAC COIL	1
17	2103.46	RELAY, 120VAC, 2PDT	1
18	2103.47	BLOCK, TERMINAL	1
19	2103.48	CONTACTOR, 25/40A, 3P, 120V COIL	1
20	2103.49	PANEL, CONTROL	1

\* **Note:** See Kit Installation Instructions at the end of this manual



<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	2103.42	PANEL, FACIA, UC65e	1
2	2103.44	LABEL, FACIA, UC65e	1
3	2103.50	SWITCH, ON-OFF	1
4	2103.51	CONTACT, MOMENTARY, N.O.	2
5	2103.52	HOUSING, SWITCH	3
6	2103.53	BUTTON, SWITCH (GREEN)	1
7	2103.54	BUTTON, SWITCH (GREY)	2
8	2103.55	LIGHT, INDICATOR LED, 125VAC (GREEN)	2
9	2103.56	CONTACT, SWITCH (EXTENDED WASH)	1
10	2103.57	SWITCH, MOMENTARY (PRIME)	1
11	2103.58	GASKET, STEAM	2
12	2103.59	SCREW, TRUSS SLOT., 8-32 X 1/4" SST	2

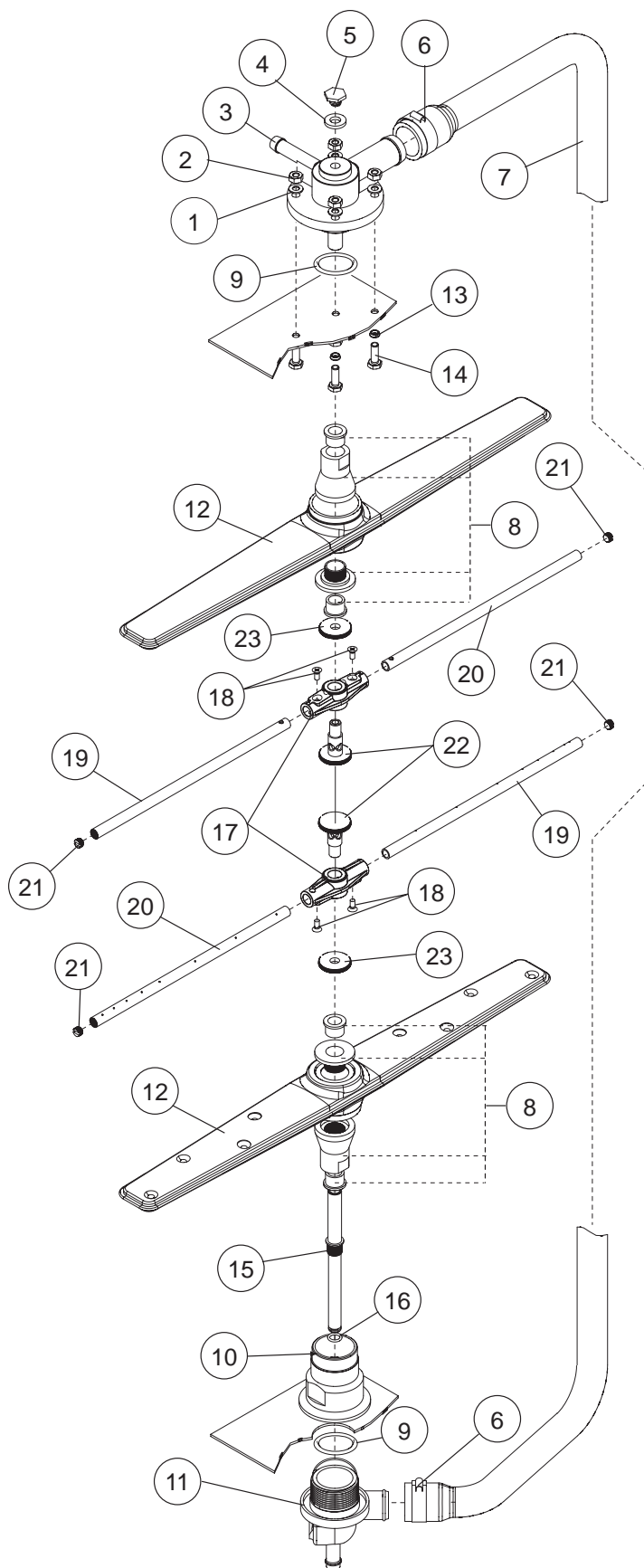
Upper Final Rinse Piping Assembly



## Upper Final Rinse Piping Assembly

Item No.	Part No.	Description	Qty.
1	2103.60	HOSE, RUBBER 1/2ID X .84OD	AR
2	2103.21	CLAMP, SS GEAR-MIN. 5/16-MAX.7/8	6
3	2103.62	FITT COMP 1/4OD X 1/8MPT ELL J (Prior to S/N W120631743)	1
4	2103.26	PLUG, 1/8 HEX COUNTERSUNK (Beginning with S/N W120631743)	2
5	2103.64	MANIFOLD, RINSE	1
6	2103.65	INJECTOR FITTING	1
7	2103.66	TUBING, 1/8OD X 1/16 ID	AR
8	2103.67	NUT, HEX SS 1/4-20	2
9	2103.04	WASHER, SPLIT LOCK 1/4i 304SS	2
10	2103.69	BRACKET, VACUUM BREAKER	1
11	2103.70	NUT, LOCK 1/2" NICKEL PLATED	1
12	2103.71	VACUUM BREAKER, 1/2" BRASS	1
13	2103.72	REPAIR KIT, VACUUM BREAKER 1/2"	1
14	2103.73	COUPLER 1/2 MPT X 1/2" HOSE	1
15	2103.74	TUBING, 1/4" NATURAL (Prior to S/N W120631743)	AR

Wash and Rinse Spray Arm Assemblies

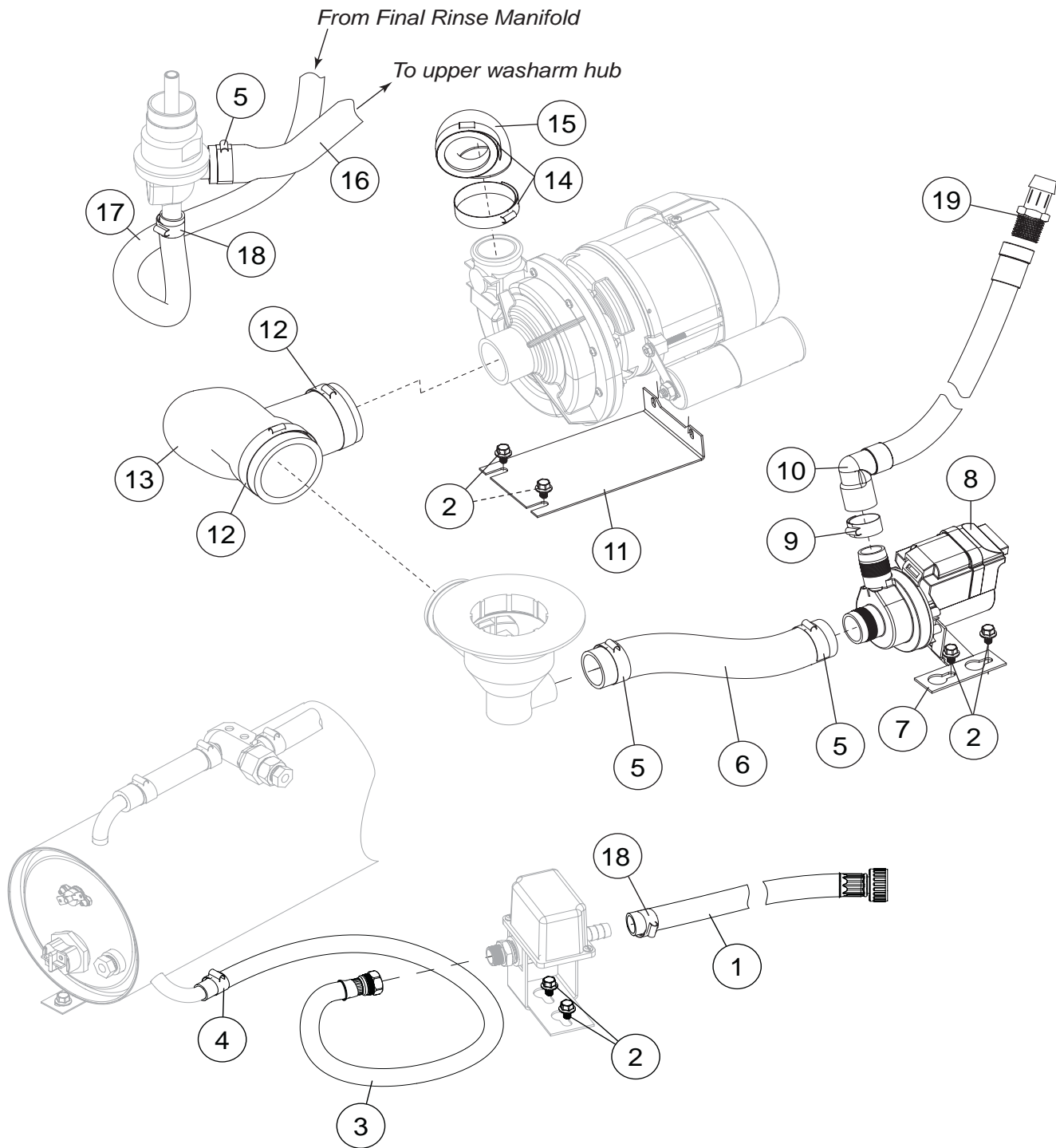


Item No.	Part No.	Description	Qty.
1	2103.75	WASHER, 17/64 id X 9/16" OD SST	4
2	2103.76	NUT, HEX 1/40-20 NYLON INSERT SST	4
3	2103.77	HUB, UPPER WASH ARM	1
4	2103.78	WASHER, PACKING	1
5	2103.79	SCREW, RETAINING	1
6	2103.80	CLAMP, HOSE GEAR 1-1/2" SST	2
7	2103.81	HOSE, UPPER WASH ARM	1
8*	2103.82	BEARING ASSEMBLY	2
9	2103.83	O-RING, 2-1/8" OD X 1-3/4" ID X 3/16"	2
10	2103.84	HUB, LOWER WASH ARM	1
11	2103.85	MANIFOLD, LOWER FWR	1
12	2103.86	WASH ARM ASSEMBLY <i>(Includes Item 8)</i>	2
13	2103.88	WASHER, NYLITE	4
14	2103.89	BOLT, 1/4-20 X 1" SST	4
15	2103.90	SHAFT, LOWER	1
16	2103.91	O-RING	1
17	2103.92	HUB, RINSE ARM, MOLDED	2
18	2103.93	SCREW, TRUSS SLOTTED 8-32 X 1/4" SST	4
19	2103.94	ARM, RIGHT-HAND RINSE (7 JETS)	2
20	2103.95	ARM, LEFT-HAND RINSE (8 JETS)	2
21	2103.96	CAP, RINSE ARM, 5/16-24	4
22	2103.97	SPINDLE, RINSE ARM	2
23	2103.98	SPACER, NUT	2
---	2103.99	RINSE ARM ASSEMBLY <i>(Includes Items 18-23)</i>	2

*\* Note:*

*The bearing assembly, P/N 2103.82 includes 2 bearings, 1 locknut, and 1 wash arm hub. The bearings, locknut and hub are not available as separate service replacement parts.*

# Drain Pump and Lower Hose Assembly

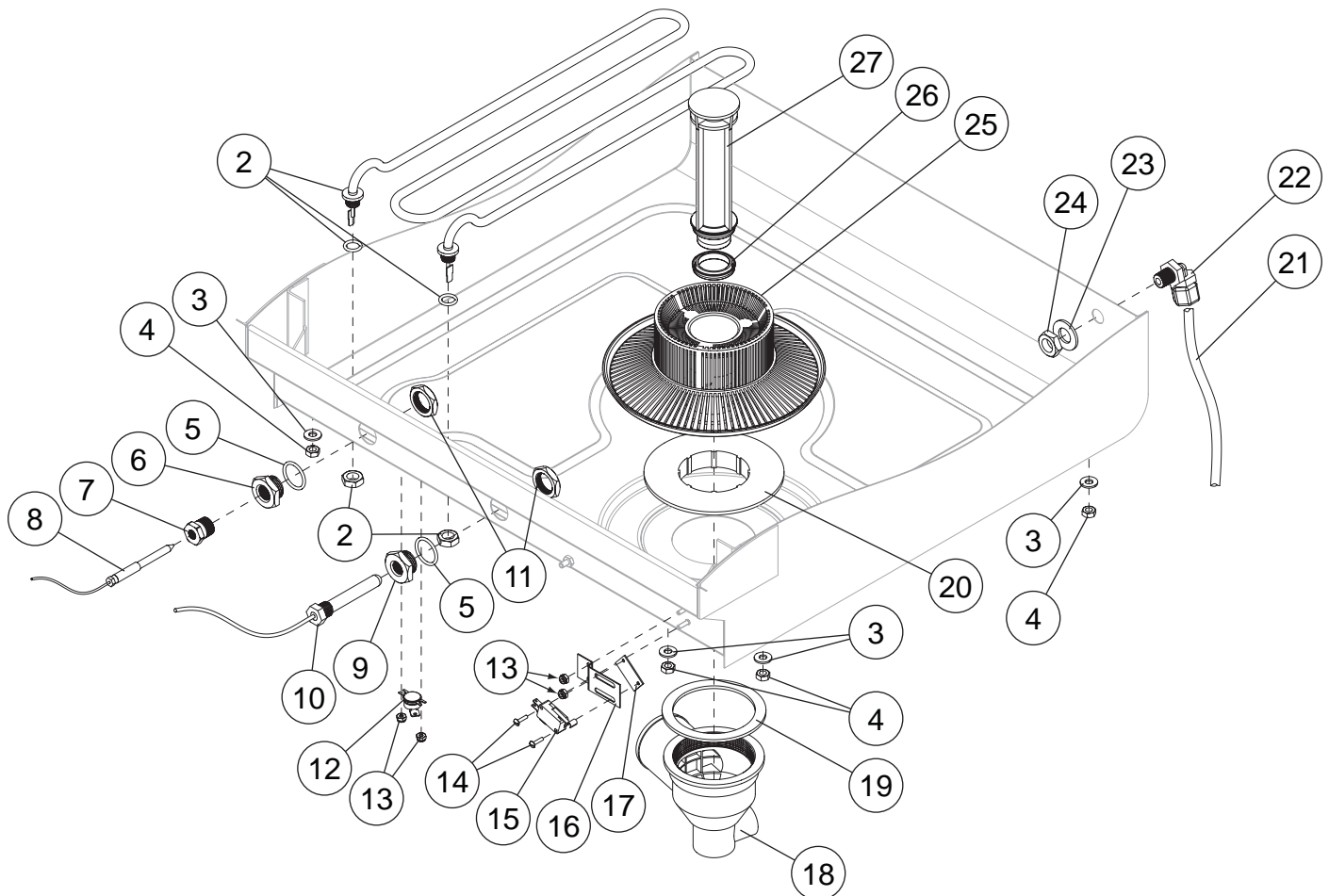
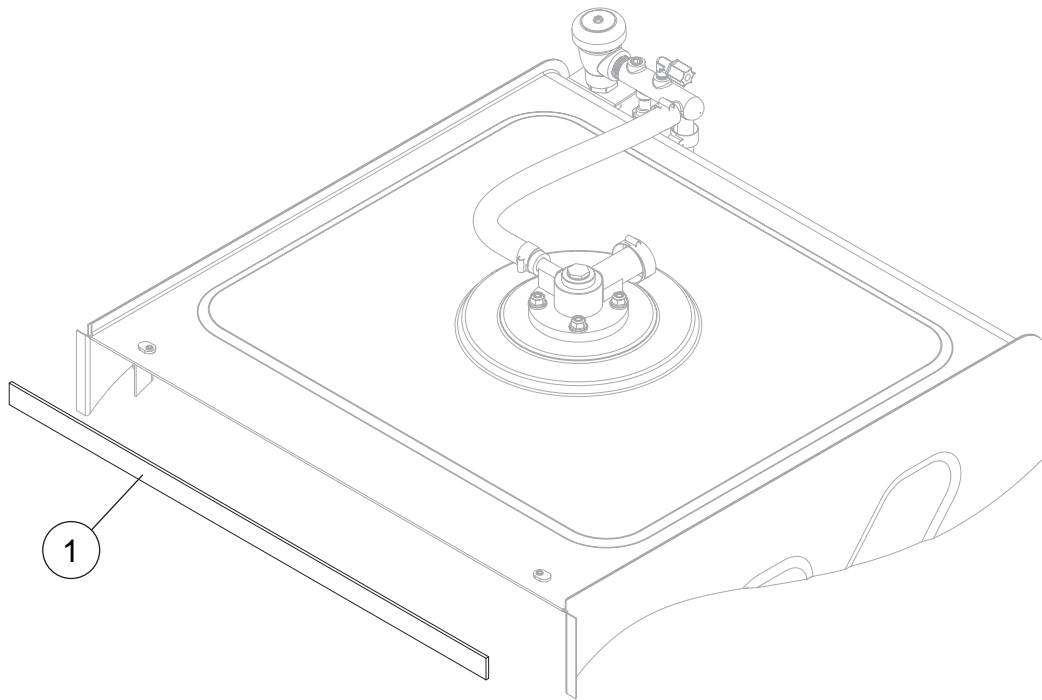


Item No.	Part No.	Description	Qty.
1	02104.00	HOSE, FILL 1/2" X 7' C/W 3/4" FNPS	1
2	2103.16	BOLT, HEX FLANGE, 1/4-20 X 3/8" SST	6
3	2103.18	HOSE, BOOSTER FILL, 1/2" X 1'	1
4	2103.17	CLAMP, HOSE GEAR-TYPE 5/16"	1
5	2104.04	CLAMP, HOSE GEAR-TYPE, 1", SST	2
6	2104.05	HOSE, DRAIN PUMP SUCTION	1
7	2104.06	BRACKET, DRAIN PUMP	1
8	2104.07	PUMP, DRAIN 115VAC	1
9	2104.08	CLAMP, HOSE GEAR-TYPE SST	1
10	798.00	HOSE, BRAIDED 20"	1
11	2104.09	BRACKET, WASH PUMP	1
12	2104.10	CLAMP, HOSE GEAR-TYPE 1-13/16"- 2-3/4" MAX SST	2
13	2104.11	HOSE, SUCTION WASH PUMP	1
14	2103.80	CLAMP, HOSE GEAR-TYPE, 1-1/2", SST	2
15	2104.13	HOSE, DISCHARGE WASH PUMP	1
16	2103.81	HOSE, UPPER WASH ARM	1
17	2103.22	HOSE, RUBBER 1/2" 1D X .84" OD	A/R
18	2103.21	CLAMP, HOSE GEAR-TYPE	2
19*	2103.68	COUPLER, 3/4" MPT X 3/4" HOSE BARB	1

**\* NOTE:**

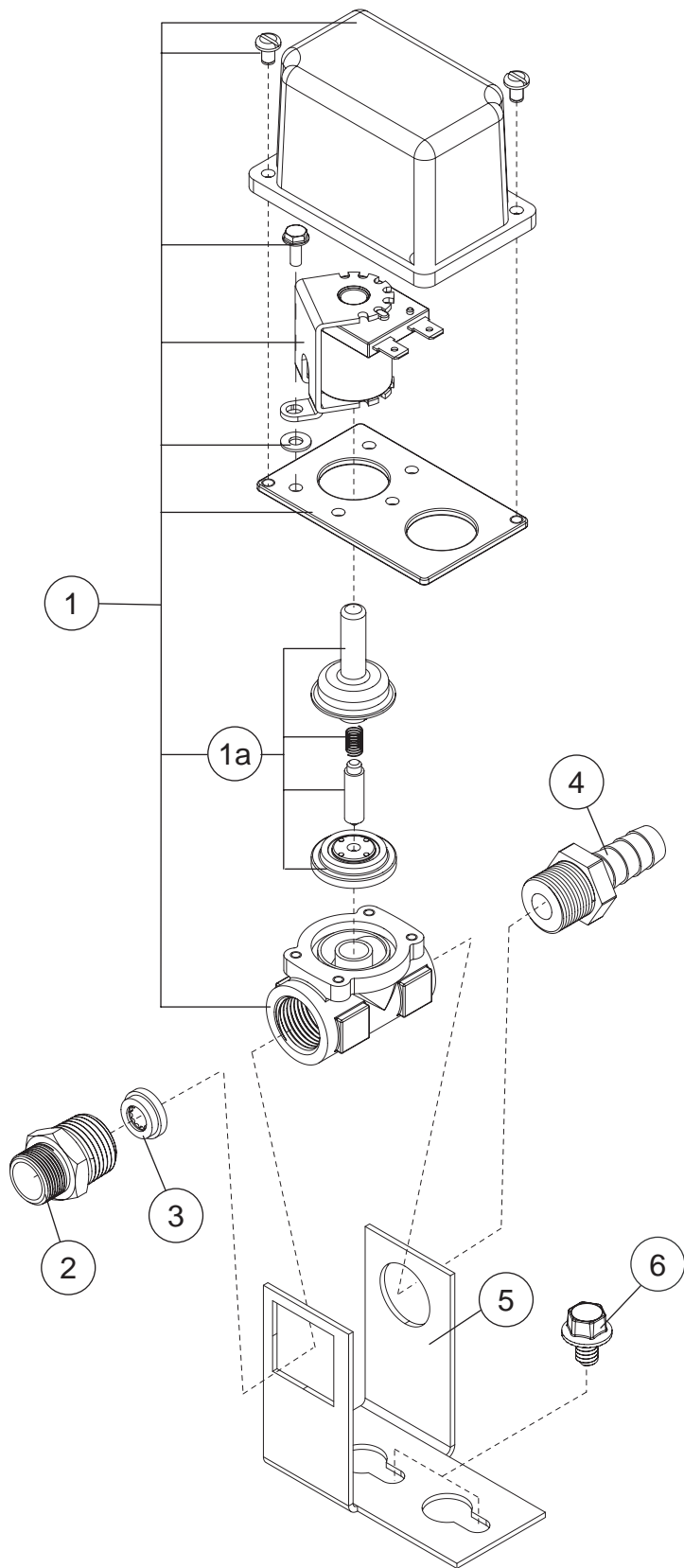
ITEM 19 IS STRAPPED TO THE DRAIN HOSE AS A SEPARATE PART FOR THE PLUMBING INSTALLER TO USE DURING INSTALLATION.

# Wash Tank Heater and Drain Assembly



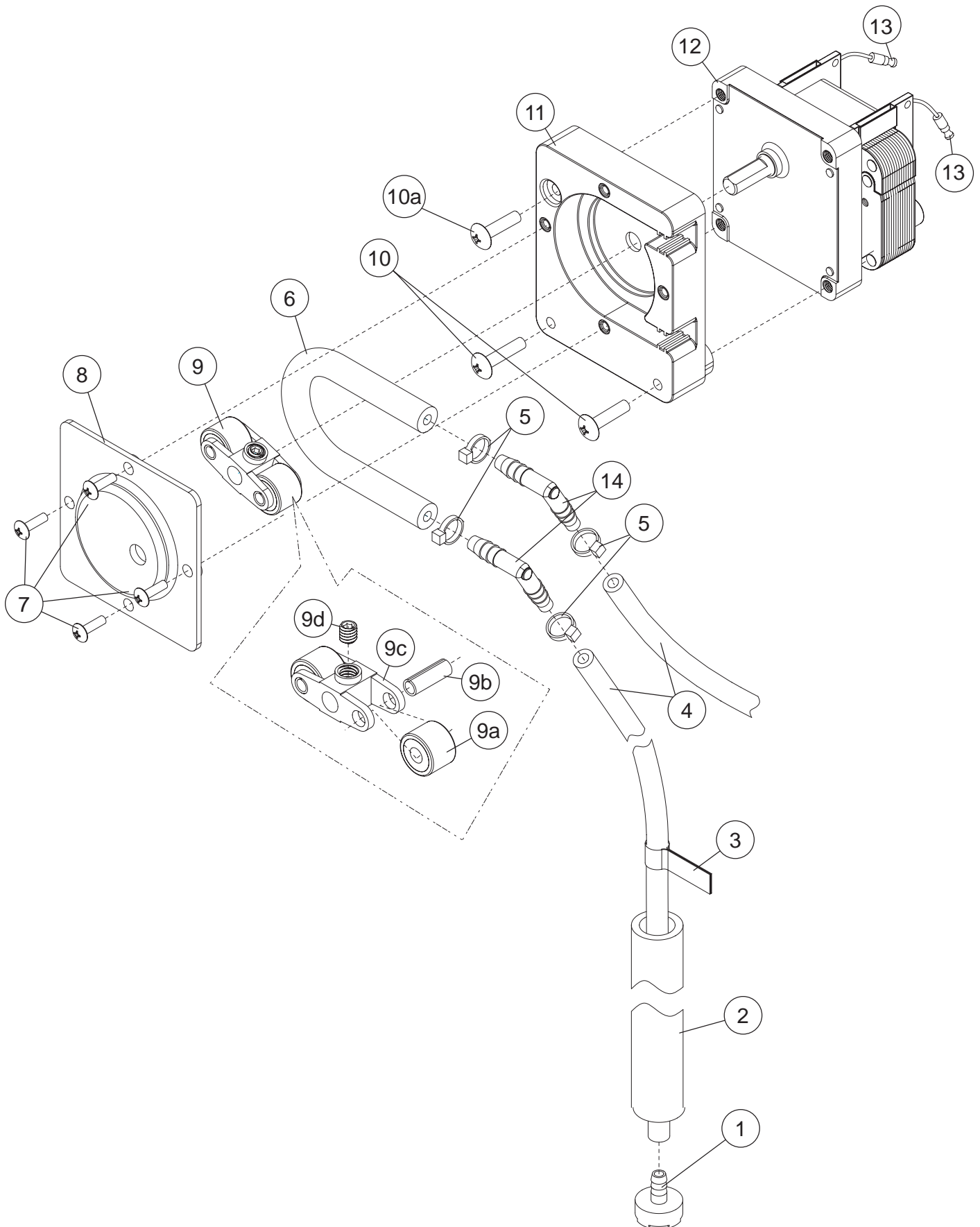
Item No.	Part No.	Description	Qty.
1	2104.17	GASKET, DOOR	1
2	2104.18	HEATER, WASH TANK, 2KW, 240VAC	1
3	968.00	WASHER, SPLIT LOCK 1/4" SST	4
4	2103.67	NUT, HEX 1/4-20 SST	4
5	2104.21	O-RING	2
6	2104.22	ADAPTER, THERMOSTAT	1
7	2103.28	BUSHING, THERMOSTAT	1
8	2103.29	THERMOSTAT, WASH TANK	1
9	2104.25	ADAPTER, THERMOMETER	1
10	2103.25	THERMOMETER, 2" DIAL C/W 7' CAPILLARY	1
11	2103.70	NUT, LOCK 1/2" NICKLE-PLATED	2
12	2104.28	THERMOSTAT, FIXED, SNAP 212°F	1
13	2103.27	NUT, GRIP 6-32 W/NYLON INSERT	4
14	2103.30	SCREW, 4-40 X 1/2" SST	2
15	43019.00	SWITCH, DOOR 15 AMP	1
16	2104.32	BRACKET, SWITCH	1
17	2104.33	PLATE, SWITCH NUT	1
18	2104.34	ELBOW, PUMP SUCTION	1
19	2104.35	GASKET, PUMP SUCTION	1
20	2104.36	FLANGE, PUMP SUCTION	1
21	2104.37	HOSE, 1/4" ID X 3/8" OD	A/R
22	2104.38	ELBOW, 3/8" TUBE X 1/4" NPT	1
23	2104.39	GASKET, 1/4" FIBER	1
24	2104.40	LOCKNUT, 1/4" PLASTIC	1
25	2104.41	FILTER, SUMP	1
26	2104.42	SEAL, OVERFLOW TUBE	1
27	2104.43	TUBE, OVERFLOW	1

Fill Solenoid Valve Assembly



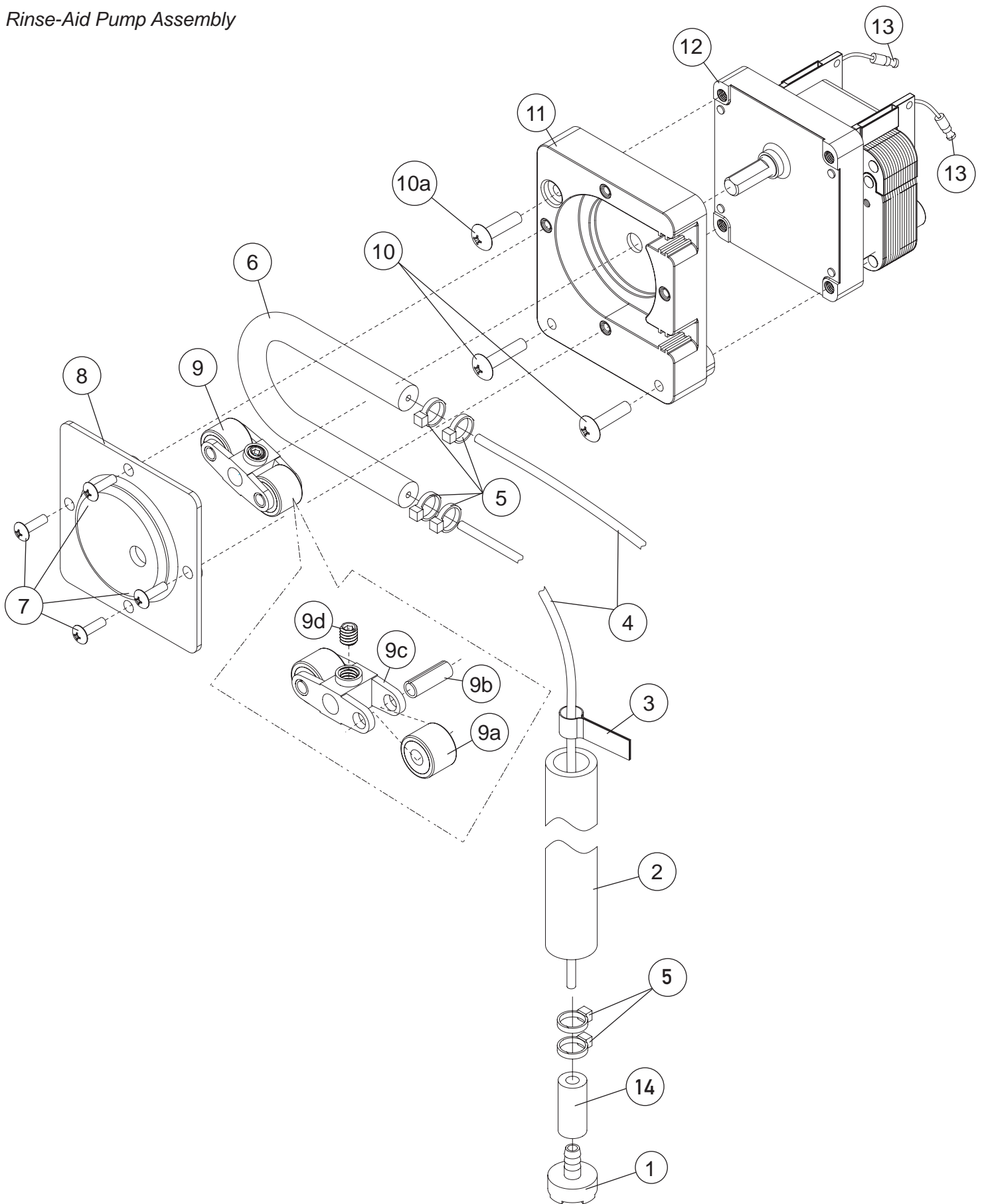
<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	03604.00	VALVE, SOLENOID, DEMA 1/2" 115VAC/60/1 <i>(Includes Items 1a)</i>	1
1a	03604.30	KIT, REPAIR SOLENOID VALVE, DEMA 1/2"	A/R
2	03604.50	FITTING, FLOW DISC, DEMA	1
3	03604.10	WASHER, FLOW, DEMA	1
4	2103.73	FITTING, BARB HOSE	1
5	2104.45	BRACKET, VALVE, UC65E	1
6	2103.16	BOLT, HEX FLANGE 1/4-20 X 3/8" SST	2

Detergent Pump Assembly



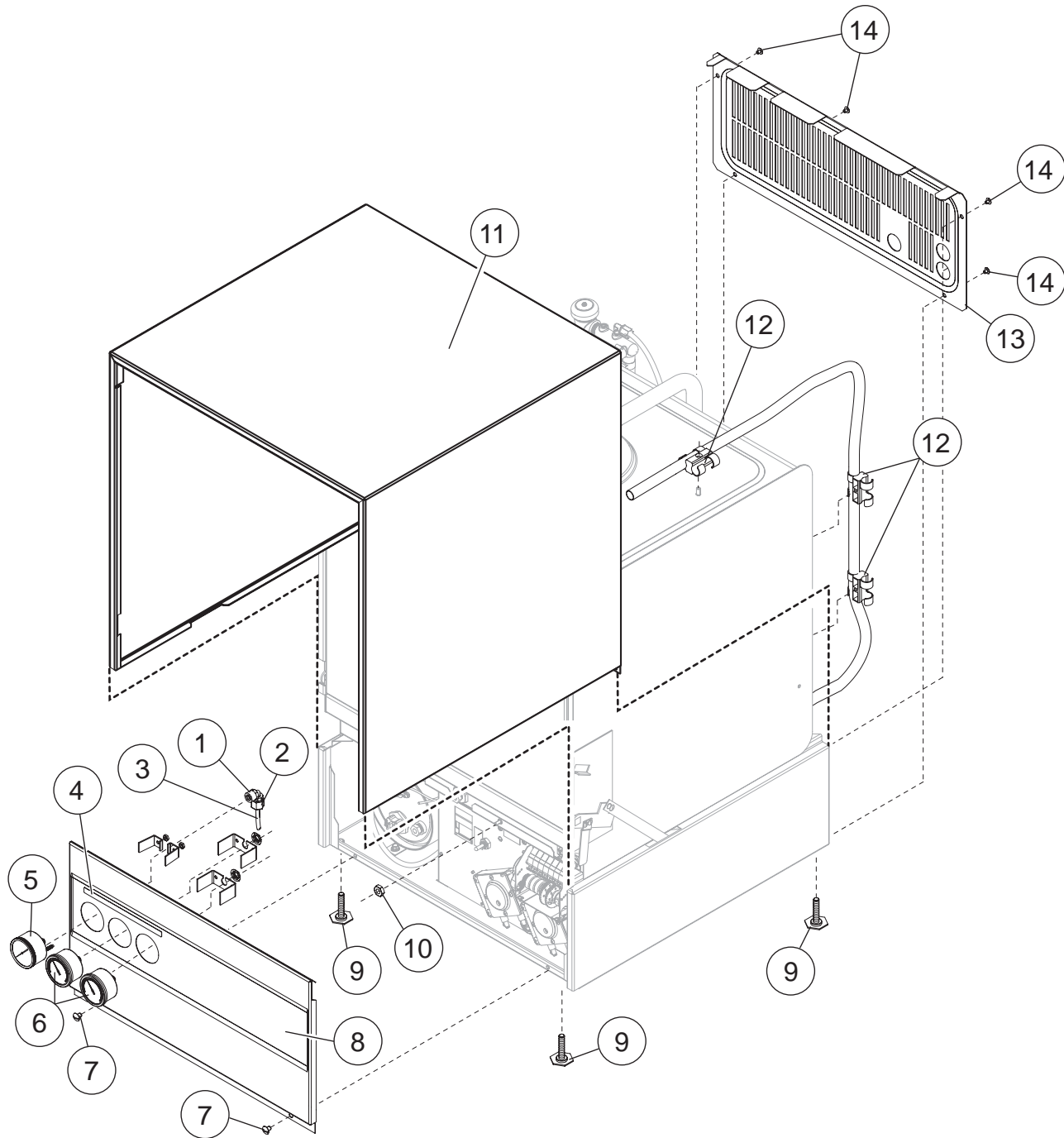
Item No.	Part No.	Description	Qty.
1	2104.47	STRAINER	1
2	2104.48	TUBE, 1/2ID X 11-7/8LG. STIFFENER	1
3	2104.49	LABEL, DETERGENT	1
4	2104.37	HOSE, 1/4ID X 3/8OD PVC	A/R
5	2104.51	TIE, NYLON 4"	4
6	2104.52	ELBOW, 1/4 HOSE BARB	1
6	00435.10	TUBE, SQUEEZE PUMP	1
7	00911.00	SCREW	4
8	00418.00	COVER, PUMP	1
9	00419.00	ASSEMBLY, ROLLER	1
9a	00423.00	ROLLER	2
9b	00422.00	PIN, ROLL	1
9c	00424.00	BEARING, CARRIAGE	1
9d	00933.00	SCREW, SET	1
10	00919.00	SCREW	2
10a	00918.00	SCREW, FILISTER HD.	1
11	00417.00	BLOCK, PUMP	1
12	00416.10	MOTOR, PUMP 115VAC	1
13	00448.00	CONNECTOR, PUMP MOTOR	2
----	00415.00	ASSEMBLY, PERI-PUMP COMPLETE (Includes Items 6-13)	1

Rinse-Aid Pump Assembly



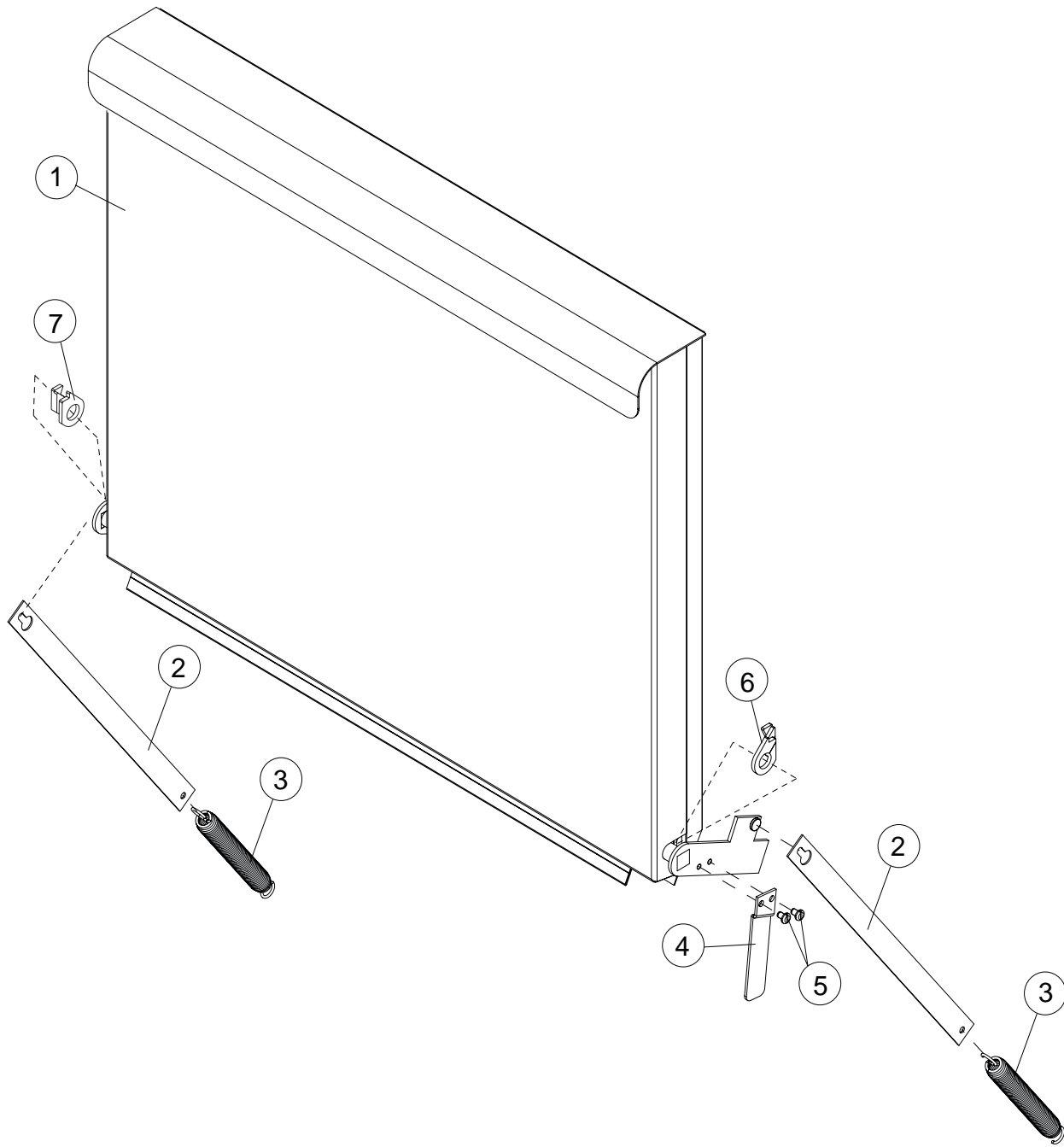
Item No.	Part No.	Description	Qty.
1	2104.47	STRAINER	1
2	2104.48	TUBE, 1/2ID X 11-7/8LG. STIFFENER	1
3	2104.49	LABEL, RINSE AID	1
4	2104.50	TUBING, 1/8" OD X 1/16 ID"	AR
5	2104.51	TIE, CABLE 4"	4
6	00836.00	TUBE, SQUEEZE PUMP	1
7	00911.00	SCREW	4
8	00418.00	COVER, PUMP	1
9	00419.00	ASSEMBLY, ROLLER	1
9a	00423.00	ROLLER	2
9b	00422.00	PIN, ROLL	1
9c	00424.00	BEARING, CARRIAGE	1
9d	00935.00	SCREW, SET	1
10	00919.00	SCREW	2
10a	00918.00	SCREW, FILISTER HEAD	1
11	00417.10	BLOCK, PUMP	1
12	00416.00	MOTOR, PUMP 115VAC	1
13	00448.00	CONNECTOR, PUMP MOTOR	2
14	2104.58	TUBE, PUMP, 1/8" ID X 2" LG.	1
----	00815.20	ASSEMBLY, PERI-PUMP COMPLETE (Includes Items 6-13)	1

Panel Assembly

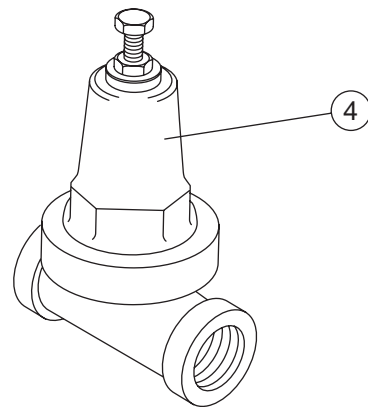
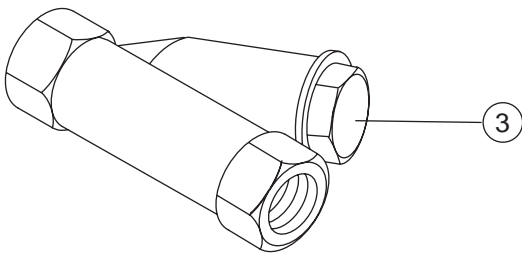
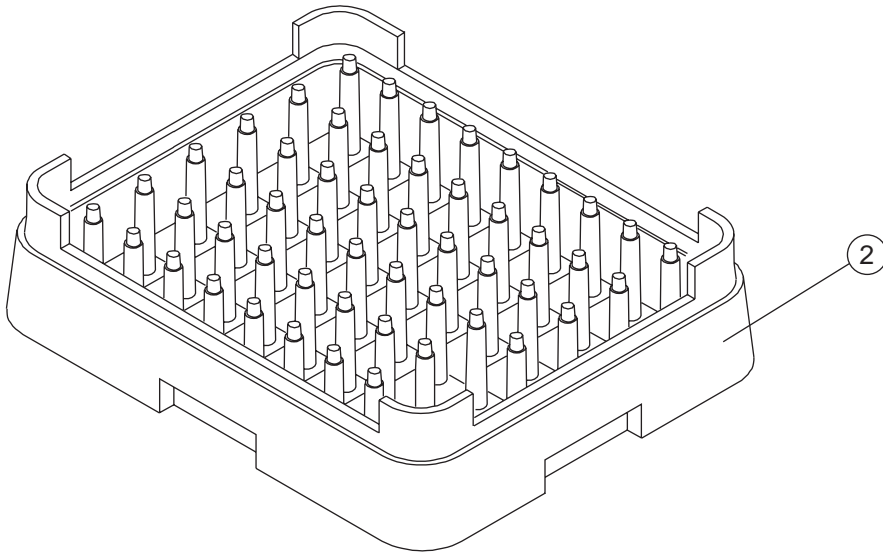
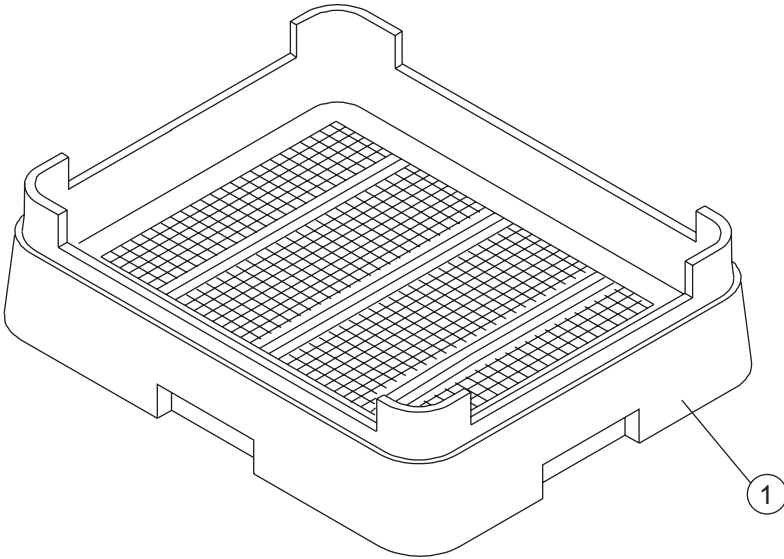


<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	2103.62	FITT COMP 1/4" OD X 1/8 MPT ELL J	1
2	2104.60	ADAPTOR, 1/8" NPT X 1/4" TUBE	1
3	2103.74	TUBING, 1/4" NATURAL	A/R
4	2104.62	LABEL, GUAGE	1
5	2104.63	GAUGE, PRESSURE 0-60PSI	1
6	2103.25	THERMOMETER, 2" DIAL, 7' CAPILLARY	2
7	2104.65	SCREW, 1/4-20 X 5/8" TRUSS HD. PHIL. SST	2
8	2104.66	PANEL, FRONT UC65e	1
9	2104.67	FOOT, ADJUSTING	4
10	2104.68	NUT, KEPS, 10-32 SST	1
11	2104.69	WRAP, OUTER PANEL	1
12	2104.70	CLAMP, DOUBLE CONDUIT	3
14	2103.39	SCREW TRUSS SLOT SS 10-32X3/8	4
13	2104.72	PANEL, REAR	1

Door Assembly



<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	2104.73	DOOR WELDED ASSY	1
2	2104.76	ARM, DOOR SPRING	2
3	2104.77	SPRING, DOOR	2
4	2104.78	ACTUATOR, DOOR SWITCH	1
5	2103.41	SCREW, 8-32 X 3/16" PHIL. SST	2
6	2104.88	SEAL, DOOR DRIP, RH	1
7	2104.87	SEAL, DOOR DRIP, LH	1



<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	2104.80	DISH RACK, FLAT-BOTTOM	AR
2	2104.81	DISH RACK, PEG	AR
3	2104.82	STRAINER, LINE 1/2" BRONZE (OPTIONAL)	1
4	2104.83	VALVE, PRESSURE REGULATING (PRV)	1

# ***Electrical Schematic, Timer Chart***

<b><i>Illustrations</i></b>	<b><i>Page</i></b>
Model UC65e Electrical Schematic .....	51
Timer Chart.....	52

# Model UC65e - Electrical Schematic

TO CUSTOMERS DISCONNECT SWITCH  
PER LOCAL ELECTRICAL CODE  
115-208/230V/1PH 60HZ

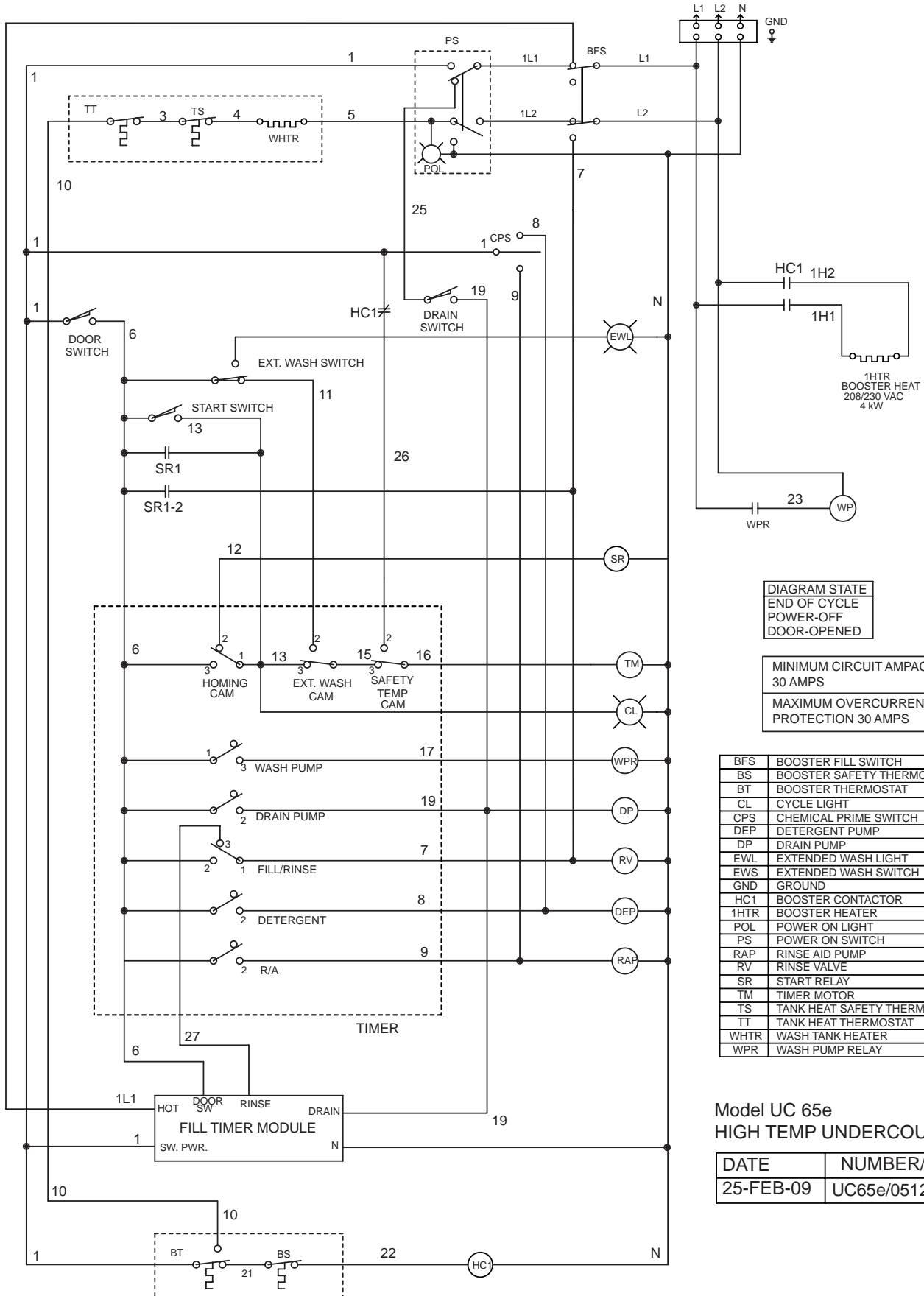


DIAGRAM STATE  
END OF CYCLE  
POWER-OFF  
DOOR-OPENED

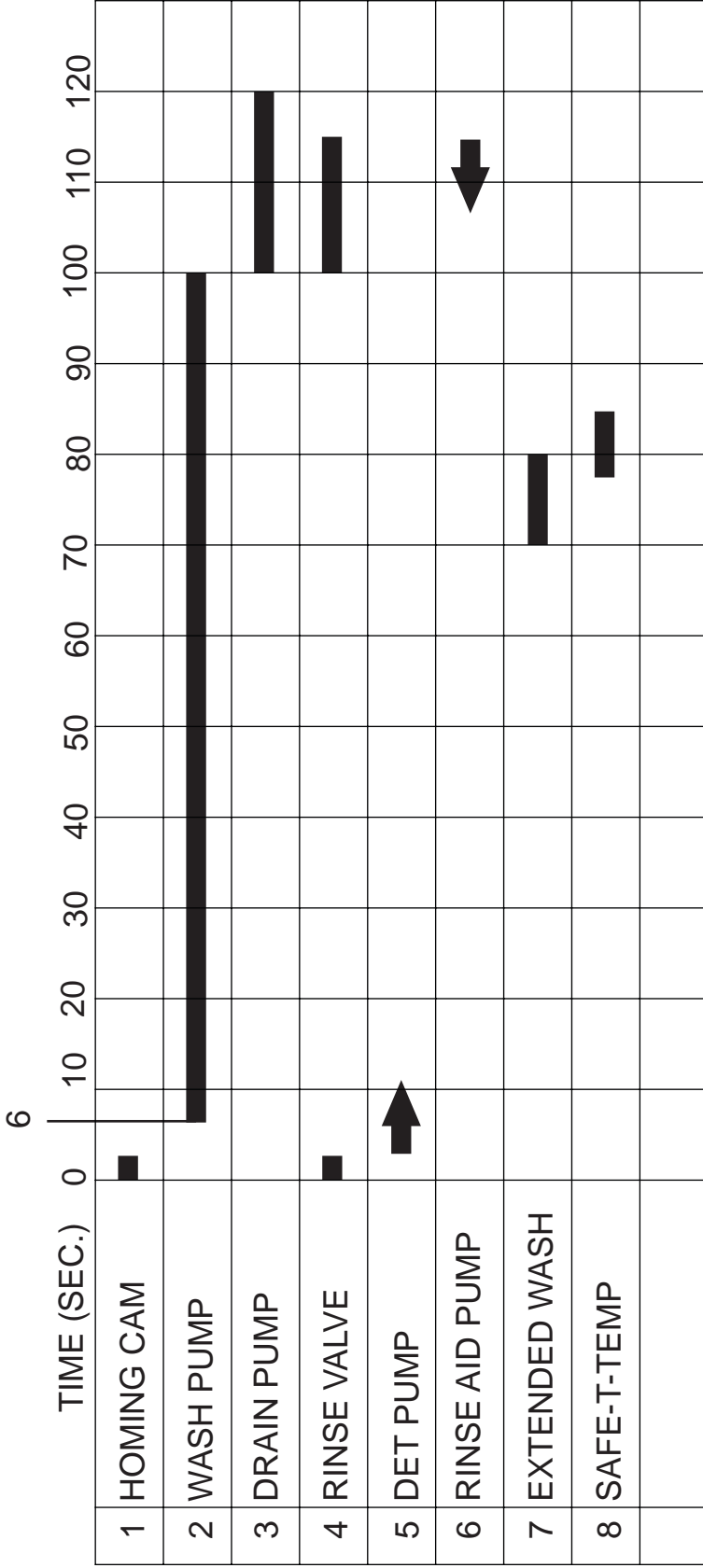
MINIMUM CIRCUIT AMPACITY  
30 AMPS  
MAXIMUM OVERCURRENT  
PROTECTION 30 AMPS

BFS	BOOSTER FILL SWITCH
BS	BOOSTER SAFETY THERMOSTAT
BT	BOOSTER THERMOSTAT
CL	CYCLE LIGHT
CPS	CHEMICAL PRIME SWITCH
DEP	DETERGENT PUMP
DP	DRAIN PUMP
EWL	EXTENDED WASH LIGHT
EWS	EXTENDED WASH SWITCH
GND	GROUND
HC1	BOOSTER CONTACTOR
1HTR	BOOSTER HEATER
POL	POWER ON LIGHT
PS	POWER ON SWITCH
RAP	RINSE AID PUMP
RV	RINSE VALVE
SR	START RELAY
TM	TIMER MOTOR
TS	TANK HEAT SAFETY THERMOSTAT
TT	TANK HEAT THERMOSTAT
WHTR	WASH TANK HEATER
WPR	WASH PUMP RELAY

Model UC 65e  
HIGH TEMP UNDERCOUNTER

DATE	NUMBER/REV
25-FEB-09	UC65e/0512867/REVA

TIMING CHART



CMA Dishmachines

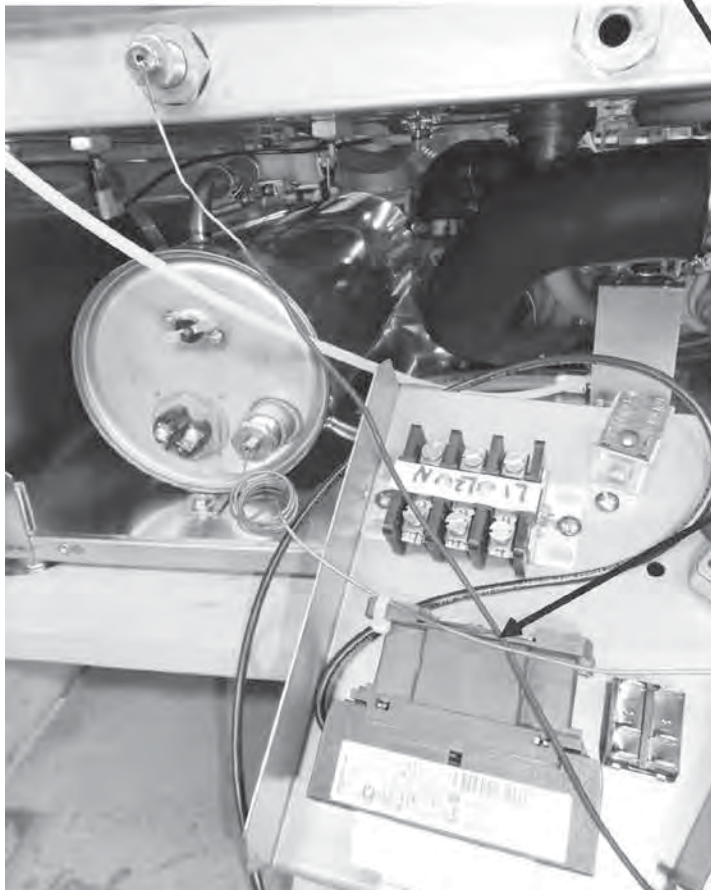
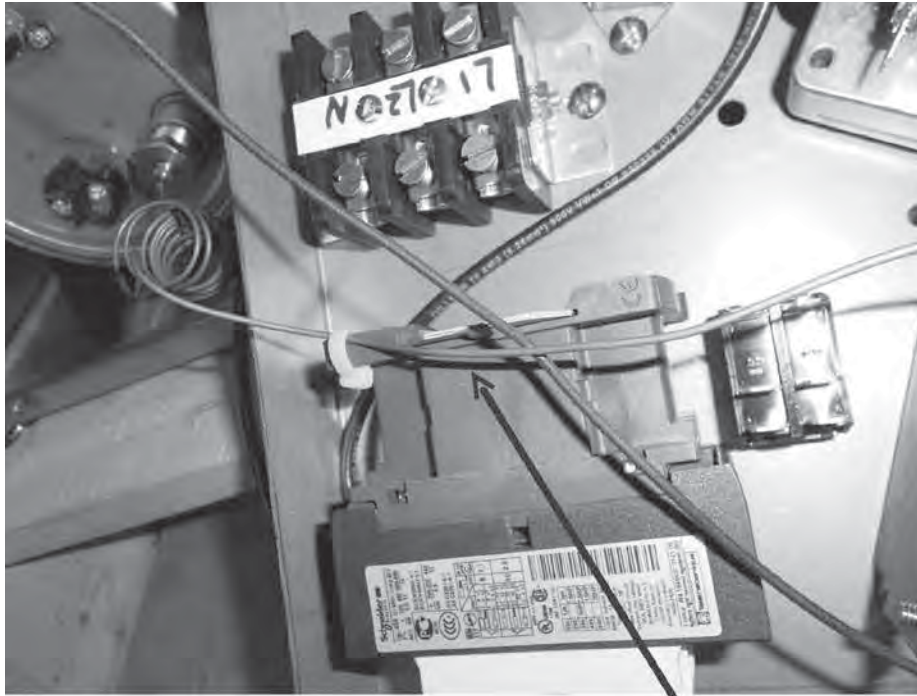
UC65e

DRAWING NO.  
05CTIME

# Service Parts Installation Instructions

<i>Booster Thermostat P/N 2103.36.....</i>	<i>54</i>
<i>Pressure Gauge Piping Change.....</i>	<i>56</i>
<i>Fill/Drain Timer Conversion P/N 2103.43.....</i>	<i>58</i>
<i>Fill/Drain Timer - Theory of Operation.....</i>	<i>62</i>



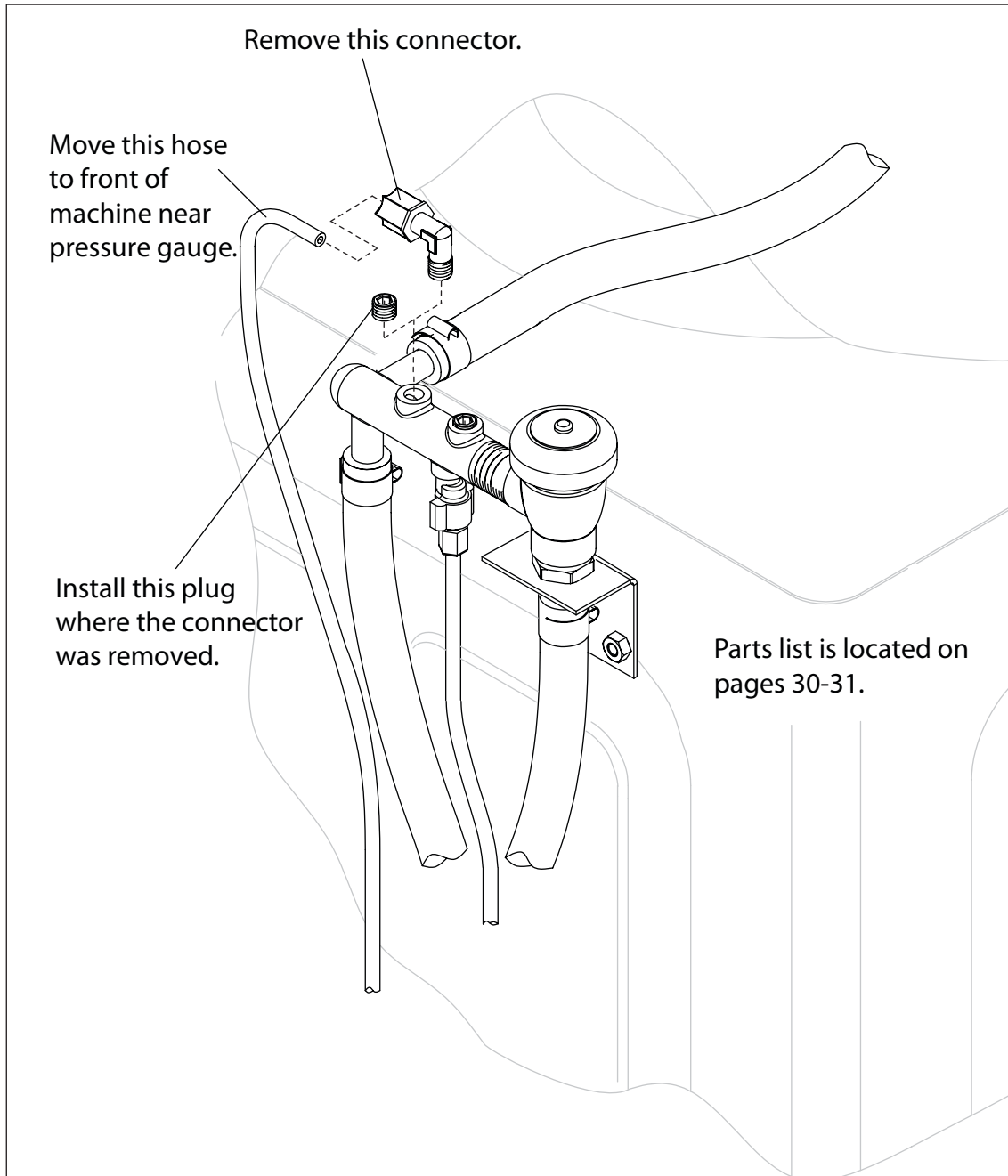


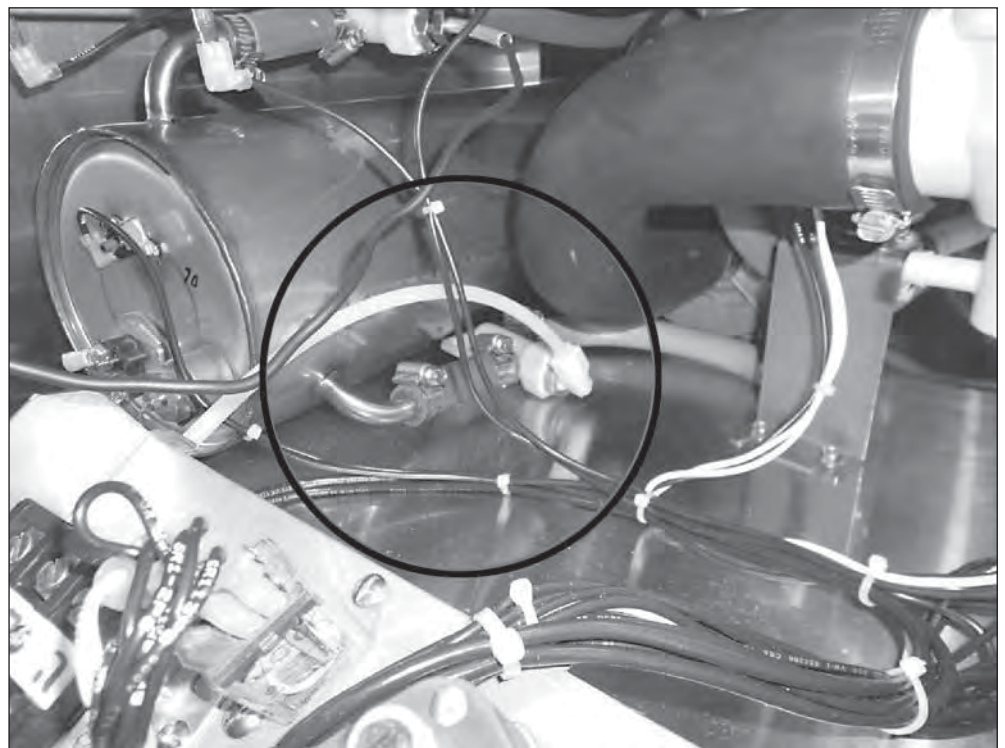
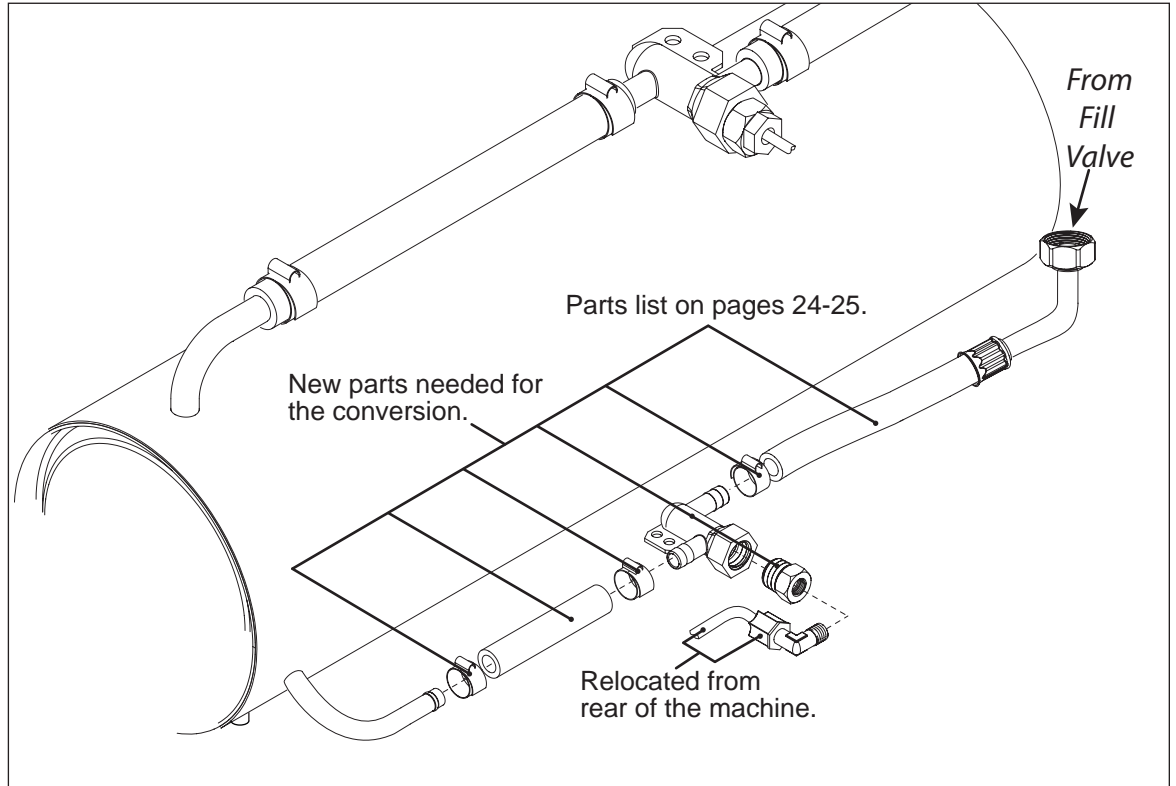
Note:  
The booster control thermostat capillary tube must be routed and tied off as shown to keep it from contacting the terminal block. Route the wash tank thermostat capillary tube in the same manner.

*Service Parts Installation - Pressure Gauge Piping Change*

Beginning with S/N W120631743, the pressure gauge tubing has been relocated from the top right rear corner of the machine to the booster located on the base of the machine. This change improves the operation of the final rinse pressure gauge.

Refer to the illustrations below and on the next page for installation instructions.



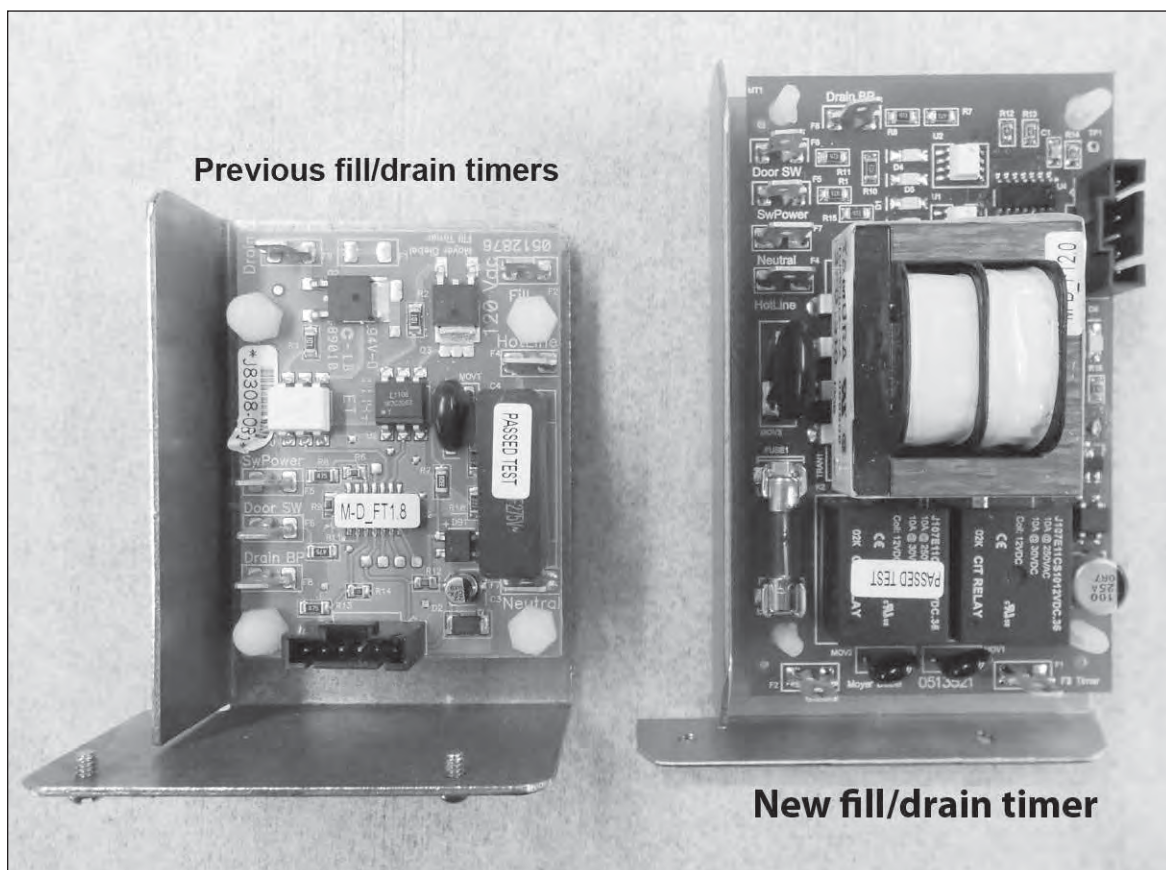


## Fill/Drain Timer Conversion - P/N 2103.43

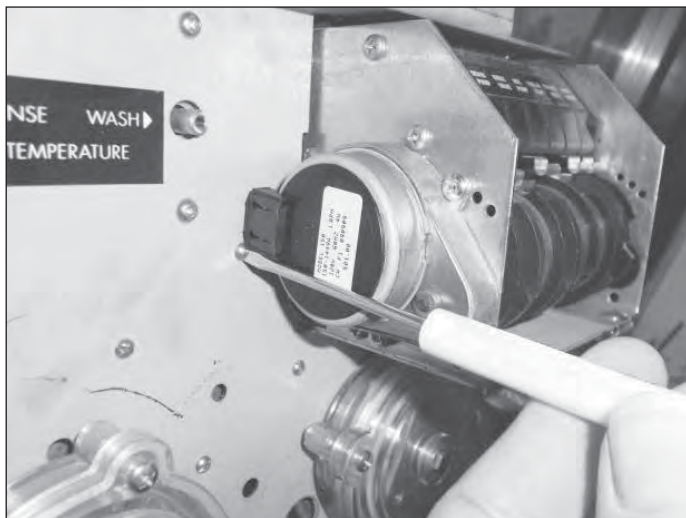
All S/N's have a new fill/drain timer, P/N 2103.43. This new timer is slightly larger than previous timers but it still mounts in the same location as previous timers.

The only function of the fill/drain timer is to fill the machine at the beginning of the day and to drain the machine at the end of the day. Normal wash and final rinse cycles are controlled by the mechanical cam timer assembly.

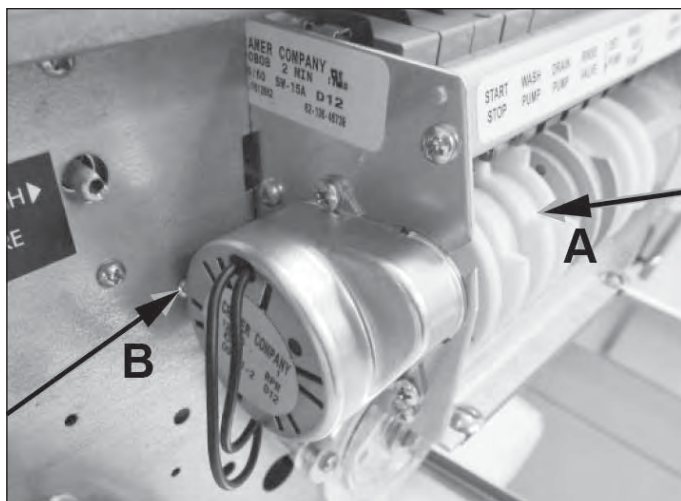
Refer to the illustrations below and on the following pages for installation instructions.



If your machine has the Cam Timer with black cams, then the board mounting screws can be accessed without removing the timer drive motor.

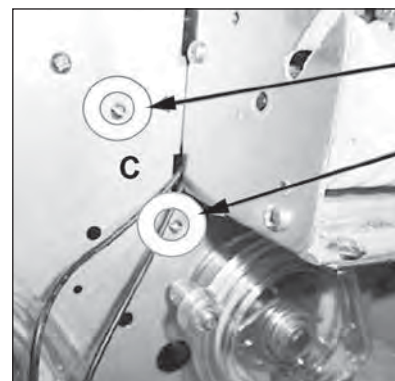


If your machine has white and gray timer cams (A), then it may be necessary to remove the timer drive motor to access one of the fill/drain timer mounting screws (B).



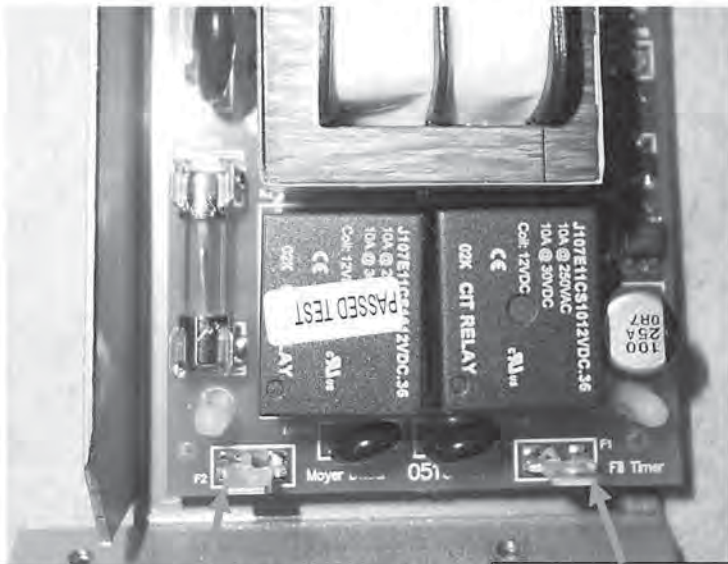
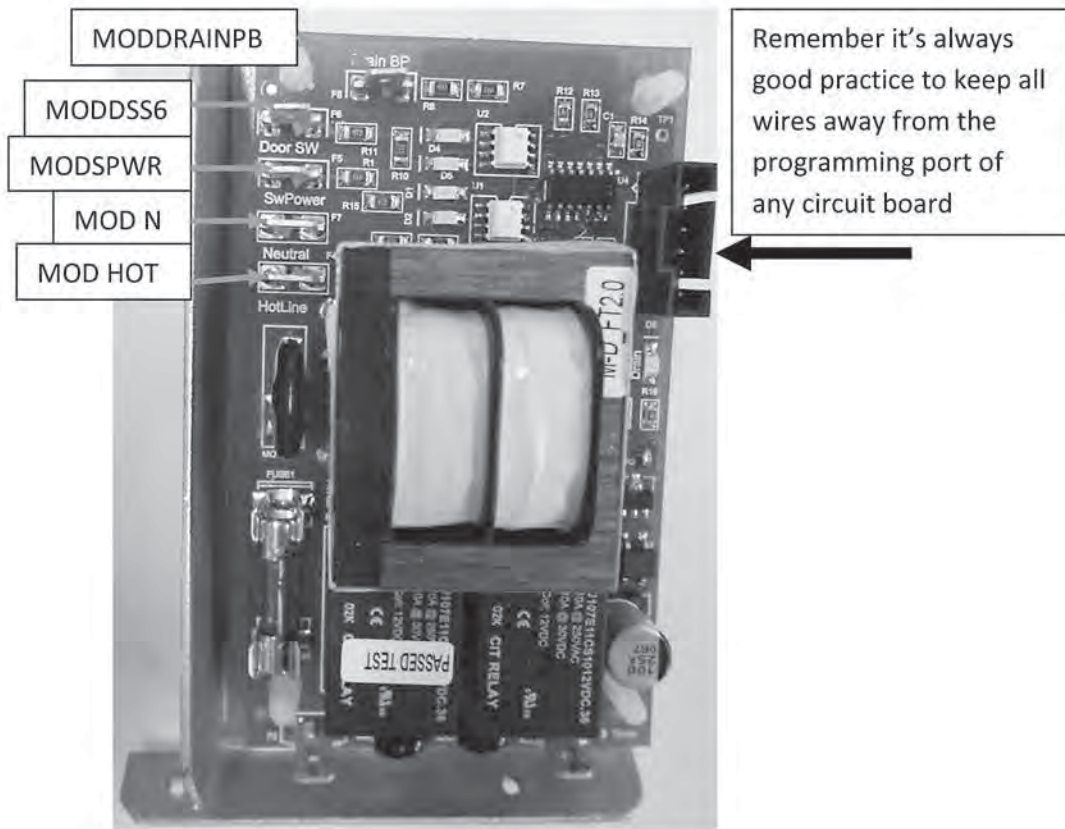
To remove the timer drive motor (A), remove the two phillips screws and drop the timer drive motor out of the way.

With the drive motor removed, you can access the fill/drain timer mounting screws (C) and remove them.



continued on next page

Fill/Drain Timer Conversion - P/N 2103.43 *continued from previous page*

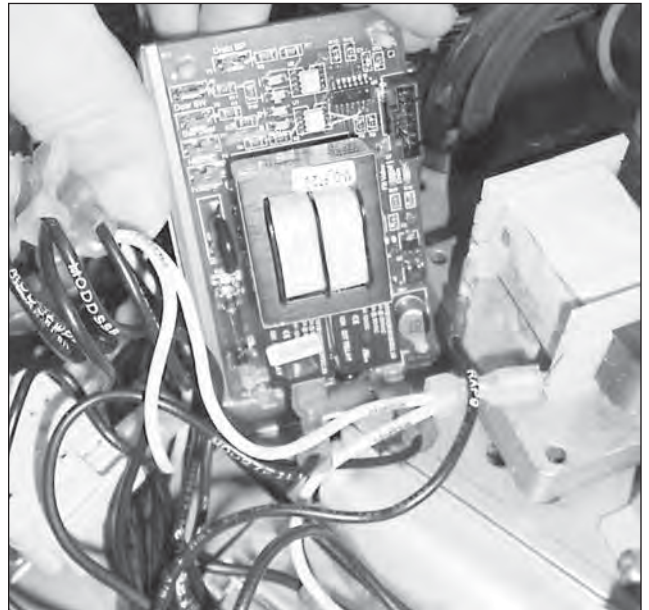


Pin marked **F2** on the bottom Left of the board is for the **FILL WIRE MOD27FILL**

Pin marked **F1** on the bottom right of the board is for the **DRAIN WIRE, MOD20DRAIN**

Fill/Drain Timer Conversion - P/N 2103.43

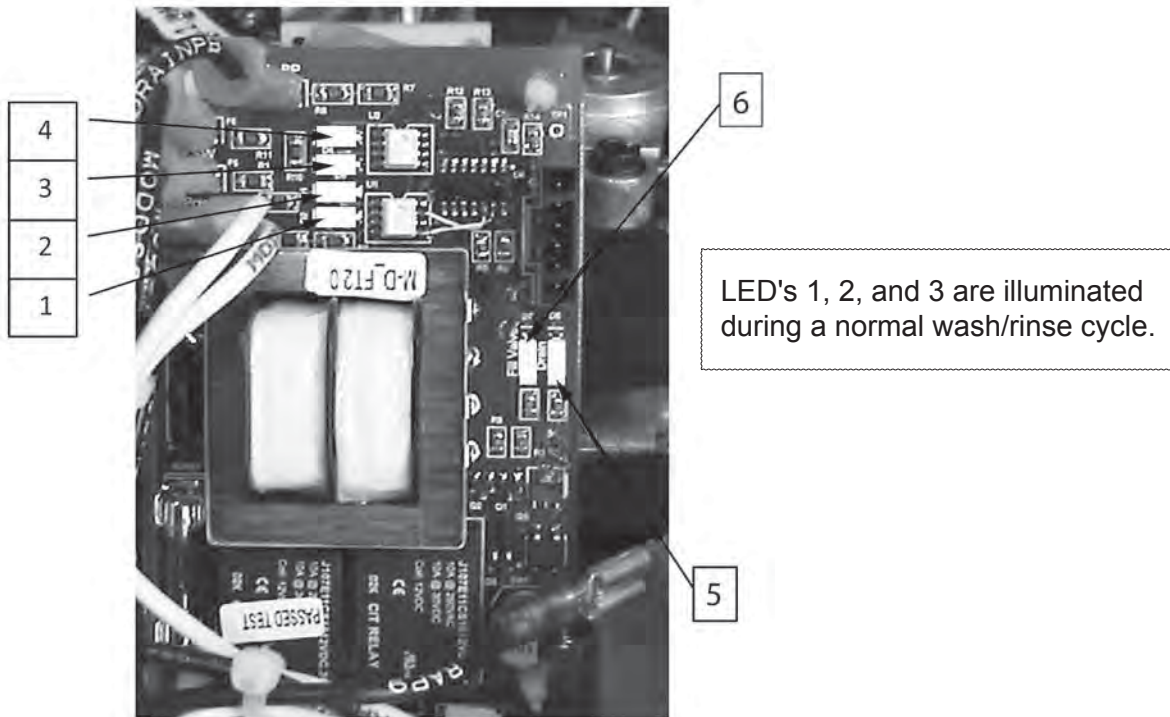
Connect the wires as shown on the previous page and reinstall the mounting screws. Reinstall the timer motor.



The new board shown with wires connected and mounting screws installed. The installation is complete.



## Fill/Drain Timer Board - Theory of Operation



The new fill/drain timer board has built-in diagnostics.

LED's (1, 2, 3, and 4) illuminate under the following conditions:

- a) LED 1 illuminates when power from circuit breaker is ON and booster/fill switch (service switch) is ON.
- b) LED 2 illuminates when machine ON/OFF switch is ON and circuit breaker in ON.
- c) LED 3 (Door switch LED) illuminates when door is closed, machine ON/OFF switch is ON and circuit breaker in ON. LED 3 goes out when door is open.
- d) LED 4 only illuminates momentarily when the drain switch is pressed and the machine ON/OFF switch is OFF.
- e) LED 5 (Drain LED) illuminates when the Power from the circuit breaker is ON, the machine ON/OFF switch is OFF, and the momentary drain switch has been pressed to start the 50 second drain cycle. The door can be opened during the drain cycle, closing the door resumes the drain cycle where it left off.

**NOTE:** LED 5 will illuminate during the fill cycle because the drain pump also runs during the fill cycle.

- f) LED 6 (Fill Valve LED) illuminates when the circuit breaker is ON, the machine ON/OFF switch is ON (3 second delay), and the door is closed.

**NOTE:** LED 5 will illuminate during the fill cycle because the drain pump also runs during every 70 second fill cycle.